Individual responses to multiple logics in hybrid organizing: The role of structural position

Virginie Svenningsen-Berthélem ● Eva Boxenbaum ● Davide Ravasi

Abstract. This article investigates how employees respond to hybrid organizing, that is, organizational settings that are characterized by multiple institutional logics. We examine individuals’ propensity to either hybridize or compartmentalize multiple logics in such settings. Our empirical setting is that of a French energy corporation that engages in research partnerships with multiple public and private actors to further energy transition. Their hybrid organizing is informed by a logic of science and a logic of market, which tend to conflict with one another. Our findings suggest that three types of capital—scientific, social and cultural—shape individual responses to multiple logics. In addition, we found that individuals gain capital from three elements of their structural position: a) their professional training, b) the type of organizational position they occupy, and c) the length and the variety of their work experience in a hybrid organizational setting. These insights shed new light on how individuals respond to multiple logics, insight that can be useful for addressing the tensions that arise in hybrid organizing and that impact on organizational performance.

Keywords: hybrid organizing, institutional logics, capital, propensity, energy transition

INTRODUCTION

Current societal and environmental challenges are stimulating organizations to engage in hybrid organizing, that is, organizational settings characterized by multiple institutional logics. Hybrid organizing includes close collaborations across traditional organizational divides and societal sectors (Haigh, Walker, Bacq & Kickul, 2015). Hybrid organizing exposes organizational actors to multiple institutional logics (Parkhe, 1993), defined as a socially constructed and integrated set of assumptions, values, beliefs and rules (Thornton & Ocasio, 2008) that shape which ends are deemed legitimate and which means are considered most appropriate for achieving them (Friedland & Alford, 1991). Although organizations increasingly engage in hybrid organizing to solve complex societal and environmental problems, the simultaneous pursuit of multiple logics can also give rise to significant tensions, such as internal conflict (Glynn, 2000), that threaten organizational stability (Battilana & Dorado, 2010) and performance.

To address this challenge, researchers have recently turned their attention to the individuals who engage in hybrid organizing in an effort to understand how they apprehend and work with multiple logics. A research stream that imagines institutions as “inhabited” (Hallett & Ventresca, 2006:...
reorients organizational studies toward the understanding that “while institutional logics carry meaning, it is also true that meaning arises through social interaction” in concrete settings. In line with this stream of research, Binder (2007: 568) points out that: “Logics are not purely top-down: real people, in real contexts, with consequential past experiences of their own (...), combine them with institutional logics from other domains, take what they can use from them, and make them fit their needs”. Researchers have identified that individuals respond differently to the same combination of logics (Pratt & Foreman, 2000; Voronov & Yorks, 2015). Individual responses include defiance (Glynn, 2000), compartmentalization (Creed, DeJordy, & Lok, 2010) and hybridization (Powell & Sandholtz, 2012a). Defiance is at play when individuals resist the pressure to engage with multiple logics and use only one logic to guide their actions. Compartmentalization refers to individuals’ attempts at purposefully segmenting their compliance with competing logics to bring some order and coherence to their work life. For instance, one institutional logic may guide their actions in one organizational situation whereas a different logic may inform their response in another situation, thus keeping the logics separate across time and/or space (Gautier, Pache & Santos, 2018). Hybridization involves a creative engagement with multiple logics (Voronov, De Clercq & Hinings, 2013), often motivated by a desire to resolve any perceived contradiction between them. Individuals hybridize logics by integrating selected elements in ways that they see fit.

While identifying different responses to multiple logics prompts the question of why individuals react differently to the same constellation of logics in a given organizational context. Researchers point to individual differences in cognitive capacities (Voronov & Yorks, 2015) and interpretive faculties (Creed et al., 2010; Lok, 2010) as core elements that shape an individual’s response. Although these elements clearly matter, they seem to overemphasize individual characteristics, neglecting structural determinants of individual responses. An alternative, complementary explanation, the one we pursue in this paper, relates to structural position and its influence on individuals’ engagement with logics (Pache & Santos, 2013a; Wry & York, 2017), encouraging them to respond in certain ways to multiple logics.

