

# **“No to the Bear”: Contested Power and Truths behind the Reintroduction of Brown Bears into the French Pyrenees**

by

Tony Knight

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## Abstract

### **“No to the Bear”: Questions of Power and Truths behind the Reintroduction of Brown Bears into the French Pyrenees**

At this beginning of the twenty-first century, global climate and biodiversity, including human survival, are seriously threatened. Fuelled by culturally constructed anthropocentric ‘needs’, the unrelenting march of neoliberal capitalism dramatically manifests dichotomous views and discourses on the environment and sustainable development. Always complex, and often conflictual, the human-environment relationships which are constructed within this neoliberal paradigm are being seriously challenged. If we are to avert potentially dangerous escalations deriving from such tensions, it is essential that environmental anthropology actively engages in the issues, and confronts the necessary cultural and environmental changes which are already becoming evident.

This dissertation examines these issues in the French Pyrenees, where a conservation programme to reintroduce the brown bear is seriously impacting traditional transhumant pastoralism, already menaced by global politico-economic pressures. I explore the potential contribution of Actor-Network Theory (ANT) to the investigation of power, science, and politics by examining the opposing, generally uniform, and largely reified arguments which create a nature-culture conflict. In this way, ANT helps illuminate the otherwise heavily disguised underlying realities which exist/emerge between those who reject the bear’s reintroduction, essentially small-scale farmers and shepherds, and the supporters of the programme who generally have no coherent understanding of the techniques or needs of transhumant farming, or even of mountain life. I argue that government-imposed systemic solutions will require a more egalitarian and accepting cultural framework which demonstrates a greater valorisation of the natural and social environment, while accepting different understandings of scientific and local truths. In short, it is essential to see through human-animal conflicts to the human-human conflicts hidden behind, and which inevitably get in the way of successful holistic natureculture futures.

## Acknowledgements

I am fortunate to have grown up in the Rhondda Valleys, where I witnessed the destruction of the social and natural environment by coal mining enterprises. I also grew up in a period when it was common place for the television news to daily show cruel and unnecessary violence against iconic mega fauna such as whales, tigers, elephants, and other animals (perhaps not so iconic); all in the name of progress and economic growth. Finally, although I was sucked in to the same unyielding, capitalistic world – and enjoyed great success in that world – I eventually remembered what it was that had formed my identity in the first place. It was at that time that I joined the distance anthropology degree programme at Lampeter.

I need to thank the faculty for recognising that I was capable of jumping over the undergraduate programme, and for allowing me to proceed directly with postgraduate master's studies. In particular, this would have been impossible without the support, encouragement, and help of Dr Samantha Hurn. She almost single-handedly managed to keep me motivated despite significant changes to the university structure and support mechanisms, especially challenging to distance students. I could not have got this far without Sam's guidance and supervision. Being at distance has serious challenges, one of which is not really knowing the departmental staff or other graduate students. Nevertheless, I would like to thank Dr Penny Dransart for the help that she offered when needed, the administrative staff who were always there, and finally to two other graduate students, Adrian Davis, and Melanie Long.

Outside of the university, Dr Katie Smith, Dr Gala Argent, Dr. Ingrid Hartmann, and Dr. Audrey Steiner have been superb motivators and mentors. I thank them whole-heartedly. Obviously, no acknowledgement would be complete without indicating my profound gratitude to my family who unswervingly – well most of the time – stood behind me, even if they could not, and still cannot, understand what anthropology is, or why anyone would wish to study it.

In closing, of course, this dissertation would not have been possible without the passionate resistance of Pyrenean pastoralists to what they perceive as a terrible, and unjustifiable wrong perpetrated by the French state and environmental lobbyists, and my own passionate love for the environment, and in particular, bears.

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# Chapter 1

## 'No' to the bear

'[T]here is at all times enough past for all the different futures in sight, and more besides, to find their reasons in it, and whichever future comes will slide out of that past as easily as the train slides by the switch'  
(James 2008 [1909]:119).

### 1.1 Anger, joy and grief: a few months during 2006

After sharing the Pyrenees with humans for 40,000 years (Demars 2004), the brown bear is almost extinct. Thirty years ago, with just twelve to eighteen bears still alive (Camarra 1990), the French state initiated urgent conservation measures, but by 2005, the bear population remained essentially unchanged (MEDD 2006a:14). The state announced a new bear reintroduction programme (MEDD 2006b:72) which, after a year of unilateral decision making, became the target of pastoral dissent and violent protest: pastoralists, after centuries of consciously eliminating large predators from the Pyrenean Mountains, simply refused a renewed, enforced cohabitation with bears.

During the spring of 2006, hundreds of *éleveurs* (sheep farmers), *bergers* (shepherds)<sup>1</sup>, Pyrenean residents, and some elected officials gathered in Toulouse, the administrative capital, and in Arbas, the Pyrenean town selected for the first Slovenian bear release (figure 1). The demonstrators attacked government buildings with firecrackers and bottles of lamb's blood. In Arbas, after destroying a large wooden sculpture of the bear, the symbol of the Pyrenees, protesters yelled insults and even death threats at François Arcangéli, the town's mayor (TF1 2006b).

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<sup>1</sup> The French language allows for the distinction between male and female pastoralists. Thus a shepherd is a *berger*, and a shepherdess a *bergère*. Similarly, a man who raises sheep is an *éleveur*, whereas a woman is an *éleveuse*. In this dissertation, I follow the French convention of using the masculine term when describing a mixed group of people and, furthermore, when I use this form, I follow with the English masculine pronoun, 'he' (as well as 'him' and 'his'). This is intended in no way to be a gender bias.

Nelly Olin had totally avoided the Pyrenees during the programme’s preparations, but protested that she had been ‘to Toulouse three times for the consultations’ (La Dépêche 2006a). Bérot (2006:37), a key spokesperson for the pastoralists, noted ironically that, ‘no doubt, seen from Paris, Toulouse looks like it’s part of the Pyrenean mountains’. While Toulouse is the departmental capital of Midi-Pyrénées, it is 100 km from the nearest communes impacted by the bear’s reintroduction, and a day’s additional walk<sup>2</sup> to where the *bergers* work on the mountain. Augustin Bonrepaux, the president of the *Ariège conseil général*, had warned the press that if the government refused real dialogue, “ça se passera mal”, the situation will turn ugly (TF1 2006a). Nevertheless, even though Olin had promised a meeting with the demonstrators during the Toulouse *manifestation*, she did not show up. The organiser and spokesperson for the demonstration, Philippe Lacube<sup>3</sup>, claimed that the “decisions taken in Paris... were far more violent” than the angry reactions of the pastoralists, which was “just a warning” (TF1 2006b) against the unilateral, non-negotiated power of the ‘core’ state over the ‘periphery’ (Wallerstein 1974).

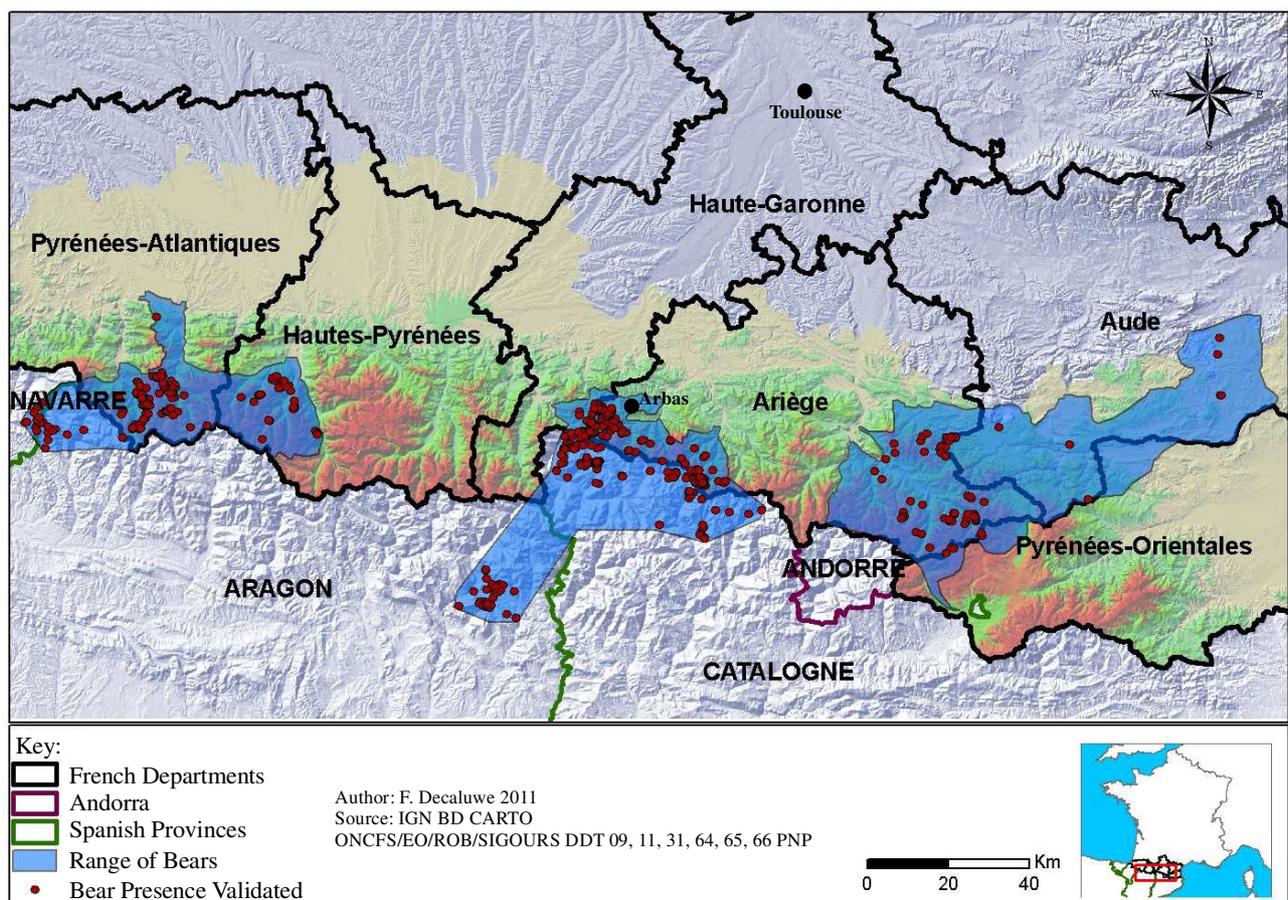


Figure 1. Map of the Pyrenees showing Toulouse, Arbas, and the bear’s range – 2010 (ONCFS 2010c:2).

<sup>2</sup> Perhaps an hour in an all-wheel-drive vehicle.

<sup>3</sup> Lacube is the founder and president of ASPAP (*l'Association pour la Sauvegarde du Patrimoine d'Ariège-Pyrénées* – Association to Save the Patrimony of Ariège-Pyrénées), and the current president of ADDIP (*l'Association pour le Développement Durable de l'Identité des Pyrénées* – Association for Sustainable Development and the Pyrenean Identity). These are two of the most active and radical anti-bear associations.

The key research question addressed in this dissertation is why many pastoralists are so opposed to bear reintroductions and pastoral-bear cohabitation. The answers are intertwined in complex and contested networks of relationships between human and nonhuman actors. The human-animal conflicts which invariably arise disguise profound human-human conflicts in which the Pyrenean bear has become a mere device manipulated by various key actors.

## 1.2 A Little Reflexivity

I grew up in the Rhondda valleys and witnessed the social and environmental destruction caused by coal mining. Whilst studying business at my first college, I also became aware of the horrors committed by humans against animals, in particular, whales, elephants, tigers, and other iconic (and less iconic) animals. This was all in the name of ‘progress’ and ‘economic growth’ (Ikerd 2005; McKibben 1990; Williams 2010). I am, thus, an ardent if sometimes idealistic believer in the necessity for conservation within a harmonious human-bio-ecosphere. I was aware from the outset that such a prejudice was a significant challenge which risked working against my research. However, the acceptance, inclusion, and (limited) control of such reflexivity has long distinguished anthropology from other social sciences (Hammersley & Atkinson 1983).

Reflexivity is a complex concept. Despite being considered the initiator of long-duration fieldwork, Malinowski (1984 [1922]) was, nonetheless, insufficiently reflexive to recognise the value of women’s contributions to Trobriand wealth: this allowed Annette Weiner, with her more reflexive openness and awareness, to be ‘pushed in the direction’ of the women’s work (Weiner, 1988:3). Similarly, in contrast to E. E. Evans-Pritchard’s (1976: 25) *phenomenological* acceptance of Azande witchcraft beliefs, Paul Stoller’s reflexivity permitted him to accept his *own* power of witchcraft in Songhay society and, thus, acknowledge the influence he exerted over the people he was studying (1987:113-9).

I have lived within a French community for the last ten years. In choosing to research people who are close to ‘home’, and who are not ‘exotic’, I felt confident I could draw on my local understanding. Nevertheless, I did not want my personal prejudices to unconsciously betray my research: I accept, and portray, my subjects – both for and against the bear reintroduction – ‘as constructing [their] social world’ (Hammersley, Atkinson, 1983: 11), but I also accept that I

participate in those social constructions and I *equally construct* a view of what I observe and interpret, fashioned after my own beliefs and values.

### 1.3 Multi-Sited Fieldwork

Participant observation is one method used to constructively incorporate reflexivity in ethnographic research. However, practicalities and ill-health<sup>4</sup> meant that such immersive ethnographic research was not possible at this juncture, but as George Marcus rightly observed:

It is perhaps anthropologists' appreciation of the difficulty of doing intensive ethnography at any site and the satisfaction that comes from such work... that would give them pause when the ethnographer becomes mobile and still claims to have done good fieldwork (1998:84).

The word, 'mobile' can be replaced with 'immobile'. The field, for me, was 'out there' in the unattainable Pyrenean *estives* (summer pastures); I needed an alternative research methodology. Marcus (1995:96) argues that modern ethnographic research, enmeshed as it is in a 'postmodern' 'world system', contrasts starkly with the requirements for traditional single-sited ethnographic methods: it requires the exploration of multiple sites in which the research 'moves out from single sites and local situations of conventional ethnographic research designs to examine the circulation of cultural meanings, objects, and identities in different time-space'. This multi-sited ethnography (Marcus 1995, 1998, 2009) forms the basis for my alternative research methodology: one in which what we study is not considered to be static but is, instead, comprised of a dynamic network of places, actors, and events,

designed around chains, paths, threads, conjunctions, or juxtapositions of locations in which the ethnographer establishes some form of literal, physical presence, with an explicit, posited logic of association or connections among sites that in fact defines the argument of the ethnography (Marcus 1998:90).

The object of the research is to remove the ethnographic study from the physical boundaries of 'place', as it might appear on a map, so that the researcher can work in:

other places, imagined, but not literally visited by the collaborators, and eventually to bring ethnography back as inputs to these collaborations (Marcus 2009:192).

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<sup>4</sup> Shortly after my research began I was found to have a very handicapping neurological disorder. To-date, despite years of medical consultations and surgical interventions, the problem remains without proper diagnosis.

In other words, being ‘out there’ is no longer essential. However, such a dynamic multi-sited field can lead quickly to an overwhelming, viral-like multiplication and expansion of sites and networks (Marcus 2009:191). Nevertheless, no matter how much information one collects, it is always incomplete (Marcus 2009:191): it needs only to be adequate to perform appropriate analysis and interpretation.

My ‘out there’ fieldwork consisted of four week-long visits to the Pyrenees and two to the Alps (to review pastoral-wolf interactions). I interviewed five *éleveur/bergers*, and spent time with three mayor’s offices and with Alain Reynes, director of a major pro-bear association, Pays de l’Ours – ADET. Most of my research was conducted monitoring major pro- and anti-bear organisations’ websites (see Chapter 3), and various discussion forums which provided thousands of view-points). Although Marcus accentuates the *ephemerality* of multi-sited fieldwork, my research remained firmly anchored by the myriad points which, while spatially disconnected, nevertheless, created a coherent, temporal discourse.

## 1.4 Existing Research

Wildlife conservation is well documented (Adger et al., 2001; Blaikie & Jeanrenaud 1997; Brown 2002; Holling and Meffe 1996; Lulka 2004), as are the challenges to the nature-culture dialectic which often pervades conservation discourse (Croll and Parkin 1992; Descola 1996; Hornborg 1996). Such challenges favour monist epistemologies, exemplified, for example, by Cronon’s (1996) work on nature and wilderness. The hybrid ‘naturecultures’<sup>5</sup> which reveal themselves in these ‘new’ epistemologies provide an opening for human *and nonhuman* agency, as in the sociology of science work of Haraway (1991) and Latour (2004a, 2005). Anthrozoological research on the (inter)relationships between human and nonhuman animals offers illuminating insights into the inevitable conflicts which arise (Knight 2000; Milton 1993). Ingold (2000a), in particular, has challenged conventional perceptions of nonhuman animals (and things) by stimulating discussion around consciousness, intentionality, empathy, and personhood. This work has been further developed by scholars including, amongst others, Bekoff and Pierce (2009), Cavalieri & Singer (1993), de Waal (2009), and White (2007).

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<sup>5</sup> In this dissertation I use ‘natureculture’, a neologism supported by Haraway (2008) to indicate the impossibility of separating nature from culture, both of which can be seen as fully interdependent and monistic.

In the Pyrenean context, socio-political and ethical dimensions remain under-researched; what exists tends to be ‘pro-bear’ (Benhammou 2005; Reynes 2005), which is often as reified and one-sided as the ‘anti-bear’ ‘cohabitation is impossible’ stance. There is little anthropological research: (Bobbé 2002, 2003, 2005) has written on the symbolic meanings of bears and wolves in the Pyrenees; Cummins (2009) published an excellent ethnography of Ossau valley pastoralism which unfortunately under-examines the bear-issue and rewilding; Vaccaro and Beltran (2008, 2009) have begun to collaborate on the emerging issues of what they see as a conflict between ‘patrimony’ and ‘wilding’. Within this paucity of pertinent studies, expanded anthropological research, capable of revealing the complexity and fluidity of human-animal relationships, is essential to enhance our understanding of rewilding in its human *and* nonhuman social context. If Pyrenean predator-pastoral cohabitation is to succeed, such research critical.

## 1.5 Opening the door to understandings

The precept of a ‘natural’, ‘pristine wilderness’ (Cronon 1996) in which to conserve wildlife, is gradually giving way to an understanding that humans, too, are just another part of the environment we are trying to protect (Grumbine:1994). However, ‘rewilding’ efforts, which include (re)introductions<sup>6</sup>, are still predominantly science-led, with research largely divided along science/social science lines, entrenching both intellectual divisions and a sense of the intractability of the issues. Human implications often become lost in hypothesised potentials for future biospherical amelioration, and thus shared biodiverse landscapes become increasingly contested.

A socio-ecological initiative which forces pastoralists into a renewed cohabitation with large predators they believe they have consciously exterminated, inevitably develops a complex web of contested associative relationships. There is no ‘unified’ social theory which can unravel such a web, and thus this dissertation remains ultimately informed by my anthropological training and a belief that nature and culture form a multi-dimensional, *monist* network of human-nonhuman interrelationships which encompass multiple interpretations of ‘realities’ and ‘truths’. Marsden (2010:3) urges a ‘transcendence of the disciplinary boundaries that currently restrain us... [to give] a greater focus on particular histories and contexts that can then be jointly crafted into emergent paths’. *This*, as Marsden claims, ‘is what anthropology has always been about’ (ibid.), and I

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<sup>6</sup> ‘Rewilding’ is an ambitious ecological restoration model that seeks to (re)introduce focal species, with their ecosystem-wide ecological functions, into landscapes otherwise free of human management (Donlan et al. 2006). I have used (re)introduction, here, to illustrate the challenge between considering a conservation initiative as being a ‘reintroduction’ of the same animal, or an ‘introduction’ of a similar animal.

correspondingly draw specifically on Actor-Network Theory (ANT), developed within science studies, to help bring scientific ‘truths’ and local knowledge(s) to the surface.

An introduction to ANT as an epistemological platform for anthropological research is elaborated in Chapter 2. Chapter 3 examines conservation management and the actors who create the Pyrenean context. The alternative ‘truths’ and ‘sciences’ espoused by these actors to support their respective causes are reviewed in Chapter 4, and the contestation which arises relative to the ‘nature’ of Pyrenean bears is dealt with in Chapter 5.

