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Sub-theme 07: (SWG) Institutions and Identities

COLLECTIVE IDENTITY FORMATION IN HYBRID ORGANIZATIONS

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Abstract

The present article examines the process of collective identity formation in the context of hybrid organizing. Empirically, we investigate hybrid organizing in a collaborative structure at the interface of two heterogeneous organizations in the domain of new renewable energies. We draw on the literature on knowledge sharing across organizational boundaries, particularly the notions of transfer, translation and transformation, to examine in real time how knowledge sharing in a hybrid setting contributes (or not) to the emergence of a new collective identity at the interface of two heterogeneous organizations. Our findings point to two factors that limit knowledge sharing and hence to new collective identity formation in a hybrid space: 1) ambiguous or multiple organizational roles and 2) strong identities of the collaborating organizations. These findings contribute to illuminating the initial formation of a new collective identity in hybrid organizing, and hence how new hybrid organizational forms may emerge non-intentionally.

Keywords :

Hybrid organizational forms, knowledge sharing, collective identity formation.

COLLECTIVE IDENTITY FORMATION IN HYBRID ORGANIZATIONS

Hybrid organizational forms are proliferating in contemporary society as a more flexible way of organizing, one that is better adapted to meet current socioeconomic challenges (Borys & Jemison, 1989). Growing insight into their characteristics, the managerial challenges they present, and the potential societal benefits they bring have in recent years contributed to slowly closing the "widespread gap between the rapid development of new organizational forms in practice and the capacity of existing perspectives to account for them in theory" (Child & McGrath, 2001: 1135). Despite these developments, we still know relatively little about the emergence of hybrid organizational forms at the earliest stages of their development. Better insight into the emergence of new hybrid forms, including obstacles to their formation, may help us understand how and why hybrids are becoming more widespread in current society.

Hybrid organizational forms are "composed of two or more types that would not normally be expected to go together" (Albert and Whetten, 1985: 270). They include, but are not limited to, organizations that combine two or more logics (Battilana & Lee, 2014) or two or more types of identity (Albert & Whetten, 1985). A somewhat neglected hybrid organizational form is that of a collaborative structure created at the interface of two organizations. This type of hybrid may evolve into a hybrid organization, just like it may consolidate at the organizational interface. To be considered novel, a hybrid organizational form must combine two logics or two types of identities that were not previously combined with one another, at least not in a similar way.

A new hybrid organizational form requires for its emergence a sense of collective identity. A collective identity enables a new hybrid to become recognized as such among its proponents, and also in the wider organizational environment. In fact, scholars emphasize the

crucial importance of a distinct collective identity, composed of heterogeous elements, in the emergence of a new hybrid organizational form. In particular, they point to story telling as a powerful vehicle for consolidating the nascent collective identity that allows for a new hybrid organizational form to emerge, consolidate, and gain legitimacy (Wry, Lounsbury & Glynn, 2011; Wry, Lounsbury & Jennings, 2014). Missing from this account is *how a new collective identity emerges in the first place. Where does it come from? How does it take form?*

In this paper, we investigate the emergence of a new collective identity at the interface of two heterogenous organizations. By interface, we mean a hybrid organizational form that is nested within the heterogeneous organizations that sponsor it. The formation of a new collective identity at an interface can be particularly challenging: the well-established organizational identity of the two heterogeneous organizations may discourage the formation of a new hybrid identity. A key challenge for collective identity formation at the interface of two heterogenous organizations is to be sufficiently distinct from their established organizational identities, yet not antagonistic toward any of them. If a hybrid identity is not distinct, a new organizational form is unlikely to emerge; if it is antagonistic, one or both organizations may withdraw their support and hence disrupt its further development. This particular challenge is likely to be less pronounced for hybrid organizations that exist as independent units, such as a social enterprise or an acquisition, though they also struggle with the integration of heterogeneous components in building a new collective identity. We focus exclusively in this paper on the formation of new collective identity of a hybrid nature at the interface of two heterogenous organizations.

We target for analysis the interactive dynamics that lead to the formation of a hybrid collective identity at the interface of two heterogeneous organizations. Previous literature has shed some light on how actors deliberately craft collective identities for new hybrid organizational forms. Fiol and Romanelli (2012) elaborate on how enthousiasts and activists

deliberately forge links between individuals, and in so doing, craft a collective identity for a new hybrid organizational form. In contrast to this actor centered perspective, our inquiry focuses on the formation of collective identity as an *unintended effect*, i.e. as a derivative of collaboration. We examine collaboration at the interface of two heterogeneous organizations and explore how this interaction unintentionally stimulate (or not) the emergence of a new hybrid collective identity, which eventually may bring about a new hybrid organizational form.

Our empirical inquiry addresses the following question: *how does collaboration between two heterogenous organizations facilitate, or hinder, the formation of a hybrid collective identity at their interface?* To answer this question, we conducted an empirical study of an on-going collaboration between two heterogenous organizations in the area of new energies. Our study is conducted in real-time prior to the formation of a new hybrid collective identity at this organizational interface. We examine how organizational members collaborate and cope with obstacles to their collaboration, and how they, in so doing, generate new organizational goals, cognitive models, and organizational practices that may lead to the formation of a hybrid collective identity.

Analytically, we draw on Carlile's (2004) model of knowledge generation across organizational boundaries. Adapted from linguistics, Carlile's model describes transfer, translation and transformation as three levels of increasing complexity through which actors generate new knowledge at an interface between two heterogeneous organizations. Carlile's model sheds light on how not only new knowledge but also shared social meaning comes into existence at this interface. Shared social meaning is not identical to collective identity but it can shed some light, we argue, on how collective identity arises (or not) at the interface of two heterogeneous organizations. Shared social meaning is intimately related to collective identity in as much as "an identity is like a compass helping us steer a course of interaction in

a sea of social meaning." (Burke and Reitzes, 1981: 91). In focusing on shared social meaning, we do not presume that a new collective identity arises, nor that actors are intentionally pursuing such an outcome.