Pache and Santos (2013a) suggest that the way in which individuals within organizations experience and respond to competing institutional logics depends on the degree to which they adhere to these logics. They posit that individuals who are identified with both logics will be equally knowledgeable about them and committed to seeing them both prevail. Their ability to understand the needs and interests of members identified with each logic will put them in a good position to find ways to combine the two logics in a sustainable way. Such profiles may be found among individuals with dual degrees, or among individuals with extensive cross-sectoral experience, who may have developed strong ties to various logics as a result of these past experiences. This line of work emphasizes the pre-reflective realm, suggesting that structural position influences individual action in subtle, yet powerful ways (Cardinale, 2018). Cardinale evokes Bourdieu’s (1990) concepts of habitus and capital to explain how individuals develop the propensity to act in certain pre-reflective ways. Although this line of work is promising, much work remains to be done to explain how the structural position of individuals relates to their capital, which in turn predisposes individuals to respond in specific ways to multiple logics.

Aiming to extend this line of research, we examine which elements of individuals’ structural position provide them with the kind of capital that
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encourages them to respond in specific ways to multiple logics in a hybrid organizational setting. Our inquiry addresses the following question: How does the structural position of individuals impact their capital, inciting them to respond in specific ways to multiple logics in hybrid organizing? To answer this question, we conducted an empirical study of a multinational corporation whose employees engage in ongoing research partnerships with its US branch, a public research and development (R&D) lab, a private R&D lab and a private/public lab. All these organizations are active in the area of renewable energy, i.e., engaged in energy transition. Our study investigates how managers and employees of the multinational corporation respond to the multiple logics they encounter in working with their heterogeneous collaborators within this hybrid organizational context.

Our findings point to three components that characterize the structural position of individuals: a) their professional training, b) the type of organizational position they occupy, and c) the length and the variety of their experience working in a hybrid organizational setting. They further suggest that the structural position of individuals imbues them with scientific, social and cultural capital, which in turn influences their adherence to multiple logics. By doing so, they extend Cardinale’s (2018) work on pre-reflective determinants of individual responses to multiple logics to shed further light on how structural position shapes individual propensity to respond in certain ways to conflicting logics. Notably, we mobilize Bourdieu’s (1990) concept of capital to explain in greater detail how individuals develop the pre-reflective tendency to respond in certain ways to multiple logics in the context of hybrid organizing.

Our work helps specify how structural positions influence individuals’ propensity to respond in specific ways. In so doing, we enrich the broader stream of research on why individuals respond differently to conflicting logics in their organizational setting. Our observations may help scholars better articulate how dispositions toward certain logics, derived from the structural positions that individuals occupy, may articulate with individuals’ cognitive capacities, interpretative faculties and proclaimed identities to encourage them to respond in certain ways at the encounter of multiple logics in the context of hybrid organizing. Such insights may ultimately help shed new light on how to manage hybrid organizations (Battilana & Lee, 2014) in a way that enhances organizational performance.

The paper is structured as follows. First, we review the literature on hybrid organizing, individual responses to multiple institutional logics and capital. We then present our case study and methodology, as well as our key findings. The paper concludes with a discussion of how our findings contribute to the literature on hybrid organizing and organizational responses to institutional complexity.

HYBRID ORGANIZING: INDIVIDUAL RESPONSES

Hybrid organizing consists in using elements from different institutional logics to fulfill organizational purposes (Battilana & Dorado, 2010). When multiple logics are managed well, such combinations can enhance organizational performance. In an empirical study, Powell and Sandholz (2012a) show that individuals contribute to the success of biotech start-ups by combining science logic with business logic. Although institutional logics sometimes coexist or co-evolve (Dunn & Jones, 2010), and occasionally even converge (York, Hargrave & Pacheco, 2015), multiple logics frequently compete with one another (Thornton, 2002), generating unproductive tensions that are often experienced as

Although hybrid organizations are not necessarily arenas of contradictions (Lallemand-Stempak, 2017), hybrid organizing can be challenging for the individuals who struggle with multiple logics and ambiguity in their daily practices (Pache & Santos, 2013a). Empirical research highlights the contradictions that individuals experience in hybrid organizing (Bjerregaard & Jonasson, 2014) and examines how they manage these contradictions in their everyday organizational practice (McPherson & Sauder, 2013; Pache & Santos, 2010), or as they test novel, contradicting practices (Dansou & Langley, 2012). For instance, individuals may manage contradictions creatively. Besharov (2014) shows in a study of a socially responsible retail chain that individuals combine social logic and commercial logic to mitigate tensions among diverse members. Similarly, (Blomgren & Waks, 2015) found in a Swedish health care study that “hybrid professionals” (i.e. medically trained individuals in managerial positions) helped manage conflicts resulting from the intersection of four conflicting institutional logics—a democratic logic, a professional logic, a managerial logic and a market logic. They managed internal tensions by constructing problems and solutions that integrated elements from all four logics. This research points to the relevance of understanding how individuals apprehend and address multiple logics in the context of hybrid organizing.