Chapter 6 presents my conclusions. As suggested by my opening quotation, there are many possible futures based on the past and its multiple ‘truths’ (James 2008 [1909]:119). It is my hope that this dissertation might contribute to a more successful future for pastoral-bear cohabitation.

# Chapter 2

## Actor-Network Theory

### 2.1 Agency

Initially developed by Bruno Latour, Michel Callon, and John Law (Callon, 1980, 1986; Callon & Latour, 1981; Callon & Law, 1982; Latour, 1987, 1988, 2005; Law, 1986), Actor-Network Theory (ANT) is poorly represented in anthropology, but is becoming visible in cognate interdisciplinary research (Beisel 2011; Jepson et al. 2011; Mol 2010), and has attracted interest in human-animal relationships (Blok 2007, 2011; Goedeke & Rikoon 2008; Healy 2007; Lorimer 2010; Neves 2012). In particular, ANT is a popular theoretical base within geographical studies (Braun 2002; Castree & MacMillan 2001; Lorimer 2007; Whatmore 2002; Woods 1997).

ANT has not, however, been universally acclaimed: Bloor (1999:97), a major critic, argued it was nothing more than ‘obscurantism raised to the level of a general methodological principle’. Latour, himself, lamented that ‘there are four things that do not work with actor-network theory: the word actor, the word network, the word theory and the hyphen’ (1999a:15). ANT, he says, is ‘a method and not a theory, a way to travel from one spot to the next, from one field site to the next’ (Latour 1999a:20-1).

Indeed, ANT is *not* a theory for it offers no testable predictions. Nevertheless, it does offer guidelines: a ‘good ANT account’ is ‘a narrative or a description or a proposition where all the actors *do something* and don’t just sit there’ (Latour 2005:128, original emphasis). From my perspective, ANT fits well with the use of ethnographic narrative within anthropology as a means to both tell a story – an account – about the implicated actors, and to elucidate theoretical positions in

order to better understand these actors, but without the need to travel down specific epistemological paths demanded by 'hard' theories.

It is, however, essential to travel down whichever paths the actors follow, which, because of the *agency* required in order for actors to *act*, is a challenging pursuit. Furthermore, like much postmodern anthropological work, ANT applies the concept of agency not just to humans but also to nonhuman entities. Agency can thus be associated to nonhuman animals such as primates (de Waal 2001; Cavalieri 1993; Goodall 1988, 1990, 1993; Patterson and Gordon 1993) and cetaceans (Herzing and White 1999), but it can equally be extended to entities more generally considered inanimate, such as mountains and rivers (Vitebsky 2005), and glaciers (Cruikshank 2005). There is, however, a key difference between the ANT conception of agency, which is essentially a causal functionality, and the anthropological sense of agency which often imputes *intentionality* to the entity in question. For instance, a glacial avalanche can cause people to die, so it indeed has a demonstrable *agency*, but it is not usually considered to have the *intention* to kill people; it can therefore be perceived as an *inanimate* agency.

This is not always the case, and certainly not within anthropological understanding. Cruikshank (2005: 68) explains how the *Tlingit* and *Athapaskan* peoples of the Alaskan/Canadian frontier perceive the glaciers of the Saint Elias Mountains as 'living sentient beings' which are 'conscious and responsive to humans... wilful, sometimes capricious, easily excited by human intemperance but equally placated by quick-witted human responses' (ibid.: 8). In the sense implied by ANT, the glaciers are indeed actors with the capacity to exhibit agency which affects proximate human networks. However, from the *Tlingit* and *Athapaskan* perspectives, these glaciers are perceived as *glacier-persons* who act *intentionally*. The glacier-persons are easily offended by the smell of cooking grease and will react violently to its disrespectful use by humans in their vicinity by intentionally triggering 'a glacier surge of ear-splitting force and great danger' (ibid.: 8).

In a similar way, different peoples can evoke human-like intentionality in nonhuman animals. The *Yup'ik* and *Koyukon* peoples perceive animals as nonhuman *persons* capable of actions driven by an innate sentience and a sometimes intense numinous power. In addition to its great physical powers, the brown bear, for example, is understood to possess a spiritual power over humans, but especially over women and children (Fienup-Riordan 1990; Nelson, 1983). This same agency has been equally attributed to bears by the pastoral community in the Pyrenees (Bobbé 2002), where there remain many myths in which bears abduct and couple with human women. In other Pyrenean narratives, the bear is often perceived as an agent of the devil (Conan 2009:8-9).

Such *intentional* agency can be perceived as being imbued with animacy. Animacy is not a thing or a property which humans can selectively infuse in nonhuman entities whenever it suits them; it is, rather, the

transformative potential of the entire field of relations within which beings of all kinds, more or less person-like or thing-like, continually and reciprocally bring one another into existence' (Ingold 2006:10).

Animacy, then, is what makes things 'real'; it is that which defines an actor. Indeed, Ingold argues it to be an essential characteristic of everything which makes up our environment, and not 'an infusion of spirit into substance, or of agency into materiality, but is rather ontologically prior to their differentiation' (Ingold 2006:10). Nonhuman actors, then, influence everything around them with their own animate agency; it is a prerequisite of their existence.

## **2.2 Monist anthropology**

The actor who has the central, if not the most discussed, role in this dissertation must, of course, be the bear. But what good is an actor if he or she is evidently going to become posthumous before the end of the first act? This concern is precisely what incited me to research the Pyrenean bear reintroduction polemic. I chose to use actor-network theory as my epistemological and hermeneutical method to ascertain whether, indeed, it is valuable to the research of nonhuman (animal) agencies.

As I have indicated, ANT is not a social theory which explains how to interpret our research. Rather, it offers a method which helps us 'to go about systematically recording the world-building abilities of the sites to be documented and registered' (Latour 1999a:21), that is, starting with the foundation and then working upwards (or downwards) and outwards (or inwards). ANT is used to approach a problematic with the goal of eliciting the important relationships, or associations, between actors, but without being limited by predetermined ideas. If this seems akin to an anthropological perspective, Latour agrees, for he sees ANT as 'another enquiry of modernity – sometimes called comparative, symmetrical, or monist anthropology' (1999a:21).

The concept of 'monist anthropology' has a particular appeal to my research. Monism is 'a theory or doctrine that denies the existence of a distinction or duality, such as that between matter and

mind' (ODE 2010). From my personal perspective, one of the most problematic of such dualisms is the human-animal dichotomy, often framed in terms of nature-culture or nature-society. In the Pyrenees, bear predation is the nominal cause of human-animal conflicts. An ANT analysis, as used throughout this dissertation, though, will equally show these conflicts to be human-human, in which case, animals (and the environment) become manipulated to play roles as key actors, but for whom the 'scripts' are interpreted differently depending on which side of the nature-culture divide one chooses to be on. A monist epistemology can help ameliorate the issues surrounding this nature-culture duality which otherwise leads to the environment being 'separated out from human agents and perceived as an exterior non-human habitat' encouraging its 'appropriation, domination, attack, conquest and domestication' (Croll and Parkin 1992:32). The environment in which shepherds keep and graze their sheep can be thought of as being essentially domesticated, interior (closed off or protected), and cultural: it is a human-dominated habitat. At the same time, however, this same environment is a space in which predators such as bears and wolves need to survive and, as such, it is 'wild', exterior, and thus, nature. This blurring of boundaries between a human, cultural landscape, and a nonhuman, natural landscape leads to a problematic polarisation within the human imaginary (see Knight 2000, Milton 1993 for numerous examples).

A monist anthropology denies this nature-culture dualism, providing instead a unified cosmology common to the worldviews of pre-modern societies, in which 'people, their indigenous knowledge and their environment exist inseparably' (Hornborg 1996:50; cf. Croll and Parkin 1992)<sup>7</sup>. Hornborg (1996) suggests that a monist anthropology can allow us to learn from such pre-modern societies, for it is through transcending such a Cartesian dualism that we will be able to contextualise such knowledge in such a way as to create and maintain a sustainable ecological understanding. The actors within the sphere of research develop 'a meaning and identity solely through the *relations* that constitute them as such' (Descola 1996:98, my emphasis): they become *meaning-full* by being part of networks in which 'local systems of relations are described... as *variations* within a group of *transformations* (ibid.:99, my emphasis). Precisely due to the refusal of the nature-culture dichotomy, these ever-changing 'variations' become apparent and comprehensible 'within a single set of relations' (ibid.:99) which encompasses all entities, whether human, nonhuman, or hybrid (cf. Haraway 1991).

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<sup>7</sup> Indeed, this can also be seen in what we might call post-modern and New Age communities where people try to become closer to, or 'reconnect' with, nature (cf. Lindquist 2000).

## 2.3 Matters of ‘fact’ and matters of ‘concern’

ANT deals with this monism of the nature-culture divide by making no assumptions whatsoever about any structural theory or ontology which would otherwise underlie the research: there are no predetermined conceptual models. Conventional social theory gives substance to an underlying foundation called the ‘social’, a ‘sociology of the social’ full of such assumptions (Latour 2005:9, 97). In contrast, ANT is a ‘sociology of associations’ which develop and change continuously between actors and networks (ibid.:9). For an ANT scholar to assume anything of any underlying structure would amount to making presumptions of what the world being studied is made of, and would be problematic. The world governed by the ‘social’ is based on ‘matters of fact’ including the difference and opposition between nature and culture, between human and animal: ANT scholars, however, treat such elements as ‘matters of concern’ (Latour 2004a:244). Whereas ‘matters of fact’ are thought of as indisputable, *discovered* by experts and not constructed, ‘matters of concern’ remain open-ended, often with ‘unexpected consequences’ (ibid.:244); they are constructed by the associations which develop between and within multiple entities, and any consequences are acknowledged as having essential relationships to the ‘Constitutional’<sup>8</sup> (ibid.:244) fabric from which they are created. That is to say that unlike ‘facts’, which are rarely thought of as social constructions, ‘matters of concern’ are intrinsically an amalgam of data and influences which pertain to the cultural, social, economic, political, and ecological beliefs and values of the individual actor(s) and their collective associations within network(s). Such a holistic view allows us to see the environment as a unified *natureculture*, with no hyphenated, divisive preconceptions. It becomes an inclusive totality encompassing associations between humans and self (*Eigenwelt*), humans and humans (*Mitwelt*), humans and society (*Menschenwelt*), and humans and our surrounding environment (*Umwelt*) (Binswanger 1963; cf. Ingold 2000b: 176). We no longer simply live *in* the world; we exist by *being-in-the-world* (Binswanger 1963), along with shepherds, sheep, and bears. The Pyrenean landscape is, thus, no longer perceived as a domestic-sheep-pasture *versus* a wild-bear-habitat; it is a sheep-bear-pasture-habitat with humans located around the periphery, but nevertheless sharing this holistic environment (cf. Ingold 2000c:218). However, this becomes apparent only when we begin by assuming nothing, questioning the roles of all the actors, and challenging all the ‘facts’ which influence them.

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<sup>8</sup> Latour uses the word ‘Constitution’, often with the prefix ‘new’, to describe an epistemology in which nature and politics (culture) are not dichotomous and opposing elements. It thus includes ‘humans and nonhumans, objects and subjects’ (Latour 2004a:239). The new Constitution avoids ‘wars between realism and social constructivism that do not concern us in the least; (ibid.:42), and ‘by speaking openly of political epistemology, provided that we bring the sciences – and not Science – together with the question of the collective – and not with the social world understood as a prison’ (ibid.:50)

## 2.4 Who speaks for whom?

In order to express their proper agency, actors must *translate* their roles, actions, and associations into continuously evolving realities. This process, known as *translation*, encompasses '[t]he methods by which an actor enrolls others' (Callon et al. 1986:xviii). Some actors will demonstrate a greater capacity for translating the associations of the actor-network(s); in this process, personal and group agendas will be formed. Any 'power' which manifests itself is 'associative, invested not in entities but in relations' (Woods 1997:323); it arises from the inter-connective *associations* which form an actor-network and not as a *given property* of specific actors (Callon 1986). Power becomes diffused through the *voice* of the network; but who speaks for whom, and therefore drives the discursive momentum of the actor-network (ibid.:12)?

Appadurai notes a 'curious double ventriloquism' in anthropological fieldwork which, I think, equally applies to this voice of actor-networks, particularly when dealing with actors who are nonhuman animals:

While one part of our traditions dictates that we be the transparent medium for the voices of those we encounter in the field... it is equally true that we find in what we hear some of what we have been taught to expect by our own training, reading, and cultural backgrounds. Thus our informants are often *made* to speak for us (Appadurai 1988:16-7, my emphasis).

As Appadurai so eloquently points out, in *making* our informants speak for us, we are imposing our own prejudices and cultural values on what we hear. Are the voices which represent the bear speaking for the bears, or are they simply human ventriloquists? Anthropomorphism essentially guarantees that they are not speaking 'ursidae-centrally' – how can we possibly know precisely what the bears want from *their* synaesthetic perspectives? Do Slovenian bears *want* to emigrate to the Pyrenees? Do they *wish* to live in a human, culturally constructed mountain landscape, crisscrossed at every point by human artefacts, some, like the intensive road network, highly dangerous to their survival? In Callon's classic ANT study of scientists, fishermen, and scallops, he observed that a few scallops 'speak' for the 'uncountable others' (1986:12): this may be so, but can we then assume that a few *people* speak for the uncountable people who in turn 'think' for the surviving Pyrenean bears and their potential descendants. Furthermore, as the voice of these (often) self-elected *human* spokespersons gathers strength, it appropriates power through its associative relationships, and changes the dynamics of the network, sometimes coming to dominate it. Such spokespersons are 'subduing others, by insinuating themselves into others' bodies and by turning them into agents of their own volition' (Shapin 1988: 534). Callon, himself, declares that 'to speak

for others is to first *silence* those in whose name we speak' (1986:14, my emphasis). The objective of the pro-bear actor-networks was to *silence* the opposition of Pyrenean pastoralists who rejected the idea of a renewed and enforced cohabitation with bears. In order to be themselves heard, the pastoral dissenters formed opposing actor-networks which, in addition to trying to silence the environmentalist position, also sought to silence the voice of some of their own *confrères*, other *bergers* and *éleveurs* who agreed to attempt a new cohabitation with the bear. The *opposing* pastoralists, then, speak as though they represent *all* Pyrenean pastoralists, much as a small group of Makah men conflated their personal views with the 'identity of an entire culture' when they effectively 'silenced' women elders who were promoting a 'more' ecological and ethical cultural identity programme by opposing the reintroduction of Makah whale hunting in the American northwest (Gaard 2001:16-7).

In a book explaining the 'anger' of (all) Pyrenean pastoralists over the bear reintroductions, Bérot, an *éleveuse*, elected herself as their spokesperson:

We're not intellectuals. Our work is manual, physical. If I write today it is in the name of all those who cannot do so. Few of us are highly qualified, doctors of ecology or biology. However, many are founts of knowledge. So each of us, in our own little way, tries to do what's possible so that our fight is understood by the general public. I write. Others speak. In the mountain, in the street, each, as he (sic) is able, tries to move the debate forward (Bérot 2006:52).

For Bérot, however, representing pastoralists who 'cannot' speak for themselves is synonymous with conflating *all* Pyrenean pastoralists with those who oppose cohabitation with the bear. Similarly, moving the 'debate' forward is synonymous with silencing the voice of bear-reintroduction supporters and, ultimately, silencing the bear himself<sup>9</sup>.

## 2.5 Moments of translation

These various 'spokespersons' *translate* momentary meanings, and *associations*, by giving them a specific voice which is extended to all of the actors within the network, human and nonhuman. Callon categorises four specific 'moments of translation... during which the identity of actors, the possibility of interaction and the margins of manoeuvre are negotiated and delimited' (1986:6).

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<sup>9</sup> In no way do I mean to imply any sexism by choosing to use masculine pronouns when describing the bear. I have chosen to do so to respect the fact that in many cultures, the bear is thought of as almost human and usually as a man (Rockwell 1991), and specifically, in the Pyrenees, legends such as Jean de l'Ours often reflect stories of a man-bear who absconds with a human woman (de Marliave 2008:213-18). As such, the bear is usually spoken of as 'he'.

These moments of translation are: *problematization*<sup>10</sup>, *interessement*, *enrolment*, and *mobilisation* (ibid.:6ff).

### 2.5.1 Problematization

*Problematization* is the means of defining the problem such that the spokespersons establish themselves as ‘an obligatory passage point<sup>11</sup> in the network in the relations’ (Callon 1986:8), therefore creating obstacles to prevent other actors from attaining their particular (counter)-objectives (ibid.:25). The reintroduction was problematized<sup>12</sup> around three propositional ‘facts’:

1. Pastoralists and other Pyreneans have always cohabited with bears;
2. The bear is an essential part of the Pyrenean culture, ecosystem and biodiversity;
3. Reintroduction of bears and cohabitation with pastoralism is the only way this protected species can be saved.

Each of these ‘facts’ was designed to silence the potential opposition of pastoralists who have, for decades, publicly maintained that pastoral cohabitation with bears and other large predators is impossible (<http://iphb.free.fr>).

### 2.5.2 Interessement

Once defined, problematizations require that actors be continuously ‘interested’ in their motivations. This process is what Callon describes as *interessement*, etymologically rooted in ‘inter – esse’ (1986:8-9), suggesting being ‘in between... interposed’. Interessement is often achieved through the use of ‘devices which can be placed between’ the various actors who would, otherwise, wish ‘to define their identities differently’ (ibid.:9). In this manner, identities and motivations, and thus the interests – interessements – of individual actors, are *manipulated* through the use of such ‘devices’ (ibid.:9ff, 35). Devices can be anything: scientists, brochures, scientific studies, even IUCN classifications. They invariably *speak* for one group of actors to interest others. This is of particular importance regarding spokespersons who represent nonhuman animals, and who

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<sup>10</sup> Callon is inconsistent in his spelling, alternately using ‘problematization’ (1986:1, 25) and ‘problematization’ (1986:6-10, 15, 17-9). For consistency, I prefer the Anglicised version with an ‘s’.

<sup>11</sup> Obligatory passage points will be discussed in detail in Chapter 4.

<sup>12</sup> The nature of this problematization has remained essentially the same since the earliest bear conservation initiatives were implemented in the French Pyrenees several decades ago, but are most clearly articulated in the documentation which supported the most recent reintroduction programme in 2006 (MEDD 2006).

interpose themselves between the animals and other actors. In speaking for a nonhuman animal actor, the human actor is expressing an understanding of the nonhuman animal's needs and desires; there is an implicit meaningful interspecific communication between the spokesperson and the nonhuman actor(s). Despite significant evidence to the credibility of such<sup>13</sup>, human-animal communications remain a highly controversial issue<sup>14</sup>. More practically, though, communications between humans and large, potentially dangerous wild predators, is unfeasible. Therefore, in speaking *for* such actors as the bear, extreme care and integrity are needed<sup>15</sup>.

### 2.5.3 Enrolment

*Enrolment* is 'the group of multilateral negotiations, trials of strength and tricks that accompany the interselements and enable them to succeed' (Callon 1986:10). It is assumed that in order to interest actors, other interests and relationships which potentially conflict with the desired result will be severed. Callon (ibid:11) called these (re)motivators 'enemy forces'; in his case study, such enemy forces included water currents, parasites, the depth of the water, and alternative objects, any of which had the potential agency to 'coerce' the scallop larvae into refuting the interselement device desired by the scientific researchers – towlines upon which the scientists wished the scallops to anchor themselves. Furthermore, just as the devices used in interselement are designed to coerce or 'translate' the interests of the actors to the needs of the group, enrolment (and counter-enrolment by other groups) can be realised through 'physical violence... seduction, transaction, consent without discussion' (ibid.:12).

The whole point of such interselement and subsequent enrolment of actors into an actor-network is to mobilise definitive action in order to achieve the objectives defined in the problematisation.

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<sup>13</sup> There are many studies which support nonhuman animal communications between themselves<sup>13</sup> (Beckoff & Pierce 2009; de Waal 2009; White 2007) and, likewise, interspecies communications<sup>13</sup>. Examples include primates (Patterson & Gordon 1993; Savage-Rumbaugh 1997), cetaceans (Herzing & White 1999), dogs (Wolfe 2008), and horses (Argent 2010, forthcoming; Brandt 2004). Much of the recent literature (as cited) focusses on communications as part of the empathetic relationships which exist between nonhuman animal species. 'Communication' means many things to many people, but when speaking in terms of interspecific relationships, it is rarely linguistic as understood by humans. Wolfe (2008) discusses the broader relationships and suggests that we consider 'a shared trans-species being-in-the-world constituted by complex relations of trust, respect, dependence, and communications (as anyone who has ever trained – or relied upon – a service dog would be the first to tell you)'. Indeed, such an understanding has been evoked to me by *bergers* when speaking of the relationship they have with their working dogs.

