

DOCUMENTS DE TRAVAIL i3 - i3 WORKING PAPERS



How firms (partially) organize their environment: Meta-organizations in the oil and gas industry

Héloïse BERKOWITZ

i3-CRG, Ecole polytechnique, CNRS, Université Paris-Saclay heloise.berkowitz[at]hec.edu

Hervé DUMEZ

i3-CRG, Ecole polytechnique, CNRS, Université Paris-Saclay herve.dumez[at]normalessup.org

Working Paper 15-CRG-02 October, 2015

Pour citer ce papier / How to cite this paper :

Berkowitz Héloïse & Dumez Hervé (2015) How firm (partially) organize their environment : Meta-organizations in the oil and gas industry, i3 Working Papers Series, 15-CRG-02.











L'institut interdisciplinaire de l'innovation a été créé en 2012. Il rassemble :

- les équipes de recherche de MINES ParisTech en économie (CERNA), gestion (CGS) et sociologie (CSI),
- celles du Département Sciences Economiques et Sociales (DSES) de Télécoms ParisTech,
- ainsi que le Centre de recherche en gestion (CRG) de l'École polytechnique,

soit plus de 200 personnes dont une soixantaine d'enseignants chercheurs permanents.

L'institut développe une recherche de haut niveau conciliant excellence académique et pertinence pour les utilisateurs de recherche.

Par ses activités de recherche et de formation, i3 participe à relever les grands défis de l'heure : la diffusion des technologies de l'information, la santé, l'innovation, l'énergie et le développement durable. Ces activités s'organisent autour de quatre axes :

- Transformations de l'entreprise innovante
- Théories et modèles de la conception
- Régulations de l'innovation
- Usages, participation et démocratisation de l'innovation

Pour plus d'information: http://www.i-3.fr/

Ce document de travail est destiné à stimuler la discussion au sein de la communauté scientifique et avec les utilisateurs de la recherche ; son contenu est susceptible d'avoir été soumis pour publication dans une revue académique. Il a été examiné par au moins un referee interne avant d'être publié. Les considérations exprimées dans ce document sont celles de leurs auteurs et ne sont pas forcément partagées par leurs institutions de rattachement ou les organismes qui ont financé la recherche.



The Interdisciplinary Institute of Innovation was

founded in 2012. It brings together:

- the MINES ParisTech economics, management and sociology research teams (from the CERNA, CGS and CSI),
- those of the Department of Economics and Social Science (DSES) at Télécom ParisTech,
- and the Centre de recherche en gestion (CRG) at Ecole polytechnique,

that is to say more than 200 people, of whom about 60 permanent academic researchers.

i3 develops a high level research, conciliating academic excellence as well as relevance for end of the pipe research users.

i3 's teaching and research activities contribute to take up key challenges of our time: the diffusion of communication technologies, health, innovation, energy and sustainable development. These activities tackle four main topics:

- Transformations of the innovative firm
- Theories and models of design
- Regulations of innovation
- Uses, participation and democratization of innovation

For more information: http://www.i-3.fr/

This working paper is intended to stimulate discussion within the research community and among users of research, and its content may have been submitted for publication in academic journals. It has been reviewed by at least one internal referee before publication. The views expressed in this paper represent those of the author(s) and do not necessarily represent those of the host institutions or funders.

How firms (partially) organize their environment: Meta-organizations in the oil and gas industry

Héloïse BERKOWITZ Doctorante, CRG

Hervé DUMEZ Directeur d'i3 (UMR 9217), Directeur du CRG

Abstract

In this paper, we investigate how firms collectively organize their environment. Past literature mostly focused on networks and institutions and has overlooked the role of meta-organizations in this process. Based on the case study of the oil and gas industry, we develop an abductive grounded theory model of meta-organizations as collective partial organizations. Our study shows that firms — complete organizations — organize their environment through the setting up of many meta-organizations — partial and thin organizations, which leads to a growing organizational complexity. This complexity results from the organizational creativity of firms when they are confronted to three decision situations. Finally, we highlight the importance of membership in MOs, analyze the various implications of its completeness or incompleteness for legitimacy, and discuss the emergent concept of outreach strategies which we argue to be central for thin organizations.

Keywords: Partial organization, meta-organization, collective strategy, oil and gas, abductive, outreach

Résumé

Cet article étudie la façon dont les firmes organisent collectivement leur environnement. La littérature a tendance à étudier cette question sous l'angle des réseaux et des institutions et s'est relativement peu intéressée au rôle des méta-organisations dans ce processus. A partir d'une étude de cas du secteur pétrolier et gazier, nous développement un modèle de méta-organisations comme organisations partielles support de l'action collective entre organisations. Notre article montre que les firmes—des organisations complètes—organisent collectivement leur environnement en mettant en place de nombreuses méta-organisations—des organisations partielles et légères—ce qui produit de la complexité organisationnelle. Cette complexité résulte de la créativité organisationnelle dont les firmes font preuve en étant confrontées à trois situations de décision. Enfin, nous éclairons l'importance des stratégies d'appartenance dans les méta-organisations, leurs implications en terme de légitimité, et l'émergence du concept de stratégie de sensibilisation.

Mots clés: Organization partielle, méta-organisation, stratégie collective, industrie pétrolière

Introduction

In the existing literature, the environment around firms usually is understood as an intertwining of institutions, networks, markets and other informal relationships (Ménard, 1995; Podolny and Page, 1998; Scott, 2001; Borgatti and Foster, 2003; Powell, 2003), a trend that tended to blur the line between organizations, networks and institutions. In their lead paper on partial organizations, Ahrne & Brunsson note that "the contemporary global order is, to a considerable degree, an organized order" (Ahrne and Brunsson, 2010, p. 18). In this organized order, the authors insist on the role of partial organization which has emerged as a key concept in organization studies (Ahrne and Brunsson, 2010), and has been linked to a large range of topics such as partial organizing for corporate social responsibility (Rasche et al., 2013), standardization as a form of partial organization (Brunsson et al., 2012), or the partial organization of social movements in meeting arenas (Haug, 2013). Those works argue that the social order is also composed of "partial" organizations, based on a decision, but that do not meet all five criteria that define a complete organization: membership, hierarchy, rules, monitoring, and sanction (Ahrne and Brunsson, 2010).

Focusing on the environment of firms, meta-organizations – organizations which members are themselves organizations (Ahrne and Brunsson, 2008; Gulati et al., 2012) - constitute an exemplified case of partial organization: based on a decision, they belong to formal complete organizations' environment, but they do not meet all five criteria of complete organization. Within this domain, few but key studies have focused on meta-organizations as a conceptual approach to collective organizations (Ahrne and Brunsson, 2005; Gulati et al., 2012; König et al., 2012) and these works have made contributions to the understanding of metaorganizations' constitution and internal mechanisms. Ahrne and Brunsson (2005) outline the foundations of a theory for meta-organizations, based on an analysis of general examples such as the United Nations, the European Union or the Fédération Internationale de Football Association (FIFA). Gulati, Puranam and Tushman (2012) study variations in metaorganizational designs depending on types of membership and internal decision making, which leads to an enlarged definition of meta-organizations that includes network. König, Schulte and Enders (2012), finally, focus on industrial associations as meta-organizations and show that meta-organizations, similarly to other organizations, respond with inertia when they face discontinuous change.

A critical issue has been absent from this discussion on meta-organizations though, the question of the decision making process itself: how meta-organizations in business environments are collectively set up by firms, in which context, and for what purpose. In line with Ahrne and Brunsson's recommendation that "research is needed to investigate the situations and patterns or interactions between organizers and the organized that give rise to more or less organization" (2010, p. 13), our research question explores complete organizations' strategic decisions to organize their own environment through partial organizations. The aim of this paper is to unbundle the dynamics behind meta-organizational establishment in a business environment and help clarify the collective strategies that take place. To that purpose, we investigate meta-organizations in a specific sector – the oil and gas – through a case study methodology. Our findings show that those firms organize their own environment through the creation of different kinds of meta-organizations, which are thin organizations, following three sequences. Since multiple and sometimes redundant MOs all subsist and co-exist, our paper argues that firms' environment is affected by a growing organizational complexity due to the proliferation of meta-organizations. This complexity

results from three decision situations firms are confronted to, potentially leading to different meta-organizational forms, and attesting firms' organizational creativity. Finally, our study highlights the particular significance of membership for MOs, its implications for legitimacy issues and the emergent concept of outreach strategy.

Before describing the methods and results of this study, the conceptual anchors of partial organization and meta-organization are reviewed, to highlight how theoretical foundations informed the collection and analysis of the data. We then present our conceptualization of meta-organizations' setting up dynamics. Finally, we discuss the implications of our findings and conclude on the limitations and future research.