INDIVIDUAL RESPONSES TO MULTIPLE LOGICS

A stream of research examines how individuals apprehend, enact and relationally define logics in an organizational setting (Smets & Jarzabkowski, 2013). Pache and Santos (2010) suggest that individual actors respond similarly to the same multiple logics in the sense of engaging in selective coupling. In contrast, Voronov and Yorks (2015) propose that individuals respond differently to the same combination of logics. Supporting the latter argument, Pratt and Foreman (2000) propose four different types of responses to conflicting logics: compartmentalization, deletion, integration and aggregation. Related responses include defiance (Glynn, 2000), compartmentalization (Creed et al., 2010) and hybridization (Powell & Sandholtz, 2012a). Gautier et al. (2018) suggest that compartmentalization and hybridization constitute the two core responses that individuals have to hybrid organizing.

Having established the existence of different individual responses to multiple logics, researchers have turned their attention in recent years to the question of why individuals respond differently to the same constellation of logics in hybrid organizationing. One proposal is that individuals differ in their capacities to apprehend institutional contradictions. This line of work suggests that cognitive capacities shape their individual responses to multiple logics (Voronov & Yorks, 2015).

A second proposal relates to the interpretative nature of multiple logics. This line of work suggests that individuals resort to different responses because they apprehend and interpret institutional logics somewhat differently (Creed et al., 2010), for example, as they have different critical capacities (Jaumier, Daudigeos & Joannides de Lautour, 2017). For instance, individuals may apprehend institutional logics through their education and work experience, (professional) organizations in which they participate or by way of their membership in a given society (DiMaggio & Powell, 1983; Thornton, Ocasio & Lounsbury, 2012). Interpretive differences may also flow from some types of social communication
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patterns being more acceptable than others in certain contexts (Nisbett, Peng, Choi & Norenzayan, 2001). For instance, Nisbett and colleagues found East Asians to be holistic, attending to the entire field and assigning causality to it, whereas Westerners were more analytic, paying attention primarily to the object and the categories to which it belongs and using rules, including formal logic, to understand behavior.

A third proposal pertains to individuals’ identification with logics, that is, their depth of engagement with different logics. Since internal identification is a core component of institutional logics (Friedland, 2012), individuals may struggle to compose with multiple logics. Pache and Santos (2013a) propose that individuals are more likely to compartmentalize two logics when they are unfamiliar with them, or do not identify with any of them, while they are most likely to combine or hybridize logics when they identify with both. This pattern echoes the practices of “amphibious entrepreneurs” that Powell and Sandholtz (2012a) describe in the context of biotechnology. They show that the founders of new biotech companies who identified with both the science logic and the business logic through their past experiences, were more likely to carry practices and assumptions across domains and to combine the elements of both logics in a sustainable way. Other researchers also highlight identification, including role identities and personal identities, as a determinant for how individuals respond to multiple logics that they perceive to be conflicting (Gautier et al., 2018; Wry and York, 2017).

Literature on competing institutional logics predominantly rests on the assumption that organizational members’ attitudes toward a given logic are driven by the degree to which they have been embedded in this logic through prior education or professional experience (Bourdieu, 1990; DiMaggio & Powell, 1983). While these proposals emphasize individual features, they do not clearly explain how individual features influence individuals’ adherence to multiple logics, hence influencing individuals’ responses to institutional complexity (Pache & Santos, 2013a).

CAPITAL

The notion of capital refers to resources that individuals draw upon and deploy in their pursuit of life (Özbilgin, Queen Mary & Nord, 2005). Bourdieu (1989) identified four types of capital: a) economic capital, which is related to heritage resources or income, b) cultural capital, derived from an embedded state (e.g. culture, language, knowledge of social codes), c) social capital, understood as a set of relationships and networks that the individual can operate, and d) symbolic capital, which refers to the expression of authority and legitimacy induced by other forms of capital that the individual has in a given field (Bourdieu, 1989). Additional forms of capital may exist, such as scientific capital, which is specific to the field of research (Golsorkhi & Huault, 2006).

