

# The role of nonhuman entities in institutional work: the case of the ocean in a surfing-centered local economy

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**Abstract.** This article examines the role played by a nonhuman entity, the Atlantic Ocean, in institutional work. It uses the results of an in-depth case study concerning the local economy of a surfing-focused seaside town in the south-west of France, where relations with the ocean have been modified by institutional work facilitated by extreme coastal erosion during winter storms in 2013-2014. This work, performed by the actors of the local economy – which include the ocean – aims to change the institutions of surfing, and local planning in a coastal town, by acting to influence the relation between this local economy and the ocean. The study involves a qualitative analysis of 32 interviews with stakeholders in the local surfing industry to identify the role played by a nonhuman entity in deliberate action to influence institutions. Mobilization of the theoretical framework of the anthropologist Philippe Descola concerning the types of relations between humans and nonhumans leads to 1) the suggestion that the nonhuman agency of natural elements should be included in consideration of institutional work, and 2) a reconsideration of the relational influence of the material dimension in organization and management theory.

**Keywords:** institutional work, institutional change, materiality, surfing industry, coastal erosion.

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*“We find the kind of proposals that may be made by an animist absurd, superstitious. But when you think about it, there’s nothing odd about fleetingly assigning intentionality to a nonhuman. In fact it’s instinctive, when our computer breaks down just when we need it most. We’re always doing it, but it hasn’t stabilized into an ontology because those are accidental occurrences that are subsequently inhibited.”*

Philippe Descola<sup>1</sup>

## INTRODUCTION

Despite the academic community’s eager interest in the concept of institutional work as a way to account for the operation of organizations (Lawrence & Suddaby, 2006), management research has tended to neglect the material dimension of that operation, concentrating instead on its discursive dimension (Boxenbaum, Leca, Huault, 2016). This tendency is very understandable, since institutional work, “the purposive action of individuals and organizations aimed at creating, maintaining and disrupting institutions” (Lawrence & Suddaby, 2006: 215), follows the path traced by neo-institutional theory, which is chiefly rooted in the interpretive research of Berger and Luckmann (1967) and the phenomenological approach (Schutz, 1967).

In recent years, however, research into institutional work has endeavored to reintroduce the material dimension into understanding of institutional processes (Lawrence, Leca & Zilber, 2013). Through their case study of the firm Intel, Gawer and Phillips (2013) highlight that actors use artifacts as a way to spread their plans for institutional change. Raviola and Norbäck (2013) refer to the concept of *agencement* developed by Michel Callon to study the role of technology in the institutional work done by journalists at an Italian business newspaper.

Yet in these studies, material objects are presented simply as “accompanying” the performance of institutional work, with no real agency of their own. As Boxenbaum et al. (2016: 236) write, “artifacts are considered as vectors of institutional processes, and the way they can influence and disrupt them has not been analyzed” (author’s own translation). Monteiro and Nicolini (2014), however, stress the “‘silent’ but essential” role played by these artifacts in the conduct of institutional work (2014: 14), and show the role of nonhuman actors, in the form of prizes given out in the Italian public sector, to encourage certain practices over others.

The question of how the role of nonhuman entities connects to human activity is thus important as regards the performance of institutional work, particularly when the nonhuman entities involved are natural, i.e. have a more active role than artifacts. Yet, in the many conceptions of “agency” that have been developed (Battilana & D’Aunno, 2009; Emirbayer, 1997; Emirbayer & Mische, 1998; Smets & Jarzabkowski, 2013), a relative methodological separation is noticeable between the study of human agency and the study of the institutional context in which the humans think and act (Zundel, Holt & Cornelissen, 2013). This “conceptual juxtaposition” of actors and their institutional context (Zundel, Holt & Cornelissen, 2013) leads to a separation between material agency and human agency (Pickering, 1993; 1995) which the anthropologist Philippe Descola calls a discontinuity between nature and culture, a position that minimizes consideration of the agency of nonhuman entities in

1. From an interview with Philippe Descola: *Entretien avec Philippe Descola: autour de Par-delà nature et culture*, vendredi 15 octobre 2010, by Nicolas Rousseau, [www.actu-philosophia.com/entretien-avec-philippe-descola-autour-de-par/](http://www.actu-philosophia.com/entretien-avec-philippe-descola-autour-de-par/). Author’s own translation of the original French.

the life of organizations (Lorino, 2013), and the performance of institutional work in particular.

In a departure from the assumption of discontinuity between the material and the social, or in Descola's words between nature and culture, this study examines the role of nonhuman entities in the work to influence institutions. This leads to the following research question: how do natural nonhuman actors contribute to institutional work? To answer this question, I refer to Descola's (2005; 2013<sup>2</sup>) work on the ways in which humans view their relations with nonhumans. Based on a case study, the ocean is analyzed as an entity that may have agency which connects to intentional action by economic actors in the surfing industry at Lacanau-Océan, a seaside town on the south-west coast of France. This study makes several contributions to the organization and management literature. First, reference to the work of Descola makes it possible to describe different modes of relations between human actors and natural nonhuman actors, with a particular emphasis on the institutional work performed by a natural nonhuman actor: in this study, the Atlantic ocean, which causes change to the institutions of surfing and local planning in a seaside resort. Second, I thus propose that nonhuman actors, especially natural nonhuman actors, have agency once human actors consider them to be endowed with a specific physicality and/or interiority. Finally, I argue that moving beyond the artificial nature/culture divide leads to a subtler analysis of the role played by nonhuman entities in organizational phenomena.

This article has six sections. The first comprises two stages. It begins by examining recent endeavors in the institutional work-based approach to include consideration of material entities. It then refers to organization theory research that has worked on inclusion of materiality to a) provide perspective on the current treatment of materiality in the neo-institutional approach, and b) justify the use of Descola in this study. The second section characterizes the theoretical framework developed by Descola which is subsequently used in the study. The third section presents the context of the study, explaining the relevance of its empirical setting to the question being addressed. The fourth and fifth sections respectively report the method and the results of a qualitative study. The sixth and final section discusses the results and concludes the article, focusing on its contributions.

## **THE QUESTION OF THE AGENCY OF NONHUMAN ENTITIES IN INSTITUTIONAL WORK**

### **AGENCY VIEWED AS PRINCIPALLY HUMAN**

Neo-institutional studies see the institution as a long-term element of life in society, with a far-reaching effect on behaviors and the representations held by individual or collective actors. The stream of research on institutional work reminds us that these actors play an active role in institutional processes, doing much more than simple actions determined by execution of a cognitively internalized instruction. A broad definition of intentionality is adopted in the institutional work research: intentionality is present "where actors relate their actions to their situations" (Lawrence, Suddaby & Leca, 2009:13). This definition can encompass many forms of institutional work. Naturally, it includes cases where actors strive to influence institutions (for continuation, change, or termination). But

2. Unless otherwise indicated, the Descola quotations in this article are taken from the English translation of Descola's (2013) book.

less intuitively, it also includes all human action that has an impact on institutions. Lawrence et al. (2009) cite the extreme case of English-speakers in a country where English is the main language: their action constitutes institutional work “since it serves to reproduce the dominance of that language” (Lawrence et al., 2009:13). However, this body of research appears to neglect consideration of agency that might not relate to human action. As Boxenbaum et al. (2016: 230) write, the favored perspective in institutional approaches is essentially discursive, and “research focuses analysis on sensemaking structures, scripts and ideologies, leaving aside the “artifactual” dimension of organizational life” (author’s own translation). First, the question of agency is studied from the standpoint of the actor, and considered as “human agency”. Second, it is generally addressed separately from the question of the agency of nonhuman entities. There is a clear distinction between actors and their social environment in the definition of agency in institutional work research. Each of these points is discussed further below.

#### NONHUMAN INVOLVEMENT IN INSTITUTIONAL WORK

Studies of institutional work have sought in recent years to examine the role played by materiality in the shaping of institutions (Lawrence et al., 2013). While the earliest studies simply examined the use made of objects by actors performing institutional work, several recent articles explore the role of nonhuman entities, in the form of objects, in institutional work (Boxenbaum, Jones, Meyer & Svejnova, 2014). Gond and Boxenbaum (2013) connect the concept of institutional work to Actor-Network Theory (ANT) to observe the role played by local contexts in the development of socially responsible investment. Blanc and Huault (2014), for their study of the process of institutional maintenance in the recorded music industry, analyze the role of the artifact, “an object that has been intentionally made or produced for a certain purpose, and that can be distinguished from a natural object” (Blanc & Huault, 2014:10). It should nonetheless be noted that the research published to date has studied nonhuman actors made by humans (artifacts, tools, instruments, etc.), ignoring natural nonhuman actors. Yet given the role nonhuman actors play in institutional work through the characteristic agency attributed to them, situated between physicality and interiority, greater awareness and consideration of the specific type of agency of natural elements is necessary.

#### SYMMETRICAL TREATMENT OF HUMAN AND NATURAL NONHUMAN ACTORS

Most articles concerning the need to consider materiality in institutional work use concepts principally inspired by the work of Latour (1987) and Callon (1986), and take a sociomaterial perspective (see for example Gond & Boxenbaum, 2013; Raviola & Norbäck, 2013; Monteiro & Nicolini, 2014). Although they include certain concepts from ANT, they do not follow its overall approach. Boxenbaum, Leca and Huault (2016: 236) lament the fact that apart from Monteiro and Nicolini (2014), such recent studies do not make full use of the intellectual contributions of ANT for the study of institutional work, notably the principle of symmetry, which in ANT underpins the importance of symmetrical treatment for humans and nonhumans (for discussion of this point, see McLean & Hassard, 2004).

To overcome the artificial divide between social and material elements, the main approach in this article is inspired by the work of

Descola (2005; 2013), with particular reference to the concept of “modes of relation”. ANT is not, after all, the only possible approach that includes materiality in consideration of institutional processes. In the afterword to the book he co-edited (Lanzara, de Vaujany, Mitev, & Mukherjee, 2015), de Vaujany (2015) compares several ontologies inspired by the work of French anthropologists that can be used to study materiality in organizations. He identifies what he calls an “ontology of process” in Latour, and a second ontology based on the work of Descola which he calls an “ontology of objects (and agency)” (de Vaujany, 2015: 300). The contributive potential of reference to Descola for our aim of understanding the agency of nonhuman entities is clear. According to de Vaujany, human and material agencies are not only recognized in Descola’s perspective, but central to its thinking. A researcher adopting this ontological approach examines the instruments and artifacts embedded in practices, and the social, material and human agencies at work (de Vaujany, 2015: 303). In de Vaujany’s (2015: 300-301) view, Latour’s ontology differs in that it considers symmetrical treatment of the human and nonhuman a secondary issue: “Continuities and discontinuities (i.e., between nature and culture, human and non-human, material and non-material) are not really what matters, nor do equivalences (leading to classification). Describing the network and identifying mediations through pragmatic research is the key objective”.