To guide our analysis of collective identity, we draw on Albert and Whetten's (1985) definition of organizational identity as the central, distinctive and enduring features of an organization. The quality of 'enduring' is less relevant for emergent collective identity, for which reason we emphasize "central" and "distinctive" as indicators of collective identity at the formative stages. Our analysis explores the relationship between the generation of new knowledge and meaning, on the one hand, and the formation of a new collective identity, composed of elements from two heterogeneous organizations, on the other hand.

The findings of our qualitative analysis point to two factors that seem to limit the non-intentional formation of a new collective identity at the interface of the two heterogeneous organizations. These factors are ambiguous or multiple organizational roles in the hybrid space, and strong identities of the organizations that partake in the collaboration. The former refers to shifting or irreconcilable roles, which seem to provoke a reluctance to share knowledge. The latter makes reference to the dominance of the existing organizational identities within the hybrid space, which makes it difficult for a new collective identity to take form and evolve. These two factors present themselves at the level of knowledge transformation, the most complex form of knowledge sharing. We propose that they constitute necessary, but perhaps not sufficient, conditions for a new collective identity to emerge spontaneously during hybrid organization at the interface of two heterogeneous organizations.

The paper is structured as follows. First we review the literature on hybrid organizational forms, collective identity formation, and collaboration at the interface of heterogeneous organizations. We then proceed to present our case study and our methodology before presenting the key findings. The paper concludes with a discussion of collective

identity formation at the interface of heterogeneous organizations as a precursor to the formation of a new hybrid organizational form.

HYBRID ORGANIZATIONAL FORMS

According to the Oxford English Dictionary (1994), a hybrid derives from heterogeneous elements and is thus composed of different or incongruous components. Applied to the organizational realm:

> Hybrids are organizational arrangements that use resources and/or governance structures from more than one existing organization. This definition encompasses a broad range of organizational combinations of various sizes, shapes, and purposes, some of which are formal organizations (e.g., mergers), whereas others are formalized relationships that are not properly organizations (e.g., license agreements). (Borys & Jemison, 1989, p. 235)

In the institutionalist literature, hybrid organizations often refer to organizations that integrate two or more institutional logics at their core, such as social enterprises (Battilana & Dorado, 2010). In contrast, the organizational identity literature emphasizes the co-existence of different types of organizational identity (Albert & Whetten, 1985). Common to the literature on hybrid organizational forms is the recognition that hybridity consists in combining core characteristics of heterogeneous organizations (Powell, 1987). In addition to governance structures, institutional logics, and identity, core characteristics include types of knowledge and organizational routines (Pache & Santos, 2010; 2013). For instance, knowledge associated with respectively the welfare sector and the private sector constitutes a core component of social enterprises (Battilana & Dorado, 2010; Besharov & Smith, 2014; Battilana & Lee, 2014).

It is widely recognized that hybrid organizational forms face a number of challenges, notably for those who are trying to manage them (Battilana & Dorado, 2010; Battilana & Lee, 2014; Ruef & Patterson, 2009). They tend to violate explicit boundaries (Ruef & Patterson, 2009: 489), potentially leading them into intractable conflicts (Fiol, Pratt & O'Connor, 2009).

Hybrids are also more likely to be negatively perceived due to the categorical imperative, that is, audiences fail to make sense of them and assign them value when they cannot easily fit them into an existing category (Zuckerman, 1999).

FORMATION OF COLLECTIVE IDENTITY IN HYBRIDS

The formation of a collective identity is essential to the emergence of new hybrid organizational forms. The categorical imperative mentioned above discourages the formation of new hybrids, which calls for a driving force to push their emergence. The existence of a collective identity has been identified as a fundamental criteria for the emergence and consolidation of a new hybrid organizational form (Wry et al., 2011). Collective identity refers to the "core, distinctive and enduring" features (Albert & Whetten, 1985) of a given "amorphous group of individuals who share an enthusiasm about a particular new way of doing things" (Wanger et al., 2002; Fiol & Romanelli, 2012: 598).

In the context of hybrid organizational forms at the intersection of two heterogeneous organizations, collective identity can be associated with (1) the existence of a "psychological group," defined as "a collection of people who share the same social identification or define themselves in terms of the same social category membership" (Tumer, 1984: 530) and (2) organizational identification in the sense of "the process by which the goals of the organization and those of the individual become increasingly integrated and congruent" (Hal et al., 1970; 176-177). In other words, the formation of collective identity is comprised of a new group formation and of this group's collective identification with an organizational entity characterized by some core, distinctive, and enduring features. If the organizational entity is emerging (e.g., a nascent hybrid organizational form), then the quality of enduring may not be present at the time of collective identity formation.

Research on hybrids points to story telling as an important ingredient for reinforcing collective identity at the early stage of a hybrid's formation (Wry et al., 2011; 2014). A story is composed of a foregrounded actor, a goal, and a context, all of which interact with one another over time. Story telling has both internal and external benefits for collective identity formation. Stories unite participants and help the hybrid organization acquire legitimacy inside and outside of the organization, hence facilitating its consolidation and survival. Internally, story telling helps create cohesion among advocates of a new hybrid organizational form and hence sustain their momentum to foster a new hybrid organizational form (Fiol & Romanelli, 2012). Wry, Lounsbury and Glynn (2011: 450) argue that the building of a "collective identity-defining story" is a necessary step for the formation of a collective identity. Hybrids that emerge at the interface of two heterogeneous organizations face the particular challenge of crafting stories about a new collective identity without undermining the collective identities of the two organizations that sponsor the hybrid. If undermined, a sponsoring organization may withdraw its support and amputate the formation of a new collective identity at its interface. The emergence of a collective identity can thus easily fail at the intersection of two heterogeneous organizations if there are no compelling stories to sustain it internally in the organizations.

