27th EGOS Colloquium, Gothenburg, July 7–9 2011, Reassembling organization

Track 17: Markets Inside the Ecological Revolution, organized by Fabian Muniesa, Peter Karnøe, and Petter Holm.

Full Paper:

Reassembling ecologies: Or how the natural environment may qualify as a stakeholder in the firm's business environment (working title)

By

Lise Justesen, Jan Mouritsen and Kjell Tryggestad

lj.ioa@cbs.dk jm.om@cbs.dk kt.ioa@cbs.dk

Copenhagen Business School

(Draft, please do not quote or circulate without the authors' permission)

Introduction

In its general form, stakeholder theory posits an extension of the ecology. It claims that there are other stakes and interests than those posited by shareholder value theory (Freeman et al. 2004; Jensen and Sandström 2011), and some stakeholder theory proponents argue that the natural environment is also to be considered as a stakeholder (Driscoll and Starik 2004; Norton 2007). It is a positive claim – there are more stakes and interests – and a moral one – we should look towards more interests in order to complete the analysis. With this framing, stakeholder theory seeks to identify stakes and interests which may be difficult but in principle achievable; it also seeks to make analysis of organized activity such as (global) business into a concern with the relative power of stakes and interests. These

concerns are highly relevant but they face the barrier that if stakes and interests are positively there, the analysis becomes static and will pay less attention to both the formation and to power-effects of stakes and interest. In effect stakeholder theory may stabilize stakes and interest too early and therefore end in a state where their contradictions rather than their roles and influences are demonstrated. In its general form stakeholder theory identifies stakes by appealing to the interests of actors qua their established position in a structure. If this is true there is a limit to the stakeholder dialogue which stakeholder theory posits as the answer to identified contradictions. The limit is that stakeholder theory will contemplate means such as compromises between existing actors, stakes, and interests rather than accounting for the emergence, eventual transformation and (provisional) settlement of stakes and interests. Jensen and Sandström (2011: 485) are thus rightly pointing to the lack of studies that "in a more explorative fashion follow how stakes and stakeholders are constructed in practice".

Therefore the general research question raised here is about the construction of stakes and stakeholder roles, interests and identities. More specifically we ask how the natural environment may qualify as a stakeholder in the firm's business environment. Following Jensen and Sandström (2011) we consider this to be a practical and pragmatic question to be investigated empirically and accounted for through useful narratives in the vein proposed by Rorty (1989) and Czarniawska (1998). The study is explorative in a general sense by considering the construction of stakes and stakeholders (Jensen and Sandstöm 2011), and by considering this dynamics for the case of nonhuman stakes and stakeholders (Driscoll and Starik 2004). As such our aim is to extend and enrich stakeholder theory by exploring and taking account of the ecological dynamics of stakeholders and stakes. To this end we draw upon a case study of the construction of a commercial housing complex. At this point it should perhaps be noted that we have also taken inspiration from the etymological definition of ecology: "house", from the Greek word *oikos*, which is also shared by economics (Webster's 1995: 317). This shared etymological root, we believe, make our case especially well suited to consider the ways in which the oikos/the commercial housing project is more or less accommodating in terms the stakeholder ecology it takes into consideration. For example does the housing project, in addition to construct a space and place for humans (and prospective customers) to live in, also consider the spatial arrangements and requirements for nonhumans such as animals living on the construction site? Or does it instead draw a clear distinction between its business environment and the natural environment? This question concerns the spatial-temporal constitution and organization of the stakeholder ecology, and

more specifically its boundary conditions. Economics has already provided one answer; the ecology consists of the business firm and its shareholders, customers, and suppliers. To this well known and not very controversial list of economic actors, stakeholders and stakes, we propose to add frogs. This addition is made on the basis of our case analysis that revolves around a number of controversies involving frogs. The following description of a central incident in our case narrative gives an indication of this:

On a Sunday afternoon, October 2004, work at a construction site near the city of Copenhagen was brought to a halt by the local police. At the time of the police arrival, construction workers were busy milling the ground at the site, but two representatives from The Danish Society for Nature Conservation (DSNC) had observed this activity and alarmed the police claiming that the workers were in the midst of destroying the habitat of a protected species – the moor frog. This episode can be seen as the culmination of an ongoing conflict between, on the one hand, the developer firm responsible for the building project and, on the other hand, local DSNC activists and some local politicians – a conflict that had lasted for more than a year when this incident took place.

This case and analysis will be elaborated in more detail in the sections that follows. We reconstruct the controversy and show how the distinction and boundary between the natural environment and the firm's business environments is established and renegotiated as the moor frogs, bearing the latin name *rana arvalis*, in sub sequent steps are qualified as a *stakeholder* in the firm's business environment. We do so by drawing upon actor-network theory (ANT) and particularly the concepts 'matter of concern' (e.g. Latour 2004 a, 2005a), 'problematization' (e.g. Callon 1980) and 'interessement', (e.g. Akrich et al.2002).

The remaining paper and argument is organized as follows. The next section provides a review of stakeholder theory with a particular focus on the question of stakeholder status for nonhumans and the natural environment. Next, we introduce our alternative ANT approach, again with a focus on contributions that consider animals and nonhumans. This is followed by a section on our case method and research context before we provide the narrative and 'case story' analysis. The final section discusses our findings and the theoretical and practical implications for our understanding of nonhuman stakes and interests. The analysis extends stakeholder theory by suggesting how stakeholders, interests, stakes, and identities are fragile and fluid while they are in the process of not only being formed but also

form relationships to other stakes and interests, themselves fluid and fragile at the time of action. The concept stakeholder qualification summarizes these findings.

Non-human stakeholders?