With their ambition to represent systems of thought and action that connect different types of actor in a common world, Latour’s and Descola’s approaches certainly share an identical view of the social world. They both propose a reflection, via deconstruction, on the traditional opposition between nature and culture, or nature and society (Charbonnier, 2016). But as de Vaujany (2015) shows, ANT and Descola’s anthropological approach do not operate in the same dimension (Jensen, 2011: 10). For example, while ANT attributes agency to Amazonian jaguars, the anthropological approach results in a more “human-centered” focus on how agency is granted to the jaguars by the Amerindian peoples (Jensen, 2011: 10).

Because Descola develops an analysis of interactions between different ways of understanding the world, his conceptual framework is better suited to the purpose of this study. With respect to institutional work, the aim of Descola’s framework, which offers a way of going beyond the traditional nature/culture divide, is to explain how the agency of a nonhuman entity such as the ocean connects to other agencies. Such a perspective can take the exploration further than a simple study considering the institution as a product of the material conditions characterizing a human environment. Nature is no longer considered “the opposite” of culture when it is incorporated into the analysis as a constituent alterity. As Le Roux (2015) notes, applying the contributions of research in anthropology, it becomes possible to conceive humans in their fully relational dimension: “it is thus man’s co-creation relation with what is around him that the human sciences must take in hand – this co-creation is not conceivable with a conceptuality that separates nature and culture as two different realities” (Le Roux, 2015:4, author’s own translation).

Under the theoretical assumptions of Descola’s approach, the ontology through which a human actor’s relations with the world is observed has consequences for knowledge of the nature of institutions and the work those humans may do. Examining the transition from one ontology to another, or the penetration of one ontology by another, has consequences for both the nature of the agency of the nonhuman entity under consideration, and the institutional work performed intentionally by

humans in connection with the nonhuman agency. The following section details the heuristic approach proposed by Descola to understand the relations between agencies, or what Descola calls “interagency” (Descola, 2014a)

## DESCOLA’S THEORETICAL FRAMEWORK AND THE AGENCY OF NONHUMAN ENTITIES

### DESCOLA’S ONTOLOGIES AND MODES OF IDENTIFICATION

Endeavoring to identify the fundamental schemas that characterize interactions between the different human groups and the world, the work of Descola emphasizes “various forms of similarity or difference with other beings, the opposition between nature and culture being only one possible variant of these” (Descola, 2014b: 236-237, author’s own translation). In his analyses, Descola distinguishes the level of interiority (mental states, mind, conscience, soul, subjectivity, intentionality, reflexivity) from the level of physicality (physical states and processes, tangible expressions, sensorimotor schemas, internal feeling of the body). In combination they give rise to four ontologies that can describe the various ways human cultures construct their relations with the world and nature, and thus identify themselves as a specific class of being. Descola defines them as follows (2013: 121):

“Faced with some other entity, human or nonhuman, I can assume either that it possesses elements of physicality and interiority identical to my own, that both its interiority and its physicality are distinct from mine, that we have similar interiorities and different physicalities, or, finally, that our interiorities are different and our physicalities are analogous. I shall call the first combination “totemism,” the second “analogism,” the third “animism,” and the fourth “naturalism” (fig. 1). These principles of identification define four major types of ontology, that is to say systems of the properties of existing beings; and these serve as a point of reference for contrasting forms of cosmologies, models of social links, and theories of identity and alterity.”

These modes of identification are summarized in the table below (after Descola, 2013: 122):

	Similar physicalities	Dissimilar physicalities
Similar interiorities	<i>Totemism</i>	<i>Animism</i>
Dissimilar interiorities	<i>Naturalism</i>	<i>Analogism</i>

Table 1 - Descola’s four ontologies

Descola’s ontologies provide a heuristic tool for examining the characteristics of the human groups studied and their modes of relations. Consequently, the modes of identification must be considered first and foremost as analytical tools:

“however we should be wary of any dogmatic reading of the combination of modes of identification. I have found it credible from a philosophical and conceptual point of view, but what primarily interests me is the productivity of the analytical criteria it supplies.” (Descola, 2014b: 222, author’s own translation)

## THE MODERN NATURALIST ONTOLOGY AND ITS MODES OF RELATION WITH THE WORLD

Among the four ontologies listed, naturalism, which Descola calls the “modern ontology”, is characteristic of western human cultures. Its main feature is a dualism between the human and the nonhuman: “by the continuity of the physicality of the entities of the world and the discontinuity of their respective interiorities” (Descola, 2013: 173). For Descola, “a social and historical context is naturalist when the concept of nature plays this role of organizer of debates, consciously or otherwise” (Charbonnier, 2015: 23, author’s own translation).

Charbonnier (2016) also underlines that to understand how these four ontologies work, Descola proposes a two-level model to explain modes of identification (“a more general schema by means of which I can establish differences and resemblances between myself and other existing entities” (Descola, 2013: 112)) and modes of relations (“dispositions that bestow form and content upon the practical links between myself and a human or nonhuman alter” (Descola, 2013: 310)). He thus distinguishes these two levels: “one resolutely cognitive, involving construction of experience, the other social, corresponding to the grammar of possible interactions between beings (persons and objects)” (Charbonnier, 2016: 18, author’s own translation). Several different configurations of combinations can thus be observed for a specific ontology (Descola, 2014b: 285, author’s own translation):

“If each cosmology defines a general arrangement of existing beings, the space of continuities and discontinuities between them, the relations that form between those existing beings, can take diverse forms.”

In Descola’s framework, the concept of the “mode of relations” is what best accounts for these different characteristics, as several types of “mode of relations” can be associated primarily with each of the ontologies. The specificity of the naturalist ontology can be defined through its three characteristic modes of relation: exchange, protection, and production. “Exchange” concerns a relation of similarity between equivalent terms, notably characteristic of relations between humans. While exchange is founded on symmetry between parties, a separate mode of relation, “protection”, “implies the nonreversible domination of the protector over the one who benefits from that protection” (Descola, 2013: 325). However, due to the special status conferred on nature, the naturalist ontology does not generally establish this type of relation between human activities and nature (Descola, 2013: 396):

“Exchange (of a mercantile type) and protection (of citizens by the state) are thus central values for modern democracies; but their advantages do not extend to nonhumans: these are pushed to the peripheries of collectives on account of their lack of any reflective consciousness and moral sense.”

Finally, Descola identifies another mode of relations used in the naturalist ontology: the “production” ontology which proposes a relation of connection between non-equivalent terms. In his view, this is the mode of relations that best characterizes the Moderns’ relations with nonhuman entities:

“Thus, even though in naturalist collectives production has little by little become the central schema of relations with nonhumans—a

fact that the proliferation of genetically modified organisms has made patently obvious to all of us—the use of production has not yet succeeded in becoming general in relations between humans, even if the fantasies prompted by reproductive cloning show how greatly some people wish to see it extend its influence” (Descola, 2013: 396)

The ontology of the Moderns, through the modes of relations produced by its structural characteristics, makes relations between nature and culture problematic. For Descola, this explains why such relations take on:

“an almost pathetic aspect when [humans] are faced with the temptation to establish a genuine reciprocity with nonhumans. To effect a deal with nature, or at least with certain of its representatives, is one of the most ancient and elusive dreams of those who are disappointed by naturalism” (Descola, 2013: 397-398).

#### CHANGES IN INTERACTION WITH THE WORLD

The two levels of analysis proposed by Descola – cognitive with modes of identification, and social through modes of relation – can facilitate the study of changes that take place at social level and are then likely to influence modes of identification. Descola’s analysis of naturalism paves the way for analysis of changes inside the modern ontology itself: his chapter on naturalism “shows that this ontology has the ability to multiply experiences of change in itself, because it is accompanied by a proliferation of reflexive forms (autonomizing forms of treatment of the world or of others, and using them elsewhere or differently)” (Charbonnier, 2016: 5, author’s own translation). A certain form of plasticity emerges from Descola’s (2013: 316) analysis (author’s own translation):

“... no relational schema is hegemonic. The most that can be said is that one or other of them acquires a structuring function in certain places, even if it is not always possible to put a name to it, when, in an immediately recognizable manner, it orientates many attitudes vis-à-vis both humans and nonhumans.”

In the same vein, Descola (2007: 239), discussing his approach, stated that the four modes of identification are theoretically:

“present in potential form in each one of us. That is to say, we have the possibility of making inferences, or abductions, of one of four types [...]. For example, I suppose that most of us are naturalists, because we have been brought up in a naturalist world. But that doesn’t stop people brought up in a naturalist world consulting their horoscope, in other words making an analogical inference, it doesn’t stop them talking to their cat (I do that sometimes...), and so in a way, even though it isn’t a reasoned inference, having what is in fact an animist behavior [...] Coexistence is possible, in each of us, for these four modes of identification. But there’s always one that dominates, and is a sort of filter, gage, framework, through which we perceive reality and break it down.”(author’s own translation)

Consequently, while certain modes of identification structure relations more directly, all the modes of identification can coexist, and this can lead to change in relations with nonhumans, or even a transition from one ontology to another. Confirming the analytical perspectives that



Descola's approach opens up for consideration of the Moderns' mode of relations, Bessis declares that "it is probable that the naturalist mode of identification [will experience], doubtless due to processes related to globalization, a series of mutations that will take it more in the direction of an analogical type of operation" (Bessis, 2006: 57, author's own translation).

Through the distinction between identification and relation, these two fundamental modes of structuring the individual and collective experience, Descola can consider characterization of any changes in relations with the natural element within relations with the world. The naturalist ontology described by Descola (2013: 398) can better accommodate these changes than the other ontologies, since it recognizes the plurality of possible *agencements*, a possibility attributable to its very nature:

"... the contradictions of naturalism, in particular its inability to subsume different regimes of behavior into one dominant relationship, are what give it its fascinating plurality. This entails the more or less pacific coexistence of would-be collectives, all of which try with considerable ingenuity to explore paths leading to an exclusive style of behavior to which, however, they will never be able to conform by reason of the ontological constraints with which they start out. This is what bestows upon postindustrial societies their hybrid iridescence and meanwhile provides sociologists with an inexhaustible terrain to explore."

This naturalist ontology, through the modes of identification and the modes of relation that emerge from it, paves the way for examination of diverse hybridizations, stabilized and identifiable in different human collectives.

Without claiming complete disruption with the nature/culture discontinuity, studying relations through Descola's framework highlights the characteristics of human relations with the environment on a continuum between discontinuity and continuity, and does not necessarily place the human high above the natural. The very use of the term "natural" encourages conception of this relation as discontinuous, but Descola's approach makes it possible to introduce a less anthropocentric perspective to classify the institutional work done by natural nonhuman actors. Such work can hence be defined as institutional work involving human actors and a natural nonhuman actor, in which the mode of relations governing the humans' relations with the nonhuman actor affects the institutions concerned. *Assemblages* between humans and objects, particularly in the current climate situation (discussed in detail in the next section justifying the case study used for this research), can differ from a purely naturalist ontology. This theoretical framework encourages stepping out of the widespread "naturalist" western perspective, which takes its understanding of social phenomena from examination of collectives assumed to consist entirely of humans. In other words, to address institutional work, this article follows Descola and will consider changes in the way all the actors, both human and nonhuman, relate to each other.