Externally, story telling enables an emergent hybrid gain sufficient legitimacy among audiences to consolidate, survive and prosper (Fiol & Romanelli, 2012; Wry et al., 2011). Without such stories, hybrids are likely to be perceived negatively, simply because they do not fit into any category (ibid). In fact, the social world is rich with examples of hybrid organizational forms that disappear before they reach a stage of development where they benefit from external recognition (Fiol & Romanelli, 2012; Ruef & Patterson, 2009). A hybrid organizational form emerging at an organizational interface is more likely to encounter

positive evaluation and gain legitimacy if compelling stories are told about its nascent collective identity to audiences external to the organizations.

COLLABORATING ACROSS ORGANIZATIONAL INTERFACES

The formation of collective identity in a nascent hybrid organizational form need not be a deliberate pursuit. Organizational members may inadvertently generate a new collective identity while collaborating with one another at an organizational interface. The first contours of a new collective identity that emerges during hybrid organizing may eventually become the starting point for deliberate story telling and other initiatives in view of reinforcing a nascent collective identity. To illuminate the dynamics of this very early formation of collective identity in hybrid organizing, we turn to the literature on collaboration at the interface of two heterogeneous organizations.

Hybrid organizing may take the form of actors' collaboratively co-constructing knowledge at the interface of two heterogeneous organizations. In so doing, they need to share their heterogeneous knowledge with each other. According to Carlile (2002; 2004), both opportunities and obstacles are associated with sharing knowledge at the interface of heterogeneous organizations. The opportunities consist in generating truly novel knowledge. For new knowledge to emerge, a *difference* is needed between the sets of knowledge that each organization holds (i.e., organizations dispose of different experience and expertise); there must also be a certain amount of *dependence* between them (i.e., the actions of a given organization must impact the other one) (Carlile, 2004). The challenges pertain to the difficulty of sharing heterogeneous knowledge across organizations that differ significantly from one another. Carlile (2004) describes three increasingly demanding processes of knowledge sharing across heterogeneous organizations: *transferring* knowledge, *translating* knowledge and *transforming* knowledge. The more demanding the process, the higher the

potential is for generating radically new knowledge. Demanding refers here to the need for generating shared new meaning in order to share knowledge, i.e. to collaborate.

Syntax: Transferring knowledge

The transfer of knowledge constitutes the simplest form of knowledge sharing across two heterogeneous organizations. Knowledge can be transferred, argues Carlile (2002: 453), if the interface is characterized by a shared and sufficient syntax, i.e. a shared meaning system that enables organizational actors to rapidly understand each other across the organizational divide. This type of interactions is often associated with *tacit knowledge* (Nonaka, 1994; Polanyi, 1966), that is, knowledge that can be codified in a way that is easily transmitted to, and understood by, members of the other organization. Tacit knowledge encapsulates technical elements that are needed to form a common language and hence to gain a shared understanding (Nonaka, 1994). A shared frame (or institutional logic) may also enable knowledge transfer across two heterogeneous organizations. A shared syntax is thus the starting point for members of two heterogeneous organizations to communicate and collaborate with one another in a hybrid environment (Carlile, 2004: 558).

Semantics: Translating knowledge

Some knowledge cannot be easily transferred because it is not immediately comprehensible to members of the other organization. In such situations, knowledge must be interpreted and adapted before it becomes useful for collaboration (Carlile, 2004). Building on Orr's notion of semantics (1996), Carlile argues that, "as individuals participate in similar activities, they develop shared meanings" (2004: 558). This shared new meaning (i.e., semantics) enables the transmission of knowledge across heterogeneous organizations. Wry et al. (2014) propose that translation occurs when actors combine heterogeneous elements from

two organizations, using one component as anchor and the other as modifier. These components can be knowledge, structure, practice, identity, culture, or other organizational features. Essentially, the process of translation consists in combining one element (the anchor) from one organization with another element (the modifier) from the other organization, thereby generating shared new meaning that enables the exchange of heterogeneous knowledge. The mechanism of translation is thus inherently linked to a process of knowledge appropriation inside the hybrid space. The shared new meaning generated through translation may also, we argue, inadvertently produce a sense of collective identity among participants in the hybrid environment.

Pragmatics: transforming knowledge

Semantics (i.e., shared meaning) may not be sufficient to share knowledge across heterogeneous organizations. Pragmatic challenges also need to be overcome. Political interests nested in the nascent hybrid organizational form can generate pragmatic considerations and lead to negotiations about competing representations and goals (Carlile, 2004). Such pragmatic obstacles can impede knowledge sharing by blocking access to knowledge and/or the generation of shared new meaning. As a result, the collaboration may not result in radically new knowledge. If, however, pragmatic considerations are overcome, the sharing of heterogeneous knowledge may well lead to knowledge transformation, i.e. the generation of radically new knowledge and meaning.

METHODOLOGY

To shed light on the very early stages of collective identity formation in hybrid organizational forms, we examine three levels of knowledge sharing at the intersection of two heterogeneous organizations. We also examine associated expressions of identification among organizational members involved in this collaboration.

Case presentation

The partnership is between a large, French Energy Company and an American start-up-oriented company based in California. In 2011, the large French company, which we name "Earth", acquired 66% of the American-based company, which we name "Mars". Upon this partial acquisition, Earth oriented its R&D strategy to helping Mars sustain its long-term competitive edge in terms of technological performance. The unit involved, Earth R&D, would bring long-term research to Mars in order to help it remain a worldwide technological leader. According to Earth R&D, the collaboration was motivated by a desire to create synergy between the two companies' respective competencies in new energies.