In stakeholder analyses, stakeholders are typically presented as humans or collective of humans who "affect or [are] affected by the achievement of an organization's purpose" to quote Freeman's (1984) well-known generic definition of the stakeholder concept. However, within the stakeholder theory literature, there is an on-going debate that addresses the question of non-human stakeholders specifically. This discussion revolves around the question whether the natural environment is to be included as a potential stakeholder (Starik, 1995; Phillips and Reichart, 2000; Driscoll and Starik, 2004; Norton, 2007) and two opposite positions have developed from this debate.

On the one hand, some researchers argue that the natural environment, such as animals, trees or the climate, should indeed be viewed as legitimate stakeholders whose claims are to be taken into account (e.g. Starik, 1995; Driscoll and Starik, 2004; Norton, 2007; Haigh and Griffiths, 2009). These authors argue for a broad and inclusive definition of the stakeholder concept and often draw on Freeman's affect or affected-by criterion to make this claim. For example, Starik argues that "… the natural environment, its systems, and living and non-living components can be considered stakeholders by all organizations, since all organizations significantly affect or are significantly affected by these entities" (Starik 1995: 215). This position criticizes other stakeholder theory models for being overly anthropocentric in their approach. As an alternative to this, classic stakeholder theory criteria are reinterpreted and supplemented by new criteria, such as proximity, to support an eco-sustainability perspective in which the natural environment qualifies as a" primordial stakeholder" (Driscoll and Starik, 2004).

In contrast to this proposition, other stakeholder theory proponents draw upon economics and argue for a more exclusive and narrow stakeholder definition. The only or important stakeholder is the shareholder and this position is maintained in that "the natural environment is not and cannot be a stakeholder…" (Phillips & Reichart 2000: 185) even though it is recognized that non-humans "may merit moral considerations of other sorts…"(ibid.: 196). The economics position and the distinction it sustains is further

reinforced as the authors argue that a broad definition, like the one proposed by Starik (1995) has the implication that the stakeholder concept becomes meaningless because it becomes almost impossible to say who does *not* qualify as a stakeholder. Based on their economics notion of a fairness-based approach, Phillips and Reichart (2000: 191) argue that "… only humans can be organizational stakeholders […] because only humans are capable of generating the necessary obligations for generating stakeholder status"

Despite the dispute and apparent opposition, a closer look at the two positions reveals that they share a number of basic assumptions that we want to problematize. First, both positions build their arguments on the premise that potential stakeholders are relatively fixed entities in the organization's environment and that these stakeholders possess specific interests and stakes that are as such *independent* of the way the firm chooses to react to these. A company may recognize an obligation towards a stakeholder whose claim may be legitimate or not, but whether this happens is an empirical question and the answer does not change the basic assumption. It is on this foundation that Starik argues that the first step in stakeholder management is to identify the "stakes" of the relevant stakeholders (Starik 1995: 215). The question of how interests are formed and may be formatted is black boxed (Latour, 1987).

Second, both positions assume that there is a relatively fixed boundary between the natural environment and the organization. There is a clear and easily defined inside and outside. Nature is assumed to be on the outside of the organization and, dependent on the position taken, is either to be included or excluded as a relevant stakeholder.

The third shared premise is the very belief that an abstract theoretical demarcation discussion is relevant in the first place. Should nonhumans in the natural environment be included as potential stakeholders? Even though two different answers result, both positions agree that it is relevant, interesting and possible to discuss and make such a distinction *a priori*.

Fourth, both positions are normative positions in a double sense. First, they assume that the a priori and abstract stakeholder demarcation discussion has both moral and practical implications for managers. Second, and more specifically, both positions grant a particular privileged role to stakeholder theory and the a priori distinctions it sustains when trying to sort out whether nature should be included or not.

In the next section we draw upon ANT to challenge the assumptions above and approach the question of nonhuman stakeholders in a different and constructive manner.

Animal controversies and actor-network theory

First, the ANT approach encourages the analysts to approach the question of stakes as an empirical rather than an abstract theoretical or moral question. Inspired by the "symmetric approach" of actor-network theory we do not operate with an a priori distinction between nature and social reality (Callon, 1986; Latour, 1993; 2004a; Czarniawska, 2009). Therefore, the question "can the natural environment be a stakeholder" is not really interesting as an a priori separation between domains, but more interesting when it assumes agency and forces human and other nonhumans to go out of their ways. The character of the interest and stake and the format of the stakeholder are "outcomes" (Callon and Law 1982: 622) of the empirical analysis rather than its input; the stakes and the stakeholders emerge and gain properties when in action – i.e. when they are involved in episodes. Thus, the question about stakes and stakeholders has to be reformulated from who they are to how they emerge and what they do.

Drawing on actor-network theory (e.g. Callon and Law, 1982; Akrich, Callon and Latour, 2002; Callon et al., 2002; Latour, 2004a; 2005a) our proposition is that actors and interests are relational effects rather than given properties of a particular actor or group of stakeholders. One related advantage with the ANT approach is that the question of how the distinction and boundaries between the natural- and economic environments is established and/or blurred can be opened up for an empirical inquiry.

ANT expands the scope of analysis by considering both humans and non-humans as *potential* actors to be taken into account. According to Latour, this somewhat contra-intuitive proposition is a defining characteristic of actor-network theory (Latour, 2005a). Examples of non-human actors actually included in ANT-inspired analyses are manifold. Latour includes actors such as microbes (Latour, 1988) and in a famous and much-cited article Callon (1986) considered scallops as actors. Other animals, such as elephants (Thompson, 2006), fish (Holm and Nielsen, 2007), baboons (Strum, 1987; Callon & Latour, 1981), sheep (Despret, 2005; Law and Mol, 2008), whales (Blok, 2010) or water voles (Hinchliffe et al., 2005) have also played important roles in ANT-inspired analyses.

In line with the contributions above we consider how the moor frog *may* become an actor in our case story. Further, this becoming (and eventual being) is to be considered an open empirical question since we cannot decide a priori whether it is an actor. Latour emphasizes that anything can be an actor, but not everything is an actor. Explaining this distinction, he says:

> "Without accounts, with trials, without differences, without transformation in some state of affairs, there is no meaningful argument to be made about a given agency […]An invisible agency that makes no difference, produces no transformation, leaves no trace, and enter no account is *not* an agency" (Latour, 2005a: 53).