THEORETICAL FOUNDATIONS ON COLLECTIVE PARTIAL ORGANIZING

We approached this research by bridging the gap between the notion of partial organization as it is studied in the literature and the one of meta-organization (MO) to shed light on the key features that define meta-organizations as collectively set up partial organizations.

Unpacking partial organizations' criteria

Ahrne and Brunsson showed that firms' environment is highly organized, and not made of the sole networks and institutions as it is usually assumed (Ahrne and Brunsson, 2010). Organizations are first understood as a decided social order (Ahrne and Brunsson, 2005, 2010; Rasche et al., 2013). That is to say, this order is based on organizations initiated by a decision. In addition, Ahrne and Brunsson define five criteria that allow to circumscribe a complete formal organization (2010): membership, hierarchy, rules, monitoring and sanction. All complete organizations inevitably meet those five criteria. Indeed, organizations first specify the limits of their membership that is to say they chose who is accepted in the company. Firms, for instance, select their employees through individuals' recruitment process. In those organizations, hierarchy forms are then instituted between members – some of them gaining decision-making power (Child, 2005) and the authority to oblige others, while some being expected to obey (Weber, 1921), making therefore hierarchy tantamount to organization (Williamson, 1975). Hierarchy, or power to command leads eventually to the crafting of rules that members are required to abide by (March et al., 2000; Weber, 1921). And the existence of rules implies monitoring of the compliance of the members (Weber, 1921) and both positive and negative sanctions (Ahrne and Brunsson, 2010). Only meeting all five criteria designs a "complete" organization.

Based on this five-criterion framework, the order that exists around companies can be understood as constituted of partial organizations, that is to say organizations that lack one or more of Ahrne and Brunsson's criteria. Organizations that use only memberships, Ahrne and Brunsson argue (2010), can take the form of customers' clubs, which lack hierarchy and sanctions – the British Airways Executive Club for instance. Conversely, some organizations are devoted to monitoring as it is the case with rating agencies such as Standard and Poor's. Partial organizations thus, can originate from any criterion or from any combination of criteria and can encompass a very broad empirical spectrum: they can refer to such disparate realities as etiquette, a captain on a boat, a customers' club, or even a gang of smugglers (Ahrne and Brunsson, 2010). Besides, this composite definition raises two questions that have been missing from the discussion on partial organizing: the relative importance between criteria

and the legitimacy of such heteroclite organizations. If partial organizations can be everywhere, they do not necessarily result from failures to achieve a complete organization. On the contrary, actors can strategically seek partiality.

Meta-organizations as collective partial organizations

Strategically setting up partial organizations for the very purpose of partiality is exemplified in meta-organizations, which is the reason why we have chosen to study them, as a special case of partial organizing. In meta-organizations (MOs), members are themselves organizations (Ahrne and Brunsson, 2005, 2008; Gulati et al., 2012). MOs have been thoroughly studied in their multiple expressions, and above all as trade associations (March and Simon, 1958; March, 2007), although they have only recently been coined as meta-organizations. For Gulati, Puranam and Tushman (2012), the main difference is that meta-organizations can also be networks – franchising networks, open communities (Wikipedia) for instance. And indeed, trade associations have often been considered as networks, as interorganizational relationships or as part of the institutional environment (Hirsch, 1975; Thorelli, 1986; Oliver, 1990). However, the partial and complete framework has never been used to analyze meta-organizations, and allows narrowing down MOs' definition to formal organizations.

In that perspective, MOs constitute formal partial organizations in the environment of firms. Indeed, MOs are a decided social order, since a decision is required for their setting up (Ahrne and Brunsson, 2005). Moreover, they are combining some of Ahrne and Brunsson's criteria: trade associations for instance are based mostly on membership. The traditional logic of hierarchy, monitoring and sanctions are irrelevant in this type of organization (Ahrne and Brunsson, 2008; Gulati et al., 2012; Lakhani et al., 2013). The "culture of consensus" (König et al., 2012) that characterizes MOs functioning precisely results from the lack of hierarchy, and the low to non-existing monitoring and sanctions. Conversely, MOs design and implement rules in the form of standards (Brunsson and Jacobsson, 2000; Brunsson et al., 2012). Membership appears as the second key criterion for a MO to be created and to survive, since members have to be recruited, and they have to remain in it (Ahrne and Brunsson, 2005). This argument is in line with previous literature on organizational fields that highlights the importance of membership in groups or organizations. Membership allows people and groups' identification (Tajfel and Turner, 1986), and at the organizational level, DiMaggio and Powell emphasized how organizations who belong to the same group or category tend to become increasingly similar.

Speaking for classes of organizations sharing the same identity, MOs allow collective strategies to be achieved (Astley and Fombrun, 1983; Astley, 1984; Barnett et al., 2000). Indeed, consistent with what Asltey and Fombrun discussed as "interorganizational collectivities" (1983), partial organizing in the form of MOs serves the purpose of collective action. Membership classes can be restricted to companies, as in trade associations, or extended to also include governmental and civil society actors as in multi-stakeholder groups (Aaronson, 2011; Bendell et al., 2010; Freeman, 2003). Most of MOs' legitimacy comes from their specific membership and their role of collective action. MOs benefit from pragmatic legitimacy (Suchman, 1995), through the negotiations they participate in, and the exchange of legitimacy that follows. But they also enjoy taken-for-granted legitimacy as their goals and existence are understandable and no other type of organization can represent other classes of organizations than meta-organizations (Suchman, 1995).

By introducing the notion of partial organization, and applying its criteria to metaorganizations, we argue that membership is key in how complete organizations use partial organizations to organize their own environment and transfer legitimacy, as we show in the following case study.

METHODOLOGY

A case study of the oil and gas sector

Given the early stage of empirical research on partial organizations, we followed a logic of grounded theory by building our analysis on MOs on a case study (Glaser and Strauss, 1967; Miles and Huberman, 1994; Fendt and Sachs, 2008). This method has already been successfully adopted in the field of formal organization (Tung, 1979; Alter, 1990; Gioia et al., 2010; Clark et al., 2010) and is coherent with the issues of theory development in the field of partial organizing. We developed an abductive approach based on a constant movement back and forth between theory and empirical material (Peirce, 1903; Dubois and Gadde, 2002; Van Maanen et al., 2007; Alvesson and Kärreman, 2007), which is coherent with grounded theory's methodology (Suddaby, 2006). To that purpose, we conceived a general orienting theory as a starting point (Whyte, 1984) stating that firms organize themselves their environment and we sought to find out how. Focusing on one sector, we let the MOs structure – and their intertwining relationships with complete organizations – emerge from the material. Our methodology conforms with Yin's guidelines on case studies (2003), especially since our objective is to study the dynamics of a case that is precisely "a contemporary phenomenon in its real-life context", and where "the boundaries between phenomenon and context are not clearly evident" (Yin, 1981, p. 59). Although we admit that focusing on one case might prevent us from applying our findings on a wider basis, we believe that the contributions of our study rest more on the attempt to analyze concretely a concept – such as partial organizations – and its application to meta-organizations that have been the subject of recent theoretical speculation (Ahrne and Brunsson, 2008, 2005; Gulati et al., 2012) but scant empirical research, and to provide insights on the dynamics of collective partial organizing. In that perspective, finding transferable concepts and principles (Lincoln and Guba, 1985; Gioia et al., 2013) is what allows our paper to make contributions to the research literature on meta-organizations and on partial organizations.

Our research setting – the oil and gas sector – is a highly organized industry. As a whole, the energy landscape is littered with complete organizations, governments, institutions and an emergent array of partnerships and networks (Dubash and Florini, 2011). This industry itself displays an even more organized order, with many interest groups, especially in the United States (Zeigler, 1983), but also a complex fragmented industry (Dess, 1987; Mascarenhas and Aaker, 1989). The value chain is subdivided into three major businesses: the upstream business that comprises exploration and development, that is to say the production of oil and gas; the midstream business, constituted of storage, trade and transportation of the resources; and the downstream business that includes refining, distribution, retail and wholesale (Adelman, 1972). In this three-pronged industry, highly integrated companies compete against specialized players (Rosendahl and Hepsø, 2012) and develop multiple operating strategies. Taking a look at organizational history, the twentieth century oil and gas industry history appears to have dealt with various phases of expansions, disruptions and newfound

equilibrium (Adelman, 1972; Jacoby, 1974; Parra, 2004; Penrose, 1968; Yergin, 1991). Through this case study, our paper shows how firms in this sector organize their environment thanks to meta-organizations.