<sup>14</sup> This is largely due to any 'understandings' being intrinsically anthropocentrically biased. It is particularly challenging to envision nonhuman animals' perceptions of complex philosophical or abstract notions such as imminent death or extinction. However, Patterson and Gordon, amongst others, would strongly disagree: they have reported on some remarkable 'discussions' touching on such philosophical issues with Koko the gorilla (1993).

<sup>15</sup> Of course, in principle this should apply equally to speaking for humans, especially those who are disadvantaged such as children, the elderly, the sick, women, the poor – indeed all who are mute, metaphorically or otherwise.

## 2.5.4 Mobilisation

*Mobilisation* occurs when enrolled entities come together, encouraged into action by others who ‘speak’<sup>16</sup> on their behalf and for the assembled network (Callon 1986:12). This assumes a democratic truism, that ‘the masses at no time contradict’ the spokespersons, that what ‘is true for a few is true for the whole of the population’ (ibid.: 12). If not, there would be a *fifth* moment of translation, that of dissent – which Callon called ‘dissidence’ (ibid.:15ff); for what happens if the spokespersons do *not* speak for the assembled network?

## 2.5.5 Dissent: ‘No’ to the bear

In Callon’s case study, he notes that:

Interessement, if successful, confirms (more or less completely) the validity of the problematization and the alliance it implies. In this particular case study, the problematization is eventually refuted (Callon 1986:9-10).

The same is true of the bear reintroduction programme which is vehemently opposed by a powerful segment of Pyrenean pastoralism. As I will later explain, each fact advanced in the problematisation of the bear reintroduction network has been, and continues to be, systematically and methodically challenged by an anti-bear/anti-reintroduction actor network.

## 2.6 Summary

In this chapter I have introduced Actor-Network Theory which favours a monistic ontology which refuses any pre-existing ‘theory’ based on supposed ‘facts’. John Law describes this process as starting with a ‘clean slate’ (1992:2) upon which each actor must be mapped. In following the ‘actors themselves’ (Latour 2005:68), the alleged ‘facts’ will reveal themselves to be nothing more than culturally-loaded hypotheses which are systematically challenged based on each actor’s associations and interactions. The actors are quite conscious of their roles and leave ‘traces’ of their

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<sup>16</sup> We must remember that to speak is to communicate in one form or another. When dealing with nonhuman actors this can be quite abstract as, for example, a nonhuman animal performing some act which ‘speaks’ for its actions, such as a dog biting a master who torments it. Similarly, a nonhuman actor such as a legal statute might transform an act of hunting into an act of poaching.

activities and associations which do not have to be explained by an underlying ‘social’ structure.

Latour puts it like this:

Actors know what they do and we have to learn from them not only what they do, but how and why they do it. It is *us* the social scientists, who lack knowledge of what they do, and not *they* who are missing the explanation of why they are unwittingly manipulated by forces exterior to themselves and known to the social scientist’s powerful gaze and methods (1999:19; original emphasis).

As I have indicated, given my predisposition to be ‘pro’ bear conservation, this was problematic for me. After many months of participating in forums, listening to ‘anti’ bear protesters, it had seemed to me that they everyone was reading from the same script, which somehow had been cut and pasted without the key page explaining the *real* reason for their opposition. I accepted that it was *I* who lacked the knowledge of what they were doing, and that *they* were neither missing something nor being unwittingly manipulated by exterior forces. Nevertheless, they seemed to be hiding some key motivation. An answer was ultimately proposed by Latour:

In ANT, it is not permitted to say: “No one mentions it. I have no proof but I know there is some hidden actor at work here behind the scene.” This is conspiracy theory, not social theory (2005:53).

The ‘anti’ bear people were probably telling me everything they knew, believed, and felt, but like most others, I was, initially perhaps, simply not listening intently enough. So ANT, then, provides us with a ‘method’ with which to proceed from a ‘clean slate’, and with which to hopefully avoid the traps of explaining the actions and interactions of actors through an invisible ‘social’, and on taken-for-granted ontological ‘facts’.

In Chapter 3, I will briefly examine the current state of conservation management theory and practice, focussing on bear conservation in the Pyrenees. This will allow me to create a clean slate to examine the various actor-networks and their interactions with, and reactions to, the bear reintroduction problematisation.

# Chapter 3

## The Bear Conservation Actor-Network

### 3.1 Conservation Management

Early conservation management was based on a ‘fortress’ mentality in which unsustainable ecological ‘islands’ were created separate from human activities (Adger et al. 2001; Brown 2002; Holling and Meffe 1996). Such programmes were widely criticised: their expert-led command-and-control management approach alienated local resource users from their land (Adger et al. 2001; Brown 2002; Holling and Meffe 1996), causing conflict between local people who were often already marginalised and disadvantaged due to their geopolitical emplacement on the ‘periphery’ of a region or state controlled by a centralised ‘core’ political group (Wallerstein 1974). Furthermore, such programmes idealised a ‘pristine wilderness’ far from the realities of a landscape which has been significantly modified through anthropogenic progresses (Cronon 1996).

Contemporary methodologies try to correct these criticisms by giving local actors significant decision-making powers as a means of devolving authority from centralised state control (cf. Conley & Moote 2003:372). They strive to integrate ecological conservation and sustainable development with local participatory management (Blaikie & Jeanrenaud 1997; Brown 2002). These ‘Integrated Conservation and Development Projects’ (Blaikie & Jeanrenaud 1997:64) concentrate on three ‘pillars’: social, economic, and ecological (Blackburn, 2007)<sup>17</sup>. Wild animal conservation, then, is now seen as being integral to holistic biodiversity solutions (Lulka 2004) within which humans have to ‘fit in’ (Grumbine 1994:35).

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<sup>17</sup> These are also respectively referred to as populist, neoliberal, and ecological pillars (see, for examples, Blaikie & Jeanrenaud 1997; Hulme & Murphree 1999).

'New' conservation, however, is not without criticism. Community participation and collaboration inevitably involve a plurality of understandings amongst actors with often competing interests (Blaikie & Jeanrenaud 1997:67): the 'power flows' resulting from the relationships between policymakers, scientists, managers, and citizens, are more competitive than cooperative (Grumbine 1994:34). Ecological approaches are inevitably still science-led, often neglecting the social and cultural issues (Blaikie & Jeanrenaud 1997; Grumbine 1994). Finally, any approach which has economic undertones is, today, an extension of free-market capitalism (Hughes & Flintan 2001:4; Worah 2000): the inherent incompatibility between capitalism and the environment is particularly worrisome (Blaikie & Jeanrenaud 1997:64; Willaims 2010) and well documented – though largely ignored. Indeed, over a century ago, Marx wrote that:

Capitalist production... disturbs the metabolic interaction between man (sic) and the earth... Moreover, all progress in capitalist agriculture is a progress in the art, not only of robbing the worker, but of robbing the soil (Marx 1990 [1863]: 637-8).

The state frequently plays the principal role in defining the environmental problem, formulating policy, and implementing the project; it is usually the most powerful actor in conservation programmes (Blaikie & Jeanrenaud 1997:62). Many programmes, then, remain essentially top-down, expert-led processes which fail to effectively engage local stakeholders (Blaikie & Jeanrenaud 1997; Grumbine 1994).

### **3.2 The State Approach to the Reintroductions**

The French state has overtly adopted this 'new' conservation during its two initial programmes to reintroduce bears into the French Pyrenees, and has endeavoured to involve all implicated stakeholders (MEDD 2006:43). The first initiative, resulting in three bears being released in 1996 and 1997, followed 'numerous information measures... to sensitise' local actors (MEDD 2006:43): a press release was sent to the Midi-Pyrénées Prefecture in January, 1995; an 'information letter' was then distributed to local political leaders, the Chamber of Agriculture, and the Hunting Federation; a year later, sixty meetings with local decision-makers and 'social professionals', and twelve public meetings were held (ibid.). 'Other' preoccupying issues, 'notably, health and sanitary problems', assured inadequate agricultural participation (MEDD 2006:43). The state acknowledged this inadequacy, but nevertheless claimed strong overall support for the reintroduction programme (ibid.:65).

Studies to determine the lessons-learned concluded that local pastoral and political actors were increasingly opposed to the programme and that, without their buy-in, failure was assured (Diren 1996:56; Quenette 2001:115, 119). Therefore, in 2005, prior to the second round of reintroductions which eventually released an additional four females and one male (MEDD 2006:14, 89)<sup>18</sup>, the state again sought local stakeholders' support. This time, an internet survey attracted 1,281 respondents, and 170 Pyreneans were randomly selected by a polling company to participate in round-table discussions to represent the general population (Bérot 2006:37; MEDD 2006b:10, 30). Bérot had this to say:

How many amongst these are really concerned by the bear? The *éleveurs* and *bergers* of the mountain, well, they're not very numerous who use the Internet... Even me, never mind that my previous career was in information technology, and that the subject of the bear is close to my heart, well, I never knew that this inquest even existed (Bérot 2006:37).

Separated by ten years, these two communications initiatives represented the sum of the interaction with the *grand public* (MEDD 2006b:9-48). Of the 1,281 internet respondents, only 291 were Pyrenean residents, amongst whom, just twenty-four were agriculturalists from departments impacted by the bear's presence<sup>19</sup> (MEDD 2006b:30-1). The round-table discussions, which gathered 'the representative feelings of a large diversity of the population' (ibid.:10), included eighteen agriculturalists (ibid.:11). The consultations concluded that agriculturalists were almost unanimously opposed to bear reintroductions, whereas the rest of the population sample was generally favourable. The key pastoral insights included:

- The consultations were a *fait accompli* (MEDD 2006b:12-3, 32); the state decision had been announced on 13<sup>th</sup> January, 2005, by Serge Lepeltier, the Minister of Ecology, prior to any discussion with local stakeholders (ibid.:72);
- Any reintroduction programme imposed on pastoralists would be totally opposed (ibid.:43);
- Agriculturalists 'refused in principle the measures recommended to assist [pastoralism] because they refused to envisage the presence of the bear' (ibid.:12-3);
- The bear had already 'disappeared' from the Pyrenees due to its 'incompatibility' with human activities (33), and the mountains were 'no longer adapted to bears' (ibid.:14, 33);
- The *éleveurs* were the 'most implicated' and were, just like the bear, a 'dying species' (ibid.:17).

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<sup>18</sup> Of the total of eight Slovenian bears which were released, four are still alive, one was last seen in 2008, two died in accidents, and one was killed by hunters.

<sup>19</sup> A total of forty-six agriculturalists participated from all over France.

### 3.3 The main actors

The root of the word ‘actor’ is ‘act’, from the Latin *actus*, meaning ‘doing’, or ‘a part in a play’ (www.etymonline.com): it is a performance. The performance can be enacted in a continuum extending from pure fiction to pure ‘truth’, and can be performed with any degree of sincerity. Paradoxically, then, a human actor might sincerely believe his or her role to be ‘truthful’, whereas, in fact, it is anything but that. In the context of Pyrenean bear conservation, actors can be ‘for’ or ‘against’ the bear’s reintroduction (or anywhere in between). This is not necessarily the same as being ‘for’ or ‘against’ the *bear itself*: many pastoralists argue that they are personally supportive of the bear’s right to survive in nature, but are opposed to a forced *introduction* of Slovenian bears into the Pyrenees (Bérot 2006:33. 49).

Starting from a ‘clean slate’ (Law 1992:2), the collective actors can be thought of as the Bear Conservation Actor-Network (figure 2).



Figure 2. The main actors placed on a ‘clean slate’.

I have placed the *Ministère de l'Écologie, du Développement Durable*<sup>20</sup> (MEDD), slightly more ‘against’ than ‘for’ the programme’s success. Given that the state is the key driver, this might seem

<sup>20</sup> Ministry of Ecology and Sustainable Development. Today, the ministry also includes transport and housing: *Ministère de l'Écologie, du Développement Durable, des transports et du logement* (<http://www.developpement-durable.gouv.fr/>).

paradoxical. However, despite several years of researching the issues, it is still not clear to me that the state is altruistically acting on the bear's behalf: rather, it can be seen to be doing the *minimum* necessary to comply with international legal agreements and to enhance the development of intensive agriculture and tourism<sup>21</sup>. Indeed, following a recent complaint to the European Commission by pro-bear non government organisations (NGO), France has been warned that it is failing to honour its legal commitments to save the Pyrenean bear population under Articles 12 and 22 of the Habitats Directive (European Parliament 2011).

The state's problematisation<sup>22</sup> is supported and challenged by many diverse actors, although in this dissertation I am interested only in those which implicate pastoralism. In general, these actors become interested in, and enrol in the problematisations of the various NGOs (figure 3) which exert direct influence on the main problematisation(s) of the bear conservation network.

IPHB – <i>l'Institution Patrimoniale du Haut-Béarn</i> Patrimonial Institution of Haut-Béarn	Against
ADDIP – <i>l'Association pour le Développement Durable de l'Identité des Pyrénées</i> Association for Sustainable Development and the Pyrenean Identity	Against
ASPAP – <i>l'Association pour la Sauvegarde du Patrimoine d'Ariège-Pyrénées</i> Association to Save the Patrimony of Ariège-Pyrénées	Against
ASPP – <i>l'Association pour la Sauvegarde du Patrimoine Pyrénéen</i> Association to Save Pyrenean Patrimony	Against
Ferus	For
Pays de l'Ours – Adet	For
FIEP – Fonds d'Intervention Eco-Pastoral Eco-Pastoral Intervention Fund	For
Réseau Ours Brun (Brown Bear Network) Includes - L'Office National de la Chasse et de la Faune Sauvage (National Hunting and Wildlife Agency) - l'Equipe Technique Ours (Bear Technical Team) - l'Office National des Forêts (National Forestry Agency) Parc National des Pyrénées (Pyrenean National Park) - FIEP	Neutral to For depending on participant

Figure 3. The major NGOs which participate in the bear conservation actor-network.

<sup>21</sup> This becomes evident through an analysis of the European Common Agricultural Policy which is beyond the scope of this dissertation (Marcon 2011; IE 2009; Moriamé 2004; Wild Europe 2010).

<sup>22</sup> See Chapter 2.5.1

Nonhuman actors play important roles in the bear reintroduction network. Such actors include the bear, of course, but also sheep, working dogs, other predators which ‘interest’ today’s pastoralists, including stray dogs<sup>23</sup>, wolves<sup>24</sup>, lynx, and vultures<sup>25</sup>, and most surprisingly, flies<sup>26</sup>. There are also less obvious nonhuman actors such as storms; climate change; the European Common Agricultural Policy; subsidies; the devices and methods used to capture, release, and monitor the bears; as well as more abstract notions such as capitalism and globalisation. Particularly important is the role played by legal treaties, specifically including the Berne Convention (1979), the Rio Convention on Biological Diversity (1992), the European Commission’s Habitats Directive (1992 – Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora), and various Council of Europe mandates (MEDD 2006:10-2). Underlying much of this legal framework is the IUCN Red List<sup>27</sup>, an ‘authority’ on the conservation status of species worldwide.

In order to realise their interests and achieve their goals, all actors must pass through what Callon (1986) calls an ‘obligatory passage point’ (OPP). To expand on Van Gennepe’s words, this is a sort of ‘right of passage’ (2004[1960]). Following Woods (1997:328-9), I have developed a table which indicates the OPP for each of the major actors (figure 4). Key actors define themselves ‘in such a way as to establish themselves as an obligatory passage point in the network of relationships they were building’ (Callon 1986:6): in this way they defend and promote their own problematisation(s) while simultaneously creating obstacles to deter dissenting actors. Each OPP is an autonomous entity with its own proper agency and is, therefore, an actor-network subject to all the same influences as other actors in the network. An OPP can be a plan, or document (Woods 1997:328-9), or an abstract notion like ‘science’ itself (Callon 1986:6).

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<sup>23</sup> One of the major causes of sheep depredations in the Pyrenees are dogs – some say they are strays, others say that they are just uncontrolled, local dogs, and yet others prefer to not even acknowledge their existence or impact (cf. Cummins 2009:239, 249ff.). And yet it is argued that stray dogs kill some 100,000 sheep each year in France<sup>23</sup>, including at least 1,000 in the Pyrenees alone (Landry 1998:13).

<sup>24</sup> The wolf has made a remarkable come-back in the French Alps, and DNA evidence has shown that at least three wolves have found their own way from Italy into the Eastern Pyrenees. It is well accepted that it is only a matter of time before the wolf population expands and extends its range across the mountains to where the availability of prey is easiest – where there are free-grazing sheep (Benhammou 2004).

<sup>25</sup> Vultures are thought of as carrion eaters, but there has been a significant resurgence of the Pyrenean griffin vulture, *Gyps fulvus*, population over the last ten years or so, and many pastoralists have observed that its behaviour has changed, that it has become a predator which attacks and kills young or weak sheep (Independent 2004).

<sup>26</sup> The fly, or more precisely, its larvae, represents a major threat to sheep. In particular, *Wohlfahrtia magnifica*, which is very poorly researched relative to the Pyrenees, was originally native to warm temperate and sub-desert regions, but due to the warming climate has migrated to more northern landscapes including the Pyrenees, (Martínez & Leclercq 1994:53; cf. Wall et al. 2011). The fly lays its eggs in exposed areas of the hooves, open wounds, or damp areas of the sheep’s body, causing myiasis (also known as screwworm). The larvae, which eat away inside the sheep’s flesh, can kill the animal in as few as four days. By 1990, between 4% and 16% of sheep were found to be infected in the Western Pyrenees and the Haute-Pyrenees (Martínez & Leclercq 1994:56). Treatment is not particularly difficult, but the only real solution is full-time observation of the animals in order to detect symptoms early enough (cf. Reynes 2005:57).

<sup>27</sup> International Union for the Conservation of Nature.

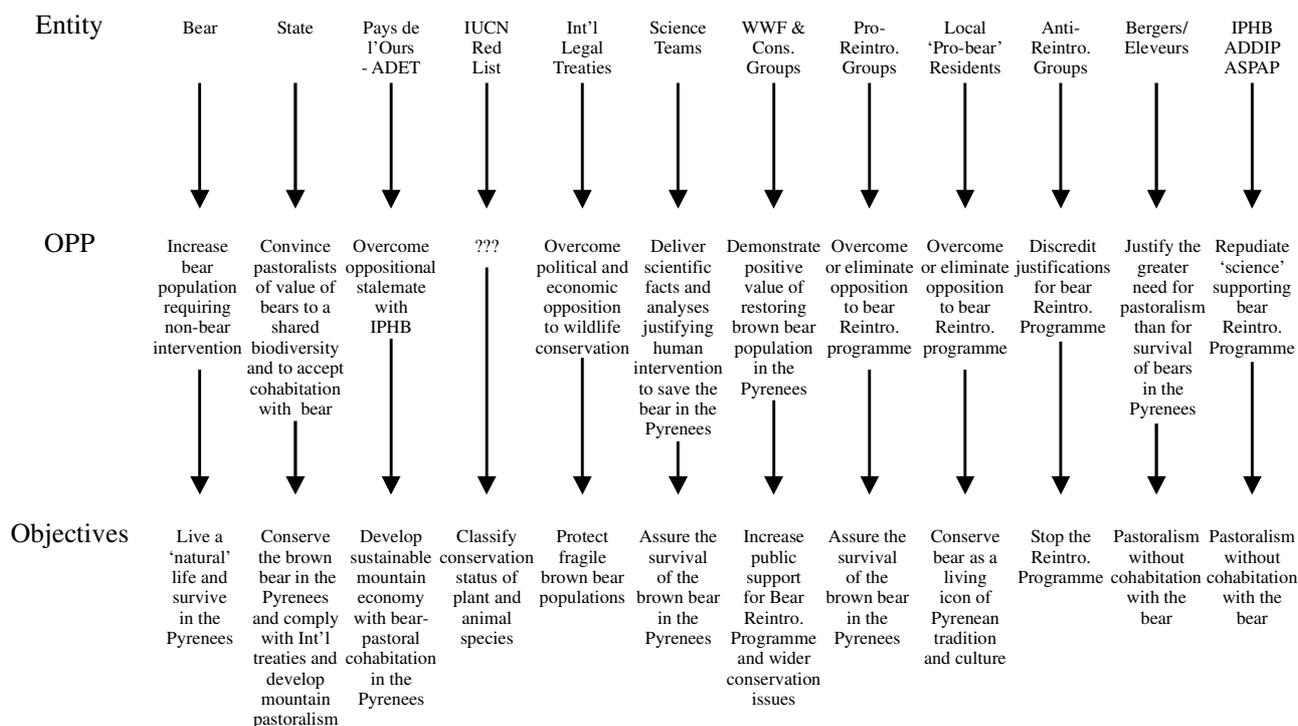


Figure 4. Obligatory Points of Passage within the Bear Conservation Network.