It is in this empirical and pragmatic sense that an animal may become and be an actor. Hence, a moor frog may become an actor if it makes visible difference to the construction project, for example by changing the time schedule, the budget, the design specifications, or more generally, actors' interests and goals. But then again, such an outcome requires the moor frog to connect with humans and other "non-humans" because an actor never acts alone. In their reflections on the "Cumbrian sheep" as a potential actor, Law and Mol (2008: 58) emphasize that "… an actor does not act alone. It acts in relation to other actors, linked up with them. This means that it is also always being acted-upon. Acting and being enacted go together". In Callon's (1986) seminal paper on the '*domestication of the scallops and fishermen of St Brieuc Bay*', he convincingly shows how three scientists not just limited themselves to the identification and analysis of already existing actors and interests, but through a process of *problematization* shaped and defined who they are and what they want. Initially this problematization was a fragile accomplishment - on paper - in the form of scientific reports and hypothesis. Further into the process, the problematization becomes more real as devices of 'interessement' such towlines with collectors manage to interest young larvae scallops to anchor and grow while preventing them from escaping into the wilderness of the sea, hence their domestication. In our analysis we follow this line of thinking, which implies that the frog canbe considered as an entity entangled in a larger assemblage consisting of both humans and things (Hernes, 2010). Its acting and being acted upon is to be analyzed by focusing on its relations to other entities, such as the developers, the environmentalist and various material devices. It is within this network that the frog may emerge as an actor with stakes and interests to be taken into account.

Actors become fluid and flexible and, according to Law and Mol the animal *is* something different in different contexts. For instance a sheep may be a "veterinary sheep", an "epidemiological sheep" or an "economic sheep" dependent on the different practices it is entangled in. It is/they are "sheep multiple: more than one but less than many" (Law and Mol, 2008: 65). This view differs from the social constructivist or perspectivist view in the sense that the animal is not just a surface for human projections. First, it cannot be anything – it is less than many. Second, its being and acting are not determined by its surroundings, but is relationally defined (ibid.: 72). Third, an animal is typically "full of surprises" in its complexity, stubbornness, and specificity (ibid.: 73).

In ANT terminology, the moor frog can be viewed as a potential actor who acts, emerged and changes in relation to a particular context and as a part of particular hybrid assemblages. At the same it can be viewed as a *matter of concern* (e.g. Latour, 2005a) that became a focal point in a set of controversies involving a number of other actors, such as the developers, the environmentalists and politicians. The concept matter of concern refers broadly to things we care about (Latour, 2004a) and it supports ANT's overall rejects of the "modern constitution" where the mutually corresponding dichotomies nature/society and fact/value are foundational and reflect supposedly distinct ontological domains (Latour 1993; 2004). Within this view nature is equivalent to a domain of matters of facts that can be observed and represented in an uncontestable manner. In contrast to this, ANT argues than nonhumans may be matters of concern that are highly controversial. In our context, we show how the moor frog emerged as a matter of concern rather than a matter of fact.

Methodology and Research Context

Our case in this study is a building project, owned and managed by DEF (a pseudonym), a Danish property developer firm. When we conducted our field study in the autumn 2006, DEF had less than 100 employees, but in terms of revenue and profitability it was one of the big actors in the booming Danish construction market. DEF's business is property development. The company buys land and creates ideas for new building projects to be build and sold. When an idea is accepted as lucrative, DEF initiates a new project based on this idea and is then engaged in the whole process from design to project and construction management, marketing and sales.

DEF is not a building contractor in the typical sense as all construction activities are sourced out to external firms in the building phase. DEF does have a project manager attached to every project but his role is to supervise and control the overall project and "manage the management" of the hired contractors. In this sense, DEF can be compared to a highly professional client. DEF's business core is property development and sales and its heavy involvement in the project management of building projects can be seen as an important mediator between these two business activities.

The empirical material informing this paper is developed from an ethnographically inspired exploration of one of the DEF's building projects. Focusing on relations between the firm and the project our data collection was organized around the practical managerial dilemmas that bestow most construction projects with dynamic properties. We used multiple qualitative methods, combining observations, interviews and documents in the attempt to establish a rich and varied empirical material.

First, we conducted a number of semi-structured interviews, both at firm level (the CEO, and a number of managers and employees at DEF) and with actors involved with the building project (DEF managers and employees as well as managers from different subcontractors working on the project). In total, we conducted 9 formal interviews. All interviews were tape recorded and transcribed at full length. This interview material was supplemented by numerous informal conversions during our field work at the construction site. It was during one of the first interviews that we became aware of the "frog story". We asked a manager if he could tell us about unexpected challenges in his experience as a DEF project manager and he told us about the firm's encounter with the frogs.

Second, taking an open and ethnographic approach we conducted a week's field study at the construction site of that particular construction project. Here, we "shadowed" the project manager from DEF during 5 subsequent workdays from early in the morning until he went home late in the afternoon (cf. Gheradi and Nicolini, 2002). In this way, we got the opportunity to participate as observers in a number of different activities such as formal and informal meetings, site inspections, lunch break chats, etc. We kept a diary for field notes. We wrote down observations but also summaries of informal conversations we had with the project manager and others. During our field work the frogs' habitat were shown to us and we even observed one frog.

Third, we also use text material as a substantial and important part of our data. These include newspaper articles, consultant reports, documents produced by local authorities, marketing material, project plans, annual reports and photographs.

We present the empirical material and our case study in a narrative form (Czarniawska, 1998).