A hybrid space, refered to as the "Collaboration", was created in 2011. It is intrinsically hybrid in a sense that the two companies are governed by different organizational principles. Mars belongs to the field of semiconductors, is highly production- and market-oriented, deeply rooted in short term objectives and oriented toward very applied R&D in new energies. In contrast, Earth R&D has a long-term mindset and pursues objectives that relate specifically to mid- to long-term research that holds promise for new product development and future market opportunities in new energies. These characteristics constitute core, distinctive and enduring features of the two organizations involved in the hybrid space. Being a large company, Earth pursues many other research and business activities related to both new and traditional sources of energy, which also impact the identity of Earth R&D and its collaboration with Mars. The distinct geographic separation of Earth and Mars further reinforces the differences in their organizational identity. Earth's team is mainly based in Europe (with HQ located in France) whereas Mars operates primarily out of the US (with HQ situated in California). The two collaborating organizations have well-developed organizational identities, yet explicitly adhere to the shared objective of creating synergy

between their respective knowledge. In so doing, they reflect a trend in the new energies sector toward partnerships, yet the particular structure of this collaboration is unique.

Hybrid organizing can take two different structural forms: an ideographic form or a holographic form (Albert & Whetten, 1985). The ideographic form keeps incompatible principles separate by embodying them in distinct subunits whereas the holographic form advocates that they are shared across all sub-units. The Collaboration can be characterized as ideographic because there is a relatively clear separation between the employees of Earth R&D, who for the large part are based in Paris or in European research labs, and Mars's employees who are based primarily in California. Their interface relies extensively on "Earth's seconded team", which is a very specific and small group of Earth employees who work at Mars' facilities in the United States.

The Collaboration presents an interesting opportunity for exploring the dynamics of new collective identity formation at the interface of two heterogeneous organizations. At its inception in 2011, the Collaboration was characterized by a tendency toward "compartmentalization", which according to Pratt and Foreman (2000; 26), "occurs when the organization and its members choose to preserve all current identities but do not seek to attain any synergy among them". While the hybrid space aimed at creating new knowledge through synergy, the two organizations had no explicit ambition of creating a new collective identity through their collaboration. In other words, the hybrid organizational form was conceived as a means to an end, not as an end in itself. Our analytical starting point is the intentions expressed on PowerPoint slides at the formal launch of the Collaboration in 2011. Our data collection took place in 2014, that is three years later, and explores collaborative dynamics that impact on collective identity formation at the interface of these heterogeneous organizations, both undisposed toward the creation of a hybrid identity.

Data collection

The presented results are primarily based on interviews conducted in 2014 at the headquarters (HQ) of Earth (in Paris) and Mars (in California). Interviews were conducted over a three months period with key people involved in the Collaboration. We conducted 24 semi-structured interviews in total: 12 interviews at Earth's HQ and 12 in Mars's HQ in California. Of the latter 12 interviews, four were carried out with key persons involved in the collaboration on the Mars side, the remaining interviews with members of Earth's seconded team, located at Mars HQ. Most of the 24 interviews were conducted face-to-face in one-to-one meetings; when this was not possible, interviews were conducted on the phone or in informal settings. All interviews were tape-recorded and subsequently transcribed to facilitate data analysis.

In addition to interviews, we conducted non-participant observations in both settings. In Paris, we attended a yearly strategy meeting and interacted with the Earth team on-site for three months. In California, we engaged in non-participant observations for a week while conducting interviews. The observations helped to validate and refine our questions and to sharpen our analysis of the interview data.

Data analysis

We analyzed the interview data by coding for expressions related to a) collective identity, and b) knowledge sharing during collaborating. For collective identity, we coded for organizational elements that informants mentioned as being core and distinctive for respectively Mars, Earth and the Collaboration. We took inspiration from Albert and Whetten's (1985) notion of organizational identity, excluding the enduring component to capture any instance of a collective identity in the making.

On knowledge sharing, we coded for instances of transfer, translation and transformation of knowledge during collaboration between Mars and Earth R&D. For this purpose, we used the theoretical framework of Carlile (2004). To recapitulate, this model posits that new knowledge may be produced in the context of hybrid organizing at the intersection of two heterogeneous organizations. New meaning may arise in this process, which provides input to an emergent collective identity for a hybrid organizational form taking form at the organizational interface. First, *knowledge transfer* provides the immediate level at which organizational members communicate and share knowledge at the interface of two heterogeneous organizations. Second, *knowledge translation* provides meaning (semantics) to knowledge that is not easily transferred across the organizational interface. Translation enables adaptations of elements from the other organization, thus facilitating knowledge sharing by creating new shared meaning. Third, *knowledge transformation* occurs when latent conflicts or divergent political interests between two heterogeneous organizations are resolved and knowledge, once rendered meaningful through translation, can be shared easily across their organizational interface.

In presentating the results of this analysis, we use illustrative citations drawn from across the full data set. Table 1 shows the distribution of citations used to construct the findings section. The letters refer to different individuals, the first 11 of which are Earth employees (E, F, L, D, A, P, N, K, F, R, J), while the last 6 (highlighted in Table 1) are employed by Mars (G, C, I, V, M, O).

Participants	Emerging shared identity – or lack thereof	Distinctive identities, practices, cultures at Mars & Earth	Syntax – transfer	Semantics - translation	Pragmatics - lack of translation
E	X	X	X		X
F	X				
L		X			
D					
A				X	
P				X	X
N				X	X
K					X
F					X
R					X
J		X			
G		X			
C		X	X		X
I		X		X	
V		X			X
M		X			
O			X		X

Table 1: Interviewee citations.

FINDINGS

In the following, we first present the findings pertaining to the collaborative dynamics related to the three types of knowledge sharing, and then to collective identity.