Data collection

To analyze the environment of firms, our first step was to build an exhaustive database of national and international meta-organizations in the worldwide oil and gas industry. To that purpose, we first went through ten years of corporate annual reports of five oil and gas majors (BP, Shell, Chevron, Total and ExxonMobil) to initiate the list of MOs which members included firms. We then completed this list by systemically checking every country potential oil and gas association as well as MOs' and firms' websites to find cross-references. In total we referenced close to a hundred MOs, and we built a directory displaying date of creation, MO's name, country of origin, membership structure, and purpose. In a second phase, we conducted in-depth individual, semi-structured interviews with the core staff of metaorganizations as well as one major oil and gas company. Those interviewed included heads of research centers within MOs, senior management positions, or the General Secretariat. We also carried out interviews in one oil and gas major, with the managers detached to the MOs. That way, we employed purposeful sampling (Kumar et al., 1993) of all key informants who had insight into the setting up of meta-organizations or special access to knowledge of their internal structure, organizational history, collective strategies, and outreach. Purposeful sampling was an integral part of the constant comparison technique we employed, repeatedly comparing data across informants and over time (Glaser and Strauss, 1967), and was a critical part of the data gathering stage of this study. To capture the information, a total of eighteen interviews in an oil and gas major and in MOs were conducted—a number at which sufficient "category saturation" was reached (Strauss and Corbin, 1998). We also relied on an extensive archival search that included MOs websites, reports, internal presentations and codes of conducts, industry publications, minutes and other written material. Overall, our interpretive approach went through an iterative movement that consisted in simultaneously compiling data, analyzing it, and interviewing new informants based on information by prior informants (Gioia et al., 2010). This process resulted in a growing sample until no additional emerging themes occurred, or what Glaser and Strauss (1967) coined "theoretical saturation".

The interviews began by asking about the respondents' background and the role they played in the organization. We then moved to the creation of the meta-organization: when it was launched, in which context, and to answer what need. We subsequently questioned them about the internal structure of the MO and how it might have changed throughout the years, with the purpose of gaining understanding of the relative importance of the partial organization's five criteria in the specific MO. We first focused on the membership in order to identify the different companies represented and the sector level of the meta-organization. The objective was to understand whether the organization aimed at encompassing the whole class of members or only selected members as in a club (Ahrne and Brunsson, 2010), and whether it displayed a hierarchy or none. We also asked about the definition of principles or the existence of rules, how they were implemented throughout the members and if there were forms of monitoring and sanctions – positive or negative (Ahrne and Brunsson, 2010; Rasche et al., 2013). We tried to leave the questions as open as possible, while making sure that it was focused on the research question and strictly avoiding "leading-the-witness questions" (Gioia et al., 2013, p. 19). As we did not want to impose our own theoretical frame of reference on our informants' interpretations, we also carefully avoided referring explicitly to concepts such as 'partial organization' or 'meta-organization'. We stopped interviewing when the "saturation" point was reached, that is, when additional questions would not have added much to our understanding of the meta-organization's strategy and structure.

Data analysis

Data analysis followed the general guidelines for grounded theory (Glaser and Strauss, 1967; Miles and Huberman, 1994; Strauss and Corbin, 1998; Gioia et al., 2013). This approach does not mean that no prior theory was used. In accordance with Strauss and Corbin (1998), who allow for prior theory, personal experience and knowledge to help gain insight into the material, grounded theory was used to elaborate on the existing conceptual vocabulary (Gioia and Chittipeddi, 1991; Gioia et al., 2013), based on an abductive movement allowing to progressively refine our understandings of the material and the theory (Dubois and Gadde, 2002; Van Maanen et al., 2007). In this perspective, we sought "to achieve a practical middle ground between a theory-laden view of the world and an unfettered empiricism" (Suddaby, 2006, p. 635). The analysis of the informants' based material was initially conducted independently by the two authors and combined with the results of the archival collection to ensure trustworthiness.

Using the "Gioia Method", we began our analysis by identifying significant concepts in the data and grouping them into categories or codes (Gioia and Chittipeddi, 1991; Gioia et al., 2013). For this analytical step, we used first level codes, that is to say units of meanings adequate to the content of information (Strauss and Corbin, 1998; Van Maanen, 1979; Gioia et al., 2013). Next, we went through an axial coding phase (Strauss and Corbin, 1998; Gioia et al., 2010), which involved looking for connections among these first-level codes and arranging them into higher-level themes (second-level themes). Throughout the process, we coded the data using Excel, to keep track of emerging categories and to facilitate classification thanks to pivot tables. It allowed quick reference between similar concepts and their underlying first-level codes or texts, and easy association between themes and underlying MOs interviews, by using the filter function. Coding continued to be carried out until a clear sense of the relationships among first-level codes and their related second-level themes emerged from the Excel spreadsheet and until additional interviews and archives failed to bring new dimensions and meanings, thus reaching the "theoretical saturation" (Glaser and Strauss, 1967). To ensure qualitative rigor, we retained findings of second-level themes only if we corroborated them across multiple informants and archives (Gioia et al., 2013).

Findings

Table 1 displays the data structure of our findings. It depicts the researcher-induced second-level themes that emerged from the underlying first-level codes extracted from the informants' material.

Table 1 : Database structure

1 st level codes		2 nd level themes
a.	Organizational history	Organizing the environment
b.	Organizational creativity	
<u> </u>	Organizational disorder	
a.	Low monitoring and sanction	Thin organization
b.	Limited core staff	
a.	Advocacy and regulatory engagement	Organization's set up rationale
b.	Issue oriented organization	
c.	Multi-stakeholders' management	
	organization	
<u>d</u> .	Exit costs	
a.	Consensus-based decision making	Rule-making process
	process	
<u>b.</u>	Predominance of the soft law	
c.	All-inclusive organization	Membership strategy
a.	Selective club	
<u>b.</u>	Outreach strategies	

Table 2 highlights some representative quotes that corroborated the second-level themes we drew out of them. We extracted five themes from the multisource material (interviews, archives, and websites): Organizing the environment, Thin organization, Organization's set up decision, Rule-making process, Membership strategy. We discuss their intertwining in the next part. The two first themes underline the growing organizational complexity in the environment, initiated by an organizational creativity by firms, which the third theme buttresses. Finally, the last two themes raise the question of organizational legitimacy

Table 2: Supporting data: subsequent first level codes and second-level themes

Theme 1: Organizing the environment

1st level code : Organizational history

"The initiative was launched at the Earth Summit in Johannesburg in 2002, and then approved in Evian. But it took three years to maturate". MO1

"In terms of the reasons of its creation, there was a conversation during the late 90s, associated with human rights in link with security: security in extractive sites is carried out by private security forces, public forces, or combination of both". MO2

"The organization was created some time ago: it started with informal relationships. Then for visibility issues, it was created in 2000 with the status and everything". MO8

1st level code: Organizational innovation

"The organizational structure is very original and completely invented. It's been replicated a lot these days because it's based on a very convivial model". MO1

"The multi-stakeholder group form is getting popular but it's challenging". MO2

1st level code : Organizational disorder

"Oh really we're in that organization as well?" Oil and gas company

"It's such a mess out there, a real chaos. I've asked my partners to take a look at all those organizations" Oil and gas company

Coincidence of all forms of MO even after the emergence of a new kind

Theme 3: Thin organization

1st level code: Low monitoring and sanction

"The only sanction is exclusion. But we try to avoid it as much as possible, even though it exists". MO1

"There has been no exclusion to date". MO2

"Regulators are the one who sanction and monitor, not us". MO6

1st level code: Limited core staff

"I am an attorney, I work in Washington but we also have an office in Paris. Since 2010 we have served as the external secretary for the organization. We basically offer policy support, facilitate the workshops, in many aspects, organize meetings, review reports, facilitate communication between members, assist in discussion with governments, and so on". MO2 "The core staff of the association is only me. I work with a consultant who owes us seven hours per week (on the website, administrative stuff and so on)." MO8

Theme 3: Organization's set up decision

1st level code: Advocacy and regulatory engagement

"It started as a standard setting agency, and became also an advocacy and regulatory engagement agency. We help to provide a voice for the industry". MO6

"There is the same division of labour in API also : standards and engagement with regulators". MO12

1st level code: Issue oriented organization

"One group work is the member peer learning that is held twice a year" MO7

"We federate companies on strictly American stakes and issues. We're active on every topic" MO12

IPIECA helps the oil and gas industry improve its environmental and social performance. IPIECA website

API's subgroups: clean air, climate change, clean water, health and safety, energy efficiency and recycling, process safety. API Website

1st level code: Multi stakeholders' management organization

The EITI implementation process is overseen by a multi-stakeholder group (MSG) that consists of representatives from government, companies, and civil society. EITI website The Global Compact involves all relevant social actors: companies, whose actions it seeks to influence; governments, labor, civil society organizations, and the United Nations as an authoritative convener and facilitator. Global Compact website

1st level code : Exit costs

"Global Compact, they're completely lost. But it's still glamorous to be with them, at least for the logo, so we can't leave" Oil & Gas major

"If we stopped, we would have a lot of questions from our stakeholders. So it's complicated for companies to reduce our involvement" Oil & Gas major

Theme 4: Rule making process

1st level code : Consensus-based decision making process

"Everything happens through consensus. No part can impose its point of view". MO1