The case story

When narrating a case story one always has to start *in medias res* (Latour, 2005a). With this in mind, our narrative begins in December 2000 when DEF decided to develop a new piece of land as part of a large and ambitious development project. The plan was to develop and build about 80.000 square meters of new residential buildings. In addition, 100.000 square meters of existing buildings on the site (also included in the purchase) were to be renovated. In DEF's annual report from 2001, it was stated that the project was a long-term project with different phases estimated to last from 2-10 years.

Nature is no stakeholder: Destroying waterholes and eliminating frogs

Like humans and most other living organisms, frogs are dependent on certain life supporting elements and conditions such as regular access to water. Unlike humans, frogs are even dependent on water in the peculiar form of waterholes or lakes. When DEF bought the land they did not know about the presence of two waterholes/lakes at the prospective construction site. Nor did they know that the construction site was a habitat to frogs. But this uncertain state of knowledge about the nature of the construction site was about to change as further actions and events unfolded. In an interview, a project manager told:

> *"And there were two lakes, but it was like some rush or grass like stuff... In fact, you couldn't see them if you didn't know they were there. And actually we didn't know. But then some people with very green mindsets thought they should be preserved. And we were told that the lakes existed, and, well, we could then see that this was true".*

The quote indicates that DEF was surprised by the nature of the natural environment at the site and the fact that nature had taken the peculiar form of waterholes had now to be taken into account. At first sight the waterholes had been invisible, hidden by rush and grass. Also,

it came as a surprise to DEF that the waterholes and their nonhuman inhabitants had specific spokespersons in the local community. In the autumn of 2003, an environmental group (DSCN) inquired into the whereabouts of the frogs on the prospective construction site. With an amphibian expert, they had not only found one, but two waterholes and several exemplars of the moor frog close by. Nature was suddenly present in yet another peculiar form and spokespersons began to articulate its stakes. Nature made itself so present that DEF somehow had to take it into account.

The waterholes were surprises, not only to DEF, but apparently also to the municipality who had approved DEF's building plans. Whenever DEF initiates a new project it has to be part of the district plan, and, as a consequence, DEF interacts with the municipality to get this matter settled as soon as possible. Potential restrictions, such as environmental considerations, are to be part of the district plan. A project manager from DEF emphasizes this in the following quote where he talks about the initial project phases:

> "We approach the municipality and say: we need to make a district plan. Is that possible? And then, there is a lot of dialogue and it can be a very long process before we even get close to being specific. We spend a lot of resources on this".

In the case project the process had seemed to be a relatively easy one to begin with. Apparently, the mayor and the majority of the city council were happy to welcome DEF and were looking forward to a project that would make this suburban municipality grow considerably in terms of inhabitants and tax income and would probably attract business. But then local environmentalists and local politicians began to protest and their protests were mainly based on appeals to the natural environment. Pointing to the existence of the two waterholes was a first step. Equipped with maps the environmentalist could show the waterholes and if additional proof was needed field trips to the site left little doubt as the rush and grass hiding the waterholes was not difficult to pass. So, after this initial uncertainty it seemed clear to everybody that waterholes were present at the construction site.

Now, however, two new questions arouse. First, when is a waterhole big enough to be protected by environmental legislation? Second, were the waterholes really natural or were the "artificial"? And what difference would it make if it turned out that the waterholes were artificial, constructed quite recently by people? The first question was easier settled than the second. According to Danish legislation, lakes with a size of 100 m2 are protected as a

rule (Naturbeskyttelsesloven § 3). The two waterholes in question were bigger than this. However, DEF argued that the lakes were of quite recent origin, designed by humans as part of the scenery for a well known Danish television program for children. However, it turned out that "designed" waterholes are also protected by law if the waterholes have become wild life habitat. The local environmentalists pointed out that the waterholes were not only habitat to wildlife but to an endangered species, the moor frog, protected by an EU-directive.

According to interviewees at DEF, the frog issue was an unexpected problem. As we saw in the interview quote above, a project manager explained that when the DEF initiated the project they did not know that waterholes were present at the site where the new buildings were to be constructed. And, as a consequence, they knew nothing about the presence of moor frogs. However, DSNC claimed about 500 frogs inhabited two waterholes that were partly concealed by wild growing rush. At this point DEF had to take action if they were to proceed with their building project. They had to take the natural environment into account. The initial actions and reactions from DEF reflect that at this point nature was hardly considered a stakeholder. On Friday 27 February 2004 DEF sent a fax to the local county authorities asking for an "exemption to bring down the waterhole". The stake - survivability - proposed by environmental groups and the amphibian expert was opposed by DEF. Instead it was an obstacle that a tractor could flatten out just like any hill or ditch could be leveled. Already by Monday 1 March, i.e. a couple of days after the fax had been sent, the local authorities had processed the DEF's application and approved the dispensation with the motivation that the waterhole "does not constitute a viable place for the reproduction of frogs" (quoted in *Information*: 12.02 2005).

At this point it was thus widely agreed that waterholes existed on the construction site. But there were also two widely diverging claims concerning the relation between waterholes and frogs: DSNC claimed the existence of two waterholes and their vital role in securing the 'survivability' (broadly conceived to also include reproduction) of some 500 peculiar and protected moor frogs. By contrast, local authorities only considered a (unspecified) waterhole and that it had no important role for the 'reproduction' of frogs (unspecified as well). In brief, while there is much at stake for waterholes and moor frogs in the DSNC account, there is little or nothing at stake for nature when the local authorities are accounting for them. The local authorities articulated nature's relatively weak and general stake under the condition that a construction had already been approved by local urban planning procedures. However, the county's decision to approve the construction project led

DSNC to file a complaint to Naturklagenævnet (i.e. a Danish public legal authority settling controversies concerning nature), a complaint that had delaying effect on parts of the building process.