Syntax: Transferring knowledge via a shared frame of different time horizons

The Collaboration started by Earth stating that its main added value was to help Mars develop longer term research projects. The distinction between long term and short term research soon became the syntax that defined all collaboration between the two organizations. The dichotomy between short term and long term provided a *de facto* symbolic line separating the two companies inside the Collaboration, enabling all participants in the collaboration to position themselves and that of others, including the two organizations, in a shared conceptual

space defined by time horizons. The different time horizons became the *syntax* enabling the transfer of knowledge across these two heterogeneous organizations.

In the context of the collaboration between Earth and Mars, this common language comes from a holistic representation of time: Earth brings a long-term oriented expertise to Mars, which keeps its focus on short-term research (i.e. business as usual for both). This repartition of tasks, embedded in their respective sets of knowledge, has been a key driver of the collaboration. It subsequently became codified in a collaborative agreement. All interviewees recognized the existence of this basic syntax as facilitating the transfer of knowledge between Mars and Earth. Mars' collaborator (C) said:

> One of the big differences I notice between the work culture at Mars and at Earth is an issue of time horizons (…) Earth tends to look 5 years out or 10 years out, as a result, there is focus on what is the research that's going to maybe yield results 5 or 10 years down the road. It's not going to have a near term impact at the bottom line of the company. Mars in general is more focused on near term results: What are you going to do next quarter? Next year? What we can commercialize quickly? What can have an impact now?

The element of time illustrates the basic function of transferring existing heterogeneous knowledge without first having to create shared knowledge or meaning that permit sharing. The process of knowledge transfer, epitomized by the discourse on different time horizons in the context of the Collaboration, represents a necessary first step for sharing heterogeneous knowledge.

As the Collaboration evolved, the shared understanding that Earth should be focused on long-term oriented research and Mars should be vested in short-term research came to be somewhat contested. Organizational members from both sides began pointing out that their collaboration did not quite reflect this time-based division of labour. In the words of a Mars employee:

> The common understanding is that Earth's involvement should be more focused on long term; at Mars, it is more applied and more day-to-day. In practice I don't think it works that way. (…) It may be not even helpful to think like "Earth does this and Mars does

> that". There are short or long term issues in every project, or at least in the projects in which I'm involved (O)

A similar perspective was expressed by a manager from Earth:

> We [Earth] don't have a long term expertise, this is a myth, these are stories we like to tell, it is just that we do not have to deal with production pressures, we can have a budget so we can allow to prepare things for Mars. (…) This is not as if we were doing something totally long term oriented and overnight we changed everything. (E)

This finding confirms that the simple act of knowledge transfer does not fully capture the complexity involved in sharing knowledge in the context of an hybrid environment. Carlile argued that "establishing a shared and stable syntax (…) ensure accurate communication between sender and receiver across a boundary and solve many challenging [of] communication (Carlile, 2002: 443). However appealing that may be, much knowledge cannot be easily shared across heterogeneous organizations. One reason is that organizational members tend to encounter difficulty in making sense of knowledge that is fundamentally different from their own. Such situations are common in hybrid organizing.

Semantics: Translating knowledge from one organization to the other

As can be expected, the Collaboration frequently provokes some minor friction between the two collaborating organizations. Since the launch of the Collaboration in 2011, different core and distinctive attributes of both organizations have been translated and appropriated by the other organization. According to Wry, Lounsbury and Jennings (2014), translating consist in using a *header* (which anchors perceptions) and a *modifier* (which changes and complement a given perception by modifying its attributes). This process occurred in our case study when one organization modified an organizational element from the other organization, thereby generating a common reference point for their collaboration.

We observed two symmetric mechanisms of translation: one where the header was an element from Mars and the modifier from Earth, and another where characteristics of Earth

was the header and those of Mars the modifier. The first mechanism took place when Mars translated into its own reality, using a core attribute of Earth's culture as modifier. For instance, Mars progressively changed its own organization from a "silo mode" of organization to an organization based on cross-functional work. In the words of a Manager at Earth:

> What we [Earth] bring to them [Mars], where they have changed, is that they became aware of how cross-functional work is crucial (….) They used to work in silos, between different teams, without too much of a discussion between teams. Through the collaborative work, we built some cross-functional projects, and it has added some significant value for them. Earth is really looking to engage its collaborators in cross-functional work, and cross-functional teamwork is part of Earth's core four values and the company culture. (P)

The second process manifested when Earth adopted a core practice from Mars, called the Stage Gate Process[1]. This process was later integrated and adopted as a fundamental coordination tool within the Collaboration. Earth R&D began consistently using this model to coordinate and run R&D projects between Mars and Earth. In the words of an employee of Earth R&D:

> The idea of the Collaboration is that it is truly collaboration and not two "systems" that operate in parallel. At Earth, we adopted Mars' system (Stage Gate Processes) because it is more appropriate to what they are doing (….) Project management completely changed and aligned with Mars; this entire story is about the Stage Gate Processes that were put in place (…) now, Earth's employees working with Mars have Key Performance Indicators (KPI); it evolved a lot, the change of vocabulary is remarkable as well, we use words to understand each other that we did not use in the past, and I am not just referring to the fact that we all speak English. (A)

After Earth had adopted and appropriated the Stage Gate Process from Mars, this tool started to become contested. It was criticized for not being appropriate for conducting R&D projects with a long-term research component. In other words, the knowledge that Mars had accumulated over the years – and reflected in the SGP tool – started to conflict with the knowledge held at Earth. Organizational members from Earth began questioning whether the Collaboration's hybrid mission, i.e., taking into account both short term and long term

[1] Stage Gate Processes are standards in the industry and aims at structuring a R&D project from Stage Gate 1 (pre-production and fundamental research) to Stage Gate 5 (market introduction)

research, could be achieved through the Stage Gate Process. Some of them considered this central coordination tool to be illegitimate. In the words of an Earth employee:

> Mars is very "vested" in what they call a Stage Gate Process. This stage gate process is very ill-suited for research type of work (…) Research does not, cannot be put into stage gates. (N)

A Mars employee, funded by Earth, had a similar viewpoint:

> There is also a bit of a challenge on how to structure really advanced very long term R&D projects and how to slot them into Stage Gate Processes (….) SGP is really designed around commercialization, it's very specific and has to go through certain things at a certain rate that returns revenues for the company. We would probably need to put some thoughts into ways that we could make an alternate SGP process that is R&D suited, a lot of Collaboration projects do not seem to fit very well in the SGP, right now; particularly, long term oriented projects which aren't necessarily going to end in a product, they're gonna end up in a learning, or a test method. Our SGP isn't really designed for that, our SGP is designed for product development. And sometimes long term R&D is not product development, it is fundamental research; and the outcome is a report, or a tool, or something like that. (C)

Eventually, organizational members began adjusting the Stage Gate Process by adding a few additional stages to better fit the context of Earth. This translation may become a new reference point for sharing knowledge in the hybrid environment.