"That's one of the tensions we have. It takes a long time to get to a common consensus, more than if it was a single company. Quite often, there is a frustration on time". MO5

"Usually the companies have got common objectives and interests and most of the time they reach consensus". MO6

1st level code: Predominance of the soft law

"The initiative in itself was launched in 2000 around a set of principles". MO2

The Women's Empowerment Principles are a set of Principles for business offering guidance on how to empower women in the workplace, marketplace and community. WEP Website

The American Petroleum Institute has an important role of setting standards for the industry. API Website

Theme 5: Membership strategy

1st level code : All-inclusive organization

"Our system was deemed permanent and aimed to cover the whole range of countries. Only, we're far from it because we miss the very big ones". MO1

"We have 100% of the European operating capacity: 43 members". MO5

"We would like to have everyone. There are lots of companies who do not want to join" MO6

1st level code : Selective club

"This is not a wide open door, selection process is taken very seriously, we do want to welcome new participants but it comes down to case by case selection". MO2

"Originally it had only 5 members, and it has grown but it is wanted to be small. The main purpose is to have a small group of companies (20-23) that are genuinely dedicated to progress on Human Rights". MO7

"It's limited to 10 players, with only one per sector". MO10

1st level code : Outreach strategies

"There is an "outreach" committee, to attract countries. We try Morocco for instance". MO1

"We're reaching out to governments by a lot of engagement and promotion, so it's some kind of lobbying although not the traditional formal form". MO2

"And then, there is the business outreach which I lead. We're convening the business community on raising awareness among business people". MO7

ORGANIZING THE ENVIRONMENT: META-ORGANIZATIONS SETTING UP DYNAMICS

Our findings indicate that complete organizations – firms – organize their environment using partial organizations – meta-organizations, leading to organizational complexity. Firms demonstrate organizational creativity through three successive decisions' situations. Finally, membership appears as the key variable in this type of partial organizations, as it raises legitimacy questions.

Increasing organizational complexity: an accumulation of thin organizations

What emerged from the chronological analysis of meta-organizations, corroborated by the informants, is the level of organization in firms' environment: their environment is highly organized, which leads to increasing organizational complexity. As early as 1917, the first national organization in that sector, the US Oil & Gas Association, was founded in Tulsa, Oklahoma. Other national trade associations also emerged in those years - the American Petroleum Institute in the US in 1919, Assomineraria for oil and mining interests in Italy in 1917. If we take the 1973-1974 oil crisis to split the period in half, thirty seven national or international trade associations were created from the beginning of the twentieth century to 1972, and fifty six afterwards. Most Northern American trade associations were established during the first phase, while most Europeans emerged in the second one: the Netherlands Oil and Gas Exploration and Production Association (NOGEPA) and the association of British Independent Oil Exploration Companies (BRINDEX) were launched in 1974, and the Portuguese one, Associação Portuguesa de Empresas Petroliferas, in 1992. All aimed at defending the industry's interests. The growing number of traditional MOs - trade associations – can be correlated with the number of UN nations. In each country where they have operations, oil and gas companies organize themselves thanks to trade associations. This applies even to the smallest countries such as Luxembourg, which trade association, the Groupement Pétrolier Luxembourgeois, was created in 1979. Some exceptions persist though, when the state maintains a governmental control or when companies are national. In Egypt for instance, there is no trade association organized by the private sector, but a State Holding, which constitutes an alternative form. In that case, or in the case of a monopoly, there is no need for a trade association.

If we assume on average, one MO per country with oil and gas interests, in the form of a trade association, the maximum number of meta-organizations should be reached when each country has its trade association. So we could have expected the MOs' creation to flatten at some point. Unexpectedly, a new form of MO appeared in 1963 with the establishment of CONCAWE, "by a small group of leading oil companies to carry out research on environmental issues relevant to the oil industry" (Concawe website). Its acronym standing for CONservation of Clean Air and Water in Europe, the MO's purpose is to provide environmental friendly solution to technical issues. CONCAWE was thus the first meta-organization in the oil and gas industry with the given objective to research and solve industrial problems, conversely to trade associations, which primary role was originally to represent the industry and defend its interest (Bradley, 1965). This type of MO – issue oriented and business only – widely spread afterwards. IPIECA was established in 1974, in order to help the oil and gas industry improve its environmental and social performance. While traditional MOs were still set up in that period, environmental and social issues were also driving the creation of MOs: Spill Control associations proliferated (1973, 1984, 1992),

the World Business Council for Sustainable Development (WBCSD) was established in 1992 as well as the Business Social Responsibility.

Once again, we expected the creations of MOs to slow down when all topics – especially environmental and social ones – had their dedicated organization. However, a third organizational form sprouted in 2000: the multi-stakeholder group, which brings together companies, governments and civil society actors. The Voluntary Principles for Security and Human Rights (VPSHR) is the first multi-stakeholder, tri-partite (governments, civil society, and businesses) MO set up in the extractive industry. The VPSHR deal with maintaining safety and security of operations within an operating framework that ensures respect of human rights (Freeman, 2003, 2002). A number of MOs have been established since 2000, following the multi-stakeholder structure, and including oil and gas companies: the UN Global Compact (2000), the Extractive Industries Transparency Initiative EITI (2002), and the Women Empowerment Leadership Group (2010). Meanwhile, issue-oriented business-only MOs were still launched, such as the World Ocean Council (2008), or the Global Business Initiative for Human Rights (2009), and new trade associations were also established, as Eurofuel in 2000.

History of meta-organizations in the oil and gas industry follows three sequences, as illustrated in figure 1: 1917-1962 with the emergence of traditional oil and gas meta-organizations (twenty one MOs created), 1963-1992 with the rise of issue-oriented business only simultaneously to creations of trade associations (fifty five MOs created), and 1993-2014 with the emergence of the third form (sixteen MOs established). What emanates from these sequences' analysis is a sense of organizational innovation mixed with confusion. A growing complexity builds on the persistency of each form even after the emergence of a new one, and for this reason, organizations bring disorganization (Durand, 2013), or at least organizational disorder, one of our first-level code in the complexity of the environment theme. One sustainability chief officer in a major was not aware of all of the existing MOs, even those the firm was a member of: "it's such a mess out there, a real chaos".

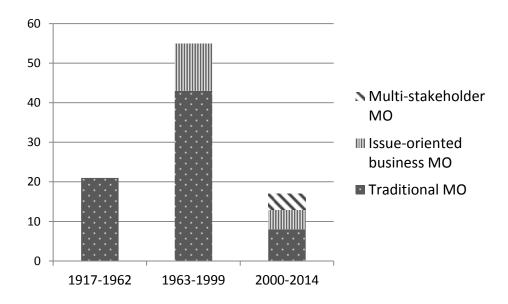


Figure 1: Sequences of MOs' creation - worldwide

If MOs do not disappear, it's because they are thin organizations, with a low creation and membership (entry) costs structure: there are few monitoring mechanisms, sanctions and very limited core staff. A General Secretariat explains "I am not interested in what they do nationally with their members. I do not want to monitor how they communicate about our association, it's their job." True enough, some MOs require their members to communicate about their progress and report their efforts towards following the principles – as the Global Compact or the VPSHR's mandates claim, and the EITI even has a compulsory annual thirdparty audit procedure for its members. However, a large majority of MOs do not aim at monitoring their members at all. Not only do MOs not have the means to implement monitoring and sanctions, but they even turn down that responsibility, saying that "Regulators are the ones who sanction and monitor, not us". Some MOs, as EITI or the VPSHR for instance, have strict proclaimed governance rules in their internal documents. Both MOs threaten their members of exclusion if they do not comply with the audit process on the EITI's part, and with due diligences on the VPSHR's part. However, as informants from the MOs explain, the exclusion is very unlikely. Suspension is more likely to be used, and when it actually happens the objective is to bring back the suspended member as quickly as possible. This thin organization also requires very limited core staff, as logically justified by the metaorganization definition, as well as resources' pooling rationale. In one MO, the General Secretary is the only permanent staff, assisted by a consultant, while the VPSHR's administration for instance, is even outsourced to a law firm. The cost structure is characterized a low creation cost, and low entry costs: creation is just based on a decision, and membership fees are a meager percentage of production or sales. Meta-organizations, as thin (low cost structure) and partial (no hierarchy) organizations, are more flexible organizations than complete ones.

Organizational creativity leading to a three-pronged strategic decision model

Because of low entry costs, meta-organizations can persist and accumulate. But how can we explain the creation of three different types of MOs, and the decisions that lead to them? As discussed earlier, meta-organizations constitute a strategically decided social order. Creation date constitute evidence of a decision to come together and set up a meta-organization. "The organization was created some time ago: it started with informal relationships. Then for visibility issues, it was established in 2000 with the status and everything" an informant reports. This "organizational history" coded quote illustrates how informal contacts, in other word networks, can become organized upon a decision to formally come together (Ahrne and Brunsson, 2010). From the material, we extracted three different situations in which a decision leads to one of the MOs presented earlier. Those decisions' situations are depicted in figure 2 and demonstrate firms' organizational creativity.