Research suggests that capital can have both organizational and field-level effects. Individuals may use their social and material capital to resist organizational change (Shimoni, 2017) or they can leverage their social and cultural capital in the pursuit of institutional change (Maguire, Hardy & Lawrence, 2004). By studying clinical managers at the National Health Service in the United Kingdom, Battilana (2011) shows how social position, both within the field and within the organization, influences actors’ likelihood to initiate organizational change that diverges from the institutional status quo (Battilana, 2011). In the institutional entrepreneurship literature, institutional entrepreneurs use their social and cultural capital to convince other actors to endorse and support the
implementation of their vision for divergent institutional change (Battilana, Leca & Boxenbaum, 2009). In a context of competing logics, human and social capital can enable founders of local banks to succeed as entrepreneurs (Almandoz, 2012).

Individual capital influences not only actors’ likelihood to initiate change in a context of hybrid organizations, but also their likelihood to hybridize multiple logics. In a study of market finance organizations that invest in French film production, Jourdan and colleagues (2017) show how actors with low legitimacy in the field convert their financial capital to social capital to facilitate collaboration across multiple logics (Jourdan, Durand & Thornton, 2017). In another study, Pache and Santos (2013a) suggest that individual identification with multiple logics predisposes individuals to engage in hybridization. Their findings echo those of a study on new biotech companies, which found executives to be more likely to mix practices from dual logics when they possessed social and technical skills and capital accumulated from past experiences in both science and venture capital domains (Powell & Sandholtz, 2012a).

This line of work suggests that capital predisposes individuals to hybridize multiple institutional logics. However, we still lack insight into how individuals acquire such capital. To address this topic, we conducted an empirical study on which structural positions shape the capital that individuals accumulate and use, often implicitly, to respond to multiple logics in a hybrid organizational environment.

METHOD

CASE SELECTION

We conducted an empirical case study of hybrid organizing within the French energy sector. Our case study took place in a recent R&D division for renewable energy within a large multinational corporation, headquartered in France, which we refer to as French Renewable Energy (FRE). FRE’s R&D division for renewable energy is engaged in hybrid organizing, as it has developed a complex set of research collaborations with three external partners: 1) Private R&D lab, which has experience working with industrial partners, 2) Public R&D lab, which is a purely academic organization in France, and 3) US Energy Corporation (USE), which is a worldwide leader in renewable energy technology, based in the United States. FRE acquired 66 percent of the shares of USE in 2011 and has engaged proactively since 2014 in developing Private/Public R&D lab, a hybrid organization for renewable energy technology, which became fully operational in 2017. FRE has multiple research contracts with USE, the public R&D lab, private R&D lab and private/public R&D lab, each of which has their own means, norms and goals. This case study of hybrid organizing is a good example of the tensions that often arise when organizations pursue multiple institutional logics (Battilana & Dorado, 2010; Besharov, 2014). As such, it offers insight into individual responses to multiple logics.

DATA COLLECTION

The data consist of interviews, conducted in 2014, with employees of FRE’s renewable R&D division. Interviewees were selected in collaboration with FRE managers and comprised 18 of the 31 employees of FRE, the public R&D Lab or private R&D Lab that engaged in this hybrid organizing initiative. The 18 interviewees were distributed equally across
these three organizations and interviews were conducted on site at the premises of their own organization. None of them are located at the private/public R&D lab or USE energy corporation, but they interact and sometimes take guidance from them. The first author conducted semi-structured interviews with the selected individuals, inquiring about their interpretations of their complex work environment, the challenges they perceive and how they responded to these challenges. Interviews lasted on average 47 minutes and totaled 17 hours. All interviews were recorded and transcribed, except for one interview which could not be recorded and subsequently was removed from the study.

DATA ANALYSIS

The first author engaged in open coding of the data to identify salient themes, which she subsequently reduced to first and second order themes through iteration with the literature. She first identified the widespread existence of two institutional logics, science and market, which helped her identify the setting as an example of hybrid organizing. She then identified two different types of responses to the two logics, which she coded as compartmentalizing and hybridizing after iterating with literature on individual responses to multiple institutional logics. The Appendix table A1 shows those two responses by individuals' location, type and letter proxy.

Subsequently, she turned her attention to the implicit forces that interviewees mentioned as shaping their individual response to multiple logics. Iterating with the literature on propension, she identified three components of individuals' structural position that implicitly shaped their response: 1) individuals' professional training, 2) type of organizational position, and 3) length and variety of their work experience in a hybrid organizational structure. These three elements represent the structural positions that condition individuals to respond in specific ways to multiple logics.