Pragmatics: Facilitating knowledge transformation

The third level of knowledge generation corresponds to the most mature level of knowledge exchange at the intersection of two heterogeneous organizations. Knowledge transformation aims at stabilizing political conflicts by formalizing a shared agreement about the meaning of new knowledge. In the context of the Collaboration between Earth and Mars, we primarily observed a *lack of* knowledge transformation. For instance, in the context of the Stage Gate Processes implemented at Mars and adopted within the Collaboration, the challenges related to obstacles went beyond those of sense making. At the core is a debate about the *goals* of this tool, notably whether it sufficiently takes into account the long-term perspective. If the mission of the Collaboration is to integrate long-term and short-term perspectives, then organizational members came to the agreement that the tool, in its current

form, is poorly adapted to the purpose. This debate reflects the observation that "When interests are in conflict, the knowledge developed in one domain generates negative consequences in another" (Carlile, 2004: 559).

In the context of the Collaboration, pragmatic problems manifest in structural ambiguity and shifting roles. Concerns of a political nature mean that the collaborative spirit and the respective organizational roles fluctuate. We highlight two types of challenges that flow from obstacles at the pragmatic level of knowledge sharing: (i) active dissociation, and (ii) role ambivalence.

Active dissociation.

Pragmatic obstacles have encouraged some organizational members to cope with the contradictions inherited in the pragmatic sphere of the Collaboration. The ones who coped the most directly with this challenge were organizational members operating at the core of the Collaboration: Earth's seconded employees. According to a manager from Mars:

> There is an Earth employee who works really closely with my group and yet is not included, my boss does not include this Earth employee in group discussions, so that's a little bit funny. Are you a member of the group or not? We are working with every single person in the group and that's make it a little hard to collaborate well because if you are not included, if you are excluded from certain discussions, if you don't know what's going on, how can you do your job really well? (O)

An Earth's seconded employee corroborated this perception of active dissociation:

> Mars has certain meetings where I have the impression that deliberately Earth is not invited. (K)

One of the proposed solutions to alleviate dissociation is to increase communication. According to a seconded Earth employee:

> One of the engineers told us: 'I don't have the feeling that it is working very well', but, in fact, one of the limitations of the collaboration is communication. We need to put some efforts into how we communicate, and this is where there is room for improvement; we don't have much exposure to what we are doing at Mars. The real challenge is communication. (R)

Communication is indeed a target in the hybrid space. One key seconded manager has a mandate to promote proper channels of communication within the Collaboration, that is,

between Earth's employees based in Paris or in European research laboratories on the one hand, and Mars' employees in the US on the other hand. However, our analysis suggests that communication may be partially blocked for pragmatic reasons, resulting primarily from Earth' double role as majority shareholder and as collaborator in the hybrid space.

Role ambivalence.

Pragmatic concerns seem to explain the shifting roles of the two organizations in the Collaboration, particularly that of Earth. As a majority shareholder, Earth has interests that surpass those of collaborating on research; likewise, Mars has interests that exceed R&D collaboration. The manager of the Collaboration, employed by Earth, occupies two different, possibly irreconcilable, roles: (1) reporting to Earth's management on any observed discrepancies between the results that Mars communicates to Earth and the day-to-day reality of production, and (2) providing, as head of the seconded team, adequate support to Mars to sustain its R&D efforts. As illustrated in the following citation, this manager from Earth and his team face some pragmatic challenges:

> We have two roles. We have a "R&D role": we are here to help them (Mars) do their research or development projects where they necessarily have difficulties and where not everything go as expected. In order to really help them, they need to be transparent, they need to really tell us, "well, we planned to do that, but it did not work, we are in trouble, we need help". This transparency and this truthfulness about their technical challenges can be different from the "official Mars discourse", which goes back to Earth as the main shareholder, where they would rather say "everything is ok, we are right on schedule". (P)

An employee on Earth's payroll but working for Mars agrees to the uncertainty surrounding which role Earth occupies in the Collaboration:

> Earth's seconded team is very different from Mars employees; they have different reporting structures, different sense of contribution to the company, I think, and the way the other Mars employees interact with them is a little bit different than the way they interact with other Mars employees: they are in many cases viewed as consultants as opposed to contributors. (C)

This shift between the role of contributor and that of consultant seems to create ambiguity in

the Collaboration. Other managers agree with the pragmatic challenges of occupying two (or more) roles that are essentially irreconcilable.

In the following quotes, two managers from Earth use control terminology, to describe a role that they occupy, or are perceived as occupying, in addition to that of contributing and/or helping Mars:

> Well, I don't really know how Mars employees are looking at us, sometimes we (Earth employees) are considered as investors that need to be pleased, I think, and sometimes we are considered as work collaborators. (E)

> It is very hard you know. Because at the beginning we were looked at as spies. We are still looked at spies. If they know you're Earth, you are a spy. You are not treated exactly the same but if they see you are good at something, of course, they try to use you, it's natural. (N)

These quotes indicate the presence of a pragmatic block to knowledge sharing that manifests at the level of knowledge transformation. The double role of collaborator (in the sense of contributor or consultant) and of controller (as an investor or a spy) seems to create a potentially significant obstacle to collaboration, one that may effectively be blocking the generation of a shared identity within the hybrid space.