The OPP for the Red List, which simply classifies plant and animal species according to their risk of extinction, is challenging to define. The polar bear is currently considered 'Vulnerable', whereas brown bears are of 'Least Concern' (IUCN 2010); it would seem that as the Red List has no interests to realise relative to the Pyrenean brown bear, then it should have no role as an actor in the bear reintroduction. This is why it is marked as a question. Nevertheless, the Red List is a vital device used to justify legal treaties which *do* have roles to play as nonhuman actors; indeed, it can also be used as a device by opponents to contest the network's problematisation.

Legal treaties, supported by scientific research, identify bears as a 'focal' species, essential to the well-being of its particular ecosystem, and therefore requiring protection (Donlan et al. 2006; Jeo et al. 1999). These treaties become devices which enable the state to impose the bear reintroduction programme. Without human intervention, the French government claimed, the Pyrenean brown bear, a *protected* species, would become extinct (MEDD 2006:14, 39). Presented as fact, this statement does not need to defend the separate question of whether the brown bear *should* be a protected species. Any challenge to the 'legality' of the reintroduction programme, then, would need to attack the 'protected' status of the bear by refuting the science underlying the Red List conclusions, and perhaps, also, the science which claims that bears are necessary for the ecological resilience of the biosphere.

‘Science’ is a key actor. Theoretically and epistemologically, science is totally neutral on any subjective needs for the bear’s survival. However, scientists are themselves human, the social products of a group which ‘colours’ its research with personal and collective values and ideas: placing science outside of culture in order to research nature is simply impossible (Latour 1987, 2004a, 2005). Therefore, as Bourdieu (1990:180) observed, conferring the *authority* of science on social issues is challenging, for ‘the statutory holder of this power’ can also be a ‘ *censor*’ of free and ‘true’ information (cf. Bourdieu 1987:2-3; Latour 2004a:14). Indeed, the full implications of science as an actor are paramount to understanding the bear conservation network, enmeshed as it is with the state, the ‘owner’ of the conservation programme. The complexity of the resulting associations comes to light only when also considering the relationship of the state-science actor-network with a key pastoral spokesperson, the *Institution Patrimoniale du Haut-Béarn*.

### **3.4 The State and the *Institution Patrimoniale de Haute-Béarn* - IPHB**

In the early 1990s, while expressing its commitment to conserving the natural environment of the Pyrenees – including its focal species, the brown bear – the state was equally concerned with an ongoing economic programme to develop the road communications infrastructure of the central and western Pyrenean region in order to support forestry, agriculture, and tourism<sup>28</sup> (Benhammou 2005:80). Previous research had indicated that any such development would be catastrophic for the survival of the bear population and should be halted immediately (Röben 1977:247).

Following ‘new’ conservation best-practices, the state assigned the balancing act of managing Pyrenean conservation and development to a local NGO, the *Institution Patrimoniale du Haut-Béarn* (IPHB). The IPBH was directed by Jean Lassalle, an elected official in Béarn, and by Henri Ollagnon, a Parisian scholar appointed by the state; both were open supporters of the agricultural lobbies and concurred on the (im)possibilities of bear-pastoral cohabitation (Benhammou 2005:80-1). Together, they became political/scientific spokespersons for the local cause, which, Benhammou (2005:82) accused, was nothing more than providing ‘the illusion that [they were] going to save the bear while developing the valleys’.

Presaging a recurring theme of the ‘periphery’ defending its rights against the ‘core’ (Wallerstein 1974), Lassalle noted that ‘many battles [had] been necessary... against a Parisian centralism cut

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<sup>28</sup> Taken in its larger context, each of these initiatives had its own group of actor-networks with the potential to interact with the bear conservation actor-network.

off from reality' before the state had finally conceded power to local stakeholders (Ferrère 2000:37). The IPHB was thus appointed as the official 'spokesperson' for two of the principal actors: the bear, and the actor-network comprising (mostly) pastoralists affected by its continued presence. Lassalle was a firm opponent of environmental protection (Benhammou 2005:92), and enrolling him as the key spokesperson for the well-being of bears recalls Larry Flynt's famous indictment of 'democratic' majority rule, which cannot work when there are 'five wolves and one sheep voting on what to have for supper' (Nickell 2005:116).

According to the IPHB's website, its main objectives are to modernise/improve pastoral working conditions and to assure safety for livestock while assuring 'the maintenance of a brown bear population in the *Haut-Béarn* within a quality habitat, all the while improving their cohabitation with human activities' (<http://iphb.free.fr>). There is an inherent conflict of interests, for the IPHB indicates no willingness to modify pastoral *activities* to improve cohabitation with the bear; rather, it implies that any such effort needs to be devoted to changing the bear's behaviour or habitat – for example, as is frequently recommended, by keeping bears in an 'enclosed' park<sup>29</sup> (MEDD 2006b:20-1). This potential conflict of interests challenges the state's judgement – and perhaps motives – in giving such power and autonomy over a large carnivore conservation programme to the IPHB and not to a consortium of stakeholders with multiple interests.

Lassalle immediately developed devices intended to undermine the science supporting the bear reintroduction programme (Mermet and Benhammou 2005:129). He refuted the methodology used to estimate the extant bear population, calling into doubt the estimate of 'five to seven bears', and demanded a new study to provide a more precise figure.

Although the methodology was quickly vindicated, and a figure of five extant bears 'provisionally' accepted while awaiting new research, from a conservation perspective, a population of five or seven bears was irrelevant: both demonstrated their extreme precarity. Lassalle then 'violently rejected' the different bear-development scenarios proposed by the state, claiming they all supported 'predetermined' objectives; in particular, Lassalle refused all dialogue on the issue of pastoral-bear cohabitation, a position the IPHB has maintained to this day. The ontological importance of the challenges posed by Lassalle was to slow down the process to the detriment of the bear's survival, a *modus operandi* which also continues today (Mermet and Benhammou 2005:129).

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<sup>29</sup> My interpretation is also based on a contextualisation formed after several years of dialogue with pastoralists, many of whom adhere to the IPHB organisation. One of the most common suggestions they make regarding the well-being of the bear is that it should be maintained in an enclosed Pyrenean reserve for its own protection from human activities.

The key issues and events of the subsequent twelve years challenge the assumption that the state's motives were ostensibly to assure a viable bear population in the Pyrenees. The state made the IPHB responsible for creating and managing its own budget, and during the first five years, the IPHB actually spent less than agreed. However, from a total expenditure of approximately €9 million – intended to protect the natural environment – 51.6% was 'transferred' to making pastoral infrastructure more profitable<sup>30</sup> (Benhammou 2005:83-4). The administrative costs of the IPHB accounted for 15.5%, compared with just 8.2% spent on bear conservation (including depredation indemnifications) (ibid.:83). Perhaps more revealing, the administrative budget was exceeded by 41% whereas the budget allocated for the bear was reduced by 17% (ibid.).

Although the state was ostensibly the major proponent in the bear conservation actor-network, its role of *interessement* was willingly appropriated by the IPHB. In order for an actor to be an actor, it must *do* something, and this requires strong communication: the IPHB was the dominant *doer* and *communicator*. The IPHB's official charter should have been renewed by 2001, but Lassalle, vying for public political position, stalled the process. With no legal charter, all state funding of the IPHB was constitutionally illegal. Furthermore, the IPHB was in breach of the charter's main objective to protect the still-declining bear population by reintroductions if necessary (Benahmmou 2005:85). The charter, itself, is a nonhuman actor which:

constitutes a contract... to lead a certain number of concurrent sustainable development actions within the Béarn valleys including the [bear's] protection, and in a potential second phase, the reinforcement of the bear population...[culminating in] at the conclusion of this experiment, the reconstitution of a viable [bear] population throughout the Pyrenean mountain chain (<http://iphb.free.fr>).

Confronted with an openly hostile local agricultural-political community, the state had perhaps been too quick to cede so much control to the IPHB, and too lax with the charter's language thus allowing legal ambiguities – enemy forces – to creep in. The IPHB favoured the terms of a 'potential' reinforcement phase while ignoring the required 'reconstitution' of the bear population. There are many incongruities in the charter, but one of the most striking indicates:

if the bear adapts well to the presence of humans and their flocks, the reciprocal is not true. In the territories frequented by bears, the insecurity is real... making cohabitation impossible (<http://iphb.free.fr>).

In ratifying the contract with the IPHB, the state accepted, *a priori*, this key caveat imposed by the IPHB on behalf of the pastoralists for whom it spoke – that pastoralism-bear cohabitation is

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<sup>30</sup> Incongruously, this pastoral modernisation and development often led to environmental degradation (Benhammou 2005:83-4).

impossible. This is clearly in conflict with the overall objective of improving pastoralism *and*, simultaneously, restoring the bear population to a viable level.

Despite the new charter remaining unsigned, the state continued to fund the IPHB. Lassalle seized the opportunity to create a new actor-network including a sympathetic media, an increasingly disenchanted anti-bear pastoral group, and a state department portrayed as plotting against the IPHB and pastoralism: he incited a media storm by resigning from his self-proclaimed role in an ‘exemplary case of local democracy’, and pursued local elections so he could more directly attack the government’s ‘wrongs’ (Longué 2001). Focussing again on the core versus periphery argument, he enrolled strong media and popular support, and was duly elected Deputy for the Pyrénées-Atlantiques. His augmented political power allowed him to overtly direct the IPHB in the face of government opposition; yet the state continued to fund the programme. At the end of 2002, Lassalle, by then Vice-president of the Pyrénées-Atlantiques Conseil Général, persuaded the new Minister of Ecology, Roselyne Bachelot, to bypass state-region regulations and give financial and institutional guarantees to the IPHB. When she visited the newly built – with programme funds – IPHB headquarters in 2003, Bachelot said she was rectifying a ‘contract of confidence which had been broken by the *state*’ (IPHB 2003, my emphasis).

Serge Lepeltier, Bachelot’s successor, quickly attacked the IPHB. Lassalle responded by immediately enrolling into his network the conspicuously absent, and unaware, bears. After several years of coercing inactivity, he agreed to support reintroductions – actually the *raison d’être* of his association – *contingent* on the state guaranteeing logistical and financial ‘continuity for a period of ten to twelve years’ (Journal l’Éclair 2004). During a radio interview that same day, Lassalle openly threatened the minister: ‘if Monsieur Lepeltier, or the state... wish to force the issue, well, I’ll let you imagine what the reactions would be’ (Radio Blue Pau-Bearn, 8<sup>th</sup> Nov. 2004).

Undeterred, Lepeltier announced, in January 2005, the state’s unilateral decision to double the number of bears in the Pyrenees to around thirty over four years, commencing with the reintroduction of five female bears that autumn (MEDD 2006b:70). His announcement prompted a very rare direct response from *bergers*. In a petition addressed to the minister, *bergers* who assumed the role of spokesperson for all *bergers*, accused Lepeltier of betraying ten years of effort by pastoralists to work with the state in order to achieve a cohabitation with bears; they demanded who, between the *berger* and the bear, was the more *culturally* ‘legitimate’ to save:

Our confidence in the state has never been more called into question... the divide between the ‘pro’ and the ‘anti-bear’ will be re-dug, and the problem won’t be resolved until either the bear, or the shepherd, makes the other go away (IPHB 2005c).

Lassalle also immediately denounced the plan, and reinitiated a media campaign presenting the locals as victims of state power. Nevertheless, despite the clear lack of partnership expected between the state and the IPHB, a new commitment was made to provide the ‘substantial public funds necessary for the functioning of an organisation which was co-responsible for the disappearance of the bear in Béarn’ (Benhammou 2005:92). Indeed, during all of this time, the number of bears had continued to decline in Béarn. By the end of 2004, the *Ours Brun* network reported that hunters had killed two bears, one of whom, Canelle, was the last autochthonous female (Benhammou 2005:88). In addition, a third had died of old age, and Canelle’s four cubs were dead or missing (ibid.). Canelle was the last ‘genetically pure’ female Pyrenean bear; at the end of 2010, as I began writing this dissertation, it became known that Aspe Ouest, the last male autochthonous bear, had died (Duplan 2010; PDOA 2010a) – the ‘pure’ Pyrenean subspecies of brown bear was formally extinct. In its first ten years of operation, the IPHB had spent more than €10 million and yet there were no more than three bears still alive in the *Pays de l’Ours* – Bear Country (Benhammou 2005:87-8).

In June 2005, Lepeltier was replaced as Minister of Ecology by Nelly Olin; despite five bears being – belatedly – released into the Pyrenees, Lepeltier’s promise to double the bear population, under continual pressure by the IPHB, still remains unfulfilled. On the other hand, the policy of (non)consultation continues to be espoused. In September 2009, the Ministry of Ecology reaffirmed that pastoralists would be involved in all reintroduction decisions (La Dépêche 2009). A year later, it unilaterally announced a new reintroduction scheduled for spring, 2011: consultations were programmed for general discussion, but the reintroduction decision, itself, was off-limits. Lassalle immediately attacked the announcement and, just a few days later, the bear reintroduction programme was effectively renounced: from that point forward, ‘only bears killed, or who died accidentally, would be replaced’ (Le Monde 2010). Three months later, Nathalie Kosciusko-Morizet took over the ministry: no bear materialised, and several NGOs, in desperation, formally complained to the European Commission resulting in a written reprimand against France (European Parliament 2011), to which the state has yet to respond.

### 3.5 Summary

The entities outlined above are only *actors* when they *do* something. When they are actively doing something – anything – they become part of a network of heterogeneous associations which interacts with everything that surrounds them (Law 1992:4). Thus an actor, through his/her/its inter-

connectivity, especially when speaking for others, influences the entire network at the same time as being an independent part of it. This is the meaning of the compound term *Actor-Network*: ‘the actor is both the network and a point therein’ (Callon et al. 1986:xvi). A *bergère* who is opposed to bear reintroductions is one of the most important actors in the Bear Conservation Actor-Network; at the same time, she is, herself, an independent, intentional actor-network. Whatever she does, or says, has an influence on the actor-network of like-minded *bergers*, but also on another *berger* actor-network which *supports* the programme. In the same way as ripples move outwards in a pond, her influence plus the interaction of influences of the closest actor-networks continue to dynamically impact other, ever-larger and more inclusive, and yet polarised, actor-networks.

Furthermore, the allegiances of a given actor-network can continually drift within the ‘for’ and ‘against’ spectrum. Simultaneously, certain actors will have more, or less, influence, and thus power, than others in this always dynamic network. It is this constant confluence of relational associations – the multitude of interactions, ideas, motivations, and discursive actions – which allows an actor-network to sustain itself, and to *translate* the collective agency into comprehensible meanings for others to understand and react to, in agreement or in contestation. One of the key ways in which this translation occurs is through the contestation of science and knowledge. This is the theme to which I turn in Chapter 4.

# Chapter 4

## Contested science and knowledge

### 4.1 Whose science, which ‘truth’?

Bourdieu claimed:

The task of science, then, is to construct the space which allows us to explain and to predict the largest possible number of differences observed between individuals, or, what is the same, to determine the main principles of differentiation necessary or sufficient to explain or predict the *totality of the characteristics* observed in a given set of individuals (1987:3, my emphasis).

This ‘space’ which includes the ‘totality of the characteristics’, is wide enough to allow different actors to readily deconstruct the socially/scientifically determined reification of information presented as ‘facts’, and reconstruct it in any number of ways. In order to properly explore the multiple complex arguments for, and against, cohabitation between pastoralism and bears, and thus, inherently, the arguments for, and against, bear conservation, this space need to be pried open to expose the matters of concern contained within.

Scientists are themselves human, products of a socio-political society which influences their research with personal, socially-conditioned values (Latour 2004a, 2005). And yet it is unconsciously accepted that scientific experts work *apart* from the political domain in order to discover incontrovertible ‘facts’ which transcend mere theories; thus conservation scientists strive to identify the ‘rules’ which indisputably govern nature in order to deliver these ‘matters of fact’ to the political sphere, where they can be used to calm, or even suppress, public debate. Such a view, however, presupposes the existence to two quite distinct spheres of reality; the *natural*, unable to speak for itself, and the *political*, in which there is a cacophony of conflicting voices ((Latour 2004a:13-4). Scientists are expected to shed their politics and values, and temporarily quit the social

world in order to access the scientific ‘truths’ of the natural world, only to then return to the social world in order to share these ‘truths’ with the rest of us. Latour calls this a ‘double rupture’ (2004a:11), which grants experts an illusion of neutrality:

In short, these few elect, as they themselves see it, are endowed with the most fabulous political capacity ever invented: *They can make the mute world speak, tell the truth without being challenged, put an end to the interminable argument through an incontestable form of authority that would stem from the things themselves*” (Latour 2004a:14, original emphasis).

However, nature and culture, science and society, are *not* distinct, dichotomous spheres, but are a single, complex whole which contains multiple associations between human and nonhuman actors, all interacting with a shared biosphere. These associations form a revised ontological framework which Ingold describes as ‘anthropocircumferentialism’, in which humans are removed from the purely anthropocentric core of an environment *perceived* to ‘surround us’, and repositioned at the periphery of a monistic natureculture – a ‘lifeworld’ – no more, or less, important than anything else within it (2000a:218). Furthermore, these associations continuously evolve and devolve, creating the dynamism within the actor-network which provides its cohesive momentum. The state-science actor-network comprises the ‘elected few’, ‘authorised’ to speak in absolutes and certainty; it enrolls actors to support the reinforcement of a population of large and potentially dangerous predators by diffusing ‘facts’. Inevitably, these ‘truths’ become challenged by opposing actors who construct their own, different, matters of fact: the actor-network becomes an association of *actor/concerns*, for both facts and actors are matters of concern.

Although a table of actors and their OPPs has its uses<sup>31</sup>, each actor is, by definition, constantly acting; it is continuously in motion, simultaneously attracting and repelling other actors within its network, therefore, the obligatory passage points through which they need to pass are constantly dynamic. It is more useful, perhaps, to visualise the major actor/concerns in terms of their forces of attraction and repulsion. A simple Venn diagram (figure 5) shows each intersecting network and reveals the tensions which simultaneously attract and repel the associating actor/concerns. The central segment would ideally enfold a symbiotic solution beneficial to all actors, embracing the collective OPP; given the dynamic tensions of complex actor/concerns, it just as readily enfolds un-accepting, opposing objectives.

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<sup>31</sup> See Chapter 2 (cf. Woods 1997:329).

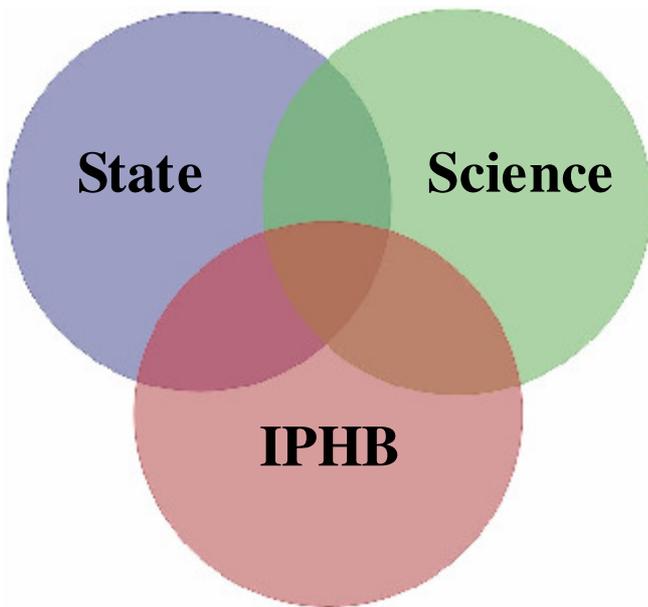


Figure 5. Key interrelationships within the bear conservation actor-network.