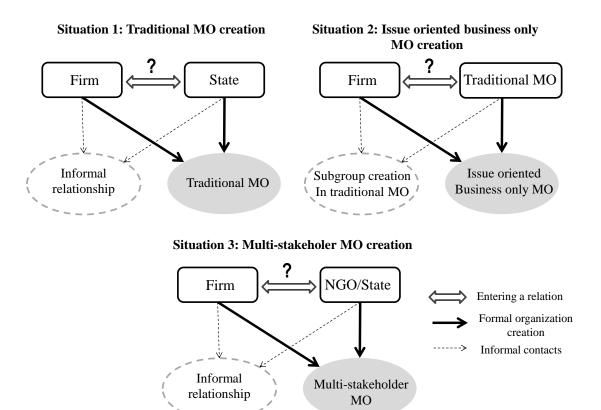


Figure 2: Three situation decisions

In the first decision situation, when a firm interacts with the State or an even larger institution like the European Union – to meet regulation or to help design standards for instance – it is confronted to an alternative. It can either remain in an individual informal relationship, or formally organize its environment at the industry level and create a MO in the form of a trade association. An informant explains: "there have been more requests from regulation bodies to provide justifications and to offer a body to go to, and not talk to all companies individually". This common voice, based on a common understanding of the industry's stakes, bears the responsibility of advocacy and regulatory engagement. Trade associations as the American Petroleum Institute (API, created in 1919), or their European counterpart EUROPIA (1989), and, at the global level, the international Oil and Gas Petroleum association (OGP, 1974), carry out this traditional mission of designing compliant standards and lobbying towards institutions, but also to follow the evolution of regulation. "One of the key tasks is looking at how we meet the European legislation" explains a European MO.

In the second decision situation, as illustrates figure 2, firms face another alternative when specific problems arise that require collective answers or at least a collective research effort. When confronted with environmental issues, companies can either decide to set up a subgroup in an existing MO – API's subgroup on clean air for instance – or to set up an issue-oriented business only MO, dedicated to providing solutions on that question. Thus have appeared organizations such as CONCAWE or IPIECA. Issue-oriented MOs can spawn on topics such as business sustainability with the WBCSD, corporate social responsibility with BSR (1992) or oceans' sustainability with the World Ocean Council (2008). Those issue-oriented MOs have for main purpose to share regulation-compliant best practices among members and to help build their capacity on these issues.

Finally, firms have to deal with a third decision situation, when it comes to managing relationships with multiple stakeholders, such as civil society and governments. Businesses can either maintain non-organizational, informal contacts – or they can decide to set up a MO, which then takes the form of a multi-stakeholder organization, as depicted in figure 2. This type of organization allows collectively discussing and managing issues. Multi-stakeholder MOs can be strictly tri-partite, as in the case of VPSHR or EITI, or involve all types of actors as in the case of the Global Compact for instance: "The Global Compact involves all relevant social actors: companies, whose actions it seeks to influence; governments, labor, civil society organizations" (The Global Compact website). This organizing process of the oil and gas environment appears creative, as one informant says "the organizational structure is very original and completely invented".

Interestingly enough, firms like Total or BP, which are vertically integrated supermajors belong to many of those MOs. As discussed earlier, MOs in that sector could appear redundant: IPIECA and group works in API both work on environmental issues, the GBI, IPIECA and VPSHR all three deal with human rights. We could expect, once an MO has been created, that redundant MOs disappear. First, the benefits for joining MOs are moderate to high, which justifies multiple memberships: advocacy, capacity building, value from positive reputation effect (Fombrun, 1996). But still, since firms can take the decision to join the MO, they could also make the choice to leave it. However, while entry costs are very low and encourage therefore new memberships, exit costs appear much higher. A manager in one of the supermajors justifies: "if we stopped, we would have a lot of questions from our stakeholders. So it's complicated for companies like us to reduce our involvement". Clarifying the rationale behind the organizational complexity of the environment, low entry costs but high exit ones explain why indeed MOs are piling up and not disappearing. In that perspective, membership appears as a key, strategic criterion.

Legitimization through strategic membership choice

While all those features contribute to qualify MOs as partial organizations, one dimension strikes as predominant. Membership selection, and thus legitimacy (Suchman, 1995), is strategic in MOs: traditional MOs, issue-oriented business only MOs, and multi-stakeholders MOs can all have different strategies where membership is concerned.

Traditional MOs – trade associations – generally aim at encompassing the whole class of members. Those MOs seek completeness and class' saturation because having the whole industry or the whole class of members builds legitimacy and provides bargaining power. The objective might not be as much to include every single member, but to at least represent large market shares: the MO "is big with its ninety members including private and national oil companies. Together they produce the vast portion of the oil production. We have a big weight from that", insists a permanent staff at an international oil and gas association. And in another, the General Secretary makes it clear that they are looking for strong support through outreach strategies towards other MOs: "that's why we try to work with them, because if we can have them on our position paper, it's good for us because they're bigger". The rationale behind this is traditional MOs are originally standards' setters (Brunsson and Jacobsson, 2000) and advocacy agencies. In order to set standards for a whole industry and therefore build pragmatic and moral legitimacy (Suchman, 1995), a strong representative membership is required, but also an intensive lobbying engagement towards institutions.

In issue-oriented business only MOs, organizational implications differ, and therefore membership strategies also diverge. In that respect, CONCAWE's membership is limited to downstream businesses and only companies that possess refineries in Europe: "You have to have a refinery. We're taking a look only at environmental issues in refinery, so a distributor like Carrefour is not in our organization" explains one of the MO's members. This exclusion process derives from the broad range of issues that spawn on the oil and gas supply chain and from the need for targeted solutions for very specific problems. However, this MO aims at covering its whole class of business - CONCAWE represents 100% of the European downstream business - while other MOs operates like a closed form membership or club. Selective membership can indeed prove advantageous for MOs that do not seek legitimacy from size but saturation of best practices through diversity. As their goals and existence are clearly understandable, issue-oriented business only enjoy a taken-for-granted legitimacy (Suchman, 1995). GBI, the Global Business Initiative for Human Rights (2009), is a closed membership cross-sectorial MO that gathers selected companies from various sectors assembling a wide range of issues and solutions across industries and geographies. Diversifying members optimizes best practices sharing based on each companies' specificities and specialty. That's why outreach in that kind of MOs consist two strategies. First it implies reaching out different organizations to achieve strategic diversification: either across sectors, or within one, to leverage on leading companies. Second, outreach also refers to the process by which MOs best practices and learning are then spread among businesses.

In multi-stakeholders MOs, worldwide MOs get legitimacy from coverage – as it is the case for the Global Compact which includes 7,000 businesses in 145 countries around the world – and the absence of alternative (Suchman, 1995), whereas selective MOs tend to raise barriers to entry. What those selective MOs often require from their members is commitment, as one MO's member states "We don't expect them to be at the same level of advancement. It does not have to be perfect all over the world. But we look for commitment and good faith". Respect of the rule making process – based on consensus and soft law – therefore grants moral legitimacy to those MOs (Suchman, 1995). This "culture of consensus" (König et al., 2012) is inescapable in a partial organization – without hierarchy – serving collective strategies' purposes. True enough, the lack of hierarchy and the collaborative nature of MOs tend to make them flexible organizations, however necessary trade-offs occur on the decision making process which is slow because of the consensus principle, but also on rules, that have little to no power in MOs. Soft law appears as the inevitable consequence of this kind of partial organization. What brings those organizations together is also often the definition of a set of principles: it is the case of the UN Global Compact, the Extractive Industry Transparency Initiative (EITI), the Voluntary Principles for Security and Human rights – which is even named after them – the Women Empowerment Principles. Members decide of the standards of their MOs, and members are also expected to comply with them. Once again, it all comes down to the membership criterion.

Ultimately, given the membership's significance, when some strategic members are absent—as it is the case of Saudi Arabia and EITI for instance – the MO risks losing credibility. Partial membership – all the more the reason in a partial organization – undermines MOs legitimacy as it both conveys inability to attract members and weakness of the organization. MOs' only strategic resort resides in the outreach. The outreach strategy recurrently came back in the interviews as a collective strategy to raise awareness about the MOs aims and actions, and to reach out new members, in order to build greater legitimacy and scope. All MOs use outreach at one or more levels: from spreading its standards among the business community, to

lobbying towards regulators, and above all winning new members. Organizational incompleteness of MOs (lack of hierarchy, little to no monitoring or sanctions), but mostly the voluntary basis by which companies decide to join the group, contribute to make the outreach strategy the only course of action for MOs to grow in terms of membership and in terms of influence. Acknowledging the particular significance of membership for meta-organizations, defined as a collective partial organizing process of the firms' own environment, has implications for research, which we now turn to, and we then outline some limitations and fruitful avenues for future research.