Collective identities

In this section, we examine the formation of a shared collective identity within the hybrid space, followed by the expression of collective identities related to Mars and Earth.

Our first observation is that organizational members do not recognize the emergence of a collective identity arising from the Collaboration. A manager at Earth, working in Paris, expressed this widespread perspective in the following terms:

> I don't think we are building a shared identity; that is an intrinsic feature of the Collaboration… At the beginning of the Collaboration, we did not know each other and we did not share much. On Mars' side, their loyalty is pretty clear: it is to their company. They are not going to bond with us … it is business. Their identity is extremely strong (E)

Another manager at Earth working in Paris expressed a similar view on shared identity formation:

> At the level of the R&D, as long as there is Earth and Mars, as long as we don't belong to the same teams, as long as we are not going through the same process for assessing individual performance, it doesn't make sense to claim that we want to become one unified group, because we will always be perceived as Earth and we will always perceive them as Mars. It is my own perception, but it doesn't make sense, no matter how willing we are, there are fundamental things that stick: we are not one single organization, a single team, taking into account all the differences between both companies (…) So, I am not saying that the Collaboration has failed, I am saying that it was not the objective, it is a false objective [to claim that a collective identity is emerging from the Collaboration], unless we want to advertise it as such, but that is not our role, our role is to do R&D, even if management likes to get such a message [of unity] out. (F)

Illustrative of a widespread perspective among participants in the hybrid space, this quote indicates that the Collaboration is not targeting, nor generating, a sense of collective identity. According to the informant, the respective identities of the two organizations are too strong for any new hybrid identity to emerge. The quote also indicates divided opinions on whether or not a common identity within the hybrid space should be an objective above and beyond that of knowledge creation.

We now turn to the effects of knowledge sharing on the collective identities of Mars and Earth. Organizational members from both organizations express that their organizations are structurally very different and that they will likely remain different even though they engage in knowledge sharing and collaboration with one another. In other words, the identities of the two organizations remain clearly distinct after three years of collaboration, apparently generating little space for a new collective identity to take form at the interface. According to a manager at Earth, working in Paris:

> There are many things, such as pragmatism, approaches to problem solving, ways to express an idea or raise an issue, many subtleties that show that we are indeed different. This is really fundamental and it is not going to change. (E)

Other participants in the hybrid space point to the difficulties in getting the synergy to operate as planned, let alone generate a shared identity. A manager at Mars expresses this challenge as related to the strong identities of the two organizations:

> I think that the two units are pretty different. At Mars, we have an established R&D that is very much guided towards manufacturing, all the pressures for manufacturing a product. Earth comes from a different background, one that is more academic, lab/research-oriented. I think that creates some difficulties in the Collaboration, people have two different mindsets, people here want very much results now or soon, there it's more long term research. I think getting the right balance between the two hasn't been easy, that's always been there, and I think it's still here, and I don't think we have a good way to merge the two sides yet. (G)

Another manager at Mars expresses a similar concern with getting the synergy between the two types of knowledge to work in practice:

> I think that there is a natural tension in focus between two parts of the Collaboration project: at Earth, the team is always going to look at things that are slower and further down the road, probably something Mars would not think of as urgent, and I think it just needs to be clear that we turn that difference into a benefit. (I)

This quote shows that there is support for the idea of creating synergy between the two organizations, which is core to the Collaboration. It also shows that this very objective is difficult to realize because of strong identities on both sides, particularly on the side of Mars, where the long-term perspective of Earth does not seem to be easily valued. Without the realizing of (perceived) synergy, a collective identity at the interface of the two organizations is unlikely to emerge.

One element of organizational culture that seems to play an important role in preventing the generation of synergy is that of performance indicators. The two organizations operate with different time horizons, not only when it comes to knowledge production but also in relation to planning and evaluation. As this manager at Earth, working in Paris, points out, this fundamental difference in time horizon results from cultural differences at the national or regional level:

> One outcome of cultural differences is the KPI (Key Performance Indicators) system at Mars, where they have all their goals on a quarterly basis, they have "tack tack tack",

> one thing after the other whereas I would say in the European and the French culture, it is not the natural way to work: At the beginning of the year we discuss the goal for the complete next year and we may revisit it during the course of the new year, but we don't need to do it. Our incentive system is a different one compared to the Mars system. (J)

This quote suggests that some of the differences in mind-set at Earth and Mars reflect institutional differences between the market contexts in which they operate.

Related to this difference in performance indicators are divergent orientations to collaboration. An Earth seconded employee, i.e. working at Mars, presents the following assessment of one of distinctive differences between the organizational identities of respectively Mars and Earth:

> At Earth, I was impressed by the way people work together and share knowledge, by the accessibility of knowledge; within Mars (…) I look at how knowledge is organized and it looks to me as much more hierarchical. That is coming from the fact, I think, that at Mars, there are many individuals who are hired and work in a very small area; in that area, they know a lot, but there are not many people there that can connect all the dots, and that's a deliberate strategy because Mars wants to protect their IP, nevertheless, that leads to the situation that many are working in their own silo and do not know what the others are working on, nor are they supposed to know what the others are working on. (L)

This perspective may be related to the particular exposure that this employee has to operating procedures at Mars and Earth. It nevertheless articulates one possible element that may distinguish the identities of Mars and Earth. The same seconded Earth employee seem to articulate a similar perception about the greater concern with protecting knowledge that is characteristic of Mars:

> I do remember situations particularly in the beginning, where my "academic" attitude was not particularly appreciated like I was used to (…) you just asked what's coming to your mind, and these questions were considered to be a stimulation to others: you just discuss those variables because that leads to new questions and new answers. Here, it was sometimes more perceived as an intrusion. (L)

These quotes indicate that the identities of the two organizations are very strong and not easily combined into a new collective identity. There are attempts at building synergy, though, which could potentially lead to the generation of a new collective identity. However,

the apparent lack of interest in generating such an identity, particularly within Mars, seem to effectively block the possibility of knowledge sharing evolving into a new collective identity at the interface of these two heterogeneous organizations.