Finally, the first author searched for patterns in how individuals in a given structural position apprehended institutional logics and implicitly adopted a particular response to multiple logics. Coding involved iteration with the work of Bourdieu (1990), which led to the identification of three salient types of capital—scientific, social and cultural capital—that give individuals a propensity to respond in a particular way to multiple logics. These three forms of capital, and the structural positions that produce them, represent our core research findings. Other minor elements of structural position and forms of capital also emerged from this coding, but they were not retained as core findings in as much as we deemed them to be relatively minor and insignificant in comparison to our core findings.

FINDINGS: DEVELOPING INDIVIDUAL PROPENSITY TO RESPOND IN PARTICULAR WAYS TO MULTIPLE INSTITUTIONAL LOGICS

FRE engaged in hybrid organizing to develop the renewable energy sector. Its hybrid organizing involved two logics, science and market, and the engagement of three to four private and public organizations. Their objective was to foster synergy between a science logic and a market logic to increase their market share of this rapidly developing sector. Individuals who took part in their hybrid organizing tended to respond in one of two ways to the multiple logics. Either they compartmentalized or hybridized them, the latter being the most common response among informants. We found their individual response to multiple logics to be
influenced by the amount of capital they possessed. We identified three types of capital that imbued individuals with a propensity to respond in a particular way to multiple logics: 1) scientific capital, consisting of scientific knowledge and skills, 2) social capital, which refers to social exposure and networking that individuals can activate, and 3) cultural capital, which manifests in a good understanding of norms and mastery of language. The more (types of) capital an individual possessed, the more likely he or she was to engage in hybridization rather than compartmentalization.

We further investigated the structural positions that enabled individuals to develop the different types of capital. Our analysis points to three salient features of their structural position: professional training, type of organizational position and length and variety of their work experience in a hybrid organizational structure. In the following sections, we introduce each form of capital and show their relationship to these three features of individual social position. Globally, our findings point to social position as an important element in developing individual propensity to respond in a particular way to multiple logics.

SCIENTIFIC CAPITAL

Scientific capital refers to the scientific knowledge and skills that an individual possesses. One way in which individuals acquire scientific capital is through their professional training experiences. One interviewee referred to his prior training in a different field as an asset for his current position:

I did my bachelor and PhD in Greece— my PhD was more experimental in laser, in a different sector, nothing to do with this component. Then I did a short post doc in Greece, which was half experimental and half simulation.... It is good to have that [type of] experience; since there isn't anyone as experienced as me in my area, despite confidential challenge, if you explain [to USE] what you need.... They tend to sympathize so far! (Z)

Prior professional training in both experimental and applied research and science eased this person's ability to work on hybrid tasks, combining science and industrials methods and practices. Such experience imbued this individual with scientific capital.

Another individual evoked his training in both science and business as an asset that helps him/her navigate multiple logics:

I have a particular profile compared to others, I went to a major engineering school where I specialized in materials science, and then I did a postgraduate degree in project management in a business school. That is something I can use and help me navigate between academic and businesspeople. (T)

This quote suggests that professional training in both science and business can increase individuals' breadth of knowledge, and thereby enhance their scientific capital, which in turn helps them bridge and navigate between dual logics.

Another way in which individuals acquired scientific capital was through length and variety of experience working in a hybrid collaborative research context. Evoking his prior experience, one manager explained that confidentiality concerns made it difficult to fully collaborate in a hybrid constellation, but that his/her prior experiences increased his/her scientific knowledge and ability to work with a variety of colleagues:
It takes experience, someone with just a thesis is not enough for most of the jobs here—you must have done something else, something different to acquire the malleability needed. But I talk about my experience. When I talk with my colleagues, what I do is very easy. Their work and context are much more complex, and I am not sure I would have the knowledge or capacity to manage it myself with my background. (L)

As this individual suggests, the scientific capital acquired through prior work experience in multiple scientific domains constitutes an asset for managing the technical complexity of a multi-logic setting. Scientific capital also appears as an asset in terms of gaining sufficient malleability for hybridizing logics.