It was during this process that DEF apparently tried to solve the problem of delays by simply eliminating the object of controversy, i.e., destroying the waterholes as fast as possible. At least this was the impression conveyed by the DSNC whose local spokesperson was quoted for the following statement in the newspaper the day after the police incidence mentioned above:

> "Apparently, DEF is trying to foreclose the case by eliminating the frogs' natural conditions for survival, so they are free to build wherever they like. Presumably, that is what they are trying to achieve. (DSNC spokesman, qouted in Jylland-Posten, 24.10.2004)
>
> (DSNC spokesman, qouted in Jylland-Posten, 24.10.2004).

In the quote the DSNC environmentalist speaks and acts on behalf of the frogs and the habitat and he presents DEF as a ruthlessly profit-driven company that has attempted to eliminate the frogs by destroying their habitat. However, this story was not accepted by DEF and the county. Two days after the incident, another newspaper wrote that the county had visited the site and concluded that shoveling the ground "did not affect the condition of the two marked lakes" and" thus, the digging did not forestall the processing of the complaint in Naturklagenævnet and did not require an application for exemption from the environment protection law's paragraph 3" (Børsen, 04.11.2004). In the article DEF's CEO was described as a "nature lover", "hunter" and even former member of the DNSC. Not only did DEF get support from the council. They also began taking a new approach where nature was taken into account by the project management and the company began to make it clear that they too cared about nature, including frogs.

Export: Saving the frogs – destroying the habitat

DEF did not go down the path of legality. Their revised response invited negotiations with both DSNC and the local community. The frog was still an obstacle but a less brutal solution was proposed to overcome this obstacle. DEF now considered relocating the 500 local moor frogs to a similar and nearby lake that would fulfill the perceived needs of the frogs and

secure their survival. Nature's stake was to survive even if dislocated. This proposition did little, however, to satisfy the environmentalists whose articulation of the stakes of frogs was different to that of DEF. There was a contestation of power to articulate stakes and to define stakeholdership. DEF was concerned with survivability but in a different place; environmentalist with nature more broadly, including the existence of the lakes and not only the frogs. Could nature be stakeholder in two ways? Should frogs live in any habitat or in the lakes in place?

DEF's solution was also a challenge to authorities whose stake was procedure. A project manager explained the lengthiness of process:

> But then there are rules that make it possible to keep on filing complaints to the Natural Preservation Authorities and this has a delaying effect on the construction process. It was clear to us that this process could go on for years before it would be decided if we would obtain approval to move these frogs or not (DEF Project manager).

Administrative procedure became a matter of concern. It required process and would be time-consuming because DSNC could, in principle, keep filing complaints and this turned out to be decisive because even if DEF would end up with a permission to relocate the frogs, such a complaint process would delay the construction and would jeopardize the firm's focus on time (Justesen and Mouritsen 2009; Justesen et al. 2009) and eventually undermine the construction (cost) budget and delay revenues from the project (Georg and Tryggestad 2009). DEF might get the permission but at the cost of a serious delay that would be very expensive. Administrative procedure helped reformulate the stake of the frog – the frog's identity as stakeholder changed.

Domestication: Re-designing the original habitat – domesticate the frogs

At this point, the frog became something different to the project management and the question of the frogs' needs and wants became a matter of concern to DEF. This new approach is reflected in the following interview quote:

> So, we ended up turning things around, saying 'Ok, instead of fighting they [the frogs] should be allowed to live there. But we

> must build anyway, so we need to know something about how this kind of frog would like to live'. Then we followed suit and recruited the leading expertise on moor frogs in Denmark as our advisors (DEF project manager).

The frog was first an obstacle or stranger of 'less concern' (to be destroyed or relocated), but gradually it was invited as a resource and was equipped with a more benign stake. Instead of fighting the frog, DEF suggested that it could co-exist with the unfolding of the construction site. Amphibian experts were introduced to advice on how it might be possible to understand the frog not as an enemy or a stranger to be fought but a *condition* to which the project must adapt. New amphibian experts were enrolled to support the new emerging project condition and ambition (Tryggestad et al. 2010) different from those that sided by environmentalists and suddenly science had two stakes – either to stop construction (and preserve nature) or to make it happen with a natural inclination (and negotiate a new settlement between construction business and nature).

This adaptation was an active endeavor because DEF had to become much more accommodating which would influence the mode of construction. This involved processes that had never before been applied by the company. The following quote illustrates some of the many initiatives that were introduced:

> "Together with the advisors we started to sort out …'when we start here, and the frogs are living there in the wild growing rush …and at this time of the year…and how does that fit with…' There is a particular time schedule for handling the frogs. When it is their breeding time they want to down to the waterhole. Then a kind of frog fence is erected to keep them on the trail. There is a frog fence where they exit the waterhole so they don't escape. Then there is the bucket dug into a hole in the ground, and the frog falls into it. Then every morning before sunrise, the frog expert arrives to count if all the frogs are there. And then he transports them down to the waterhole…"
>
> (DEF project manager).

There are several management considerations worth noticing in this quote. First, as mentioned above, time is a very important aspect of DEF's activities but it turns out that in order to manage the frogs *their relation to time* must also be taken into consideration. Whereas DEF' project time is linearly structured, the frog lives in cycles and therefore special time schedules for the frogs must be constructed and it becomes a challenge to align these two different time schedules. Second, a number of material devices are established to control and direct the behavior of the frogs. Fences and buckets are two such examples and the following quote illustrates a third one:

> …there are corridors, where they [the frogs] can wander, and in case they can't wander there, we have constructed a tunnel under the road. There are a lot of challenges… (DEF project manager)

As for the bucket it serves as a collector and register of frogs on the construction site. It grants the frogs a more durable existence in a vein similar to the scallop collector (Callon, 1986). The bucket's 'frog catch' speaks first to the hired frog expert about how many they are and their interest in this particular site. Next, the frog expert record and translate this into textual-numerical representations and summaries in the field notes, which in turn enables both frog expertise and project management to speak with more knowledge and authority about how to manage the co-dependent relation between the housing project and the frogs. Fences and corridors are established to prevent the frogs from getting killed. The use of such technologies and interessement devices (Callon, 1986) make our case of "frog management" similar to Hinchliffe et al. (2003) case on water voles. Thus, the survival of the moor frog is now an integrated concern in the project whereas in the beginning, it seemed that elimination from the construction site was the aim.