*Intermediate research question:*

As a result of adopting Descola's perspective, the general question addressed in this research to advance knowledge of institutional processes is now reformulated as follows:

*How do natural nonhuman actors contribute to institutional work?*

## BACKGROUND TO THE CASE STUDY

To understand the possibly intentional action of a nonhuman affecting institutions, it is relevant to study the action of a natural nonhuman actor to avoid entanglement with the intentionality that humans incorporate into artifacts when crafting them. This issue is gaining visibility and relevance in a context where natural elements seem to be playing a growing role in our understanding of human activities. The work done by the Intergovernmental Panel on Climate Change (IPCC), based on almost twenty years' documentation, concluded that climate change is very probably caused by human activity. While caution should be exercised regarding the causal link between global warming and the rising number of natural disasters, all reports agree that such events (heatwaves, droughts, floods, cyclones, wildfires, coastal flooding, coastal erosion, etc) have intensified significantly over the last 20 years (see, for example, the IPCC report of 2014 about the impacts and vulnerability associated with climate change). Such expert reports that stress the increase in natural disasters generally confirm the need to give due consideration to the action of natural nonhuman entities in human activities.

The case study presented here therefore concerns the action of the ocean affecting the institutions of surfing and local planning in the French town of Lacanau (in the Gironde *département* of south-west France). Part of the town, a district called Lacanau-Océan, is located on the Atlantic coast, with a seafront providing direct access to the beach and ocean. As the town has fourteen kilometers of unspoilt beaches, the local economy has a strong focus on the ocean (with shops, accommodation, restaurants, bars, and a range of leisure activities). It has become highly dependent on this situation, particularly through the surfing industry, which has expanded significantly over the last twenty years: the number of surfing schools in Lacanau-Océan, for example, rose from two in 1995 to eighteen in 2016.

In the space of just a few days during the winter of 2013-2014, an exceptional series of storms, often combined with high-coefficient tides, seriously eroded all of the Aquitaine region's sandy coastline. Beaches were left very much lower and flatter, limiting their resilience against the onslaught from the ocean. The Aquitaine Coast Observatory reported that Gironde, the *département* (equivalent to a county) where Lacanau is located, was where "marine erosion was the most serious. We observe that the shoreline has receded, often by more than 20m, and by up to 30 or 40m in some places<sup>3</sup>". This extreme erosion raised a series of issues for the local economy concerning local planning, and the future and organization of economic activity. The town council quickly had a wall built and installed riprap (rock defenses) to restore some protection and provide access to the main beach ahead of the large-scale influx of summer holidaymakers. But the May 2015 report by the Lacanau section of the Aquitaine Coast Public Interest Group<sup>4</sup> on relocation of activities and properties in Aquitaine (and other sources) noted that clearly, in the long term, the town and its economic activities were under threat from the advance of the ocean.

This case study examines this situation, with a particular focus on the management of this change. In terms of neo-institutional theory, the actors were obliged to review the institutions of surfing and local planning in Lacanau, modifying their relations with the ocean. The institution is a long-term element of social life, with a profound effect on the behaviors and

3. Translation from page 3 of the report (in French) of the *Observatoire Côte Aquitaine*, « *Évaluation de l'impact des tempêtes de l'hiver 2013-2014 sur la morphologie de la Côte Aquitaine* » (Assessment of the impact of the 2013-2014 winter storms on the morphology of the Aquitaine coast), accessible at: [www.brgm.fr/sites/default/brgm/projets/oca/RP-63797-FR.pdf](http://www.brgm.fr/sites/default/brgm/projets/oca/RP-63797-FR.pdf)

4. Groupement d'Intérêt Public Littoral Aquitain, Atelier Lacanau.

representations of individual and collective actors. The symbolic representations individuals adopt and refer to form one of the pillars of institutions. The analysis of institutional change proposed here concentrates on this pillar, Scott's (2008) cognitive pillar, to explore the relations between individuals and the ocean. This is a particularly interesting case of institutional change, since one of the central actors in this change is the ocean itself.

*Research question:*

Despite the attention paid to institutional work, there is scant knowledge of the role played by nonhuman entities in the phenomenon. Intentional action to influence institutions is studied, but we still have only a partial understanding of how that action combines with other actions of different natures. In the light of Descola's work, this study aims to examine the issue by addressing the following research question:

*How does the ocean contribute to the institutional work done by local actors in Lacanau to redefine the institutions of surfing and local planning?*

## **METHOD AND DATA**

The principal objective of this case study is to understand how the ocean's action takes part in the institutional work performed by actors in the local/surfing economy of a seaside resort on France's south-west coast. It focuses particularly on how relation with the ocean changed after the extreme erosion of the shoreline in winter 2013-2014, described earlier.

### **TYPE OF DATA COLLECTED**

The method primarily consists of analysis of qualitative data collected from semi-structured interviews that took place in June and July 2016. 32 semi-directive interviews were conducted, and then transcribed and coded. Interviewees were selected so as to maximize the diversity of profiles and perspectives. The sample included surfing school managers and instructors, surfboard makers and repairers ("shapers"), managers of surfshops (selling surfing items and clothes), kitesurfing instructors, town councilors, members of public organizations involved in management of the coastal erosion (including the president and members of the Aquitaine Coast Public Interest Group), personalities in the local economy (the founder and manager of Lacanau Surf Info, a website reporting weather and surfing conditions).

The second source was a corpus of secondary data. Two principal types of documents were studied: 1) press articles from the regional daily newspaper *Sud-Ouest* (46 articles published between 2014 and 2016), and 2) reports issued by organizations involved in management of coastal erosion for the town of Lacanau. Most of these publications were by the Aquitaine Coast Public Interest Group, the Aquitaine Coast Observatory and documents connected with work on the local strategy for managing Lacanau's coastline.

Coding of the primary data identified two forms of institutional work through which actors in the surfing industry influenced institutions: the institutional work carried out by actors involved in the business and activity of surfing, and the institutional work performed as part of the town's planning for its seafront.

## DATA ANALYSIS

The objective of the semi-structured interviews was to bring out the actors' own descriptions of their relations with the ocean, where relevant in connection with the interviewee's economic activity (selling surfing or other articles, surfing lessons, surfboard rental, etc).

Data analysis took place in several stages, in line with the approach used by Gioia, Corley and Hamilton (2013). This approach consists of an inductive analysis combining generalization from empirical data with a theory-based categorization process. The interview transcripts were coded using the NVIVO 11 qualitative data processing software.

The analysis initially focused on explicit references to the role of the significant coastal erosion event of winter 2013/2014, which provided a wealth of material on the central role played by the ocean in the institutional change process observed. The interviews lasted between 35 minutes and 1 hour, and were all recorded and transcribed. During these interviews, respondents were encouraged to talk about their experience without too much guidance from the interviewer. Broad questions were asked, such as "What do you think about the erosion event of 2013-2014?". This often led the interviewees to talk about the role played by the ocean in institutional changes. The interview guide also included many questions about the actors' perceptions of their activity before the shoreline suffered storm erosion. Also, following the methodology of Gioia et al. (2013), the questions in the interview guide were adjusted as the study progressed. It soon became clear that the erosion event played a crucial role in the institutional change that was taking place locally. To explore these new themes, new questions were developed about the collective action taken locally in recent years, so respondents could say more about their relations with the ocean: "Why was Lacanau's surfing school association formed?" and "Why was the beach users' committee set up?".

From a first-order coding ("an analysis using informant-centric terms and codes" in the words of Gioia et al., 2013), I was able to organize the data based on units of meaning found in the respondents' discourse. The initial coding categories were founded on the representations expressed by the interviewees: their representation of the ocean's role in the local economy, and more broadly, in relation to the local area, and any changes perceived, particularly in connection with the significant coastal erosion of winter 2013-2014.

Next, I compared these interpretations to group them into first-order categories that were aggregated at a higher level (the results of this process are represented in Figure 1 below). The second-order analysis involved theoretical generalization ("using researcher-centric concepts, themes, and dimensions" in the words of Gioia et al., 2013). For this study, the second phase was inspired by the approach of Lawrence and Dover (2015) who examined the relations between institutional work and place, under an approach inspired by Gioia et al. (2013). Like Lawrence and Dover in their analysis of institutional work, I could have examined the visual and historical dimensions of the phenomenon studied. But like them, I adopted an interpretive approach instead, focusing on the impressions of the actors involved in our field, combined with studying the secondary data collected.

This second phase led to analysis of the role played by the ocean in each of the institutional settings identified. An abductive approach was followed, consulting the literature during this stage of the research process (Gioia et al., 2013) to locate useful concepts for analyzing the role of the

ocean. This involved the work of Descola, particularly his concepts of the mode of identification and the mode of relations. Consequently I referred to the frameworks through which the actors establish differences and similarities between themselves and the ocean (mode of identification), and the dispositions that give form and content to the practical connection between the actors and the ocean (mode of relations), to analyze the ocean's capacity for action as observed in representations of activity, particularly economic activity, at Lacanau-Océan. I examined how modern naturalism, which posits that nature exists and that we should uncover its mysteries and make better use of its resources, is hybridized through splicing with a naturalist view of the ocean (dissimilar interiorities, similar physicalities), and also by challenging modes of relations that induce a lack of ontological equivalence between the ocean and humans.

In Figure 1, some of the second-order categories relate to changes in the mode of identification, whether regarding the interiority attributed to the ocean (the "Attribution of continuous interiority to the nonhuman entity in the work on local planning" and "Attribution of continuous interiority to the nonhuman entity in the work on surfing and the teaching of surfing" items) or its physicality (the "Local planning responds to the coastal erosion" and "Surfing and the teaching of surfing respond to the ocean's movements" items). Other second-order categories identify changes in the mode of relations, particularly through the "Modification of the mode of relations in work on surfing and the teaching of surfing" and "Modification of the mode of relations in work on local planning" items. At this stage, examination of the data led to a focus on two institutions that emerged as central in the local economy: local planning, and surfing (including the teaching of surfing). Next, the work associated with each institution was scrutinized, with regard to the role played by the ocean.