Evoking his prior working experiences working in both fundamental and applied science, another individual explained that he learned how interactions and collaborations among scientists can be leveraged to rapidly solve complex scientific problems:

If it does not work, either we are very strong and manage to find a solution, or we will ask the neighbor some question. From working both on fundamental and applied physics, I learned that you will advance less quickly if you remain locked than if you look for information, interact with people, and engage in collaborations. When we interact, we must remain humble and make efforts. (N)

Past working experiences in explorative and exploitative science increased this person's scientific capital. Moreover, it stimulated him to increase his social capital by engaging with members from both domains to perform his work.

As Appendix table A2 indicates, other individuals also referred to the length and variety of their professional training and working experiences in both academic and applied science as a source of scientific capital that enabled them to work in a setting characterized by dual logics. This type of capital facilitated their technical capacity and their cognitive facility to work and navigate in a hybrid work setting. The data suggest that scientific capital helps individuals identify with the scientific logic and may predispose them to hybridize logics to the extent that they also identify with the business logic.

SOCIAL CAPITAL

Social capital refers to the social exposure and networking that individuals are able to activate in their hybrid work setting. We found social capital to be derived from the type of organizational position they occupy and the length and variety of individuals’ work experience in a hybrid setting.

One way in which individuals gain social capital is to occupy certain favorable positions in the hybrid work setting. Evoking his/her current position, a person working in the company's headquarters explained that working in a transversal function exposed him/her to various departments and gave him/her a large social network to draw upon:

I work in a transverse function where we work with a lot of services, including finance, legal. Indeed, there are influential interactions…. At the moment, we have these discussions about how to mix R&D, innovation and the generation of new commercial products; this is the right vision! (D)
This quote shows that the individual gains social capital from the position he/she occupies in this hybrid work context, a position that allows him/her to mix multiple objectives and practices.

Not all individuals, however, gain the same amount of social capital from the position they occupy. For instance, an academic researcher spoke about the work-related difficulties he/she experienced due to insufficient social capital, resulting from few opportunities to engage in social interaction and networking activities:

*What can help me is to meet people who agree to discuss the technical recipes. But when other academic researchers hear that I do an industrial dissertation, they create a distance, because it annoys them that I ask too many questions. I better not make waves and so I tend to work separately.* (J)

This quote shows that some individuals occupy a position that gives them low levels of social exposure, interaction and networking. Their low social capital appears to limit their adherence to, and identification with, multiple logics, resulting in a propensity to withdraw from potential opportunities to engage with multiple logics.

Another element of social position that appears to stimulate a gain in social capital is that of length of engagement. One interviewee brought up the length of his/her participation in a collaborative project as a source of social capital. He explained that the length of engagement with shared projects helped both academic and industrial actors build relationships and interact with one another:

*I place the human before everything else and especially before the technical aspect of our job. A unit was built to connect academic and industrial partners, and we are, in fact, quite complicit. The projects that bind us together create relations between the various people and help us address shared concerns. The human and social assets we develop are important for our collaboration to work.* (T)

This quote emphasizes how shared projects generated trust between different members and imbued its participants with social capital. The interviewee also suggested that this capital constitutes an important asset for a successful collaboration between academic and industrial partners, implying a propensity to hybridize logics.

The other way in which social position shapes an individual’s social capital is through the length and variety of work experiences in a hybrid organizational context. One interviewee explained that the work setting prevented her from engaging in hybridization, forcing her to engage in compartmentalization:

*To better understand what certainly fueled my decision to stop... I felt isolated, there was a lot of information that I did not have. It was also very different from what I had experienced before; there was greater transparency, we had all the info. Here everything is partitioned, which is difficult for me. I need more interactions, exchanges... I always liked to spend time in the lab, talk with the technicians who can give me ideas, but here, no, it's very compartmentalized.* (S)

This quote indicates that some individuals with prior experience from a hybrid organizational setting had gained sufficient social capital to stimulate them to hybridize logics. When this person felt unable to exercise her propensity to hybridize logics in her current work context, she quit her job, which she had experienced as forcing her to compartmentalize. This
example underscores the forcefulness with which social position acts upon an individual's propensity to hybridize.

Appendix table A2 shows additional data suggesting that social capital acquired from past experiences and from a current position in a hybrid organizational context predisposes individuals to either hybridize or compartmentalize logics.

CULTURAL CAPITAL

Cultural capital pertains to a good understanding of norms and mastery of language. This type of capital appears as predisposing individuals to hybridization. We found that individuals derived cultural capital primarily from one dimension of their social position: the length and variety of their experiences working in a hybrid organizational context.