DISCUSSION

The purpose of this study was to improve our understanding of how firms partially organize their environment through meta-organizational collective building. Almost ten years after the emergence of the concept of meta-organizations (Ahrne and Brunsson, 2005), few empirical studies have been carried out to provide evidence supporting this concept, to analyze its breadth and scope, the impact of MOs on companies, their organizational forms, and their arrangements' processes. A primary contribution of our paper is proving the extent to which environment is actually organized by firms themselves. Our findings indicate that firms contribute to the organizing dynamics of their own environment through the setting up of partial organizations in the form of meta-organizations - organizations whose members are themselves organizations. Three main organizational forms of meta-organizations emerged from our material, following three different sequences. From the early twentieth century to 1962, firms first organized their environment through traditional MOs that is to say national trade associations, which overall number logically tends to approximate the one of UN countries. From 1963 to 1999, while traditional MOs are still set up, firms implement a new organizational form to deal with specific business responsibility driven issues: issue-oriented business only MOs. Finally, from 2000 on, a last organizational form is emerging, the multistakeholder MO, which can either be issue-oriented (EITI, VPSHR...) or global (the UN Global Compact).

Those forms we have discussed display common features including lack of hierarchy, and low monitoring and sanctions, making them partial organizations. We showed that those features were tantamount to membership as monitoring, when it was applicable, was limited to members, and positive and negative sanctions were also based on membership acceptance or rejection. Our data showed no clear disappearance of MOs. MOs were sometimes transformed – Oil and Gas UK was established in 2007 on the foundations of UK Offshore Operators Association – but we identified no clear MO's termination, proof that MOs are piling up in the environment. Our findings suggest that the increased interest in MOs derives from the structure that characterizes meta-organizations as thin organizations, which explains why they do not disappear and stack up. As a consequence, a growing complexity of the environment results from the persistency of these three organizational forms of MOs. This is our second contribution.

MOs' setting up proves that partiality of organizations can be strategically chosen, and not simply result from a failure to achieve completeness. In that strategic choice, the decision-making process is essential. Our third contribution consists in our definition of three organizational forms of meta-organization – traditional MO, issue-oriented business only MO, Multi-stakeholder MO – and the decision situations leading to them. Depending on the actors firms are confronted to (governments, meta-organizations, or civil society actors), they can

make two kind of decision: either remain in the existing framework, or create one of the three organizational forms. These three decision situations illustrate how firms can display organizational creativity. Based on these three situations, MOs' backed collective action displays a specific costs/benefits structure: low costs of creation, low costs of entry, moderate to high benefits, but high costs of exit. Defining this collective action decision and costs/benefits model, and highlighting the organizational creativity it corroborate, is our third contribution.

The unpacking of partial organization criteria for MOs reveals the importance of membership strategies and organizational legitimacy (Suchman, 1995), which constitute the fourth contribution of this paper. Our study shows that MOs can seek to cover a whole class of members, or to remain a selective club. While class saturation yields bargaining power, diversity optimizes best practices sharing and exclusivity aims at ensuring members' commitment. All three strategies legitimize MOs' organizational form choice, bestowing them either pragmatic, moral or taken-for-granted legitimacy (Suchman, 1995). Indeed, legitimacy is ensured by the negotiation role of MOs, by the respect of a generalized consensus-based decision making process and a collectively designed soft law, which engages every member of the partial organization, and by the lack of alternative. While legitimacy can be undermined by an incomplete membership, outreach strategies constitute an emergent concept to overcome that risk. Outreach is a specific feature of collective partial organizations, characterizing both the attempt to raise awareness among the business community or the regulators, and to acquire new members and therefore cement legitimacy.

The use of a sectorial case study raises uncertainty about the extent to which the insights extracted from the material extend to other organizations and other industries. We studied three stages of the oil and gas environment's organizing through MOs on about a century. While industry-specific problematics might differ, the dynamics of firms' collective action is expected follow the same sequences: organizing the environment as a whole through traditional MOs, organizing to provide collective answers to given problems, and organizing to manage stakeholders' relationships. Indeed, we believe that our model of collective action provides some transferable knowledge from the oil and gas sector, to other sectors. Indeed some MOs are actually cross-sectorial, such as the UN Global Compact or the WBCSD, which grants generalization to our model and thus transferability.

In a few words, our paper makes four main contributions. Firms dynamically organize their own environment through the setting up of different kinds of meta-organizations in three sequences. Our first contribution to meta-organizations theory consists in empirically showing that complete organizations as firms thoroughly organize their environment using partial organizations in the form of meta-organizations — with low entry costs and high exit costs — which we have coined thin organizations. Organizational complexity or disorder (Durand, 2013) is the consequence of the co-existence of three meta-organizational forms in the environment, which understanding constitutes our second contribution to MOs theory. When new issues arise, firms can either chose to remain in an existing structure or to start something new to deal with it. We have outlined three decision situations that can lead to MOs' creation, and that display a specific costs/benefits structure. This organizational model and the organizational creativity it buttresses are our third contribution — to the theory of partial organizations. Finally, highlighting the particular significance of membership for MOs, its implications for organizational legitimacy and the emergent concept of outreach strategy is our fourth contribution, also to the theory of partial organizations.

Collective action, coopetition, and organizational boundaries

While past studies have outlined the importance of environment's organizing (Ahrne and Brunsson, 2005, 2010; Gulati et al., 2012), literature on collective action has privileged looking at environment through a network perspective (Soda and Zaheer, 2012), through actor-oriented schemes for multi-partite collaborations (Fjeldstad et al., 2012), but seldom at meta-organizational architecture and dynamics. The few scholars who have studied metaorganizations as organizational architectures in the environment have done so by focusing on some specific cases of meta-organizations, such as industry associations (König et al., 2012), or the role of meta-organizations in standardization (Boström, 2006), but have not addressed the question of how firms organize their environment through different meta-organizational forms. Our study shows rich empirical evidence on meta-organizations as strategic collective partial organizations. As they serve the purpose of collective action among competitors, MOs clearly raise the question of coopetition (Brandenburger and Nalebuff, 1996). This could lead to a different approach on coopetition while scholars have so far focused on nonorganizational coopetition (Yami et al., 2010) through for instance the analysis of the relationship between buyers and suppliers (Dyer and Singh, 1998; Depeyre and Dumez, 2007; Yami et al., 2010; Lacoste, 2014).

A further implication of our analysis concerns the unexpected emergence of the concept of outreach. Outreach strategies aim at moving forward the boundaries of MOs. Outreach shows that boundary spanning is no longer entitled to the sole research on innovation, but can and should be also approached from an organizational perspective, inside and outside organizations. This unexpected concept allows dynamically understanding organizational boundary spanning. Outreach in multi-stakeholder MOs aims at extending the boundary of the organizations to include new members with different nature: companies, governments, civil society actors. In this kind of consensus-based meta-organizations, outreach appears as the only viable strategy to win new members and to move organizational boundaries. Organizational boundaries in the context of collective action and meta-organizations are clearly linked to coopetition strategies, that is to say to membership choices.

Limitations and directions for future research

The previous points also highlight some limitations of the present paper, with its specific focus on companies and meta-organizations' macro level. First, in line with the typical conception of Ahrne & Brunsson's organization based on a decision (Ahrne and Brunsson, 2005, 2008), we have sought to explain meta-organizations' set up, from the companies focal point. Our model does not fully account for the role of environmental pressures on companies' decision to establish a MO. Governmental, regulatory and civil society actors are expected to weigh on companies, but how to measure external pressures importance in the emergence of new forms of MOs? Future research could address this question of the external drivers to MOs' setting up, to better understand the place of stakeholders in our decision situations model.