Becoming friends with the frogs

So, with the help of the amphibian expertise and technologies the construction process was able to proceed without killing frogs and without destroying their habitat. It turned out to be possible to align the existence of the frogs on site with the realization of the construction project. As developers, DEF's core activity is developing of property with the purpose of sale. This means that marketing is an integrated activity in the real estate projects initiated by DEF. And it is in relation to this, that we see that the frog becomes more than just a condition and a concern.

When arriving at the first day of our field work at the construction site, we noticed big posters at the entrance. This was marketing material aimed at potential buyers who visited the site and one of the apartments that had been build from the very beginning of the project so that it could function as a 1-1, real model of the apartment a customer might by. So, potential buyers were visiting the site while the buildings were being constructed and, in fact, the majority of the apartments were sold before they were constructed. Some of the posters showed pictures and/or visualizations of the buildings and the interior of the apartments. Others had focus on the green environment surrounding these buildings. One these large posters showed a close-up of a frog. The poster was not the only sales material in which the frogs or the waterholes were represented. In a brochure, we see two kids playing at a waterhole, trying to catch something with their fishing net.

Here, the frog has become more than just a concern. It is now a friend that adds value to the project by illustrating that the buildings are located in a green, family-friendly environment. The frog supports the amenity value of the buildings.

Discussion

Was the frog a stakeholder in our case project? Instead of providing an abstract theoretical or moral discussion of this question we have shown empirically how the frog emerged as a matter of concern and a stakeholder to be taken into account. Frogs and project managers are not stabile entities with stable interests. Their identities and interests are transformed during the process of "frog management". Instead of assuming that the firm or a project *has* a finite ecology with a given set of stakeholders, what counts as stakes and stakeholders are constructed in contingent and situated processes. Here, the boundaries between the natural and business environment are negotiated and established only provisionally. Our analysis shows how the relationship between frogs and project management changed several times during the project. First, the frog and its habitat were nonexistent in the project universe as DEF knew nothing about waterholes or frogs when they purchased the land and planned the building project. Then, when learning about the frog's existence it seemed that the animal was viewed as an enemy to be fought and eliminated because it hindered the realization of the building project. When this option was ruled out, the frog was viewed perhaps less as an enemy but still as an obstacle to be handled and removed by DEF. The suggested strategy here was to try to relocate the frogs to a nearby lake. When

this strategic move, for reasons outlined in the above section, was abandoned as well, the frog's status changes once again. Instead, it became a condition to the project and the challenge now was how to align the frogs' existence with the construction activities.

It is at this point in the story that the frog begins to resemble a stakeholder with needs, interests and perhaps even rights. It becomes a matter of concern – something to be taken care of. Finally, in the end, we see that the frog is positioned as an asset – as something that adds value to the firm's project. In the sales material produced by DEF, pictures of the moor frog are presented to illustrate the attractiveness of real estate that is both close to the city and to nature.

To sum up, several issues in the controversies may be identified. First, it was unclear whether the construction site included a habitat for moor frogs. Finally, if later in the process there was considerable agreement that at least some moor frogs were present, who should "speak on their behalf"? What are the needs, stakes and interests of a frog? And how does it become an actor in a context like this? In our case analysis we have showed how these controversies unfolded and how the frogs became a rather complex *matter of concern*.

The study reveals that stakeholder qualification of the natural environment involves the management of three interrelated challenges: problematization, identification and domestication. First, DEFs initial distinction between the natural- and business environment had to be problematized so that the existence of frogs on the construction site could be recognized. As noted by Callon (1980, 1986, 2003) *problematization* is an important mechanism of knowledge production. In our case there is a series of problematizations that culminate into a definition of the 'problematic situation' of frogs on the construction site. Then, the existence of waterholes on the construction site had to be recognized. Next, the possibility of frogs living in the waterholes had to be inquired into. Since the local authorities concluded on the non-existence of frogs in the waterholes, further problematizations were required to grant the frogs an existence. It was only after DSCN had, in a subsequent chain of actions and events mobilized; an amphibian expert's observations of frogs on site, and EU regulations, and the police, and the media, and the public interest, that the frogs' existence on the construction site were recognized by the management of the firm's construction project.

Second, and following the recognition of existence, is *identification* where the frogs had to be further identified and considered in terms of their potential value and importance as stakeholders in the firm's business environment. Since the frogs' peculiar interests and needs

were still largely unknown to the developer firm and its management, they decide to enroll amphibian expertise and the latter assumes the role as spokesperson and translator (Akrich, Callon and Latour 2002) for the frogs in relation to the construction project and management. As the frogs were further identified with the help of expertise and a whole array of new management technologies, the frogs' peculiar interests are inquired into and taken into account. Subsequently, the frogs' identity is transformed from 'enemy' or 'obstacle' to a potential valuable collaborator and partner.

Third, a new and more ecological sustainable compromise had to be established in which the frogs and their interests and concerns were allowed to partake in the shaping of both the project's ambitions and goals (design, time, cost) and execution. Integral to this compromise is the simultaneous *domestication* (Callon 1986) of the natural *and* the business environments. It was accomplished by way of constructing a natural-artificial habitat for the frogs on the construction site. Again, integral to this compromise was a whole array of project-and construction management technologies such the time schedules, cost calculations, and architectural designs and drawings for the landscape, all of which had to be reconsidered and redrawn during the construction process. The resulting domestication and compromise were thus inscribed into the management technologies. The latter, in turn, helped to establish a new and more blurred boundary between the natural- and business environments by providing the draft and constitution for the endorsement of the frogs as legitimate stakeholders in the project.