In the case of the bear conservation actor-network, this central segment requires that all actors accept the state's problematisation<sup>32</sup>:

1. Pastoralists and other Pyreneans have always cohabited with bears,
2. The bear is an essential part of the Pyrenean culture, ecosystem and biodiversity,
3. Reintroduction of bears and cohabitation with pastoralism is the only way this protected species can be saved.

A synergistic consensus is sought between politics and its incontestable knowledge, science and its indisputable knowledge, and 'local' empirical knowledge. In the Pyrenees, this consensus has not been reached, for each intersection in the Venn diagram becomes a conflict over whose science and truth prevail.

## **4.2 Pastoralists and other Pyreneans have always cohabited with bears**

Human settlement began in the Pyrenees during the Upper Palaeolithic, 40,000 years ago (Demars 2004), 60,000 years after brown bears are known to have been there (Dendaletche 1986). Iron-Age burial mounds along the lengths of the pastoral routes (Bahn 1997:23), and dolmen found in the *cols* (passes) and *estives* (summer pastures) of the Western Pyrenees, suggest that transhumant pastoralism has been practiced for at least 4,000 years and perhaps as long as 10,000 years (Gómez-

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<sup>32</sup> As articulated in Chapter 2.

Ibáñez 1975:27-8). However, although humans have cohabited with bears in the Pyrenees since the earliest settlements, this does not mean that this cohabitation was *accepted*.

The bear has been 'venerated' throughout Europe since 'time immemorial' (Conan 2009:6). Germanic peoples believed the bear to be an 'intermediary creature' occupying a liminal space somewhere between humans and animals, sometimes even as an ancestor of humans (ibid.). The Hittite roots of the name Artemis, the Greek goddess of the hunt, is *arta*, meaning 'bear', suggesting that long before 'modern' civilisation, she was a Bronze Age bear goddess (Brown 2004:251-3). Later Roman thinkers began to emasculate society symbolically and materially, weakening the meanings associated with the feminine and nature:

through the inscription of specific women in the primeval landscape, epic dramatizes the displacement of woman from the Roman cultural order by *fixing her in nature*... Once engendered the feminised earth metaphorically gives birth to and fosters the male agents who step to the forefront of these narratives (Keith 2000:63-4 my emphasis).

The feminine bear-Artemis became part of nature, opposed to masculine society (cf. Abramson 1987; Douglas 2002 [1966]), and was transformed from a spiritual power, and a pacific – although, like all of nature, potentially dangerous – cohabitant with human society, into an unwelcome enemy; the monist 'lifeworld' had become an ontological nature-culture dualism. The consensus recourse was to dominate nature and eliminate its dangers.

The decline of the brown bear in Europe (figure 6) coincided with the expansion of the Roman Empire (MEDD 2006:13) and continued unabated with the development of European society. Archival research of records dating from 1890 to 1963 (Arripe 1998) concludes that predators, including bears and wolves, were hunted with the single objective of eliminating them from France, and from the Pyrenean Mountains<sup>33</sup>. Bérot claimed that 'all the institutions, local, regional, and national, were in agreement... until the 1960s, to favour the bear's extirpation by all means' (2006:31). Indeed, the state had, for centuries, offered financial incentives to kill large predators (Bouchet 1990).

By the beginning of the twentieth century, brown bears had disappeared from all but the most remote forests and mountain areas; towards the century's end, fewer than sixteen bears still

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<sup>33</sup> A full historical analysis, however, has convinced me that the intent was never to eliminate the species, but rather to profit from its continued existence. The successful hunting of bears was not performed by pastoralists, who had neither the financial means nor the desire (Bouchet 1990; cf. Lamazou 1988:193), but by professional hunters who earned their living from killing some bears and selling their 'parts' to a diverse buying public, and from capturing cubs to be sold to *montreurs*, who then toured the world with their show bears (Bouchet 1990). Although these activities dramatically accelerated the decline of the bear population, it was not in the interests of such professionals to consciously extirpate the source of their revenues.

survived in the French/Spanish Pyrenees (Camarra & Dubarry 1992:34). Bérot (2006: 30-1) emphasises that this decline had nothing to do with money, but was ‘the destruction of the predator [which] was impossible to live with’. This belief, echoed frequently by pastoralists, is the foundation of a new actor-network which rejects the first problematisation. The ‘scientific’ reification espoused by the state is simply that pastoralism has always coexisted with bears; local knowledge argues that such cohabitation continued only until the means were developed to change the equation. The reality is that both claims are essentially ‘true’; bears, the state, pastoralists, professional hunters, consumers of bear products<sup>34</sup>, tourists, and profiteers shared inclusive associations in this actor-network. In a world already becoming dominated by capitalist ideology, the associations manifesting within the actor-network all used the bear – to its detriment – as a device to satisfy needs based on profits or losses due to predation. This same is still true, although today, the bear is worth more to tourism and development alive, than the offset of depredation losses, thus creating a tension which was not present in the past (MEDD 2006:21-2, 59; <http://www.aspap.info>).

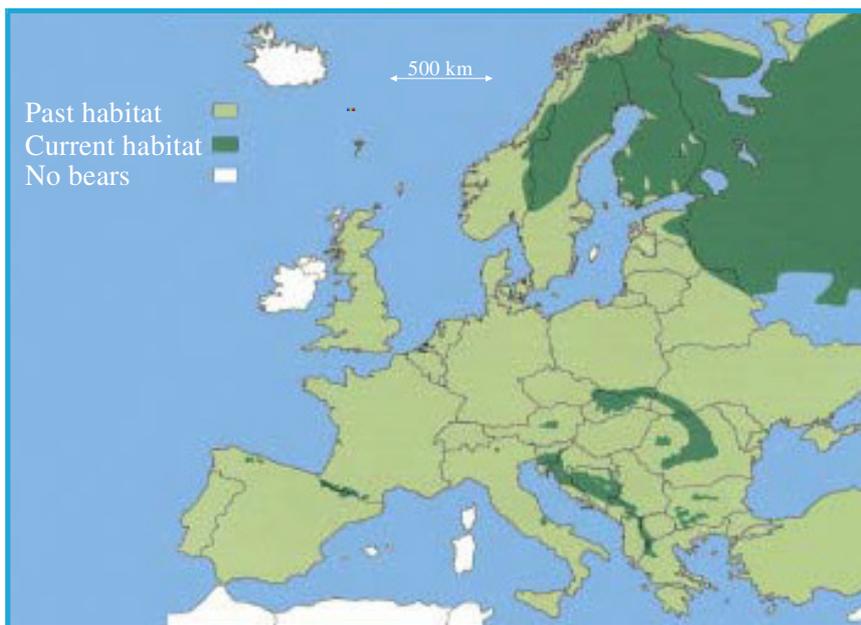


Figure 6. Brown bear distribution and decline in Europe (Camarra 2005:18).

<sup>34</sup> In addition to the *montreurs*, early Pyrenean tourism profited from the bourgeois, visiting from distant cities (core, power, wealth), who desired to join guided hunts and/or eat bear meat (generally considered poorly tasting) in order to augment their reputations (de Marliave 2008:144-5). Additionally, various parts of the bear, including its head, paws, and organst, were prized by individuals who sought to appropriate some of the bear’s powers (ibid.). Bear fat has been used since antiquity, ‘the time of Galen of Pergamon’ (Chaumartin 1963:32), and was highly valued by pharmacists to make expensive potions and ointments for rheumatism, gout, and hair re-growth.

### 4.3 The bear is an essential part of the Pyrenean culture, ecosystem and biodiversity

The extensive symbolic meanings and relationships between the bear and Pyrenean culture are well documented (Bobbé 2002, 2005; Cummins 2009:67ff; de Marliave 2008:205-38). Nevertheless, a very brief introduction is warranted. In 1974, Willis (1974:120) noted that:

As symbols, animals have the convenient faculty of representing both existential and normative aspects of human experience, as well as their interrelation; what is beyond society, the ultimate ends of action, and the incorporation of such values in the structure of social perception and relations.

In the Pyrenees, this is evidenced through the many festivals still practiced today, which derive from traditional Pyrenean gatherings based on the pastoral calendar and the production and exchange of local products (Cummins 2009: 67-8). Such gatherings served multiple social purposes including the honouring of life and death through births, communions, and funerals, and assuring societal continuity through rites of passage (Van Gennep 1981). Many modern festivals frame the bear as a *mediator* who assists in the liminal transitions of boys into men and virgin girls into men's wives, thus perpetuating the patriarchal ideals of pastoral society (Bobbé 2002:171-3). In these festivals, the bear – usually a costumed young man – is often shaved, dominated, ‘killed’, and revived as a human (*ibid.*). He is socially transformed from ‘nature’ into ‘culture’; symbolically extirpated, and made to disappear through the superior technologies, power, and domination of humans. In part, this is what Pyrenean pastoralists have striven to attain for millennia, for in pastoral ‘reality’, the bear has always been a non-negotiating mediator, transforming ‘ordered’ culture into ‘disordered nature’; today, the bear is a threat to the continuation of Pyrenean pastoralism (<http://iphb.free.fr>). I will return to this point in the next chapter.

The importance of the bear to Pyrenean culture<sup>35</sup> is not generally refuted by anti-bear actors. Instead, they attack the proposition of the bear being essential to Pyrenean biodiversity. They do so by reframing the debate to one of ‘whose science, and the ends to which it is to be applied, are to prevail’ (Lockie 2004:51). The ‘anti-bear’ actor-network enrolls its own ‘scientific’ experts to provide counter arguments.

Benhammou, a geographer, and Mermet, an environmental management professor, are very outspoken spokespersons for ‘pro-bear’ scientific actor-networks: although they are ‘scientific’,

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<sup>35</sup> Indeed, Pyrenean cosmogenic myth says that the mountains were built by Hercules over the grave of Pyrène, his pregnant lover, after she had been killed by a bear (Augoustakis 2003:240-242; <http://pyrene.free.fr>).

they speak with authority about highly technical issues beyond their particular domains. Their objective is to assure the survival of the brown bear in the Pyrenees, and to achieve this, they need to enrol as many actors as possible into their network in order to pass through their OPP, which is to prove the scientific position. They need, therefore, to discredit the counter-arguments of anti-bear actors. In actuality, they simply reiterate ‘indisputable’ scientific ‘facts’ to denounce what they call ‘anti-expertise’, fabricated by anti-bear spokespersons (Mermet & Benhammou 2006:130). In particular, they target the IPHB who ‘deliberately’ create uncertainty, ‘*la fabrication de l’incertitude*’ (ibid.:131). Because scientific ‘facts’ are ‘incontrovertible’ and ‘true’, they can state as ‘fact’ that the IPHB actors are ‘wrong’, and deliberately misleading the public in order to minimise the chances of the reintroduction programme succeeding (Mermet & Benhammou 2006). ‘Anti-bear’ becomes opposed to ‘pro-bear’, as ‘anti-expert’ is opposed to ‘expert’ and therefore ‘truth’; ergo, anti-expertise is false.

In order to justify reintroducing bears, the state relies partially on the scientific claim that the bear is a focal species, a key species which acts as the *representative*, or spokesperson, for local biodiversity (Jeo al 1999). Indeed, Lockie argues that ‘environmental controversies are often... conflicts over who may speak on behalf of non-humans’ (2004:51): in this case, the state/science actor-network speaks authoritatively for the bear, implying that the bear speaks for the ecosystem and all its biodiversity. Science argues that the (re)introduction of focal species delivers ‘improved’ ecosystem services and resilient biodiversity better suited to the uncertain ecologies of the Anthropocene (Donlan et al. 2006; Jeo al 1999). Bear conservation is, then, ‘fundamental to the functioning and equilibrium’ (MEDD 2006:79) of the ecosystem; furthermore, the state tries to enrol pastoralism into this equilibrium, claiming that ‘a balanced, pastoral mountain is a mountain with bears’ (MEDD 2006b:27).

‘Anti-experts’, however, claim that the Pyrenean ecosystem has been manipulated by humans as long as pastoralism has existed and, as such, does not exist outside of human activity: this ecosystem has adapted itself to function optimally with fewer and fewer bears. Jean-Louis Etienne, a medical doctor and Antarctic explorer, is a frequent spokesperson for this actor-network. He claimed that:

The almost total disappearance of bears from the Pyrenees has not led to ecological disequilibrium. Re-conquering the territory of the bear, aesthetically, intellectually, is interesting. But the human cost is exorbitant relative to the ecological gain (<http://www.aspap.info/contenu/3.htm#Etienne> 2006).

‘It is ridiculous to want to reintroduce bears into the Pyrenees’, Etienne argued, ‘because that knocks around an entire ecosystem which is no longer habituated to them’ (Libération 2006a). Bérot (2006:62) similarly argues that ‘the Pyrenean brown bear is already dead... [it] no longer has a place adapted [to it] in the Pyrenees’. These arguments are articulated in one form or another in the thousands of internet forum comments posted by anti-bear actors, and are not invalid; however, the number of bears, today, is so small that their impact on the ecosystem, good or bad, is, at best, marginal. Indeed, the bear’s role as a focal species – in particular as an alpha-predator – has been effectively appropriated by humans: Yves Coppens claimed in a radio debate that reintroductions are defensible, but we should remember that we are not simply dealing with an ‘ecosystem’, but with ‘an agro-ecosystem, and that the predator is man (sic)... Which is to say that humans also participate in this biodiversity’ (France Inter 25/11/2005). The integrity of this ‘agro-ecosystem’ is challenged each time a bear, representing pre-modern natureculture, stumbles upon thousands of largely defenseless sheep, the result of pastoral modernity. Coppens, the co-discoverer of Lucy, the *Australopithecus* ‘first’ human, is a scientifically credible and strong spokesperson for the anti-bear actor network. Furthermore, as demonstrated in the above citation, he successfully employs the device of seemingly supporting bear conservation before delivering his real interestment: conservation is good except when it interferes with pastoral needs.

Using a similarly disingenuous device, the state acknowledges that biodiversity has been adversely affected by human activities, and also concurs with pastoralists that their activities benefit Pyrenean biodiversity (MEDD 2006:78). However, the state/science actor-network stresses the irreplaceable value of the bear to the Pyrenean biosphere; its survival, then, is implied to be more important than the minor inconvenience this presents to pastoralism (MEDD 2006:78ff).

The anti-bear networks frequently argue that *ecolos* – the local generic term for environmentalists – support bear conservation in order to absolve their collective guilt for the anthropogenic annihilation of the Pyrenean bear population. Bérot (2006:10-1) stereotypes *ecolos* as rich urbanites who know nothing about mountain life or environments, and visit their country homes in expensive four-by-fours. They support ‘easy ecology’ like bear conservation, which are *symbolic* measures to combat ecological issues, helping to ease their consciences while demanding no personal deprivations (ibid.:28). Bérot raises another issue which is often picked up by spokespersons for the anti-bear actor-networks; ecology and biodiversity are just a ‘fantastic pretext which allows public opinion to be rallied almost unanimously’ (ibid.:10): the ‘true’ reasons are to support ‘uniquely electoral and economic ends’ (ibid.:61).

Indeed, during a heated radio debate, Philippe Lacube<sup>36</sup>, totally dismissed the biodiversity rationale:

We're not talking about biodiversity. The biodiversity in this mountain range [already] exists. It's recognised. We're one of Natura 2000's most recognised European regions precisely because of the richness of our territory's biodiversity – we're not talking at all about biodiversity when we displace bears from Slovenia, [when] there are hundreds, even thousands, throughout Europe. It's not an animal on the verge of disappearance. We're not speaking about biodiversity. We're not in any frame of biodiversity. (RFI 2010: 2:07)

Lacube is a spokesperson for the 'sustainable' development of pastoralism (Pyrenean identity). He cleverly reframed the discussion to present his anti-bear agenda:

we need to speak of a territorial plan; territorial development. If, somehow, during this consultation, we could get people to actually speak about what they really want for the Pyrenees? Is it a rewilded territory, closed off, dedicated to large predators? Or is it a Pyrenean territory like we're used to today, with ski stations, people who work for a living, *éleveurs*, hunters, hikers...? (RFI 2010: 2:07)

By invoking the concept of development, he was also subtly attacking the state's 'hidden' motives; to phase out pastoralists who disagree with bear reintroductions in order to divert associated financial subsidies towards more profitable 'development' – intensive agriculture and tourism<sup>37</sup>. This is not unfounded: the brown bear 'Action Plan' states:

In areas where livestock farming in bear range is a threat to bear conservation, effective guarding techniques should be adopted *or livestock farming should be abandoned in favour of other forms of production that are compatible with bear conservation* (Swenson 2000:35, my emphasis).

Indeed, such a 'hidden' agenda resonates well with Marxian theory which maintains that '[c]apital requires humans and nature only as conditions of monetary accumulation, nothing more' (Williams 2010:213); it positions 'saving the bear', and 'pastoralism', simply as opposed profit centres in which social reasoning becomes subsumed. The state actor-network is a capitalist device: it is obligated to promote its capitalist needs, which are intrinsically driven by profit (Ikerd 2005; Williams 2010).

The cultural (and capitalistic) and ecological value of the bear in the Pyrenees has changed over the millennia and the simplifications inherent in the state's second problematisation are easily challenged. The 'truth' of the state's scientific knowledge is continually questioned through a

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<sup>36</sup> As mentioned in Chapter 1, Lacube is a prominent spokesperson for the anti-bear actor-networks. He is an Ariège *éleveur* and president of ADDIP, the *Association pour le Développement Durable de l'Identité des Pyrénées* (Association for Sustainable Development and the Pyrenean Identity).

<sup>37</sup> This becomes evident through an analysis of the subsidies available under the European Common Agricultural Policy. This is, unfortunately, beyond the scope of this dissertation (Marcon 2010; IE 2009; Moriamé 2004; Wild Europe 2010).

discourse of alternative interpretations based on empirical local knowledge. It is to this theme I turn next in Chapter 5.

# Chapter 5

## Tension within the actor-network

### 5.1 Reintroduction of bears and cohabitation with pastoralism is the only way this protected species can be saved

This third problematisation is critical, for it requires the acceptance by the three actor/concerns that saving the bear is good for Pyrenean pastoralism. As such, it lies at the heart of the pastoralists' challenges to the state's science, raising key questions about the multiple classifications which define what, exactly, a brown bear is, and therefore the feasibility of human-bear cohabitation. In other words, whose science, and which 'truth' applies?

#### 5.1.1 Classifications

Bowker and Star state that 'to classify is human', but that no classification system can be perfect (1999:1ff.). Different values invariably become associated to the resulting classes, causing Barthes to note that in their most insidious forms, 'all classifications are oppressive'<sup>38</sup> (1996:335). Animals have been classified hierarchically into groups since at least the time of Aristotle's *scala naturae* (Pieterse 1992:40). Once classified, animals become:

neatly identified, delimited, and positioned in the relevant conceptual space so as to be separate from and not overlapping with other things there identified, delimited and positioned (Philo and Wilbert 2000:6).

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<sup>38</sup> Although Barthes was referring to the use of language and discourse as elements of social exchange and specifically of power discordance, I believe that his sentiment is well justified in my appropriation relative to the classifications of animals.

Classification, then, allows the transfer of power from one class (nature), to another (culture): animals become classified as *different from* humans, making it easier to justify their control and domination (Clutton-Brock 1994:28). In the Pyrenees, bears have long been considered ‘public enemy number one’ (de Marliave 2008:59), classified as pests (MEDD 2006:13) responsible for unacceptable predation of domestic animals.