Furthermore, our findings showed that meta-organizations in the oil and gas industry proliferated from 1917 to nowadays. Meta-organizations being thin organizations (no hierarchy, low monitoring and sanctions, limited core staff, low entry costs, moderate to high benefits and high exit costs) explained this proliferation. However, we have not specifically determined the causes of this proliferation. This model is bound to the fact that meta-

organizations are a specific case of collective action. Indeed, collective action can either take the form of partial organizations which members are individuals – in which case Olson's (1965) theory of collective action and costs/benefits structure apply – or the form of partial organizations which members are organizations – in which case Olson's theory does not apply. Based on our findings on organizational forms creation, and the costs/benefits model we have defined, we suggest the following:

Proposition 1 (P1): Meta-organizations as partial organizations are more likely to be created if the entry costs are low and benefits are high

As König, Schulte and Enders (2012) showed, meta-organizations, similarly to other organizations, respond with inertia when they face discontinuous change. Based on this and our model, we can assume that non paradigmatic changes in the environment, and emergence of new issues – such as environmental ones – favors creation of new meta-organizations over changes in the existing ones. However, we showed that the setting up of new meta-organizations was also strongly linked to firms' organizational creativity, which leads us to formulate the proposition:

Proposition 2 (P2): The proliferation of meta-organizations as partial organizations is uncapped as long as members display organizational creativity and can create new organizational forms to answer discontinuous change

Following this, if meta-organizations proliferate, they should reach a point where firms have to strategically select which MOs they join. Based on the organizational complexity that emerged from the material, and combining propositions 1 and 2, our paper raises the question of meta-organizations' benefits. Why should firms join so many meta-organizations, thus multiplying costs? Our findings show that through best practices sharing, peer learning or capacity building, firms use membership in MOs as a strategic option to increase their knowledge (Kogut and Zander, 1992). Entry costs are low in meta-organizations as we have shown, but cumulated in many organizations, financial costs and above all time involvement of the managers who represent the organization can become high. Therefore the expected benefits of the new meta-organization need to be sufficient. From our findings, benefits can come from advocacy and regulatory engagement, although once all regulatory instances have been met there is no longer a need for traditional MOs creation. Benefits can also result from capacity building on sustainability issues, from stakeholders' management in multistakeholders MOs, and from reputational effect (Fombrun, 1996). Our observations of the benefits of MOs lead us to formulate the following proposition:

Proposition 3 (P3): It is in the firms' interest to create new meta-organizations, as long as the expected benefits are higher than the cumulated entry costs and costs to remain in the other meta-organizations

While those three first propositions are focused on creation of MOs, it would be interesting to study cases of terminations of MOs. The rationale behind a termination would provide many insights about meta-organizations dynamics. Although our study did not highlight any disintegration, it does not mean none ever happened. Assuming that termination rates are effectively low in meta-organizations, how can it be explained? While our data could not speak directly to this question, our grounded model of meta-organizations tends to argue in favor of stability over time, as we assume that:

Proposition 4 (P4): Meta-organizations as partial organizations are less likely to disintegrate over time when they are thin organizations with low costs of entry and high costs of exit

While low costs of entry, that encompass both creation and membership costs, justify the creation of new meta-organizations, the level of exit costs can explain why partial organizations in the form of meta-organizations tend not to disappear and therefore stack up, making the environment of firms highly organized, but also exceedingly complex and chaotic.

Additional future research

Our paper provides the basis for asking several other questions. In line with recent work in the meta-organizations literature (Gulati et al., 2012; König et al., 2012), our paper contributes to the understanding of meta-organizations as partial organization by drilling down the organizational processes that happen at the macro level of analysis. Yet, an important question our paper raises is the one of the impact of MOs on a firm's capacities, at the individual level. From our informants, it appears that specific employees are detached to specific MOs and relay acquired knowledge through meetings with MOs, in board meetings and issue-oriented committees. For instance, in one Oil & Gas supermajor, the "Human Rights Coordination Committee" is the point of entry of all knowledge gathered during MOs' meetings. Through this committee, best practices are then relayed inside the company. Throughout the interviews, we have noted many committees where MOs played a role: Human Rights Coordination Committee, Environmental Sustainability Steering Committee, Social Responsibility Steering committee, Energy and Climate committee, among others. No doubt that external meta-organizational complexity is replicated inside the organization. In that sense, we believe that organizing mechanisms inside and outside the organization lead to more disorder, or at least to an organizational complexity that impacts management practices. Analyzing the interplay between internal and external complexity from the perspective of meta-organizations could prove a rich avenue for research.

Another interesting research question concerns the role of meta-organizations in dealing with sustainability issues. While partial organizations already have been identified as venues for dealing with corporate social responsibility (Rasche et al., 2013), MOs in particular are clearly positioning themselves on the corporate sustainability segment - human rights, environmental issues, fair labor, and development of local communities – and appear as the de facto device for dealing with sustainability. Indeed, MOs are collective organizations designing social and environmental responsibility standards, and they are also helping companies enhance their environmental performance through capacity building and best practices sharing. An interesting research question for further exploration would be how corporate social responsibility answers are collectively designed through meta-organizations, either by business only meta-organizations, or by multi-stakeholders meta-organizations. Lastly, this study suggests that meta-organizations, as a collectively decided social order, as a strategic partial organization of firms' own environment, as a concerted organizational answer to sustainability issues and as a shared device for stakeholders' management, are fertile avenues for gaining better understandings of the intricate characteristics of the growing organizational complexity surrounding and encompassing firms.

REFERENCES

- **Aaronson Susan Ariel** (2011). "Limited partnership: Business, government, civil society, and the public in the Extractive Industries Transparency Initiative (EITI)", *Public Administration and Development*, vol. 31, n°1, pp. 50–63.
- **Adelman M.A** (1972). *The world petroleum market*, Baltimore and London, Johns Hopkins University Press.
- Ahrne Göran & Brunsson Nils (2008). Meta-organizations, Cheltenham, Edward Elgar.
- **Ahrne Göran & Brunsson Nils** (2010). "Organization outside organizations: the significance of partial organization", *Organization*, vol. 18, n°1, pp. 83–104.
- **Ahrne Göran & Brunsson Nils** (2005). "Organizations and meta-organizations", *Scandinavian Journal of Management*, vol. 21, n°4, pp. 429–449.
- **Alter Catherine** (1990). "An exploratory study of conflict and coordination in interorganizational service delivery system", *Academy of management journal*, vol. 33, n°3, pp. 478–502.
- **Alvesson Mats & Kärreman Dan** (2007). "Constructing mystery: Empirical matters in theory development", *Academy of Management Review*, vol. 32, n°4, pp. 1265–1281.
- Astley Graham W. (1984). "Toward an appreciation of collective strategy", *Academy of Management Review*, vol. 9, n°3, pp. 526–535.
- **Astley Graham W. & Fombrun Charles** (1983). "Collective Strategy: Social Ecology of Organizational Environments", *Academy of Management Review*, vol. 8, n°4, pp. 576–587.
- **Barnett William P., Mischke Gary A. & Ocasio William** (2000). "The Evolution of Collective Strategies among Organizations", *Organization Studies*, vol. 21, n°2, pp. 325–354.
- **Bendell Jem, Collins Eva & Roper Juliet** (2010). "Beyond partnerism: toward a more expansive research agenda on multi-stakeholder collaboration for responsible business", *Business Strategy and the Environment*, vol. 19, n°6, pp. 351–355.
- **Borgatti Stephen P. & Foster Pacey C.** (2003). "The network paradigm in organizational research: A review and typology", *Journal of management*, vol. 29, n°6, pp. 991–1013.
- **Boström Magnus** (2006). "Regulatory credibility and authority through inclusiveness: Standardization organizations in cases of eco-labelling", *Organization*, vol. 13, n°3, pp. 345–367.
- **Bradley Joseph Francis** (1965). The role of trade associations and professional business societies in America, Pennsylvania, Pennsylvania State University Press.
- **Brandenburger Adam & Nalebuff Barry** (1996). *Co-opetition*, New York, Harper Collins Business.
- **Brunsson Nils & Jacobsson Bengt** (2000). *A world of standards*, Oxford, Oxford University Press.
- **Brunsson Nils, Rasche Andreas & Seidl David** (2012). "The dynamics of standardization: Three perspectives on standards in organization studies", *Organization Studies*, vol. 33, n°5-6, pp. 613–632.
- **Child John** (2005). Organization: contemporary principles and practice, Malden, Blackwell.
- **Clark Shawn M., Gioia Dennis A., Ketchen David J. & Thomas James B.** (2010). "Transitional Identity as a Facilitator of Organizational Identity Change during a Merger", *Administrative Science Quarterly*, vol. 55, n°3, pp. 397–438.