Our case study helps to illustrate how the natural environment may be qualified as a stakeholder in the firm's business environment. The analysis extends stakeholder theory by suggesting how stakeholders, interests, stakes, and identities are fragile and fluid while they are in the process of not only being formed but also form relationships to other stakes and interests, themselves fluid and fragile at the time of action. This case was particular as it developed the ecology of stakeholders to include not only humans and non-humans such as business firms, but also species from the natural environment (e.g. Starik and Marcus 2000; Fineman 2001; Tsoukas 1999). A small moor frog turned out to be a concern that the developer firm that commissioned the project could not ignore. The frog became an issue to the firm's construction project because it not only was involved in constructing the building but also in constructing nature and the role of the frog. The empirical account shows that firstly, the very possibility of the frog as a stakeholder was a surprise. Secondly, it shows that the frog when identified was first considered an enemy whose interests had to be resisted;

propositions about its possible relocation so that it could survive elsewhere; then interests were incorporated which suggests a change to nature so that the frog could live in place. These made the frog a difficult and powerful actor that forced the developer to go out of its way to accommodate concerns for survivability of the species with the problem of cost, time and political reputation being at stake. The frog was incorporated in different roles and had various stakeholder relations within and outside the project. Later, the frog became a friend. In marketing materials it spoke for the construction as it added nature and habitability to the building. In a society attempting to be and become green this was a string proposal. Unfortunately this friendship was at odds with the influence of heavy duty equipment need for the construction and suddenly, even if it were a friend and that much investment was committed in its interest, the frog required more than a designed space for its activities to unfold. It started to become extinct.

Over the course of this process the frog and other actors such as both the developer firm and the environmentalists who eagerly overlooked its fate, gained stakes, interests with different types of recognized needs. This process of stakeholder qualification developed unexpected stakes, interests, concerns, and identities which held power for a while on its way to new configurations hereof. This is an account of the operation of stakes and interest rather than of its structural and positional origins.

To justify this claim the case study focused on the controversies that emerged in relation to the management of this project and its attempts to map the controversies as they unfolded over time (Latour, 2005a). As indicated by our case analysis, the controversies revolved around the moor frog and its habitat as this particular species, bearing the Latin name *rana arvalis*, turned out to be a significant matter of concern to a number of different actors involved in the firm's project. Such stakeholder dynamics are at odds with contemporary stakeholder theory, but should be taken into account and theorized accordingly, i.e., without assuming static or finite stakeholder ecology. At best this assumption will not make any (pragmatic) difference, at worst it might only reinforce the separation between economy and nature while confusing the half empty "house" (of economics in particular) with the much more important process and task of (re)assembling the ecologies that constitute the oikos. We conclude on the theoretical and practical implications above by proposing the concept of stakeholder qualification as a dynamic alternative and complement to the existing views that either include or exclude the natural environment as a stakeholder. The concept is also a useful reminder that an ecological and environmental friendly compromise is always a

fragile and provisional assemblage (Reijonen 2008) – the ecological matters of concern is never resolved once and for all.

References (incomplete)

Akrich, M., Callon, M., and Latour, B. (2002) "The key to success in innovation part I&II", *International Journal of Innovation Management* 6: 187-206 & 207-225.

Buysse, K. and Verbeke A. (2003) "Proactive environmental strategies: A stakeholder management perspective", *Strategic Management Journal* 24(5): 453-470.

Callon, M. (1980) "Struggles and Negotiations to Define What Is Problematic and What Is Not. The Socio-logic of Translation." In: K. Knorr, R. Krohn, and R. Whitley (Eds.) *The Social Process of Scientific Investigation. Sociology of the Sciences Vol IV*. Dordrecht: Kluwer Academic Publishers: 197-219.

Callon, M. (1986) "Some elements of a sociology of translation: domestication of the scallops and fishermen of St. Brieuc Bay". In J. Law (ed.), *Power, Action and Belief: a New Sociology of Knowledge?* Routledge, London: 196-233.

Callon, M (2003) "The increasing involvement of concerned groups in R&D policies: what lessons for public powers?", in A. Geuna, A. Salter and W. E. Steinmueller (eds.) *Science and Innovation: Rethinking the Rationales for Funding and Governance*, Cheltenham: Edward Elgar, 30-68.

Callon, M., and Latour, B. (1981) "Unscrewing the big Leviathan: How actors macro-structure reality and sociologists help them to do so", in Knorr-Cetina K. and Cicourel A.V. (Eds.), *Advances in Social Theory and Methodology: Towards an Integration of Micro- and Macro-Sociologies,* Routledge and Kegan Paul, London: 277–303.

Callon, M. and Law, J. (1982) "On Interests and their Transformation: Enrolment and Counter-Enrolment", *Social Studies of Science* 12: 615-625.

Callon, M., Méadel, C. and Rabeharisoa, V. (2002) "The economy of qualities" *Economy and Society* 31(2): 194-217.

Callon, M. and Rabeharisoa, V. (2008) "The Growing Engagement of Emergent Concerned Groups in Political Life: Lessons from the French Association of Neuromuscular Disease Patients" *Science, Technology & Human Values,* 33(2): 230-261.

Czarniawska, B. (1998) *A Narrative Approach to Organization Studies,* London: Sage.
Czarniawska, B. 2009. Commentary: STS meets MOS. *Organization* 16, no. 1: 155–60.
Despret, V. (2005) "Sheep Do Have Opinions", In: Bruno Latour and Peter Weibel (eds.) *Making Things Public: Atmospheres of Democracy*. ZKM, Center for Art and Media and The MIT Press, Karlsruhe and Cambridge, Massachusetts: 360- 369.

Donaldson, T. and Preston, L. E. (1995), "The Stakeholder Theory of the Corporation: Concepts, Evidence and Implications", *The Academy of Management Review*, 20(1): 65-91

Driscoll, C. and Starik, M. (2004) "The Primordial Stakeholder: Advancing the Conceptual Consideration of Stakeholder Status for the Natural Environment", *Journal of Business Ethics*, 49(1): 55-73.