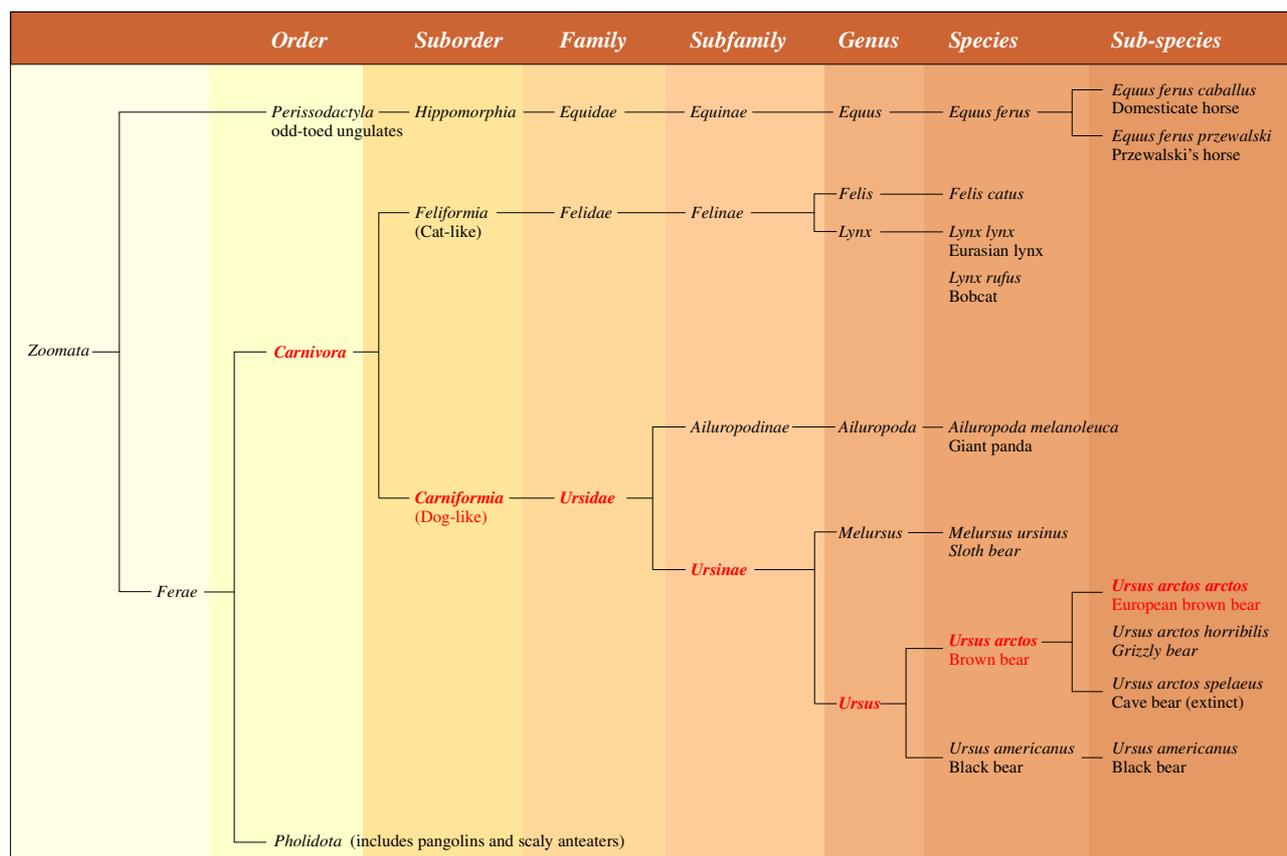


Figure 7. Bear classification. Created based on data presented in: Gittleman 1997; McLellan and Reiner 1994; Taberlet and Bouvet 1994; <http://en.wikipedia.org/wiki/Zooamata>

The brown bear *species* belongs to the *ursidae* family, itself a part of the *carnifomia* (dog-like) suborder of the taxonomic order of *carnivora* (figure 7). The autochthonous bear which has coexisted with humans for millennia in the Pyrenees is known as the ‘Pyrenean brown bear’; it is part of the single species, *Ursus arctos* (Chapron et al 2003; MEDD 2006; Swenson 2000), and is not a formal taxonomic classification. Rather, it is a cultural definition used by different human actors as a means of defining the bear in a way particular to their individual needs. Scientifically, the ‘pure’ Pyrenean bear is ‘just’ a European sub-species, *Ursus arctos arctos*, which has been

argued to be ‘certainly... the oldest form’ of brown bear<sup>39</sup> (Camarra 2005:16; MEDD 2006:10). As discussed in Chapter 3, the ‘pure’ Pyrenean bear is extinct.

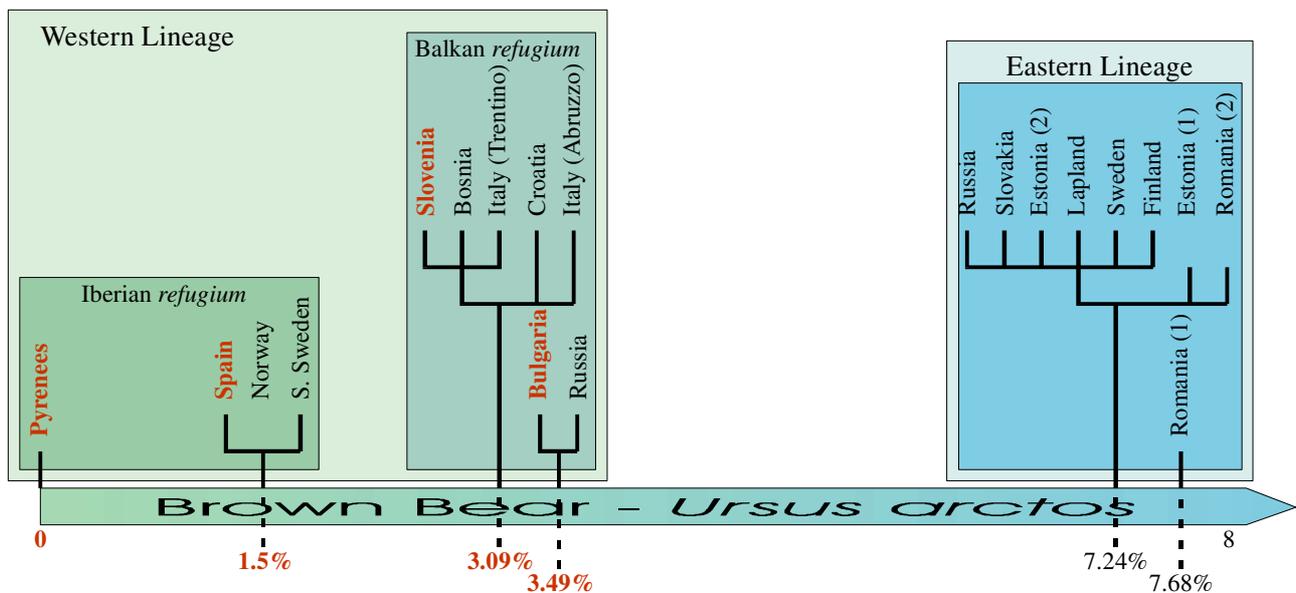
### 5.1.2 Brown bear or Pyrenean brown bear?

The state uses scientific ‘devices’ to define the bear in terms which support its problematisation. According to McLellan and Reiner (1994:91-3), brown bears have existed in Europe for 250,000 years; although the state cites no references, they agree with this estimation (MEDD 2006:10). However, mitochondrial (mt) DNA analysis shows that brown bears in Europe separated into two distinct lineages, eastern and western (figure 8), at least 850,000 years ago (Taberlet and Bouvet 1994:197-8). The Taberlet report is a key reference for the MEDD documentation, but the state ignores this dating enigma, thus creating a *momentary* actor-network – comprising the state, bears, ‘science’, the un-cited reference to the 250,000 year bear existence, and the Taberlet and Bouvet paper. An important device is imputed – the *selective sourcing* of scientific ‘facts’.

The eastern lineage includes Russian, Romanian, and Slovakian bears, whereas the western lineage includes bears from Spain, France, Norway, Sweden, Italy, Greece, Slovenia, Croatia, Bosnia, and Bulgaria (Taberlet and Bouvet 1994:197-8). Although all of these bears are members of the same taxonomic species, the two lineages differ by more than seven percent of mtDNA (ibid.). Furthermore, the western lineage has two distinct clades: the autochthonous Pyrenean bears belong to the Iberian *refugium*, which also includes bears from Spain (the Cantabrian mountains), southern Sweden, and Norway; the other clade, the Balkan *refugium*, includes bears from all of the other countries of the western lineage (ibid.).

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<sup>39</sup> The North American grizzly, *Ursus arctos horribilis*, is the most recent sub-species of brown bear to develop (MEDD 2006:10)



mtDNA sequence divergence relative to the Pyrenean brown bear.  
 The coordination between **country** and the percentage **in colour** is specific, but all other countries are averaged.  
 Based on data in Taberlet & Bouvet (1994:196-7)

Figure 8. Eastern and Western Lineages of European Brown Bears.

The state commissioned this scientific research in order to select the regional European bear best-suited for Pyrenean reintroduction. Based on ‘genetic, ecological, ethological, hygiene, logistics and political-administration’ criteria (MEDD 2006:43), bears were considered from four regions, Sweden, Bulgaria, Slovenia, and Slovakia (ibid.:44). The state scientific enquiry created a new actor-network comprising the ministry of ecology, scientists, and bears from the four countries, but not including local stakeholders. Slovakian bears are a part of the eastern lineage and were explicitly *rejected* by Taberlet and Bouvet ‘due to the clear genetic break which separates the eastern and the western lineages’, and ‘the irretrievable loss of the historical genetic record’ which could result from such transplantsations (1994:199). Including Slovakian bears in the selection process, then, was a red herring, a device intended to highlight the state’s ‘open-mindedness’. Ultimately, Slovenian bears were selected, justified in part because:

The Pyrenean brown bear is a part of the western lineage of the European population of *Ursus arctos*, which is present from Spain up to the south of Sweden, passing through France, Italy, Slovenia, and Croatia (MEDD 2006:10).

Latour (1999a, p. 274) calls such a statement ‘factish’: it is an amalgam of ‘fact’ and ‘fetish’ which recognises that ‘factual’ knowledge such as that of science is, in reality, fabricated, but in such a manner as to be epistemologically defensible and traceable. Apart from the obvious geographic incongruity of this statement, it obfuscates information which might otherwise suggest that the lineage itself is too genetically broad to be considered a single entity. Bears from the Pyrenees and

Slovenia are correctly identified as being within the same lineage, but the omission of Norwegian, Greek, Bosnian, and Bulgarian bears (Taberlet and Bouvet 1994:197-8) is deliberately misleading. More importantly, the autochthon Pyrenean bears belong to the Iberian *refugium*, whereas the Slovenian bears come from the Balkan *refugium* (ibid.: 197-8). The two *refugia* are conflated to the higher-level classification – the western lineage – to justify the decision.

In a recent radio debate, François Arcangéli<sup>40</sup> bluntly stated:

the Slovenian bear is as much a brown bear as the Pyrenean bear. It's exactly the same race. There's no more difference genetically between a Slovenian bear and a Pyrenean bear, than there is between a Slovenian human and a Pyrenean human (RFI 2010: 04:30).

To better understand this statement, I will use an analogy of the 'higher' primates (figure 9). Wallace et al. (1997:14904) found a divergence of 1.4 percent between the human nuclear and mtDNA sequences, and a corresponding 8.4 percent divergence between the human nuclear and the chimpanzee mtDNA sequences. This analysis relies on a combination of both mitochondrial DNA (mtDNA) *and* nuclear DNA sequences. Both forms of DNA analysis provide information about evolutionary history, gene flow, and genetic diversity, but mtDNA is *maternally* biased (inherited from mother to offspring), whereas nuclear DNA is *paternally* biased (father to son) (Waits et al. 1999:25). The implications of using these two forms of DNA analysis are fully understandable only by 'experts'.

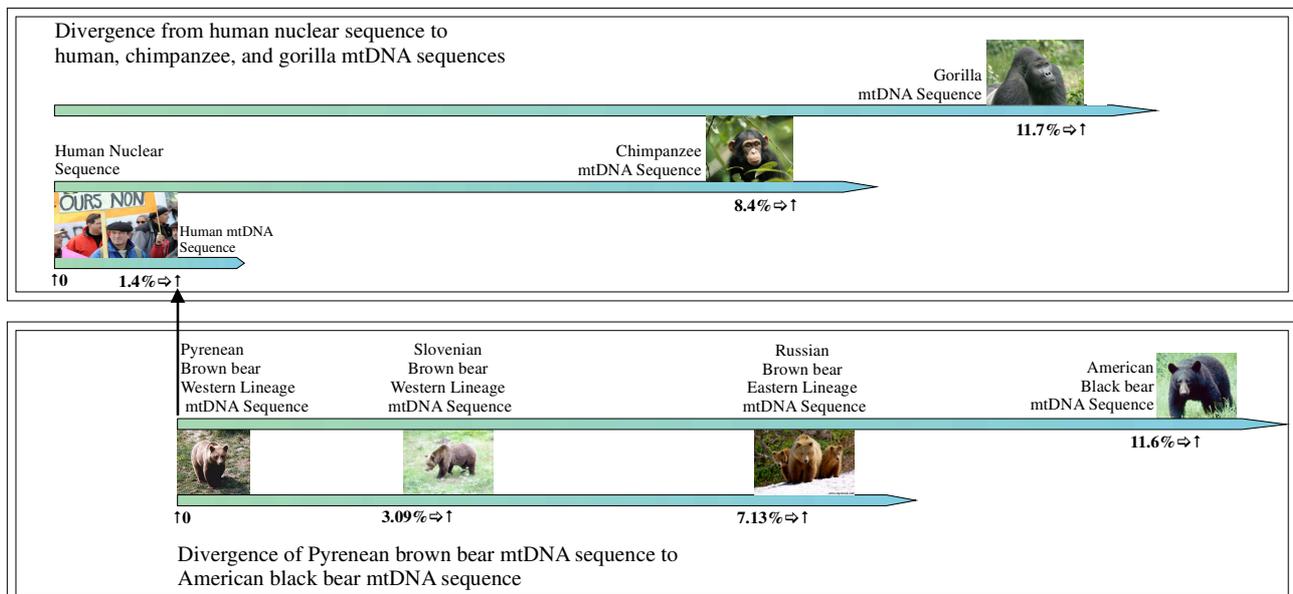


Figure 9. mtDNA divergence of brown bears on same scale as humans and apes. Based on data in Wallace et al. (1997) and Taberlet & Bouvet (1994).

<sup>40</sup> As discussed in Chapter 1, Arcangéli is the mayor of Arbas, the town selected for the first bear reintroduction in 2006. He is a long-standing spokesperson for the 'pro-bear' actor-networks and is, today, a regional counsellor for the French 'green' party, *Europe-Ecologie*.

I absolutely am *not* an ‘expert’ in genetics, but I will nevertheless attempt some deductions using the type of logic potentially employable by ‘anti-experts’.

In this graphic representation (figure 9), which is to scale, the mtDNA differences between humans, chimpanzees, and gorillas can be seen to be very similar to those between different types of bears. The mtDNA sequence divergence between humans and chimpanzees is 7 percent<sup>41</sup>, almost the same as the average mtDNA sequence divergence of 7.13 percent between brown bears of the eastern and western lineages (Taberlet and Bouvet 1994:198). Gorillas, however, are further removed from the human species, just as black bears, *Ursus americanus* (figure 9) are from brown bears. And yet as can be seen in figures 8 and 9, the mtDNA sequence divergence between Slovenian bears and Pyrenean bears is actually 3.09 percent (Taberlet and Bouvet 1994:197), approximately the same divergence seen between chimpanzees and gorillas.

Socially constructed scientific ‘truths’ used by experts and anti-experts ‘colour’ meanings (deliberately or not), and *interesse* different actors to serve specific needs. Arcangéli is not a scientist, but he is a *spokesperson* for the scientific actor-network; taken literally, I could interpret Arcangéli’s comment as suggesting that Slovenian and Pyrenean humans are approximately as close, genetically, as chimps are to gorillas<sup>42</sup>!

### 5.4.3 The brown bear is a *végétivore*?

Brown bears are also classified in other ways, each of which becomes very significant in understanding contemporary human-bear relationships, especially within the context of the Pyrenees<sup>43</sup>. Despite being a member of the order of *carnivora*, the Pyrenean brown bear is scientifically classified as a common *omnivorous ursid*, indeed, ‘the most widely distributed’ in the world, with a global population exceeding 200,000: the European population (excluding Russia) is estimated at around 14,000 (McClellan et al 2008).

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<sup>41</sup> My understanding is that given the 1.4% sequence divergence between the human nuclear sequence and human mtDNA sequences, and the 8.4% divergence between the human nuclear sequence and the chimpanzee mtDNA sequence, we can subtract the former from the latter in order determine the difference between the human and chimpanzee mtDNA sequences.

<sup>42</sup> My personal interpretation might be scientifically flawed, but my overall conclusion – that the *approximate* genetic distances between humans and apes are not that different than the equivalent genetic distances between the different types of bears – is probably reasonable.

<sup>43</sup> Very important, but not something I can fully address within the scope of this dissertation, is the bear as a symbol within Pyrenean pastoral culture.

The state-science actor network classified the brown bear as an ‘opportunistic omnivore’, depending on meat for less than 30% of its diet (Camarra 2005:21; MEDD 2006:10, 15-7). However, the collective experiences of pastoralists discovering the remains of ewes which had served as the bear’s most recent dinner tells them otherwise. Furthermore, the teeth, claws, and digestive system of brown bears are unequivocally those of a carnivore, but one, scientists argue, with ‘a recent *végétivore* tendency’ (Camarra 2005:20). A *bergère* suggested to me that the bear must be just like us: “He appreciates a good aperitif with some veggie appetisers, so he can then really enjoy his meat dinner”.

Before its extinction, the ‘pure’ Pyrenean brown bear’s diet was essentially ‘80% from plants, of which 25% [were] berries’. The ‘preferred’ foods were fruits, nuts, certain grasses, and roots; just 20 percent of the diet was animal-based (figure 10)<sup>44</sup>, and more than half of this came from insects, not large mammals (Camarra 2005:21.). In contrast, the Slovenian brown bear eats slightly more meat – about 32 percent of its total diet – but its mammal ingestion is not significantly greater than that of the Pyrenean bear (*ibid.*).

The source and proportion of meat ingestion is highly contested by Pyrenean pastoralists. The reintroduction plan documentation (MEDD 2006:17), taken almost *verbatim* from Camarra (2005:22), states the official position. Brown bears represent no threat whatsoever to ‘European’ wild fauna<sup>45</sup>, and generally show few signs of predatory behaviour even when near domestic flocks; occasionally, adolescent and old bears, for whom it is more challenging to find food, are known to ‘lose their good manners’ (Camarra 2005:22).

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<sup>44</sup> The supporting data presented in the reintroduction plan documentation are attributed to a 1982 study by Berducou et al. for the Pyrenean bear, and to Griess and Rech (1999) for the Slovenian bear. It should be noted that there is a slight anomaly in the numbers provided: they indicate that the Slovenian bear’s diet is 68 percent plants and berries, at least 20 percent insects, and about 14 percent coming from mammals (MEDD 2006:16): this would equal 102 percent (MEDD 2006:16). In order not to misrepresent the mammal portion of the diet, which is the most contentious, I have reduced the insect intake to be able to create a corrected rendition of these data (figure 10). The same data and graphs (including the 2% discrepancy) had been initially reproduced by Camarra (2005:21-2) several months earlier before being included in the state documentation (MEDD 2006). Although Griess and Rech (1999) are cited for the data regarding the diet of Slovenian brown bears, no further reference is provided. In Camarra (2005:22) the data are credited to an ‘internal document’. I was ultimately unable to find any trace of the primary source document and thus cannot list it in the bibliography.

<sup>45</sup> No further precision is offered in order to determine if this applies equally to Pyrenean wild fauna.

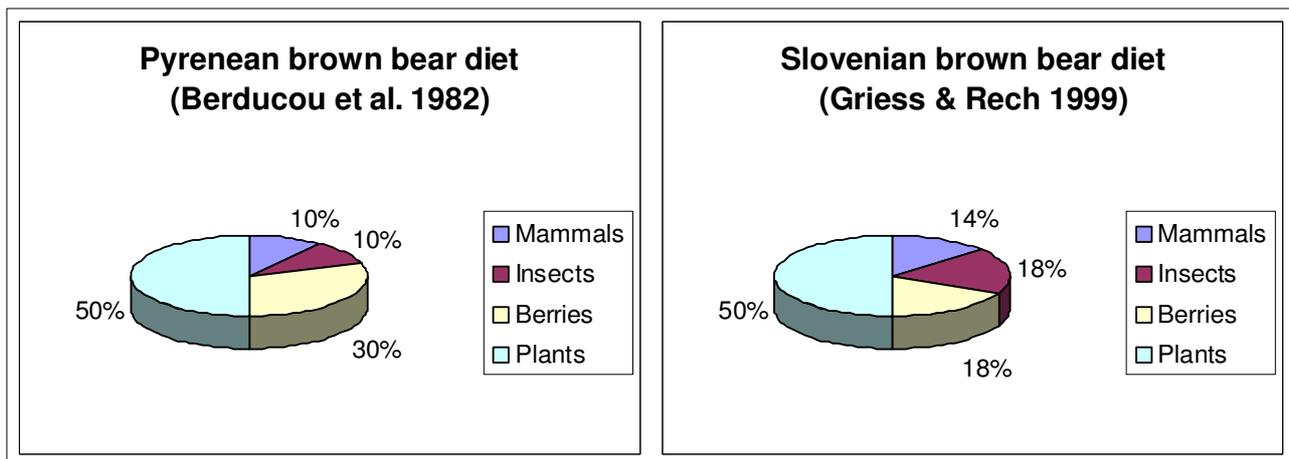


Figure 10. Diet of Pyrenean and Slovenian brown bears.<sup>46</sup>

Prey and food, then, are actors which can become very useful devices to interest and enrol other actors to mobilisation. The same is true for words. The word ‘*végétivore*’ chosen by the French ecological community is a neologistic device which distracts attention away from the bear’s carnivorous nature without using the word ‘herbivore’ – which, if it were scientifically applied to brown bears, would invite ridicule. The state appears to have chosen this term to accentuate the bear’s dependence on abundant natural vegetation for their alimentation. Certainly, the notion that the brown bear is rapidly evolving into a predominantly vegetarian mammal is appealing compared to its reputation as a large, wild, ferocious carnivore. Indeed, FIEP<sup>47</sup>, an NGO created in 1975 to promote bear conservation and bear-pastoral cohabitation, compared the bear to ‘a cow in the springtime’ eating ‘the tender, pastoral grass’ (FIEP 1999). The word, ‘*végétivore*’, then, is factish: it disguises information which might otherwise legitimise opposition to bear reintroductions by pastoralists who believe that pastoral-bear cohabitation is impossible.