To explain his tendency to hybridize, one industrial manager brought up his experience working with an academic partner who exposed him to different aspects of the science logic, from which he learned and benefitted. In particular, he mentioned freedom, creativity and flexibility as academic norms and practices that he learned and integrated into his industrial performance criteria:

Our partnership with an academic has brought me and us a lot of expertise, freedom, creativity—things we cannot do in our more constrained industrial environment; this experience brings flexibility and openness to do new things.... So now the criteria for success [concerning our partnerships] are numerous. They can include the exchange of people between partners, the [number of] publications, the patents, the number of PhD students trained. These are the kind of things that are good indicators [of a successful collaborative partnership]. (I)

This quote suggests that individuals who gain an understanding and experience of the academic codes and language may be more inclined to hybridize the science logic and the market logic.

Another manager who engaged in a research collaboration between industrial and academic partners pointed to the challenge of combining explorative and exploitative research. He explained that his prior experience from other hybrid organizational settings helped him accept some "rules of the game" that apply to hybrid organizing.

The challenge we have with our industrial partner is to balance exploitative and explorative work. It does not surprise me; these things happen; you could have expected this tension naturally. I also experienced this tension in other companies. (B)

This quote shows that some individuals readily embraced the tensions related to working in a hybrid organizational setting and learned the appropriate codes for managing this tension.

Our findings suggest that previous experiences from hybrid organizational settings can increase individuals' understanding and mastery of the language and norms associated with working with dual institutional logics. Previous experiences in similar hybrid organizational settings seem to facilitate individuals' acceptance of conflicts between logics and enhance their ability and willingness to hybridize logics.

As further indicated in Appendix table A4, our findings suggest that individuals derive cultural capital from the length and variety of their experience working in a hybrid organizational setting. Individuals with high cultural capital (i.e. a good understanding of the norms and language...
related to different logics) might be predisposed to hybridize logics because they understand the practices and codes of both logics and therefore are better able to engage in hybridization.

**DISCUSSION**

When organizations resort to hybrid organizing to develop more effective and robust solutions to a variety of organizational and societal challenges, they also tend to increase tensions for employees and managers. This situation has drawn attention to the question of how individuals experience and respond to institutional contradictions in their work environment (Creed et al., 2010; Suddaby, 2010). Having identified that individuals respond differently to the same hybrid context (Almandoz, 2012; Creed et al., 2010; Lok, 2010), scholars have started to examine why individual responses differ.

As a contribution to this line of work, we analyzed the role of structural position. More specifically, we identified different types of capital that predispose individuals to respond in certain ways to multiple logics. We identified three forms of capital that appear to increase individuals’ propensity to engage in hybridization rather than in compartmentalization of logics: scientific capital, social capital and cultural capital. We argue that individuals who possess one or more of these forms of capital are predisposed to hybridize logics in a work setting characterized by multiple logics.

We further examined how individuals’ structural position enabled them to accumulate capital. Our findings point to three elements of structural position that help individuals gain capital: a) individual professional training, b) the type of organizational position an individual occupies, and c) length and variety of individual work experience in a hybrid organizational setting. We found professional training to enhance scientific capital and type of organizational position to stimulate social capital. Most significantly, length and variety of individual work experience in a hybrid organizational setting seemed to help individuals gain all three forms of capital. Collectively, our findings suggest that individuals’ structural position produces different types of capital that predispose individuals to either hybridize or compartmentalize multiple logics in a hybrid organizational setting. We propose that the more capital an individual possesses, the more likely he or she is to hybridize logics when working in a hybrid context.

**THEORETICAL IMPLICATIONS**

Our findings contribute to the emerging literature on individual responses to multiple logics in hybrid organizing. In particular, we advance insight into explanations that do not rely on strategic calculations. Previous literature suggests that individuals experience institutional logics through three main channels (DiMaggio & Powell, 1983; Thornton et al., 2012): their education and work experience, organizations or groups in which they participate (e.g. professional organizations) and experience with broader societal logics of the family, religion, state, market, profession and corporation (Friedland & Alford, 1991). The functional background of individuals may also shape their apprehension of contradictions related to multiple logics (Voronov & Yorks, 2015), as may their institutional biography, that is, their family history and their professional and personal experiences (Bertels & Lawrence, 2016). Our study further specifies that the elements that matter most are those that generate specific types of
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capital for the individual. In our study, scientific, social and cultural capital were most salient. Other hybrid contexts may emphasize different types of capital.