DISCUSSION AND CONCLUSION

Our paper explored, from inside a hybrid organizational form, how organizational members generate collective meaning as they engage in collaboration at the interface of two heterogeneous organizations in the sector of new energies. We conducted *in situ* observations, collected archival data (annual reports, internal documents and powerpoint presentations, etc.) and led 24 semi-structured interviews with key collaborators from both side of the Collaboration, between Earth's headquarters in Paris (France) and Mars' headquarters in California. We collected data in real-time on how actors dealt with the obstacles they encountered, prior to the formation of a collective identity in the hybrid organizational form. Our in-depth study provides insights into the processes through which the earliest contours of collective identity are drawn within a hybrid organizational environment.

The hybrid organizational form that we studied epitomizes one of the core challenges facing hybrid organizational forms: the crafting of a new collective identity for the hybrid within the context of two heterogeneous organizations. We investigated the generation of collective meaning among involved actors, all employed by one or the other of the two organizations. This collective meaning represents, we argue, a precursor to the formation of a new collective identity at the interface of heterogeneous organizations, and hence of a potentially new hybrid organizational form.

Our analytical framework built on Carlile's (2004) model of knowledge sharing at the interface of heterogeneous organizations, developed with inspiration from linguistics (Orr, 1996). Carlile's model includes three forms of knowledge sharing of increasing difficulty:

transfer (syntax), translation (semantics), and transformation (pragmatics). In essence, actors can access knowledge across organizational boundaries by either: (i) sharing a common lexicon (engage in 'transferring'); (ii) reconciling interpretive differences (engage in 'translating'); and (iii) removing political obstacles to the joint construction of new knowledge (engage in 'transforming'). The more heterogeneous the organizations, the more difficult it is for them to share knowledge and the more they need to engage in translation to produce collective meaning (Carlile, 2004). Similarly, the more significant the power inequalities or political struggles in the hybrid space, the more difficult it is to transform two sets of heterogeneous knowledge into radically new knowledge, and potentially into a new collective identity and perhaps even a novel hybrid organizational form.

The findings of our qualitative analysis point to two factors that seem to limit the formation of a new collective identity at the interface of the two heterogeneous organizations. These factors comprise: (1) ambiguous or multiple organizational roles in the hybrid space, and (2) strong identities of the organizations that partake in the collaboration. The former refers to shifting or irreconcilable roles, which seem to provoke a reluctance to share knowledge. The latter makes reference to the dominance of the existing organizational identities within the hybrid space, which makes it difficult for a new collective identity to take form and evolve. These two factors present themselves at the level of knowledge transformation, the most complex form of knowledge sharing. We propose that they constitute necessary, but perhaps not sufficient, conditions for a new collective identity to emerge spontaneously during hybrid organizing at the interface of two heterogeneous organizations.

The empirical findings also point to the *potential* for a new collective identity to emerge in the process of hybrid organizing, even if this outcome is not the intended effect of hybrid organizing. Through collaboration at the interface of two heterogeneous organizations, a new collective identity could in principle crystalize in as much as new meaning is

generating through translation of heterogeneous knowledge. Yet, at the time of our observations, a new collective identity had not taken form within the hybrid. Knowledge was shared and translated, i.e. rendered meaningful, but the pragmatic concerns mentioned previously seemed to reinforce existing identities rather than creating a new one.

In light of these findings, we propose that for a new collective identity to emerge through the process of hybrid organizing, all three processes of knowledge sharing across organizational boundaries (i.e. "transfer", "translation" and "transformation") need to take place. Integration at the level of pragmatics, which is the most challenging form of knowledge sharing, seems to constitute a necessary condition for a new collective identity to form at the interface of two heterogeneous organizations. Further research could verify our proposal that the three dimensions of knowledge generation at an organizational interface are indeed necessary for identity formation in a hybrid environment. Further research could also shed light on how organizations (and individuals) can deal with pragmatic concerns in order to achieve knowledge transformation.

Our findings relate not only to identity formation in hybrids but also to the literature on boundary spanning, defined as the capacity for actors to span organizational boundaries (Hargadon & Sutton, 1997; Dokko, Kanne & Tortoriello, 2014). While boundary spanning has been positively associated with innovation under certain conditions (Hargadon & Sutton, 1997; Fleming, Mingo & Chen, 2007), not much has been said about how boundary spanning shapes the identity of hybrid organizations (Battilana & Dorado, 2010; Battilana & Lee, 2014) and other hybrid organizational forms. We propose, based on our findings, that boundary spanning across heterogeneous organizations can lead to the early formation of identity and hence give rise and shape to new hybrid organizational forms.

Finally, our study has implications for practicioners as well. Increasing numbers of organizations with strong and different identities are collaborating with one another. Such

instances of collaborations include alliances between large companies and civil society (Arenas, Sánchez & Murphy, 2013) and alliances between large companies and public actors (Rangan, Samii & Van Wassenhove, 2006; Rufin & Rivera-Santos, 2010; Kivleniece & Quélin, 2012). Our findings can help practitioners engage more deliberately in knowledge transfer, knowledge translation, and knowledge tranformation. They encourage practitioners to pay particular attention to role ambiguity or multiplicity in their hybrid organizing. They further point to the importance of strong organizational identities in hybrid organizational forms that are adopted with the explicit goal of creating synergy between heterogeneous, and potentially complimentary, sources of knowledge.

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