Animal wastes can also become important actors. The state-science interpretation of the bear’s diet is based on decades-old analysis of collected faeces: the residues in the faeces of Italian bears reveal a meat ingestion of 15% (Zunino & Herrero 1972); for Siberian bears it is 10-15% (Vereschagin 1976); and for bears in the Yellowstone National Park it is 9.9% (Mealey 1977). Although rarely scientists, ‘anti-experts’ refute these data by appropriating ‘legitimate’ research often published by key scientific actors within the state-science actor-network. They argue that faecal analysis is ineffective in evaluating bears’ diets. For example, in the state’s ‘Action Plan’, Swenson (2000)

<sup>46</sup> The bear reintroduction plan documentation (MEDD 2006:16) credits Griess and Rech (1999) for the data regarding the diet of Slovenian brown bears, but no further reference is provided. The same data are presented in Camarra (2005:22) but are credited as an ‘internal document’. I was ultimately unable to find any trace of the primary source document and thus cannot list it in the bibliography.

<sup>47</sup> *Fonds d’Intervention éco-Pastoral* (Eco-Pastoral Intervention Fund).

concluded that such studies ‘have underestimated the importance of animal matter, especially large mammals, in the diet’.

This view, ignored by the state documentation, is supported by a study of Canadian brown and black bears (Pritchard et al. 1990), and by a recent French veterinary thesis (Lagalis 2002:42) defended to a jury which included Quenette, a scientist frequently consulted by the state.

The second rebuttal of the state’s scientific ‘truth’ is that the brown bear’s digestive system is particularly inefficient at digesting vegetable matter; the massive percentages of vegetation claimed by the state have the agency – though not intentionality – to kill a bear (Lagalis 2002:34, 58). Lagalis concluded that the meat consumption of the European brown bear is, on average, 56.3% of its diet, (ibid.:62), although this amount is significantly higher in springtime, 81.8%, and in summer, 64.5% (ibid.:66). This carnivorous tendency, significantly more important than ‘factualised’ by the state-science actor-network, has also been argued by Dahle et al. (1998) and Persson et al. (2001) – both co-authored by Swenson – who found that meat constituted between 70% and 87% of the diet of Scandinavian brown bears.

Much of this well-argued counter-expertise is published by the IPHB and its ‘sister’ NGOs. Directly related ‘science’ seems reticent to engage the counter-science in any way, leaving this task to other spokespersons, notably Benhammou, discussed above. However, Larzabal (2008:5), a *zootechnicien*, admitted that ‘to-date, there exists no complete study of the alimentation of bears in the wild because of the inability to take urine samples’. Non-scientific pro-actors, though, do take up the challenge. Mercier (2010), vice-president of the Pays d l’Ours-Adet association, attacked Lagalis’s veterinary thesis as a ‘fantasist’ study by an ‘apprentice veterinarian’, and that, furthermore, such theses are usually more ‘rapid and superficial than [those] of universities [and] frequently ridiculed by scientists for their lack of rigour’. I quote this not to deride Mercier, who otherwise has done some excellent work for pro-bear conservation, but to illustrate how easily this debate becomes polarised at a popular level, making it difficult to have any form of constructive dialogue (from both sides).

#### **5.1.4 The bear’s not really a predator?**

Despite the state’s position that bears are not a *serious* threat to pastoralism (Camarra 2005:22; MEDD 2006:17), bear predation is nevertheless accepted as a reality. Such is the case throughout

the world: ‘lessons learned’ from Yellowstone Park indicate that despite general discourse being dominated by scientific ‘facts’ and ‘solid data’, the real debate is about veritable human-animal conflicts ‘shaped by *symbolic* understandings’, behind which lie ‘real carnivores’ (Rutherford & Clark 2005: 259, my emphasis). Such symbolic understandings become inflated with the politicisation of the conservation process itself, and conflicts which begin as personal issues – between a *berger*, his sheep, and a bear predation – morph into an ever-widening polarised polemic, joined on both sides by increasing numbers of militants. Bears, an icon of the environment and the environmentalist movement (McAllister & McAllister 1997), become demonised as ‘vicious predators foisted on localists by outside forces’ (Rutherford & Clark 2005: 260). Bear attacks are not random, unimportant events abstracted from reality for the needs of conservation management documentation; they are *personal*, and the same *éleveur*/flock often suffers multiple attacks: ‘When you have 300 animals, to have 20 or 30 ewes killed by the bear in one season is unimaginable’ (Bérot 2006:62).

The surviving number of bears in the Pyrenees is impressive only in its miniscule size, and yet for most *bergers*, despite scientific reassurances that bears pose little threat to pastoral and domestic life, bear predation continues to be an unacceptable threat to their flocks and their livelihoods. In Bèarn’s Ossau valley, known as ‘Bear Country’, *bergers* voice near-universal zero-tolerance for the bear. Each has his or her own, often horrific, story to justify their opposition to the bear’s continued existence.

The nightmare began at one in the morning. In the middle of a terrible din, the whole flock took off. Not a sound from the dogs, mute, who dove [in] through the open door of the *cabane*, in total panic. The little that could be seen in the light of the torch was ghostly, unreal: the grass was flattened, forming a trail which headed straight towards the ravine and there was already a sickly odour of intestines and of burst-open bellies. We counted the cadavers by [their] glazed-over eyes, broken limbs, smashed backs. To the [number of] sheep who killed themselves by jumping into the empty space, we needed to add those who would never recover from their injuries. Fifty-odd sheep lost in a single night to the madness of the bear. (Jean Cedet, *Parc National Pyrénées Occidentales* guide, 1992, cited in de Marliave 2008:65).

Boutxi<sup>48</sup>, a large male bear weighing well over 200kg, killed 160 sheep in a single attack in the Aston *estive* during the summer of 2005: the sheep, close to a ravine, panicked during the bear’s attack and fell to their deaths (La Dépêche 2005). Of the sheep killed, 142 belonged to Jean-Pierre Mirouze, who was moving his flock in preparation for the descent from the *estives*:

Friday evening, towards 9:20, my father and I saw [Boutxi] on a trail near the *col de Sounac*. He’d been seen the weekend before, too, by hikers, and he killed five of our ewes, four others ended up

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<sup>48</sup> Boutxi, or sometimes Boutxy, was the son of a Pyrenean female, Mellba, and Pyros, a reintroduced Slovenian male.

impaled on the rocks. This weekend, we were finishing the transhumance and were moving the animals during the night. Around 11:30 my uncle heard the sheep bleating and the sound of their bells. It seemed a bit bizarre to him. The following morning, my father saw lots of vultures and wondered if there'd been a catastrophe. But we didn't dare go to look (La Dépêche 2005).

In 2006, Franska, a Slovenian reintroduced bear, quickly earned the hatred of pastoralists in the Béarn region. Five months after her release into the mountains, she was accused of killing more than a hundred sheep in just one month (La Dépêche 2006b).

### 5.1.5 How many bears are enough?

As previously discussed, international treaties, following Red List assessments, classify the bear as 'Least Concern'<sup>49</sup>. In France, the bear is legally protected, an issue which has angered pastoralists opposed to bear reintroductions. The main argument used to challenge this protection is that there are thousands of bears throughout Europe, and using the state's own definition, the Pyrenean bear is no different than any of the other brown bears. Furthermore, the 'pure' Pyrenean bear is extinct, therefore, it serves no purpose to introduce foreign bears into the highly human-dominated Pyrenean ecosystem, poorly adapted to the bear's well-being. Nevertheless, despite decades of state-imposed bear conservation, the bears who still survive are at serious risk of disappearing.

The bears of the Iberian *refugium* genetically closest to the 'pure' Pyrenean brown bears are the Cantabrian bears; the mtDNA sequence divergence is just 1.5% (Taberlet & Bouvet 1994:197). However, this population of around seventy bears is 'among the most endangered worldwide' (Pérez et al. 2010:104); it is 'very far from the size considered as a viable minimum', which should be around 200 individuals (Pérez et al. 2009).

A key concern with small bear populations is the rate of endogamy, which, at around ten percent for Cantabrian bears, is ten times greater than the maximum allowable for *domesticated* animals (Pérez et al. 2009). Their survival is threatened by the subsequent reduction in genetic variation; a minimum population size of 50 is essential to minimise this reduction, but in order to 'ensure survival on an evolutionary time scale', the population should be 'above 500 or even 5,000 individuals' (Waits 1999:29).

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<sup>49</sup> Although bears can be classified as critically endangered when considering small or isolated sub-populations such as in the Pyrenees.

Numbering just nineteen, today (ONCFS 2010c), the Pyrenean bear population is, therefore, critically small. Indeed, as previously mentioned, the actual – the ‘true’ – number of bears has become a significant device to interest and enrol actors into the major networks for and against reintroductions. In 2003, working to strict ‘scientific’ standards, Camarra estimated that there were five to seven bears in the Béarn region (Mermet and Benhammou 2005:130); based on photographic evidence known to be erroneous, the IPHB argued that there were actually eight (ibid.). This challenge became a powerful enemy force, disingenuously used against the state-science actor-network via its own spokesperson, Roselyne Bachelot:

I have the feeling that we don’t know exactly what’s happening, that the scientific issue isn’t totally agreed, and when we say ‘there’s a population of five to eight bears’, the issue isn’t at all the same if it’s five or if it’s eight... In the first case, the evidence indicates that the population is on a path of disappearing. In the second case, it’s on a path of conservation (IPHB 2003).

Presented, as it was, by a Minister of *Ecology*, this was startling. Bachelot demonstrated a total contempt for the precautionary principle (Warren 1993) and, more importantly, an incomprehension of the scientific understanding of how large a viable population should be. Bachelot’s own commissioned report of ‘intermediate risk scenarios’ argued that a minimum of twenty to forty bears was essential to avoid extinction (Chapron et al. 2003:178).

Pastoralists claim the current population represents an unacceptably high level for cohabitation (RFI 2010), so what does the potential for hundreds of bears imply? The reification of complex scientific information and its inherent authority make it difficult for the lay person to do anything but accept the state’s claims as scientific ‘truth’, and be coerced into joining the muted majority, subjugated to the democratically representative power and control of the hegemonic state (Latour 2004a:14). However, such understandings have reinforced the will of the otherwise ‘muted’ anti-reintroduction networks to be ever more vocal and activist. In a radio debate, Philippe Lacube, an Ariège éleveur, and the president of l’ADDIP<sup>50</sup>, argued:

If tomorrow we choose to have a genetically viable population using the numbers given, between 100 and 150 bears, we’ll no longer be in a territory that we can maintain economically. We’ll be in a territory that we’ll need to keep under tight control, a wilderness under the name of the protection of a bear that’s in no danger of extinction, which I repeat, as there are thousands throughout Eastern Europe... eh, on a European scale. And we don’t generate livelihood, we don’t generate [our] economy; it’s really a question of regional *development*. We’re not in biodiversity. Placing the problem of the Pyrenean bear, *in the Pyrenees*, in terms of biodiversity, is total nonsense. (RFI 2010).

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<sup>50</sup> Association pour le Développement Durable de l’Identité des Pyrénées (Association for Sustainable Development and the Pyrenean Identity).

Lacube's statement clearly sums up the anti-bear actor-network's reasons for opposing bear reintroductions. In particular, it alludes to the key issue that pastoralists believe they cannot survive in cohabitation with bears, and that alternative 'regional development' is the 'real' state objective.

### 5.1.6 Pastoral-bear cohabitation

When large predators share the same geographic space as humans, there is always the possibility of encounters and therefore, a risk to all of the actors concerned; humans, domestic animals, crops, and, of course, to the predator itself. Such encounters occur when the bear, a *wild* animal, is perceived to *transgress* the invisible frontier of a human cultural landscape, moving between two contested spaces without negotiation. Like 'weeds' in a garden, or dirt in the home, when it moves across this imaginary line – the hyphen between 'nature' and 'culture' – the bear becomes an animal 'out of place' (Douglas 2002 [1966]; Knight 2000:14). The bear finds itself unwittingly 'where it does not belong according to tradition, custom, rules, law, public opinion, prevailing discourse or some other criteria set by human beings' (Johansson 2009:155).

The human response is, also without negotiation, to try to (re)move all traces of the unsolicited movement: to transform that which is dirty into something clean, that which is wild into domesticated, that which is nature into culture; to transform disorder into order. In fact, this is exactly what Pyreneans have striven to do with their natural landscape for millennia: even though the mountains are a part of nature, they are not 'wilderness' (cf. Cronon 1996).

Unlike in North America where there still exist large areas largely devoid of human activity<sup>51</sup>, France and, indeed, Europe in general, has lost any distinction between environments dominated by nature and by humans. As Linnell et al. (2005:398) point out, 'the influence of humans is just too strong in Europe to allow a return to a "natural" system'. Indeed, millennia of human intervention have succeeded in transforming space which was once wild, dangerous, frightening, and unacceptable, into a domain which is domesticated, safe, calming, and acceptable. The bear, exercising his proper agency, enrolls himself in a holistic natureculture actor-network where he becomes the non-negotiating spokesperson for wild nature, and imposes himself on this

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<sup>51</sup> Unfortunately, this is less and less true. As human activity continues to pollute the atmosphere, it has far-reaching effects even on areas otherwise remote and therefore barely touched by human settlement. Climate change and ozone depletion, and a multitude of carcinogenic particles, amongst other things are ensuring that every part of the planet is now touched by anthropogenic activities, with far from predictable effects even over the short term (cf. McKibben 1990; Williams 2010).

domesticated space, forcing pastoral actor-networks to coalesce with the objective of regaining control and rebalancing the scale of power (Douglas 2002 [1966]), just as their ancestors did before them.

The power required to re-instil control over the transgressed, contested space recalls Foucault's 'bio-power', the role of which is 'to assure, support, reinforce, multiply life and *put life in order*' (1998 [1976]:179, my emphasis). In contemporary terms, this bio-power can be thought of as biosecurity, defined by Buller, in his study of the French Alpine wolf population resurgence, as not 'being eaten by big and ferocious wild animals' (2008:1583). The natureculture space created by the bear's transgression leaves no room for *bergers* to retake control of their environment without implicitly accepting his non-negotiated presence, for:

[t]he refusal of the bear in the Pyrenees is not a question of money. It is a legitimate expression of the right of these men and women to live simply but with dignity, without predators or indemnities, without having to be paid... blood money (<http://www.aspap.info/index.html>).

The state's response was to claim that bears present minimal risk to cultural life. The last brown bear attack in France which killed a human occurred over 150 years ago (MEDD 2006:33). Brown bears in the Pyrenees, as we have seen, represent an 'insignificant risk' to wild fauna (Camarra 2005:22); furthermore, they generally prey only on *unprotected* domestic flocks where they kill, on average, 1.5 sheep per attack (MEDD 2006:17). The French government claimed that total losses of sheep each year on the Pyrenean *estives* caused by stray dogs, illness, accidental falls (in ravines for example), lightning, theft, and 'predation by bears and other species', was between 10,000 and 20,000 (MEDD 2006:26). The average annual depredations due to bears were 300 (ibid.), a number which has since fallen to 167 (AFP 2010), which represents just 0.028% of the estimated 600,000 sheep in the *estives*, and 11.13 sheep per bear (AFP 2010).

Nevertheless, in order to assure biosecurity at the ephemeral bear/human, and wild/domestic boundaries of nature-culture space, the state-science actor-network expressed its explicit understanding that future pastoral cohabitation with the bear is predicated on modifications to current pastoral practices (MEDD 2000:32). As with so many other devices of state hegemony, and indeed, the world capitalist order<sup>52</sup>, the onus of responsibility is cleverly shifted from the bear and the state's reintroduction programme, to the *bergers*; it is *they* who must change their methods and

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<sup>52</sup> This is clearly demonstrated in multiple ways. The failure of government collusion with capitalism and, in particular, financial mega-corporations, has been shifted to the general population who must suffer extreme austerity measures to compensate for the untenable debts accumulated by their leaders. Similarly, the catastrophic fault of global industry, which is largely responsible for atmospheric, oceanic, and terrestrial pollution, and climate change, has been shifted to the population to cut back on their individual energy needs, recycle plastics and so forth (cf. Williams 2010).

protect their flocks so that bear predation will diminish. The state, therefore, offered significant financial incentives to *bergers* who agreed to *surveiller* their flocks full time with the aid of *patous*, the famous Pyrenean Mountain dogs (figure 11), and night-time electrified pens. Sheep proven to be killed directly by bears were indemnified by the state (ibid.:100ff). The anti-bear actor-network dismisses the programme as ‘a plan created by people... non-native to the valleys, and who cannot understand [our ways]’ (MEDD 2006b:13), and ‘pure bullshit churned out by people who don’t live in the mountains’ (ibid.:33). In refusing the financial benefits offered by the state, pastoralists are making a symbolic statement of resistance by the periphery against the unilateral core, rejecting an otherwise tacit acceptance of the programme itself, and therefore, of the bear.



Figure 11. Patous enjoy a dominant position to observe the flock (Burri et al. 2004).

A detailed analysis of the state’s biosecurity aid programme to pastoralism and its ‘scientific’ justifications would make a worthy dissertation in itself, and is far beyond the scope of this dissertation. Very briefly, the key state-science actor-network’s argument that ‘modern’ protection of flocks is sufficient to deter bear predation is vehemently contested, again by using the network’s own research. The ethnographic records maintained by the Pyrenean National Park, for example, suggest that bears are less afraid of human and canine presence than is suggested by the scientific and political literature:

[based on] all the data, it is clear that no form of protection is dissuasive once a bear has decided to attack, even if he prefers to avoid human proximity. *Patous*, electrified enclosures, do not intimidate him. Witness this bear which, on 13<sup>th</sup> July, 1987, at 11 pm, launched his attack just 30 metres from the *cabane d'Utapet*, despite the presence of the *patou* and the electrified enclosure. It took the *berger's* intervention to make him [the bear] drop the goat he was holding on to (Nédelec 1987:np).

Despite mostly positive research on the value of livestock protection dogs (cf. Andelt 1999; Coppinger et al. 1988; Green and Woodruff 1990; Haraway 2003), the vast majority of pastoralists reject the use of *patous* because of the very traits which make them good guardians of the sheep which they consider to be their 'pack' (Burri et al. 2004:70-2). They are liminal animals, closer to nature and the bear himself (Cummins 2009:120; Degois 1946:209); 'virtually inobedient' (Landry 1998:15) and 'almost wild' (Bobbé 1998:16).

Over-night penning of sheep 'shows a total incomprehension of sheep husbandry because the "natural rhythm" of flocks is to eat during the cool hours and to rest during the hot hours' (Bérot 2006:70). Furthermore, the mere presence of a bear can cause penned sheep to panic and die from suffocation if they cannot break through their enclosure (Primm and Murray 2005:113): in one such Pyrenean bear attack, twenty-three ewes died in this manner when they massed against each other in fear (PNP 1990:152).