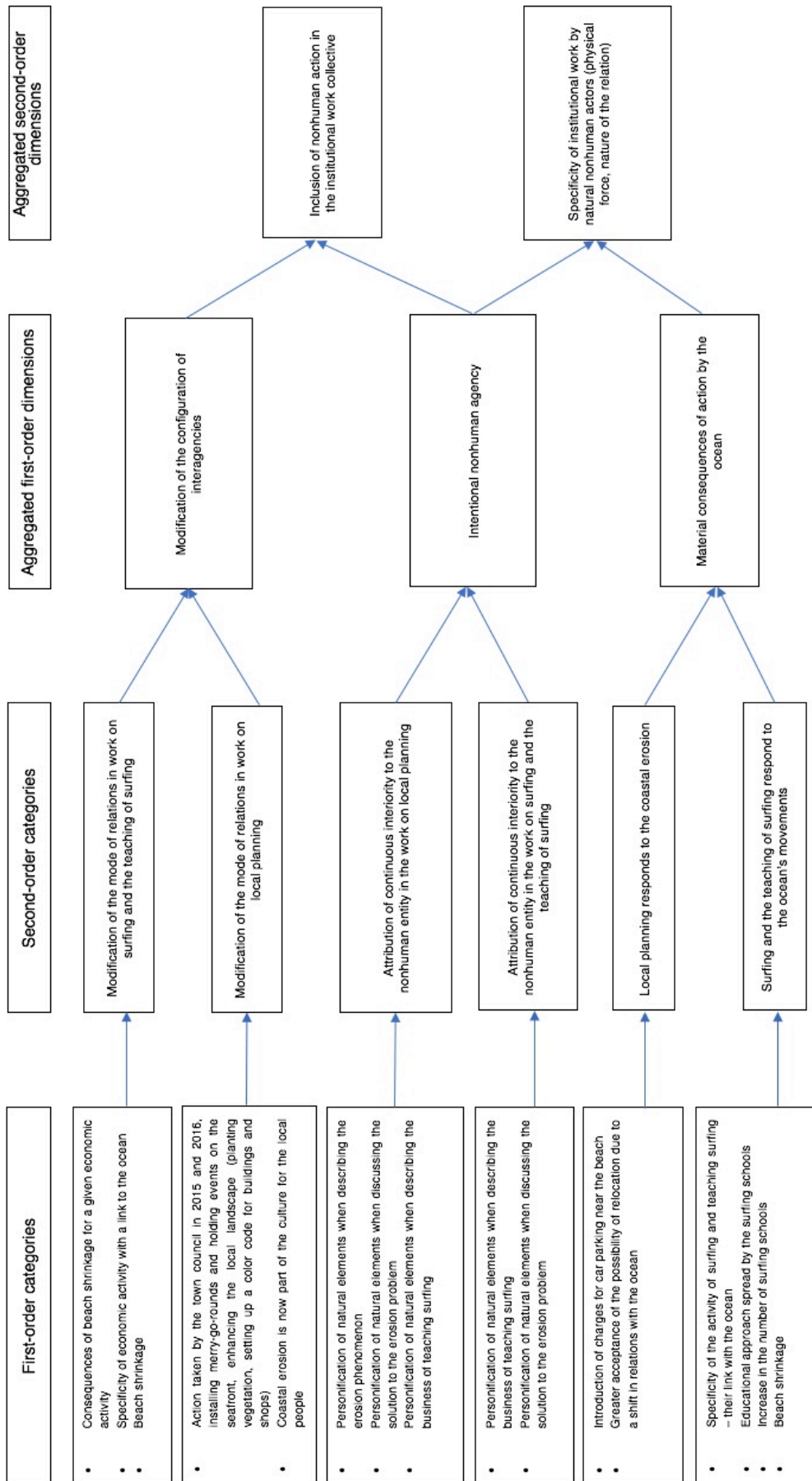


Figure 1 . Data processing plan

The third stage of analysis aimed to consolidate the theoretical dimensions from the second-order categories, seeking to understand how these categories can fit into a coherent general representation (Gioia et al., 2013). In this study, this stage was subdivided into two phases. The first (aggregated first-order dimensions) was more specifically inspired by Descola, and identified the forms of agency, which in the second phase (aggregated second-order dimensions) brought out the role played by the ocean in the institutional work studied.

Drawing on Descola's approach, I identified the shift from a productive naturalism to a protective naturalism, reflecting the move from a naturalist ontology to a fragmentation of existing beings into multiple essences with only slight differences, i.e. towards an analogical mode of operation. I then highlighted a change in modes of identification, characterized by a change of direction in the naturalist ontology, towards a form of animism, for instance. In the final step, this information was used to classify the institutional work done by the ocean in this local economy. The ocean's first type of agency appears through the attribution of a human interiority to the figure of the ocean, whose integrity must be preserved in the same way as the other members of the (human) collective. Its second type of agency is expressed through the integration of the "ocean" entity into the collective of actors, by means of a shift in perception of its physicality which challenges the strict nature/culture separation that is characteristic of the naturalist ontology.

## **ANALYSIS: THE AGENCY OF THE OCEAN IN THE INSTITUTIONAL WORK BY ACTORS IN LACANAU'S LOCAL ECONOMY**

Analysis of the empirical data identified two institutions which actors in the local economy are working to change: surfing, and local planning. Section 6.1 presents empirical information describing the institutions studied and the ocean's action that affects them. Section 6.2, drawing on Descola's approach, brings out the role played by the ocean in this institutional change, with further information confirming the existence of the institutional work for change described in section 6.1.

### **TWO INSTITUTIONS SUBJECTED TO WORK IN LACANAU'S LOCAL ECONOMY**

Examination of the interviews showed that there were two notable institutions underlying the actions of actors in the local economy. Each of these, as it appears from what follows, corresponds to the definition of an institution given in the theoretical section (2.1). Analysis of the interviews brings out the institutional work done to influence these institutions by actors in the local economy, in association with action by the ocean.

#### *Surfing and the teaching of surfing as an institution*

The surfing industry is crucial for the town of Lacanau, as explained by Jérémy Boisson, a Lacanau town councilor in charge of economic development, and himself a former top surfer<sup>5</sup>:

"Anyway, today [Lacanau] has an identity that's totally linked to surfing, because you have the oldest European competition, that's

5. All extracts from interviews are translations from the original French, prepared for the purpose of this article.

held in Lacanau, the biggest club in Europe, that's in Lacanau, the oldest club in Europe after Biarritz. I think we're the town with the most surfing schools. We can't be far off being the town with the most surfing shops, because we've got ten of them, and that's quite something for such a small area."

The surfing school economy, which by nature is an economic activity that has to adapt to the ocean, has undergone significant recent changes which are described later.

The view of commercial activity around surfing has been modified by the unexpectedly rapid advance of the ocean in recent years. The interviews with actors from the local economy revealed a realization of this situation, and a change in relations with this natural element. For instance, Martin Lavigne, manager of the UCPA surfing school in Lacanau, commented:

"We've got a beach that's getting shorter and shorter, a dune that's getting nearer and nearer the water. In fact at high tide, the water comes onto the dune. (...) On the sea front, at the central beach, we've seen it recede by ten meters, so that's had an impact on the ways onto the beach, from our point of view it's had an impact on the possible places for teaching. We had to really change the places we went to, a lot...When I first came to Lacanau, you could work anywhere with any tide. And nowadays, well, as the tide coefficient increases and the high tides get closer, things are getting complicated, and we have to go a bit further over southwards, where there's less riprap and the dune, let's say, has come through it all in a bit better shape."

When the line of dunes shifted and the beach in the town centre shrank, the surfing schools had to adapt. Surfing lessons require a beach, and a smaller beach is a problem for this town which now has several surfing schools. Nicolas Pourcelot, a "shaper" (surfboard maker and repairer) and correspondent for the Ocean Surf Report newsletter, confirmed this:

"Lacanau has a lot of surfing schools for a small town. Now that, for example, we no longer have an accessible central beach at high tide, everyone goes off to the outer beaches. That's the problem, it's not necessarily the number of schools, it's more to do with the shoreline configuration."

#### *Action by the ocean in the institutional work of actors from the teaching of surfing*

Presumably because they are the first people affected by the actions of the ocean due to their surfing activity, the actors of the surfing economy are very aware of the importance of protecting the ocean. The discourse of surfing instructors indicates a relation with the natural element that attributes to the ocean a capacity to act, to "put [customers] back in their place", as seen in the discourse of town councilor Jérémy Boisson, who is himself a member of Lacanau Surf Club:

"And during the lessons, they make people aware right from the outset that nature is in control of everything. So we have to adapt.



They start by teaching us about the currents, the *baïnes*<sup>6</sup>, how the waves are formed, that the ocean is a living thing and if we lack respect for it we'll be put back in our place straight away. And that's what happens, people get put back in their place immediately. So you get straight away that it's a sport that makes you want to push yourself to the limit. If you aren't motivated, you won't be able to enjoy surfing and it'll all be over at the end of the first lesson."

The same tendency is noted in the discourse of various actors from the local surfing economy. Olivier Labat, a shaper in Lacanau, made the following comments when asked about erosion:

"Because when the dune is in its natural state, since time immemorial, I know some old men here, they know and we all know that the sea takes sand away and brings it back, it takes it away, some years more, some years less. And when there's riprap, the sea can take sand away, but it's hard for it to bring sand back, because of the riprap. So if you look at the next-door beaches which are natural and haven't got any riprap, the sea eats up the sand, then brings it back, it's a natural to-and-fro, but on the whole the level stays the same. If there's riprap, that protects homes but it's not going to help the sea or the sand reclaim its rightful place."

The discourses of the surfing schools emphasize the idea that teaching surfing for sport or leisure is an unusual activity because it requires constant adaptation to external conditions. Martin Lavigne, head of UCPA surfing school, stressed this point:

"It's really an integral part of surfing, making sure you're in the right place at the right time (...) And without set times. We're in an activity with a specific environment, you have to take some gambles with that element which is often shifting, we try to adapt as best we can."

The significant role assigned to the ocean, as shown by the above quotation, is intrinsic to surfing. It is also informative about the way the institution is influenced by its actors. Jérémy Boisson stresses one of the dimensions of learning to surf: "they say that a good surfer has an excellent sense of the sea. Yes, he's a man of the sea, of the ocean." Our interviews indicate that this discourse is extended by including consideration of the recently accentuated phenomenon of erosion. The interview with Jérôme Bisson, a coordinator at Lacanau Surf Club, took place in a meeting room overlooking the ocean at the club's premises, one of the few buildings erected on the dune at Lacanau-Océan. Bisson considered the possibility of leaving this building, which is a well-known symbol of the resort:

"There's the coastline, a red line that's been defined and in some places goes through the village. What we need to know now is what we're going to do, and be brave and tell ourselves that the whole plan of the village might be completely revised, even if that means demolishing some of it to make a new more sustainable one, better integrated into the landscape, especially because in fact, what's happening here, having put concrete on a dune that's supposed to live and move has clearly broken that dynamic, so logically we should backtrack on that process, we should leave and make way for what was here before".  
(...)

6. Dangerous currents created by emptying tidal pools on the beach.

“We’ve got a thermometer, the ocean is really a thermometer for what’s happening, so we’re going to be directly affected.”

The surfing schools claim that they teach people more than the technical aspects of surfing. Surfing needs knowledge of the ocean, and the instructors use a discourse about respect for the water, and are intensifying this “education” in view of the increase in erosion and pollution. Jérôme Bisson concluded the interview as follows:

“But to end on an optimistic note, quite a few things are being done. But we need to coordinate the teaching, because the problem in this country, in France, is that the ocean is everywhere but nobody is properly trained. And that’s a real shame. I’ve been to Australia. There are people there, even when they don’t really know, they know better than any professional here, because it’s part of the culture. Again, personally I put the accent on working with schools, because that’s what I really care about, and you know the kids, the ones who’ve followed the program [the surfing course for school groups], they come along when they’re 18 and it’s a pleasure to see their instincts (...). Yes you can raise awareness, but we still get the daftest questions from people who live less than 10km away, along the coast, and I don’t think that’s right.”