Fineman, S. (2001) "Fashioning the Environment", *Organization* 8(1): 17-31.

Freeman, R. E. (1984) *Strategic management: A stakeholder approach*. Boston: Pitman.

Freeman, R. E. et al. 2004

Georg, S. and Tryggestad, K. (2009) "On the emergence of roles in construction: The qualculative role of project management", *Construction Management and Economics*, 27 (10): 969 -981.

Gheradi, S. and Nicolini, D. (2002), Learning the Trade: A Culture of Safety in Practice, Organization 9(2*): 191-223.*

Haigh, N. and Griffiths, A. (2009) "The natural environment as a primary stakeholder: The case of climate change" Business Strategy and the Environment18: 347-359.

Hernes, T. (2010) "Actor-Network Theory, Callon's Scallops and Process Based Organization Studies", in Hernes, T. and Maitlis, S. (eds.) *Process, Sensemaking & Organizing*. Oxford: Oxford University Press.

Hinchliffe, S., Kearnes, M. B., Degen, M. and Whatmore, S. (2005) "Urban Wild things: a cosmopolitical experience", *Environment and Planning* D 23: 643-658.

Holm, P. and Nielsen, K.N. (2007) "Framing fish, making markets: the construction of Individual Transferable Quotas" In: M. Callon, Y. Millo and F. Muniesa (eds) *Market Devices*. Blackwell Publishing/The sociological Review, Oxford: 173-195.

Jensen, T and Sandström, J. (2011) Stakeholder Theory and Globalization: The Challenges of Power and Responsibility. *Organization Studies*, 32 (4): 473 – 488.

Justesen, L. and Mouritsen, J. (2009) "The triple visual: Translations between photographs, 3-D visualizations and calculations", *Accounting, Auditing and Accountability Journal*, 22(6): 973-990.

Justesen, L., Mouritsen, J. and Kjær, A.B. (2009) ”Ledelse af det uforudsete i byggeriet: Videnledelse når viden er dyr”, *Økonomistyring & informatik*, 25(2): 121-135.

Latour, B. (1987), *Science in Action*, Harvard University Press, Cambridge, MA.

Latour, B. (1988). *The Pasteurization of France*. Cambridge, Massachusetts: Harvard University Press.

Latour, B. (1993). *We have never been modern*, Harvard University Press, Cambridge, Massachusetts.

Latour, B. (2004a). *The Politics of Nature*. Cambridge, Massachusetts: Harvard University Press.

Latour, B. (2004b) “Why has Critique run out of Steam? From Matters of Fact to Matters of Concern”, *Critical Inquiry* 30: 225-48.

Latour, B. (2005a) *Reassembling the Social*, Oxford University Press, Oxford.

Latour, B. (2005b) *What is the style of Matters of concern*? Spinoza Lectures by Bruno Latour in April and May 2005, available on www.bruno-latour.fr

Law, J. and Mol, A. (2008), “The Actor-Enacted: Cumbrian Sheep in 2001”, in C. Knappett and Malafouris (eds.) *Material Agency*. Springer Science and Business Media, LLC.

Mitchell, R. K, Angle, B.R and Wood, D.J. (1997) “Toward a Theory of Stakeholder Identification and Salience: Defining the Principle of Who and What Really Counts, *Academy of Management Review*, 22(4): 853-886.

National Environmental Research Institute Denmark. (http://www2.dmu.dk/1_Om_DMU/2_Tvaer-funk/3_fdc_bio/projekter/redlist/data.asp?ID=303&gruppeID=10. Last accessed April 19 2010).

Norton, S. D. (2007). The natural environment as a salient stakeholder: non-anthropocentrism, ecosystem stability and the financial markets, *Business Ethics: A European Review*, 16 (4): 387–402.

Phillips, R. A and Reichart (2000) “The Environment as a Stakeholder? A Fairness-Based Approach”, *Journal of Business Ethics* 23(2): 185-197.

Reijonen, S. (2008) *Green and Fragile: A Study on Markets and the Natural Environment,*Samfundslitteratur Publishers,Copenhagen.

Roome, N. and Wijen, F. (2006) “Stakeholder Power and Organizational Learning in Corporate Environmental Management”, *Organization Studies*, 27(2): 235-263.

Rorty, R. (1989) *Contingency, irony, and solidarity*. Cambridge University Press, Cambridge.

Starik, M. (1995) “Should Trees Have Managerial Standing? Toward Stakeholder Status for Non-Human Nature”, *Journal of Business Ethics*, 14(3): 207-217.

Starik, M. and Marcus, A.A. (2000) “Introduction to the Special Research forum on the Management of Organizations in the Natural Environment: A Field Emerging from Multiple Paths, with Many Challenges Ahead. *The Academy of Management Journal*, 43(4): pp. 539-546.

Strum, Shirley (1987). *Almost Human. A journey Into the World of Baboons*, Randon House, New York.

Thompson, C. (2002) “When Elephants Stand for Competing Philosophies of Nature: Ambroseli National Park, Kenya”, in Law, J. and Mol, A. (eds.) *Complexities*. Durham and London: Duke University Press.

Tryggestad, K., Georg, S. And Hernes, T. (2010) “Constructing buildings and design ambitions”, *Construction Management and Economics*, 28 (6), 695-705.

Tsoukas, H. (1999) “David and Goliath in the Risk Society: Making Sense of the Conflict between Shell and Greenpeace in the North Sea”, *Organization* 6(3): 499-528.

Weick, Karl E. (1979) *The social psychology of organizing*. Reading, MA: Addison-Wesley.
Webster’s (1995)
Webster’s (1995) *Webster’s New Encyclopedic Dictionary,* revised edn, 1st printing, Black Dog & Leventhal, New York.

Woolgar, S., Coopmans, C. and Neyland, D. **(**2009)” Does STS Mean Business?”, *Organization* 16: 5-30.