The most contested requirement of the state was to require that all flocks be guarded full time by *bergers*. There is no region of Europe where untended extensive sheep farming coexists with wolf or bear populations without incurring unsupportable depredations (Kaczensky 1999:68). Traditional pastoralists used to spend their entire summers on the *estives* with their flocks; today, 69% of all Pyrenean flocks graze totally unsupervised (Reynes 2005:54). As Bérot (2006:41) argues, modern flocks comprise between 1,000 and 2,000 sheep<sup>53</sup>, and have little in common with the flocks of sixty animals, or so, which characterised traditional pastoralism. Today's *éleveur* is often obliged to have a second job in order to survive (ibid.; PNM 2011:66), and given the size of the flocks and the immensity of the mountain, *bergers* typically access the *estives* every three to eight days using four-wheel-drive vehicles (Bérot 2006:41; Kaczensky 1999:62).

The 'traditional' Pastoral life was not easy. Pyrenean *berger*, Etienne Lamazou, was 88-years-old when his unique autobiography was published: he wrote that in order to earn just enough to eat and be clothed, *bergers* had to work 'like a galley slave', and were able to 'go out on Sundays, as long as there weren't too many Sundays' (1988:26). The *berger's* life was 'too demanding' with never any time to relax or take holidays because 'the sheep don't take them' (ibid.:204). Speaking for

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<sup>53</sup> European subsidies through the Common Agricultural Policy favour and encourage intensive farming practices and large numbers of livestock (Marcon 2010; IE 2009; Moriamé 2004; Wild Europe 2010).

modern pastoralists, Bérot asks: ‘Who’d be crazy enough in our modern society to accept a job working five months straight without a single day off and in extreme solitude?’ (2006: 41-2).

## **5.2 Summary**

‘Truth’ is a social construct, and in order to mobilise their networks to achieve their problematisations, each actor within the actor-network provides different interpretations of the same ‘truths’, or even entirely different ‘realities’. The power of science to silence the muted majority has been seriously challenged, sometimes politically, sometimes scientifically – but always socially. While their actors continue to act, actor-networks continue to thrive and, in the case of the bear conservation actor-network, they continue to create oppositional devices to silence dissent. This polarisation of beliefs and values has only deepened over the decades of bear conservation initiatives in France. Today’s pastoralists are as much at risk of extinction as the bears in the Pyrenees and as much as the state-science actor-network insists that cohabitation is both required and possible, pastoral and anti-bear actor-networks are equally as adamant that it is unjustified and impossible.

I have followed the actors as far as I have been able, and in so doing, revealed many of the motivations which give them the power to exist. In the following chapter, I will attempt to bring my findings and understandings together into a coherent summary, or conclusion; but as long as the agency continues to drive the bear reintroduction network, of which I am now a part, this is far from assured.

## Chapter 6

### 'No' to the bear: conclusion

Our own survival depends on understanding not only are we coupled to our own conceptualization of ecosystems and ecological order, but also to embodiments of our own ways of thinking about and acting on them. (Harries-Jones 1995:8).

One could be forgiven for thinking that those actors who support the bear reintroduction programme in the Pyrenees, and those who oppose it, are living in different realities; they probably are. A violent verbal exchange erupted during a protest against the reintroduction of the first (recent) Slovenian bear, Palouma, in 2006. Philippe Lacube claimed that the Pyrenees are 'our world, not the bear's'. Nelly Olin, the Minister of Ecology retaliated that the protesters were 'donkeys' and 'imbeciles', who 'must not be part of the same world [as us]' (Libération 2006b). Indeed, Latour (2004b:455) argues that opposing groups rarely 'agree on opinions: they begin, rather, to inhabit a different world'.

Throughout this dissertation, this notion is best exemplified by the ongoing constructions of alternative 'sciences' and 'truths', in which the bear has become the lead actor, enrolled without conscious consent, but constantly manipulated as a device of spokespersons for these different actor-worlds. It is clear that a key question is not what bears *are*, but what they are *becoming* (cf. Blok 2011). Bears are continuously being metamorphosed: from their simple beginnings as naturecultural cohabitants with humans, to gods, to envoys of the devil, to nature-cultural transgressive pests, to ecosystemic 'focal species', to a symbol of wild, pristine nature, to a naturecultural icon of cultural harmony with nature, to a means for absolution of human guilt. In one world, the bear has come full circle, starting and finishing in a monistic natureculture; in another world, the bear has become ever-more separated from natureculture, unequivocally associated with a nature inherently opposed to anthropocentric culture. Bears, like other iconic

megafauna, have become highly contentious ‘cosmopolitical’<sup>54</sup> actors, who co-constitute contested ‘human identities and concerns’ (Blok 2007:82). As such, bears have become factish actors, constructed not from scientific proofs, but from matters of concern.

Scientific proofs, however, are always derived from accepted, but unprovable, first principles, or axioms; science, therefore, never ‘proves’ anything (Ikerd 2005:28). Likewise, Actor-Network Theory is also based on ‘first principles’: although no ‘presumptions’ are permitted, all actors have agency and must be followed wherever that may lead. This obligates an examination of *every* association between two initial actors<sup>55</sup>, followed by an analysis of all subsequent associations created by interconnections with other actors. Therefore, in trying to understand the adamant opposition to bear reintroductions by certain Pyrenean pastoralists, this requires almost infinite research; out of necessity, much must be ignored, glossed over, or greatly reified. Such is the case in this dissertation. Furthermore, the associations which are selected for inclusion, or exclusion, must be chosen by the researcher: my reflexivity must influence the outcome of the research (cf. Woods 1997:337). Minimally, in addition to the actors outlined in Chapter 3, pastoral opposition is further influenced by associations resulting from: gender; class structure; urban-rural/core-periphery; ‘free market’ pressures and globalisation including intense competition from New Zealand and the UK; European Common Agricultural Policy (CAP) objectives, norms and subsidies<sup>56</sup>; and even the electrified fencing proposed to protect flocks. Physical, mental, and emotional indicators of all pastoralists and their kin, their animals, their communities, *ecolos*, politicians, tourists, the tax payer, veterinarians, the bear, and even the fly – indeed, anything which can affect any component of the overall bear conservation network – must be considered.

This process of developing a generalised symmetry by diffusing the totality of associative relationships while simultaneously according agential equality to all actors, human and nonhuman, has a flattening effect. Critics accuse ANT of artificial reductionism which creates a one-dimensional model of reality (cf. Blok 2007:83; Woods 1997:335). In reality, as indicated, many associations are simply avoided: any reasonable ANT research must be at best a vast over-

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<sup>54</sup> Latour uses the word ‘cospolitics’ to describe an anthropological cosmopolitanism different than the more usual sociological definition which he specifically attributes to Ulrich Beck. In the Latourian context, multiple actors, human and nonhuman, specifically create conflicting natures which, in turn, generates conflict (Latour 2004b).

<sup>55</sup> Actually, an argument can be made that a single actor can have conflicting feelings, emotions, knowledge, and so forth, and could therefore be considered to be subject to internal associations of what – following mathematical thought – might be considered sub-actors, or elemental actors.

<sup>56</sup> <sup>56</sup> I have been unable to introduce any substantial discussion about the Common Agricultural Policy. It has an important influence on just about every aspect of agriculture and is currently being revised for 2013. Even before the current financial crisis, this revision was expected to have significant ramifications on Pyrenean pastoralism, but now many expect serious restrictions and conditions to be associated to available aid (ACAP 2009; Besson and Daniel 2008; europa 2010a, 2010b, 2011; Moriamé 2004).

simplification of the myriad possible actor-network associations. For example, the Pyrenean Mountains are, themselves, an actor, but do they exhibit an agency potentially important to the research question? Ultimately there are relationships between the mountains and every individual human, animal, and plant, and all have a discernible influence. This tangle of associations quickly becomes too complex to fully comprehend. Nevertheless, from out of this flatness, ANT does succeed in bringing many actors and associations to the surface which might otherwise be missed – for example, bear faeces.

The agential symmetry required by ANT between certain nonhuman animals – bears, dogs, and sheep – and humans, seems questionable (cf. Blok 2007:83); it is humans who control the agency. The bear, in particular, has been unconsciously enrolled into opposing actor-networks largely depending on which side of the nature-culture divide human spokespersons fall. Although science is epistemologically neutral, it has provided significant data which are used by human actors who wish to promote a more harmonious and holistic natureculture including humans and ‘wild’ animals. These data are denied, modified, or interpreted differently by other human actors who espouse a pragmatic world divided into the distinctly separate spheres of nature and culture, wild and domesticated.

Ian McAllister, a popular environmental writer, found himself face to face with a grizzly bear and thought he was about to die. However,

the big bear lumbered down the trail, nose up, and stopped in mid-stride right in front of me. We stared at each other across the sword ferns. Salmon blood stained his mouth and he seemed well fed. He did not seem alarmed at my presence. The look in his eyes when they met mine was one of gentleness, almost sentience... Then the 225-kilogram bear lowered his head and passed on without even snapping a twig, as beautiful as anything I have seen (McAllister and McAllister: 1997:26).

The bears photographed by the McAllisters and others are important devices intended to enrol human sympathisers into supporting the presence of large predators in beautiful holistic landscapes which are neither wilderness nor cultured spaces, but are ‘better’ perceived as a harmonious whole, and which should, therefore, be protected at all costs. The fact that the photograph (figure 12) was certainly not taken at the same moment as the account which it accompanies in the book<sup>57</sup> is not important: the *iconic* ‘Bear’ is used throughout the environmental movement to suggest an innocent, imploring being, worthy of human help, regardless of social consequences.

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<sup>57</sup> This image shows none of the salmon blood or sword ferns described by McAllister.



Figure 12. A hardly-intimidating bear as photographed by McAllister (McAllister and McAllister: 1997).

However, people who live and work in close proximity to bears can see things differently. For these actors, the bear can epitomise the wildness of nature – the enemy of culture and even of biodiversity – associated with a more ‘backward’ and less ‘civilised’ time before humans learned how to ‘manage’ the environment. The images posted for all to see on the internet by Pyrenean pastoral associations reflect nothing of the gentleness or sentience of McAllister’s bears. They are often pornographically violent, used as devices to incite anger and hatred amongst fellow human actors who see themselves as victims of bear cohabitation, just as their sheep are victims of bear predation. The photograph I have selected (figure 13) of a ewe which survived a bear attack, is a very ‘inoffensive’ image amidst numerous others which are far more disturbing. This image, however, still serves to express the quotidian concerns of today’s Pyrenean pastoralists. The sheep becomes the counter-image of a ghastly, uncivilised bear attack, which would be totally avoidable if the

government did not interfere with the ‘natural’ demise of bears no longer suited to their habitat. On the other hand, bear supporters appropriate the same images to demonstrate the anthropocentric and selfish human-environment relationship (cf. Woods 1997: 329) sought by pastoralists who elect to do the least possible to protect their flocks from minimal bear predation which could easily be avoided by employing electrified pens, livestock protection dogs, and human surveillance.



Figure 13. Injured Sheep.

<http://picasaweb.google.com/aspap.contact/OursAttaquesPyrenees?feat=directlink#5384284571348822178>

The bear is the principal actor in the bear conservation network, but has become a dichotomous device used to manipulate the feelings and opinions of other *human* actors, to interest them enough to become enrolled in causes which are often positioned as artificially false dichotomies. The bear becomes an actor only via *human* mediation (cf. Blok 2007:81). The same is true of the sheep, the *patous*, and all other nonhuman actors.

I have argued that nonhuman entities have their own proper agency and intentionality. I find that my epistemological foundation based in environmental anthropology allows me to easily perceive,

accept, and incorporate nonhuman agency into my analysis. However, in this dissertation about human-bear conflict, I find that the bear's voice becomes muted by the constraints of ANT. Furthermore, those human actors who speak for the bear invariably do so from personal motives which are not necessarily bear-centric or altruistic. ANT does not succeed in treating humans and nonhumans equally; rather, it minimises the intentional agency of nonhuman actors, shifting the focus instead to human actors' *definitions* of this agency (Callon 1986:25). Therefore, what are generally perceived as human-animal conflicts, are in fact shown to be human-human conflicts. Unfortunately, ANT denies certain key actors 'the capacity to act' (Woods 1997:335).

Power, according to ANT, is 'invested in relations rather than in entities' (Woods 1997:336). Certainly, the state-science relationship reinforces the power needed to impose bear conservation, but this power is *already* invested in the state without any specific need for scientific authority. The actors exercising this power are appointed by the elected few who represent the people, to represent the interests of the elected few. In contrast, apart from its physical attributes, the only useful power inherent in the bear rests in the transfer of its agency to competing human spokespersons and is, thus, indeed 'invested in relations'. However, the relative power of this translated agency is not displaced equally as ANT desires: the actor-networks which exercise this power are 'constructed across a topography of power relations, populated by elites and pressure groups with power and influence derived from discursive constructions and privileged access to resources' (ibid.).

In the Pyrenees, the elites are powerful scientific, business, and political leaders. For the most part, the objectives of these power-actors are transparent – to support or to oppose the reintroduction of bears and their forced cohabitation with pastoralism. Their *motives*, though, are rarely obvious: power-actors manipulate and coerce the actor-networks to succeed in their often un-stated problematisations. This is particularly true for the state.

As I have shown, the state is ostensibly supporting a monistic naturecultural ideal which purports to integrate pastoralism and bear conservation, while dissuading a nature-culture dualism in which the two are opposed. However, the French government is inextricably intertwined with capitalist economics – which is intrinsically nature-culture dualistic (Williams 2010). The overarching requirement of the state is economic growth: this is the only (perceived) means to reduce unemployment, the deficit, and massive national debt. Within capitalist ideology, the environment has (globally) been *externalised* to avoid incurring any costs which would decrease profitability and economic growth (cf. Ikerd 2005; Williams 2010). A simple statistic illustrates this very well: the 'cost' of *internalising* the environmental despoliation caused by the world's 3,000 largest

corporations would be \$2.2 *trillion* per year (CSR 2010:3), an amount which would likely collapse the global economy if it had to be accounted for. Constrained by capitalism, the French state is *obligated* to implement policies which *avoid* environmental mentalities and increase economic growth. Although the state is pressured by moral/ethical conscience and international laws to protect the Pyrenean bear population, it will *rationaly* do so only as far as it can while minimising costs and inefficient industries dependent on subsidies and financial aids – such as pastoralism – and favouring economic growth from more productive intensive agriculture and from tourism linked to the presence of the bear.

Every actor in the bear conservation actor-network is subject to the machinations – devices, deliberate or otherwise – of global capitalism; but only human actors have anything to say about this. Indeed, only those actors whose ‘associative’ power wields the greatest force have any real say – and these elite actors develop and control the very system which maximises and perpetuates their power (cf. Williams 2010). The pastoralists may have a few power-actors, but collectively, they are significantly overpowered by the state. Thus, while ANT wishes to *flatten* power to diffuse via associative relationships, this is simply not realisable<sup>58</sup>. Power is pre-existing in radically disproportionate amounts in all actors: what is lacking, then, is not power, but ‘true’ agency (Woods 1997:336), and the pastoralists resort to emotive and angry tactics to express a minimum of this agency.

It is possible that ANT might help some researchers deduce subtle manifestations of power which they might otherwise not perceive, particularly from nonhuman actors. However, the anthropological perspective is particularly well versed in the complex abstractions of ‘power’ found in cultural constructs such as methods, rituals, and rites, and their associated artefacts, as well as in many other symbolic and material nonhuman actors (cf. Cheater 1999); as such, I do not find that ANT offers significant advantages over our discipline’s particular epistemologies.

I have endeavoured, though, to respect an ANT-informed analysis of the Pyrenean bear reintroduction programme and the intense opposition expressed by a small, but important, pastoral group. What I can conclude is that their anger is largely justified. The pastoralists who say ‘No’ are seeing their livelihoods being threatened by two unwelcome predators – the bear and the neoliberal state. The state is acting with a deeply rooted economic rationalism which is socially and environmentally flawed (Ikerd 2005; Marx 1990 [1863]; Williams 2010). Although reason

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<sup>58</sup> This is not to say that occasionally actor-networks can evolve which disrupt or even overturn such power; but such occasions are rare and rarely sustainable.

profoundly informs the pastoral counter-science, they are responding to these threats emotionally. Emotional reactions are also common to pro-bear actors (cf. Milton 2002). The result is that often, each ‘side’ in this debate is talking past the other: there is no real dialogue, and the state has exacerbated this problem by favouring unilateral decisions with debate after the fact. The ‘truths’ on both sides have become non-negotiable matters of ‘fact’, fundamentally opposed because of their underlying motives – to live with or without the bear – and not effectively refuted or affirmed by either side.

Nevertheless, it is clear that with or without political intervention, the Pyrenees are becoming rewilded. The Pyrenean biodiversity includes humans and bears, but will soon enough include wolves<sup>59</sup>; it deserves a chance to prosper, but this can happen *only* with cooperative human acceptance and intervention, which requires pastoral well-being: this is the meaning of the opening quotation to this chapter which summarises Gregory Bateson’s thinking. Today, such a monistic, rewilded vision is vehemently opposed by pastoralists antagonistic to this emerging ecology, its economic implications, and the political processes driving it.

Today, Pyrenean pastoralism could not survive without massive CAP<sup>60</sup> subsidies linked to productivity and environmental standards. In order to gain pastoral support for bear cohabitation, the state offers significant additional financial aid to pastoralists who agree to specific measures designed to protect the flocks, particularly full-time surveillance by bergers, the use of *patous*, and the overnight penning of sheep. Most pastoralists grudgingly accept CAP aid, but vehemently reject any aid perceived to imply *acceptance* of the bear. The demands made on today’s pastoralists are already too great, and the state’s demands to enforce comprehensive full-time protection of flocks are impracticable. Combined, though, these demands disguise the underlying, unsustainable goals of ‘free’ global trade, encouraging the production of more agricultural products than are actually needed, thus promoting needless, cut-throat price/profit competition<sup>61</sup>. More research is needed, but my current understanding suggests that if pastoral subsidies were less geared towards intensive

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<sup>59</sup> The wolf has made a remarkable come-back in the French Alps, but DNA evidence has shown that at least three wolves have found their own way from Italy into the Eastern Pyrenees. It is well accepted that it is only a matter of time before the wolf population expands and extends its range across the mountains to where the availability of prey is easiest – where there are free-grazing sheep (Benhammou et al. 2004).

<sup>60</sup> But CAP, itself, is a device of global free-markets, intended to concentrate agricultural production (including the need for massive quantities of expensive soil additives and pesticides etc.) and to create export markets for the sole purpose of increased global profits; and with little regard to what is better for agriculture and local markets. Ironically, then, part of the pastoral crisis in Europe is due to the system, and not to ideal pastoral practices (cf. Ikerd 2005; Williams 2010).

<sup>61</sup> There is also a major issue given the associated enormous environmental pollution caused by unnecessary extensive international cross-shipping as each country imports products from some countries only to export to others (or even the same ones). In addition there are numerous other problems such as meat being produced in Europe for sale to non-developed nations at a price which easily undercuts local farmers, forcing them to abandon their farming practices to seek employment in cities, and encouraging land-grabbing by large international corporations (Williams 2010:63-4).

farming, and if Pyrenean pastoralists readopted more traditional methods of ‘properly’ surveilling and protecting far smaller flocks, then they could potentially achieve higher self-valorisation while earning better net incomes and supporting local markets. In addition, these much smaller, more human-scale, exploitations would bring pastoralists closer to their traditional culture and to nature, and might just persuade them that living with bears is, indeed, good for the whole.

In any event, sustainability *and* biodiversity have become important local and global goals, considered by many to be essential for the survival of human civilisation; certainly essential for the survival of Pyrenean pastoralism. The challenge, then, is to open the process to a more pluridisciplinary epistemology which is less restrained by the conventional culture-nature binary which drives an anthropocentric-biocentric approach; to focus on the holistic relationships and networks which exist between animals, humans, and the environment, allowing for the proper agency of each without state appropriation of this agency. Only in this way can we hope to reconcile the multiple, and diverse, needs of this complex mountain ecosystem, with the cultural and pastoral practices of the people who have made their livelihoods there for millennia.

Humans, nonhuman animals, and the environment share ecological memories and co-participate in a vast, complex network of interactions situated biologically, emotionally, politically, and spiritually in a temporal and dynamic landscape: it is *this* actor-network which ultimately determines the individually different, yet intertwined relationships with the environment. ANT, by itself, cannot be the theoretical basis for such a profound and complex issue; combine with sound anthropological epistemology, though, it has great potential.

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