The trend referred to did not begin with the ocean’s exceptionally rapid advance in the winter of 2013-2014, but that event provided strong support for focusing on relations with the ocean. In parallel to this kind of educational action that influences relations with the ocean, new schools with a differentiated offering have set up in the resort. These surfing schools have turned the increasing scarcity of available town-centre beach space and their customers’ desire for authenticity to their advantage. One example is the Magic Surf School, founded in 2014 by former professional surfer Adrien Valéro. It has town-centre premises but drives its pupils to out-of-town locations for surfing, as he explained in his interview:

“A school that offers something different, with a different way of seeing things. Right from the start, I wanted to be mobile and go to all the beaches, to offer a service that’s appropriate to people’s level of ability and what they want.”

To some extent, the aim is also to avoid the consequences of the combined effect of expansion in the economic activity of teaching surfing, and the shrinking number of places where surfing can be practiced, due to coastal erosion:

“There are loads of schools in the town centre that cross the road, walk along the tarmac and go surfing on the central beach in August, frankly, it’s hell. I take quite a different approach, that’s absolutely not what I wanted (...). And that’s another reason why I chose Le Lion [a surfing spot a long way south of Lacanau], because it’s really a great site. After a bit, coming from the forest, [the customers] arrive in an area where there’s nothing but pine trees. In other words, these guys come down from Paris, on Saturday they’re stuck in the traffic, on Sunday or Monday they arrive in the pine trees. You switch off the engine, they can hear the birds and the crickets, and you know I don’t think you can put a price on that (...).

I’ll say it again, what I like about Dja [a surfing spot known only to insiders] is that you walk in the dune. The guys, the customers, are just blown away. They can’t believe there’s a dune like that. They

come through the dune totally bushed, I tell them “that’s what you have to go through to get good surfing conditions with no-one else around.”

Adrien Valéro talked about the majority of his customers, who are what he calls “regulars”:

“the way [the regulars] relate to the ocean is a bit more like our way. They’re looking for nature, kind of being in communion with the ocean, interacting with it (...). [The population of regulars] is absolutely growing; I think that when people do a week or ten days and get the bug, they accept that the power isn’t in their hands. In fact, you know, they accept this interaction with this thing [the ocean] that they get to know a bit more every day.”

Yann Boufflers, another interviewee, developed a new-concept surfing school away from the town centre, among the pine trees south of the resort, on land that is managed by the French national forestry and waterways agency<sup>7</sup>, corroborating this trend of a growing industry that is increasingly integrated into the natural environment. This was the impetus for the foundation in 2015 of a local surfing schools’ association, the *Association des Ecoles de Surf de Lacanau*, formed at the instigation of the town council for the purpose of reflecting on organization and problem-solving in relation to teaching surfing, especially as the working space was shrinking, as Yann Boufflers emphasized:

“And exactly because we set up this association (...), the Lacanau surfing schools have done some good things, exactly, to bring in the fishing associations, plus the kitesurfers, plus the waveski surfing schools. And we have two meetings a year with the lifeguards, at the beginning and end of the season, with the beach actors too, we discuss each of our problems and we try to find solutions and compromises. And most importantly, we have drinks together afterwards, so we have a nice time and it’s really good, we’ve made incredible progress on those points.”

The proposed analysis shows the role of the ocean in the institutional work influencing the institution of surfing. The shrinking size of the beach has led to a reconsideration of the teaching of surfing in Lacanau. For the instructors, the receding coastline has accentuated the need to think about the best time and place for lessons, considering the tide for instance, but also considering the other surfing schools and other users of the beach. It has also triggered reconsideration of the content of surfing lessons. As noted earlier, the erosion of the coastline points up the need to “raise awareness” of pupils about environmental features and due respect for the environment. The specificity of learning to surf, a sport in which pupils’ activity is dictated by the waves, is even stronger when familiarity with the ocean is cultivated in an environment under the threat of erosion. For example, lessons are timed according to the sea conditions rather than to suit the pupils. Also, the ocean’s role in the activity of teaching surfing is evident in the fact that it imposes new constraints, subjecting surfing to coordination between the different groups of beach users: other surfing schools and other people on the beach, all of whom are growing in number. These issues for surfing lessons are amplified further by the emergence of a physical threat to property, for example at the Lacanau Surf Club whose building is under threat from coastal erosion.

7. Office National des Eaux et Forêts.

These factors provide objective indications of the power of the ocean, which the actors cognitively incorporate into their relations with surfing. Beyond the new constraints affecting practice, the ocean's action intensifies the "respect for the environment" message conveyed through the teaching of surfing, as shown in the interview with Jérôme Bisson, who connected erosion-related matters with the educational approach used in surfing lessons. Finally, extending this phenomenon, there is a growing trend for schools to offer a surfing experience more firmly set in a natural environment (not "walking along the tarmac", avoiding overcrowded surfing areas) and this is accentuated by the local coastal erosion, which is reducing the space where the practice of teaching surfing can take place. Table 2 below summarizes the characteristics of the institution of surfing/teaching surfing, examined before and after the exceptional storms of winter 2013/2014. Although the difference between the two periods appears clear, the table must be considered with caution. The erosion by the ocean of the French Atlantic coastline is not a one-off event but is constantly ongoing (occasionally punctuated by more significant events such as the storms that changed the coastline at Lacanau in winter 2013/2014). Furthermore, the modification of institutions cannot be attributed to the extreme erosion event alone, which as we shall see later, accelerated the ongoing phenomenon rather than actually creating it.

Institution concerned	Institutional work concerned	
	1990-2013	2014-2016
Surfing/teaching surfing	<ul style="list-style-type: none"> <li>- Development of an economy of surfing schools: the number of schools rose from 2 in 1995 to more than 15 in 2014</li> <li>- Surfing on the seafront, on the central beach, with intensification and professionalization of the teaching of surfing</li> </ul>	<div style="text-align: center; font-weight: bold;">Extreme erosion of winter 2013/2014</div> <ul style="list-style-type: none"> <li>- Emergence of differentiated "green tourism" style practices</li> <li>- Spreading principles of dune protection</li> <li>- Surfing became more complicated as a practice (safety, experience, learning options) on the central beach because of density and topographical factors</li> <li>- Rise of surfing schools on the edge of the central beach, offering an "experience"</li> </ul>

Table 2 - Characteristics of the surfing/surfing institution before and after the extreme coastal erosion event

#### *Local planning as an institution*

The unprecedented advance of the ocean significantly changed the approach of local action to influence the local economy of this ocean-oriented town. In local politics, the town council elections of March 2014 brought in a new mayor, by a margin of just 11 votes over the outgoing mayor<sup>8</sup>. The change of majority in the new town council was interpreted as being a consequence of the previous mayor's management of the advancing sand dune crisis<sup>9</sup>. In fact the new mayor was often considered as the preferred candidate of those with seafront economic interests who are particularly concerned by the shifting coastline, and who were initially inclined to stand their ground against the ocean in order to carry on with their lucrative business activities. But soon after his election, the mayor adopted a policy that incorporated the inevitable, preparing his fellow citizens to resign themselves to compromise with the ocean's advance rather than fighting it.

8. Compared to many countries France has a highly decentralized administration, and the local mayor and town council have extensive decision-making and budgeting powers for their area.

9. See for example the article headlined *Le vote du bureau 5 a fait basculer le scrutin* (The vote by section 5 tipped the election), in the newspaper *Sud-Ouest*, 03/04/2014.

THE RETREATING COASTLINE IN LACANAU: A REALITY

In Lacanau, the tourism economy is threatened by erosion

The retreating coastline is a reality in Lacanau: under the impact of the waves and storms, **the dune on which businesses and properties are built is relentlessly shrinking**. In the winter of 2013-2014, a series of storms brought the shoreline 10-20 meters closer to Lacanau, revealing the scale of the risk and the critical situation of many important issues for the town.

**This erosion poses a threat to all of Lacanau's tourism economy:**

Since 20% of second homes and most of the seaside resort's commercial activities are concentrated along the seafront.

Figure 2 . Extract from Lacanau's website (author's own translation)<sup>10</sup>

Influenced by the work by the Aquitaine Coast Public Interest Group and the Coastal erosion commission<sup>11</sup>, Lacanau town council is developing a local strategy that takes a contrasting approach to the policy of the MIACA (Interministerial mission for management of the Aquitaine coast<sup>12</sup>) which applied in 1974-1987<sup>13</sup>. The MIACA is one of the normative pillars which has had a profound effect on local social life, extending well beyond the policy's official end in 1987. It oversaw construction of buildings along the Lacanau seafront. Figure 2, in contrast, shows a screenshot from the Lacanau town website which sums up the town council's current position regarding local planning and the need to prepare for coastal retreat.

*Action by the ocean in the institutional work of local planning for the seafront by the town council*

In a similar move to the foundation of an association for surfing schools (the *Association des Écoles de Surf de Lacanau*), the town council set up a beach users' committee, the *Union des Usagers de la Plage*. Gérard Depeyris, a former lifeguard, shaper and local personality, described this collective, of which he is a member (Depeyris is not part of the majority group in the town council):

"The town council's beach committee consists of users of our beaches. Swimmers, surfers, kitesurfers, fishermen, the lifeguards who are in charge of safety, waveski surfers, the coastal rescue service who use the beach. There's some formal management now, because there are a lot of people involved."

Setting up this body prepared the ground for management of human activity along the resort's coast which is intense, as the diversity of committee members shows. Jérémy Boisson described how the committee was initially proposed, and its intended purpose:

"That was when we understood the problem. We set up a committee with all users of the beach, asking how we can optimize that use in a way that keeps everyone happy. Because otherwise, if we let the

10. Consulted on 21 September 2017 on [www.mairie-lacanau.fr/environnement/381-erosion-du-littoral.html](http://www.mairie-lacanau.fr/environnement/381-erosion-du-littoral.html)

11. *Commission érosion du littoral*.

12. *Mission interministérielle pour l'aménagement de la côte aquitaine*.

13. See the report of the GIP Littoral Aquitain, MIAC : *Première politique d'aménagement touristique du littoral aquitain 1967/1988* (MIAC: First tourism development policy for the Aquitaine coast 1967/1988) [www.littoral-aquitain.fr/sites/default/files/miaca\\_livre\\_small.pdf](http://www.littoral-aquitain.fr/sites/default/files/miaca_livre_small.pdf)

number of schools increase, there'll be nothing but surfing schools, there'll be no room for our swimmers, or for people going fishing or waveski surfing, or even for [individual surfers], which includes me. We've almost got to the point where you need a timetable to go surfing. So we needed to act intelligently and we had a meeting, but it's all a bit, well, new. It doesn't happen in other towns. You might get a meeting of surfing schools, that kind of thing, but not all the actors. So the impact on this sector is immediately clear."