- **Depeyre Colette & Dumez Hervé** (2007). "Le rôle du client dans les stratégies de coopétition", *Revue française de gestion*, vol. 33, n°176, pp. 99–110.
- **Dess Gregory G.** (1987). "Consensus on strategy formulation and organizational performance: Competitors in a fragmented industry", *Strategic management journal*, vol. 8, n°3, pp. 259–277.
- **Dubash Navroz K. & Florini Ann** (2011). "Mapping global energy governance", *Global Policy*, vol. 2, n°s1, pp. 6–18.
- **Dubois Anna & Gadde Lars-Erik** (2002). "Systematic combining: an abductive approach to case research", *Journal of Business Research*, vol. 55, n°7, pp. 553–560.
- Durand Rodolphe (2013). La désorganisation du monde, Lormont, Le bord de l'eau.
- **Dyer Jeffrey H. & Singh Harbir** (1998). "The relational view: cooperative strategy and sources of interorganizational competitive advantage", *Academy of management review*, vol. 23, n°4, pp. 660–679.
- **Fendt Jacqueline & Sachs Wladimir** (2008). "Grounded Theory Method in Management Research Users' Perspectives", *Organizational Research Methods*, vol. 11, n°3, pp. 430–455.
- **Fjeldstad Øystein D., Snow Charles C., Miles Raymond E. & Lettl Christopher** (2012). "The architecture of collaboration", *Strategic Management Journal*, vol. 33, n°6, pp. 734–750.
- **Fombrun Charles** (1996). *Reputation : Realizing Value from the Corporate Image*, Harvard Business School Press.
- **Freeman Bennett** (2003). "Managing risk and building trust: the challenge of implementing the Voluntary Principles on Security and Human Rights", *Oil, Gas & Energy Law Journal (OGEL)*, vol. 1, n°2.
- **Freeman Bennett** (2002). "The Voluntary Principles on Security and Human Rights", *UN Global Compact. Case Studies of Multistakeholder Partnership. Policy Dialogue on Business in Zones of Conflict*, pp. 7–14.
- **Gioia Dennis A. & Chittipeddi Kumar** (1991). "Sensemaking and sensegiving in strategic change initiation", *Strategic management journal*, vol. 12, n°6, pp. 433–448.
- **Gioia Dennis A., Corley Kevin G. & Hamilton Aimee L.** (2013). "Seeking Qualitative Rigor in Inductive Research Notes on the Gioia Methodology", *Organizational Research Methods*, vol. 16, n°1, pp. 15–31.
- **Gioia Dennis A., Price Kristin N., Hamilton Aimee L. & Thomas James B.** (2010). "Forging an identity: An insider-outsider study of processes involved in the formation of organizational identity", *Administrative Science Quarterly*, vol. 55, n°1, pp. 1–46.
- Glaser B. & Strauss A. (1967). "The discovery of grounded theory. 1967", Aldin, New York.
- **Gulati Ranjay, Puranam Phanish & Tushman Michael** (2012). "Meta-organization design: Rethinking design in interorganizational and community contexts", *Strategic Management Journal*, vol. 33, n°6, pp. 571–586.
- **Haug Christoph** (2013). "Organizing spaces: Meeting arenas as a social movement infrastructure between organization, network, and institution", *Organization Studies*, vol. 34, n°5-6, pp. 705–732.
- **Hirsch Paul M.** (1975). "Organizational effectiveness and the institutional environment", *Administrative Science Quarterly*, pp. 327–344.
- **Jacoby Neil H.** (1974). *Multinational oil : a study in industrial dynamics*, New York, Macmillan.
- **Kogut Bruce & Zander Udo** (1992). "Knowledge of the firm, combinative capabilities, and the replication of technology", *Organization science*, vol. 3, n°3, pp. 383–397.

- **König Andreas, Schulte Martin & Enders Albrecht** (2012). "Inertia in response to non-paradigmatic change: The case of meta-organizations", *Research Policy*, vol. 41, n°8, pp. 1325–1343.
- **Kumar Nirmalya, Stern Louis W. & Anderson James C.** (1993). "Conducting interorganizational research using key informants", *Academy of Management Journal*, vol. 36, n°6, pp. 1633–1651.
- **Lacoste Sylvie M.** (2014). "Coopetition and framework contracts in industrial customer-supplier relationships", *Qualitative Market Research : An International Journal*, vol. 17, n°1, pp. 43–57.
- **Lakhani Karim, Lifshitz-Assaf H & Tushman Michael** (2013). "Open innovation and organizational boundaries: the impact of task decomposition and knowledge distribution on the locus of innovation", *In* Grandori A (2013) *Handbook of Economic Organization: Integrating Economics and Organization Theory*, Cheltenham, UK, Elgar, pp. 355–382.
- Lincoln Yvonna S. & Guba Egon G. (1985). Naturalistic inquiry, Thousand Oaks, Sage.
- **Van Maanen John** (1979). "The fact of fiction in organizational ethnography", *Administrative Science Quarterly*, pp. 539–550.
- **Van Maanen John, Sørensen Jesper B. & Mitchell Terence R.** (2007). "The interplay between theory and method", *Academy of management review*, vol. 32, n° 4, pp. 1145–1154.
- **March James G.** (2007). "The Study of Organizations and Organizing Since 1945", *Organization Studies*, vol. 28, n°1, pp. 9–19.
- March James G., Schulz Martin & Zhou Xueguang (2000). The dynamics of rules, Stanford; CA, Stanford University Press.
- March James G. & Simon Herbert A. (1958). Organizations, New York, Wiley.
- **Mascarenhas Briance & Aaker David A.** (1989). "Mobility barriers and strategic groups", *Strategic Management Journal*, vol. 10, n°5, pp. 475–485.
- **Ménard Claude** (1995). "Markets as institutions versus organizations as markets? Disentangling some fundamental concepts", *Journal of Economic Behavior & Organization*, vol. 28, n° 2, pp. 161–182.
- Miles Matthew B. & Huberman A. Michael (1994). Qualitative data analysis: An expanded sourcebook, Thousand Oaks, Sage.
- **Oliver Christine** (1990). "Determinants of interorganizational relationships: Integration and future directions", *Academy of management review*, vol. 15, n° 2, pp. 241–265.
- **Olson Mancur** (1965). *The logic of collective action : public goods and the theory of groups*, Cambridge, MA, Harvard University Press.
- Parra Francisco (2004). Oil Politics: a modern history of petroleum, London, I.B. Tauris.
- **Peirce Charles Sanders** (1903). *The essential Pierce : Selected philosophical writings*, Bloomington, Indiana University Press.
- **Penrose Edith** (1968). The large international firm in developing countries: the international petroleum industry, London, George Allen and Unwin.
- **Podolny Joel M. & Page Karen L.** (1998). "Network forms of organization", *Annual review of sociology*, vol. 24, n°1, pp. 57–76.
- **Powell W.** (2003). "Neither market nor hierarchy", *The sociology of organizations : classic, contemporary, and critical readings*, vol. 315, pp. 104–117.
- **Rasche Andreas, Bakker Frank & Moon Jeremy** (2013). "Complete and Partial Organizing for Corporate Social Responsibility", *Journal of Business Ethics*, vol. 115, n°4, pp. 651–663.

- **Rosendahl Tom & Hepsø Vidar**(2012). *Integrated Operations in the Oil and Gas Industry : Sustainability and Capability Development*, Hershey (PA), IGI Global.
- Scott W. Richard (2001). Institutions and organizations, Thousand Oaks, Sage.
- **Soda Giuseppe & Zaheer Akbar** (2012). "A network perspective on organizational architecture: performance effects of the interplay of formal and informal organization", *Strategic Management Journal*, vol. 33, n° 6, pp. 751–771.
- **Strauss Anselm & Corbin Juliet M.** (1998). Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory, Thousand Oaks, Sage.
- **Suchman Mark C.** (1995). "Managing legitimacy: Strategic and institutional approaches", *Academy of management review*, vol. 20, n°3, pp. 571–610.
- **Suddaby Roy** (2006). "From the editors: What grounded theory is not", *Academy of management journal*, vol. 49, n° 4, pp. 633–642.
- **Tajfel Henri & Turner John C.** (1986). "The Social Identity Theory of Intergroup Behavior", *In* Worchel S. & Austin W.G. (1986) *The social psychology of intergroup relations*, Monterey, CA, Brooks/Cole, pp. 7–24.
- **Thorelli Hans B.** (1986). "Networks: between markets and hierarchies", *Strategic management journal*, vol. 7, n° 1, pp. 37–51.
- **Tung Rosalie L.** (1979). "Dimensions of organizational environments: An exploratory study of their impact on organization structure", *Academy of Management Journal*, vol. 22, n° 4, pp. 672–693.
- Weber Max (1921). Wirtschaft und Gesellschaft, Germany, Tübingen, Mohr.
- **Whyte William Foote** (1984). *Learning from the field : A guide from experience*, Beverley Hills, London, Sage.
- **Williamson Oliver E** (1975). *Markets and hierarchies, analysis and antitrust implications : a study in the economics of internal organization*, New York, Free Press.
- Yami Saïd, Castaldo Sandro, Dagnino Giovanni Battista & Le Roy Frédéric (2010). Coopetition: winning strategies for the 21st century, Cheltenham, Edward Elgar.
- Yergin (1991). The prize, New York, Simon and Schuster.
- **Yin Robert K.** (2003). Case Study Research: Design and Methods, Thousand Oaks, SAGE Publications.
- **Yin Robert K.** (1981). "The case study crisis: some answers", *Administrative science quarterly*, vol. 26, n°1, pp. 58–65.
- **Zeigler L. Harmon** (1983). "Interest groups in the states", *In* **Gray Virginia, Jacob Herbert** & **Vines Kenneth N.** (1983). *Politics in the American states*, Boston, Littel Brown, pp. 101–107.