The actors acknowledged that, although they were not the only trigger, the events of winter 2013/2014 played a decisive role in the shift in relations with the ocean in Lacanau. As Jérémy Boisson said:

"The events that happened in 2014 accelerated [consideration and action for the coastline] immensely, no doubt about it. The fortunate thing about those unfortunate events is that they made us [Lacanau] known, they put us in the spotlight."

In this context, the shift in relations with the ocean can also be grasped from the changes in the town's local planning approach. The work done by the Aquitaine Coast Public Interest Group in parallel with the action taken by Lacanau town council is revealing in this respect. The ocean's advance initially required installation of some protection. The €5 million cost was mainly borne by the town: this was a very significant proportion of the council budget (equivalent to the total annual payroll costs), for a construction with a structurally limited lifetime. Given the colossal costs of fighting the ocean's advance and the inexorability of coastal erosion, it was not long until the town council considered a relocation solution. The relocation policy aims "to purchase and remove properties preventively before they're removed by the sea, restoring the functions of nature" (interview with Martin Renard, the man now in charge of urban planning and town facilities). The local population, particularly seafront business owners, are not very supportive of this approach. Christophe Sourgen, owner of several local shops in the resort which would be affected by the potential relocation, could not resign himself to it:

"For a while, I couldn't sleep. They tell you catastrophic things are going to happen. Yes the seafront was particularly hard hit, obviously, obviously."

In response to the objections of a sizeable share of the population, actors such as Gérard Depeyris took steps, combining their action with the advance of the nonhuman actor, the ocean, to remind people that a change in relations with the ocean was necessary:

"In theory, the buffer of the sea wall is only supposed to be there while we organize a withdrawal, but that's not being done, and we're starting to talk about 2050 [for the relocation]. Who's going to provide a reality check? I know how this'll go. There's only one thing that'll give us a reality check: the ocean, she'll give us a reality check. Because when she attacks, we'll have to pour in another 3 million euros like it's already cost, that's bound to happen at some point, and then what will we do?"

The events of winter 2013/2014 played a dominant role in accelerating the authorities' work to include the ocean in local planning considerations. Martin Renard, who previously worked at the Aquitaine Coast Public Interest Group before Lacanau town council hired him to head urban planning and town facilities, said:

“2013-2014 undeniably accelerated the general public awareness. But the thing is that all that’s soon forgotten, especially when the sand comes back. That’s what happened last summer. [The erosion of 2013-2014] was undeniably a sharp reminder, for everybody. And further afield than Lacanau. Local realization of the problem was extremely widespread. But the aim of this local strategy is to keep up [this new realization]. It can be forgotten fast because the sun comes out again, the sand comes back, a new wall has been built. The relation [to the ocean] has changed, even though that sometimes gets forgotten.”

The institutional change achieved, incorporating the inevitable acceptance of a change in relations with the ocean due to erosion at Lacanau, was clearly highlighted by Martin Renard when he described the response to the work by the Aquitaine Coast Public Interest Group before the winter crisis of 2013/2014:

“People’s positioning and people’s views on the issue of erosion have changed. If we’d, I can remember the very first forums we held in 2013, when I first arrived at the GIP [i.e. the Aquitaine Coast Public Interest Group, Martin Renard’s previous employer]. The discourse was still “it’s great to have car parking on the seafront”, “you have to be able to come in your car [to see the sea]”. There’s a nice sea wall. There’s nothing to worry about. Relocation, you could hardly even say the word, nobody wanted to hear of it. At the last forum we did, at the end of 2015, we had people speaking up, seafront property owners, who took the floor to ask questions. And one lady spoke, I remember, to say, “well, I own a house in this spot, I can’t see any other solution than protection”: half the room applauded what she said. A man spoke up after her, saying, “but do you realize, this erosion is inevitable, and we aren’t going to be able to protect ourselves forever: there’s no other solution but to withdraw”. The other half of the room applauded. If we’d had the same discussion only two years ago, that scene would have been impossible. The general awareness of this risk is really evolving a lot.”

The narrowing of the gap between humans and the ocean, which can be summed up in a comment made by Martin Renard: “Nowadays, [the question of erosion] is part of the culture of the people of Lacanau”, also found concrete expression in action taken by the town council in 2015 and 2016, such as the installation of merry-go-rounds, holding events on the seafront, enhancing the town’s appearance (planting vegetation, introducing a color code for buildings and shops), and introducing charges for parking near the ocean. The council’s action, supported by the actions of Jérémy Boisson and his team, clearly shows its determination to work to change mindsets:

“It’s all about awareness-raising. For the events, I want to bring in things that can include anyone in this culture. What does being included in this culture mean? For a start, it’s having an environment that’s conducive to the culture [the ocean as an integral part of the local culture and area]. In the peak of the summer, we put palm trees along the edge, it’s kind of silly, but that’s all part of it. What do you get on postcards of Hawaii? A palm tree, and then a star on a surfboard at Waikiki. We can do that here too, absolutely no problem. So surfing is undeniably something that’s a bit elitist, a bit

complex, but the environment all around... Having 10 surfshops, bars that are all about surfing, restaurants with pictures of surfing everywhere. All our shops and restaurant owners are well aware of the image of surfing.”

These events are making use of the “wake-up call” sent by the ocean to the local economic actors who depend on it for a living. Basing their activity on the surfing culture which, as seen in the previous section, makes the ocean a central actor that should be respected as such, seems to be gradually changing relations with the ocean:

“I involve all the actors so that projects and mini-projects take place within these big events, and with a purpose, which is promoting respect for the environment and awareness of dangers relating to the environment, but, you know, without any negative connotation. Just because it’s dangerous doesn’t mean you shouldn’t go there. You need to learn to live with it. And the culture that I think is the most exemplary on that angle is the Hawaiian and Polynesian culture.” (Jérémy Boisson).

Table 3 below summarizes the features of this institution, examined before and after the exceptional storms of 2013/2014. In interpreting the table, the same caution should be taken as for table 2 regarding the risk of unduly considering the extreme erosion event as the sole causal factor in the context of this study.

Institution concerned	Institutional work concerned	
	1990-2013	2014-2016
Local planning	The Planning Approach Continued The Policy Applied By The Miaca (Interministerial Mission For Management Of The Aquitaine Coast) For The Aquitaine Coast (1974-1987). -The “Océanide” Project, Building Apartment Blocks And A Seafront Promenade. - Building Apartments And Public Areas On The Dune. Seafront Car Parking.	Relocation and Sustainable Planning for the Resort. - Need To Avoid Creating More “Major”, Low-Reversibility Facilities That Damage the Natural Dune. The Central Beach Must Retain its Natural Character. - The Center of the Resort Must Prioritize Low-Impact Traffic, With Cars Relegated to the Edge of Town and Shuttles To Bring People Into the Center. - Lacanau Must Develop a Clean, Recognizable Urban Style. - The Connection Between the Existing Buildings and Invention of a New Style Must Be Carefully and Creatively Planned.

Table 3 - Characteristics of the local planning institution before and after the extreme coastal erosion event

In examining the modes of identification and modes of relations used by the collective studied here, Descola’s approach provides a better characterization of the institutional change resulting from the work of the actors, including the role played in that change by the ocean. The following section explores how this work has led to a shift in the culture/nature relation, as presented in the ideal-type naturalist ontology identified by Descola.

FROM THE NATURALIST MODE OF IDENTIFICATION TO AN ANALOGICAL OR ANIMIST APPROACH?

Using the framework derived from the work of Descola to understand relations between Lacanau’s local/surfing economy and the ocean, and how they have changed, two lines of analysis emerge and are



discussed in the next two sub-sections. They enable us to classify the institutional disruption studied by reference to the shift in relations with the ocean observed in this local economy. Understanding the changes in the way the actors of Lacanau-Océan, both humans and the ocean, relate to each other leads us to include the ocean as an actor in this collective, a social partner in its own right that interacts with the institutions.

#### FROM PRODUCTIVE NATURALISM TO PROTECTIVE NATURALISM

First, the institutional work done to influence the local economy can be interpreted as a transition from a productive naturalism to a protective naturalism<sup>14</sup>. The traditional, productive mode of relations is characterized by a mode of relations with the ocean that justifies the need to preserve it by reference to its usefulness, its instrumental value: “in short, we need to protect nature because it contains unexplored potential resources and putting its internal balance in danger will have catastrophic consequences for humans” (Descola, 2008: 5, author’s own translation). In the discourses of the actors from Lacanau, a shift is perceptible in this initial mode of relations, with the ocean now being allocated a place in its own right in the collective formed by all the actors. The gap between nature and culture thus narrows, moving the local economy closer to a “protective” relation that “becomes a dominant schema when a group of plants and animals is perceived both as dependent on the humans for its reproduction, nurturing, and survival and also as being so closely linked to them that it becomes an accepted and authentic component of the collective” (Descola, 2013: 326). The figure of the ocean gradually takes on an essence that resembles the essence of humans, endowed with a life and reproductive capacity that must be preserved (as indicated by Olivier Labat’s analysis of the dune regeneration cycle, a process the town now wants to protect) in the same way as the lives of the other – human – members of the collective. The hallmark of a situation relating to the ideal-type naturalist ontology is the new status conferred on the figure of the ocean. Although the discourse remains somewhat vague regarding the precise role attributed to the ocean, its action, manifested in the extreme coastal erosion episode, leads actors in the local economy to acknowledge its new place as an actor with intrinsic capacities, notably the capacity to settle questions of local planning (the ocean decides that shops must retreat) and leisure practices (the ocean decides the time and place of surfing lessons). However, this study does not present a case in which nature is only protected for instrumental reasons, i.e. in which only the benefit of preserving the coastal movement for humans is observed.

In the situation studied here, the ocean’s advance has led to a hybridization of the naturalist ontology, with simultaneous modification of the nature of the institutional work performed by the actors. The ocean becomes one of the protagonists, particularly by incorporating modes of relation with the natural element that derive from animism or analogism. The way the continuities and discontinuities between humans and their environment are established marks a departure from the nature/culture divide since the institutional work is now being done by the community of living beings, in a great continuum that mingles humans and nonhumans. Several examples given in the presentation of our empirical results attribute intentionality to the nonhuman entity of the ocean. This is particularly noticeable when the actors describe the dynamics of the dune,

14. The adjectives “protective” and “productive” are used here in the sense used by Descola. They belong to modes of relation between terms in a hierarchy, i.e. non-interchangeable terms: there is no reversible movement between the two terms of ocean and society, as they do not have the same ontological status.

a process in which “the ocean takes away and brings back sand” (see the quotations of Olivier Labat, Jérôme Bisson and Davy Salabert in particular), but also when Gérard Depeyris personifies the ocean (“There’s only one thing that’ll give us a reality check: the ocean, she’ll give us a reality check. Because when she attacks...”). These actors, whose activity (as lifeguards, surfing instructors, shapers, etc.) is closely connected to the ocean, have developed a specific mode of relation with the ocean (as Depeyris said, “I feel like I can see this situation because I know the ocean’s situation, I can see it, I have a vision, a feeling for space, for volumes. I got that from an outdoor life, on all the seas”). And due to the critical episode of erosion on the seafront in the winter of 2013-2014, this mode of relation has come to be shared more broadly with the local population.

### *Shifts in modes of identification*

The second interpretation that emerges from our results relates to a more general shift in the actors’ perceptions, this time not concerning modes of relations but modes of identification. The social changes perceived in modes of relations, “practical links between myself and a human or nonhuman alter” (Descola, 2013: 310), can give rise to a change in “a more general schema by means of which I can establish differences and resemblances between myself and other existing entities” (Descola, 2013: 112), i.e. in modes of identification. The naturalist ontology is visibly undergoing transformations, leading the observer to wonder how it will change. Bessis (2006) mentions the presence of a series of mutations which, under the influence of processes associated with globalization, are drawing the naturalist ontology towards an analogical type of operation (Bessis, 2006: 57); these mutations are confirmed by our analysis. The shift observed from a relation of production to a relation of protection appears to reflect a shift in the naturalist ontology towards fragmentation of existing beings into multiple essences with only narrow differences, i.e. an analogical type of operation (different physicalities, different interiorities).

Our study also shows how the naturalist ontology can take a turn towards a form of animism, a product of the changing nature of interaction with the ocean by the actors who depend on it for a living. While the naturalist ontology of Modern western human collectives, which considers there is a strict difference between humans and nonhumans, would structurally exclude any symmetrical relations with the ocean, the two institutions studied here show how the nonhuman entity formed by an initially natural figure is progressively being included in the collective of human actors by those very actors. Descola’s work stresses that in the ontology of the Moderns, human “culture” draws its specificity from a strict opposition with “nature”, but he also shows that animist phenomena are also found in the naturalist ontology, although their use is not stabilized as they are “accidental occurrences which are subsequently inhibited” (Descola, 2010, author’s own translation). This study shows that, through a relation with the ocean that alters the initial naturalist approach to nonhuman entities, the combination of the ocean’s advance and the growth in surfing-related economic activity has led to a form of “disinhibition”.

## DISCUSSION AND CONCLUSION

### PRINCIPAL CONTRIBUTION

The results of this research confirm the necessity of taking nonhumans, understood more broadly than just man-made nonhumans (artifacts, tools, instruments, etc.), into consideration in institutional work. Taking this approach, the research presented here provides an example of action by natural nonhumans in institutional work. This is a new finding because it offers a fresh way to consider materiality in institutional work, neo-institutional theory and the study of organizations. By allowing recognition of the ocean as an actor that has intentionality once human actors have attributed intentionality to it, Descola's analysis framework makes it possible to consider that nonhuman actors have their own intentionality. Several points must, however, be made in this respect.

When interiority is recognized, from Descola's point of view it does not concern an action that passes through human subjectivity, but a relatively objective interiority since modes of identification precede modes of relations. Regarding identification, Descola writes:

"This mechanism of mediation between the self and the nonself seems to me, from a logical point of view, to precede and be external to the existence of an established relationship with something other, that is to say, something the content of which can be specified by its modalities of interaction" (Descola, 2013: 112)

In an interview with French newspaper *Libération* in January 2019<sup>15</sup>, Descola reasserted this position and mentioned the animism of the Amazonian Jivaro peoples he had studied: "I understood that for the Achuar, these ideas developed interactions with nonhumans at all times. They weren't a 'system of representation', but a way of life" (author's own translation). In the case study presented here, recognizing that the ocean has interiority does not appear to be dominant in the mode of identification. Descola observed in the same interview: "Some of the things that are automatic reflexes for us because of our upbringing keep us from ever going over completely [to the Achuar animist outlook]". But the shift observed in this case study is one element of the hybridization of the naturalist ontology in the collective studied, among others such as the changes in modes of relation highlighted. The move from productive naturalism towards protective naturalism also reflects the shift in the naturalist ontology towards a fragmentation of existing beings into multiple essences with only narrow differences, i.e. towards an analogical type of operation.

These elements confirm the relevance of the "material turn" taken in recent years by organization theory (de Vaujany, Hussenot & Chanlat, 2016). In particular, this study underlines that materiality should not be approached solely through artifacts, for natural objects are also active, and potentially endowed with a specific form of intentionality. It therefore shows that the influence of natural nonhuman actors is expressed relationally in the organizational environment, and through recognition of the use of force attributable to natural nonhuman actors. In this work, the term "relational" as used by Descola must be understood as a hybridization between the modes of relations described, which can confer different degrees of power on the actors under consideration. This leads to an ontological contribution, discussed in sub-section 7.3, that opens up avenues for future research,

15. Consulted on 29 April 2019 at [www.liberation.fr/debats/2019/01/30/philippe-descola-je-suis-devenu-un-peu-animiste-il-m-arrive-de-dialoguer-avec-les-oiseaux\\_1706426](http://www.liberation.fr/debats/2019/01/30/philippe-descola-je-suis-devenu-un-peu-animiste-il-m-arrive-de-dialoguer-avec-les-oiseaux_1706426).

particularly methodological research. The following sub-section discusses the lessons that can be learned from this principal contribution for neo-institutional theory, i.e. for the definition and identification of institutional work by natural nonhuman actors.

#### MATERIALITY AND INSTITUTIONAL WORK: CONSEQUENCES OF TAKING THE ROLE OF NONHUMAN ENTITIES INTO CONSIDERATION

##### *The materiality of natural non-human entities in institutional work*

At Lacanau-Océan, the ocean's advance has called into question certain conceptions of "local planning" and "surfing" (including the teaching of surfing). This has led to new practices, rooted in a redefinition of relations with the natural element, that ultimately modify the form of economic activity across the whole local area.

This article departs from the ontological positioning that separates the social from the material, in order to bring out nonhuman agency in institutional work. Previous attempts to achieve this have shown how the action of nonhuman entities is incorporated into man-made objects that channel the institution (Raviola & Norbäck, 2013; Blanc & Huault, 2014; Jones & Massa, 2013). The results of this study confirm Jones and Massa's (2013) finding that materiality is a central factor in explaining why certain ideas persist and others gradually disappear. In particular, materiality can crystallize the social relations that form the human communities underlying institutions (Jones & Massa, 2013: 1127). In this study, the ocean's advance has led to a reconfiguration of the collectives in Lacanau, as shown by the development of a variety of initiatives: the surfing schools' association and the beach users' committee, and more generally a modified collective identification of the ocean, incorporating it into the collective as a member in its own right. This contrasts with the dominant approach of the past, which emphasized the use of a natural element that was considered passive.

However, the specificity of the case study concerning the materiality of natural nonhuman actors leads to observations that differ from the conclusions of Jones and Massa in their case study of the reinforced concrete Unity Temple church built by Frank Lloyd Wright. In that case, although artifacts underlie the formation of collectives, buildings do not necessarily prompt identification by the inhabitants ("When buildings do not trigger identification, they do not inspire institutional maintenance work and support" (Jones & Massa, 2013: 1127)). My study, in contrast, suggests that in the case of natural nonhuman actors, once their action reaches the stage of a potential physical threat, their inclusion in the collective identity is inevitable. Examination of the role played by the ocean at Lacanau also shows distinct elements of simple institutional permanence that is supposed by the materialization of multiple human agencies in a building, as in the case studied by Jones and Massa. Unlike a situation where a technology is appropriated by institutional actors, here it is the intrinsic action of the ocean that initiated reconsideration of local planning and the local surfing activity.

The Lacanau case study is a challenge to what Jones and Massa call "institutional evangelizing", "a process of multiple actors with interdependent agency rather than a heroic individual who alters institutions" (2013:1126), which assigns certain human actors an important role in institutional processes. At the end of their study, Jones and Massa say that they take a new interest in the institutional entrepreneurship perspective: "we re-engage rather than abandon institutional

entrepreneurship and describe it as a form of collective, rather than individual, action" (Jones & Massa, 2013: 1126). The situation in the study presented here highlights the importance of the ocean's agency in such collective action. It raises the question of whether the role of the ocean can be considered as that of an institutional entrepreneur, whereas in Jones and Massa's case study that role was only attributed to human figures such as Frank Lloyd Wright and his creative genius.

By considering the diversity of modes of human/nonhuman relations, this article opens up a fresh perspective on what the material element represents in the institutional approach. Blanc and Huault (2014) consider artifacts in institutional processes as elements infused with values, such values being transferrable between artifacts. For example, in the music industry, dematerialized music inherited the properties of the physical music media of the past, and those properties facilitated appropriation of new forms of recorded music in the industry's traditional organization. The study of the modes of relations with the natural environment presented in this article, considering elements such as the possibility of conferring interiority on the artifact, expands Blanc and Huault's concept of a relatively passive materiality, a simple receptacle for the values they embody, towards a concept of a role with greater agency for materiality in institutional processes. The results of this study also suggest that if nonhuman actors, natural or artifacts, can be beings endowed with their own intentionality, then this inherent intentionality probably coexists with intentionality conferred on them by humans.

The ideas supported by this research answer the call made by Monteiro and Nicolini (2014) to consider the various roles played by the material dimension in institutional work. Monteiro and Nicolini argue that "accepting that materials play a role in institutional work is only a departure point, an entrée to a world where institutions are created, maintained, and disrupted through the combination of humans, language, and material entities" (2014: 14). Focusing on the way the ocean participates in performance of institutional work through a redefinition of the mode of relations between humans and nonhumans, this study has proposed an original empirical investigation that corresponds to the research avenues recommended by Monteiro and Nicolini. The action of the ocean, examined here, expresses a situation that goes beyond the case of human work made possible or even extended by "scaffolding" resulting from a meeting of the nonhuman and the human. The impetus given by the ocean's action appears to have extended the temporal and spatial activity of the nonhuman, rather than the opposite situation found by Monteiro and Nicolini, in which nonhuman agency extended human activity in time and space (Monteiro & Nicolini, 2014: 14).

#### *Nonhuman agency in institutional work*

The results of this study thus enhance our understanding of the nature of institutional work, particularly as it relates to "agency" (Lawrence et al., 2013: 1026). More specifically, they add to past research that has underlined the practical and contingent aspects of agency (Daudigeos, 2013). Daudigeos shows that the agency of "staff professionals" (managers) lies in their ability to "assess the current situation and deploy a set of specific influence tactics" (Daudigeos, 2013: 742). His study refers to the concept of "episodic power", exercised through ad hoc, transitory strategic acts in the course of institutional work, motivated by the agents' personal interests. While his study, like this one, focuses on the relational influence gained in the organizational context, the

research presented here leads to new observations. First, the relational should be understood as a hybridization of different levels of interiority and physicality attributed to beings – human and nonhuman – that can confer differing levels of power on the actors concerned. Where Daudigeos highlights the power that emerges from the institutional work of developing interactions with other organizational members, my study suggests the existence of a power that arises from a potential alignment between human agency and nonhuman agency, making it possible to influence institutions.

This study thus shows how an active element external to the actors holds power through the use of force (Lawrence, 2009). Lawrence's comment that the use of force is "perhaps the most under-examined aspect of institutional politics in the organizational literature" (2009: 184) recognizes the existence of a problem associated with the ontological perspective taken by existing studies<sup>16</sup>. With the ontology used in this study, it is possible to navigate through different "worldings" (ways of seeing the world) and thus different views of physicality, for greater consideration of this material dimension in institutional work. Lawrence underlines this omission in the naturalistic representation of physicality through examples of physical force observed in organizations. He cites legitimate uses of physical force ("prisons, psychiatric hospitals, the military and police forces" (2009: 183)) but also gives examples of "bureaucratic force" ("corporations fire employees; bars forcibly remove disruptive patrons; schools confiscate contraband substances; universities expel poorly performing students" (2009: 183)). This article shows that physical force can also be exercised by a nonhuman entity, such as the ocean. The form of this force may differ from the forms traditionally imagined by naturalism. In the case studied, the ocean, by its physical action in significantly advancing during the winter of 2013-2014, displays an agency that does not confine nonhuman agency to being a simple complementary element enabling human agency to perform institutional work (in this respect, the approach used echoes the perspective of Leonardi (2011) as discussed in the following subsection). It is also of note that taking the agency of nature into consideration in this way challenges past attempts, marked by unconscious naturalism, to consider the natural element as an actual stakeholder (Starik, 1995).

#### THE BENEFITS OF REFERENCE TO DESCOLA FOR THE STUDY OF MATERIALITY IN ORGANIZATIONS

As well as contributing to studies of materiality in the specific case of institutional work, the conclusions of this research contribute to a better consideration of the role played by the physical environment in the understanding and theorization of organizations, which has become a pressing question for organizational studies (Mitev & de Vaujany; 2013, Lanzara, de Vaujany, Mitev & Mukherjee, 2015). Using the work of Philippe Descola, whose modes of identification and modes of relation enable us to grasp continuities and discontinuities in the practice of environments, opens up the possibility of analyzing shifts in relations between human and nonhuman actors, and thus ultimately of examining the emergence of a new type of agency in natural elements.

To achieve this, once we acknowledge the need to declutter the debate on the subjectivist tradition of western thought (Lorino, 2013: 71), there are several options for a researcher who wants to take a disruptive approach and break away from the ontology of discontinuity between the

16. Lawrence also states "this may be more of a reflection of the constrained empirical focus we have adopted in organization studies than the relative importance of force in creating, maintaining and disrupting institutions".

social and the material. The perspective initiated by Latour has been widely used in organization studies, particularly for approaches to institutional work as noted earlier. Yet this perspective, with its specificities, belongs to an approach that only partially examines the complexity of the phenomenon of continuity between the human and the nonhuman. Kelly (2014: 265) quotes the comment made by Michael M. J. Fischer, at the Chicago conference attended by Latour and Descola in November 2013: "Latour is like an *engineer* determined to clear his networks of people, subjects, and individual actors... Descola meanwhile includes the animals as always potentially persons, both among animists... and Americans".

This article echoes the work of Leonardi (2011), which must be hailed as pioneering in organization studies for its ontological stance that defends the inseparability not only of material and social artifacts, but also of human and social agencies. The contribution of this research also differs from and complements Leonardi's definitions of material agency<sup>17</sup> by opposition to the definition of human agency<sup>18</sup>. In the work reported here, the potential attribution of interiority to a nonhuman entity can result in intentionality being attributed to that agency. The description de Vaujany (2015: 303) proposes of the *modus operandi* of Descola's perspective ("once distinguished analytically, social and material agencies can be connected to describe broader imbrication processes, constituting routines and/or technologies") thus seems a more appropriate characterization of the study of agency in nonhuman entities in their connection with other social and material agencies from a perspective that remains close to Leonardi's. Leonardi's definition of material agency, as Lorino stresses (2013: 71), differs from human agency by the absence of a "goal". As explained below, Descola proposes a heuristic that allows for (even temporary) attribution of similar interiority to humans and nonhumans alike. This could lead to consideration of the organizational consequences, for example, of how forests think (Kohn, 2013).

This article, using Descola's "ontology of objects (and agency)" (de Vaujany, 2015: 300), adopted an ontological approach that is open to acknowledging nonhuman agency in the same way that human agency is generally examined, in order to incorporate what Pickering (1995) in *The Mangle of Practice, Time, Agency, and Science* calls the "dance of agency". With his famous example of the Mississippi river, which frequently overflows the structures for containment built by engineers in the New Orleans region, Pickering stresses the agency of the river, writing, "It turns out that the Mississippi wants to move" (2008: 6). However, as Howell (2014: 109) remarks, the scientific basis underlying Pickering's analysis of the river's movement without actually attributing any form of intentionality to it is problematic, and raises thorny issues of methodology ("Pickering's dance of agency cannot, to my mind, be interpreted without attributing intentionality to the non-human elements involved" (2014: 109). This is the problem addressed by this article. It deliberately sought to break out of the generally accepted framework of the naturalist ontology, in order to study how the ocean came to be included in the local collective, establishing a more symmetrical mode of relations between human and nonhuman actors, and changing the institutional configuration of the local economy. In this new framework, de Vaujany (2015: 301) offers an apposite summary of the approach to agency that this article proposes to introduce into analysis of institutional work: the "notion of 'agency' makes sense as the capability to move physically and symbolically inside the anthropological system".

17. "Material agency is defined as the capacity for nonhuman entities to act on their own, apart from human intervention" (Leonardi, 2011: 148).

18. "Human agency is typically defined as the ability to form and realize one's goals" (Leonardi, 2011: 147).

## LIMITATIONS AND AVENUES FOR FURTHER RESEARCH

One way to represent the originality of the approach taken by this article could be to highlight its capacity to achieve interaction between Scott's (2008) three institutional pillars – the regulatory, coercive, and cognitive pillars. That route, although possible, is not explored in detail here, and it might be instructive to study how Descola's approach could be connected with the institutional pillars perspective. As Daudigeos, Boutinot and Jaumier (2015) observe, the three pillars must be considered closely interrelated to account for the complex causalities at the heart of the institutional change process. In this research for example, the coercive pillar appears to be a dependent variable of the cognitive pillar. The field of coercive physical possibilities differs depending on whether or not similar physicality is attributed to objects and humans. Adopting the ontological perspective used here, examination of how the interrelations between the institutional pillars are taken into consideration could produce major contributions to advance the study of institutional processes.

Some limitations of this research should be mentioned. A commentary on the article by Peton and Pezé (2014) underlines “the necessity of systematically putting the analysis of institutional work into perspective with a historical study of the field and its dominant collective representations, so avoiding the risk of a biased interpretation of causal links” (Daudigeos, Boutinot, & Jaumier, 2015: 258). Although some historical context is provided in the first part of the results section, the historical background to the article could be explored in greater depth. A more systematic historical analysis could be undertaken to indicate the extent of biases due to this interpretation being confined to the period studied. However, the relatively recent beginnings of the collective studied must also be noted: the resort of Lacanau-Océan was only established in 1906 (see Magnon's (2006) book published for its centenary *Lacanau-Océan a cent ans. 1906-2006*).

The institutional change concerning local planning, an institution now characterized by the prospect of relocation and sustainable planning, is clearly highlighted. It would now be interesting to see whether the same type of institutional processes exist in other coastal zones (for example in the Netherlands, Brittany, the coastal cliffs of Normandy, the Mediterranean, the Basque country, Senegal, New York, etc). Research could usefully compare the spatial planning approaches applied in other zones where a rising sea level is a concern. But relocation is a far from a typical response: generally, constructions using a range of technologies are erected. At Lacanau the town's relations with the ocean have been modified (this is reflected in its participation as a pilot site for management of the coastline by the Aquitaine Coast Public Interest Group), and it could be interesting to compare the institutional changes under consideration in other, dissimilar places that are also affected by the risk of ocean flooding, for example the French town of Biarritz.

Finally, this research indubitably raises the question of how the action of nonhuman actors should be treated in future research that is ontologically stimulated by relinquishment of the nature/culture divide. This is a limitation of the present research that merits a brief discussion here, since it was not covered in depth in the course of the study.

It is important to note that approaching the action of nonhuman beings, such as the ocean, through the human actors' representation of the ocean as an actor with agency, is not necessarily an anthropocentric approach. On the contrary, as shown earlier, Descola's conceptual



framework offers a more all-encompassing approach which is not necessarily elaborated from the human dimension alone. In this respect our theoretical framework echoes anthropological perspectives such as the one adopted by Eduardo Kohn, and thus raises fresh questions regarding the new ontologies developed by such positioning:

“taking nonhumans seriously makes it impossible to confine our anthropological inquiries to an epistemological concern for how it is that humans, at some particular time or in some particular place, go about making sense of them. As an ontological endeavor this kind of anthropology places us in a special position to rethink the sorts of concepts we use and to develop new ones (Kohn, 2013: 10)”

This positioning raises many questions, which are not explored in depth here, such as epistemological questions regarding the type of data and events that analyze nonhuman actors as actors in such a framework. In this article, I focused on the cognitive dimensions of these manifestations. In Descola’s approach, this distinction does not really make sense, since the physical phenomenon is deduced from a comparison of the ways in which humans relate to others, human or nonhuman.

The fact remains that one limitation of this research is that it does not pay enough attention to other, more coercive manifestations of natural nonhuman action for example, even though they are hinted at in our study. When the ocean makes its presence felt through the bodies of surfing students “being put in their place by the waves”, the mechanical dimension of the action is obvious. The issue is still sensitive, since care must also be taken not to address the nature of this “physical” action from a perspective that is specific to the naturalist ontology, for example seeking pure objectification of physical force and simply measuring the ocean’s action, quantifying the energy generated in a given local context in terms of number of joules for instance; thanks to the precautions taken, this article avoided such steps. Kohn’s seminal book reminds us of the diversity of nature’s nonhuman manifestations:

“the squirrel cuckoo who flew over the house whose call so radically changed the course of discussion down below; the household dogs with whom people sometimes need to make themselves understood; the woolly monkeys and the powerful spirits that inhabit the forest (...) In my pursuit of certain tangibles of the ecological webs in which the Runa are immersed I also compiled many hundreds of ethnobiological specimens.” (Kohn, 2013: 13)

Transposed to understanding the action of the ocean, this type of perspective suggests we should broaden our consideration of phenomena to include original manifestations such as the noise made by the ocean, the materials it “secretes”, the episodic appearance of beings such as poisonous jellyfish, seals, etc. These could be considered as expressions of how “the ocean thinks”, just as Kohn has established that “forests think” – the “thinking” of tropical forests being revealed through the signals it puts out, as “an emergent and expanding multilayered cacophonous web of mutually constitutive, living, and growing thoughts” (Kohn, 2013: 79).

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