Previous work has also inquired into how structural position shapes biography (Almandoz, 2012; Bertels & Lawrence, 2016; Powell & Sandholtz, 2012a). We extend this line of work with further specification of how individuals’ structural position enables them to acquire the types of capital that shape their responses to multiple logics in a hybrid setting. In particular, we found that professional training, type of organizational position occupied and length and variety of work experience in a hybrid organizational setting mattered most for individuals’ acquisition of capital. Other hybrid settings may privilege other elements of structural position. Specifically, we found that the length and variety of work experience in a hybrid organizational setting enabled individuals to accumulate all three salient types of capital. Such experience helps them gain scientific understandings and skills, social status and connections, and cultural competencies in relevant language and norms, which enable them to act as “boundary actors” (Smink, Negro, Niesten & Hekkert, 2015). Some positions in a hybrid organizational setting attribute high social capital to individuals, such as trust, emotional bonds, facility in operating across logics and the ability to mitigate tensions between heterogeneous organizational members. Individuals’ professional training may also increase their scientific capital, enabling them to navigate demanding scientific challenges. We found all three elements of social structure to enhance individuals’ cumulation of capital and, thereby, develop their propensity to hybridize.

Our findings also speak to a related stream of research on identification, including role identities and personal identities. Previous work suggests that identity is a strong determinant for how individuals respond to conflicting logics in hybrid organizations (Gautier, et al., 2018; Wry and York, 2017). We did not engage directly with identity, but our identification of three salient forms of capital may be leveraged to shed light on the individuals’ identity formation, including their capacity to apprehend and assume different role identities.

Finally, our work engages with the literature on boundary-spanning as a source of organizational innovation. Previous work suggests that new organizational forms arise through hybridization. Powell and Sandholtz (2012a) show that individuals’ social capital enabled the creation of new organizational forms in the field of biotechnology between 1972 and 1981. Boundary-crossers, also known as “amphibious” entrepreneurs, had experienced disparate social worlds—the academic world and the realm of biotech start-ups—which helped them gain social capital in the form of social legitimacy and technical knowledge of, and capabilities for, both worlds. Using this social capital, they developed a new organizational form by bundling and hybridizing practices from both science- and technology-based ventures. Our work contributes to this stream of research by adding scientific capital and cultural capital to their emphasis on social capital.

PRACTICE IMPLICATIONS

In addition to these theoretical contributions, our findings help advance managerial practice in the context of hybrid organizing. Managers struggle with how to structure and operate organizations that span multiple logics, notably those related to combining economic and mission goals. This topic has taken on great importance in recent years. Scholars have suggested that managers can develop areas of interaction and spaces of
negotiation to maintain a productive tension between competing institutional logics, thereby facilitating their coexistence (Battilana, Sengul, Pache & Model, 2015). Our work can help managers leverage structural position to facilitate the management of multiple logics in hybrid organizing.

Another important issue in hybrid organizing pertains to human resource management. Hiring policies are important for developing organizational identity among members of a hybrid organization (Battilana & Dorado, 2010). Our study suggests that managers of hybrid organizing can attend to different types of capital when they develop hiring policies and stimulate career development. Such attention may help them select and develop individuals' capacity to apprehend and hybridize conflicting logics.

Individual responses to tensions associated with hybrid organizing can also be leveraged to increase the performance of hybrid organizations. Research suggests that “hybridizers” trigger innovation by combining multiple logics in ways that foster synergies between them, for instance through selective coupling (Meyer & Hammerschmidt, 2006) or creative synthesis (Dalpiaz, Rindova & Ravasi, 2016). Hybridizers can, in this way, foster innovation and high performance in organizations populated by members with sharply different values (Besharov, 2014). To exemplify, managers of Cambridge Energy Alliance, a public–private partnership, leveraged tensions between different logics to trigger phases of innovation, which in turn produced novel solutions to significant problems (Jay, 2013). Our work sheds new light on how individuals gain the ability to navigate multiple logics. Such insights can be used to help hybrid organizations become innovative and increase their performance.

LIMITATIONS

Our findings also have certain limitations. One limitation is that our informants include a relatively low number of compartmentalizers (4 out of 18). It is possible that few informants opted for compartmentalization because such individuals might have left the organizational unit once it adopted multiple logics. In fact, Pache and Santos (2013a) propose that individuals are more likely to compartmentalize when they are unfamiliar, or do not identify, with one or more of the logics in a hybrid setting. Future research could avoid this potential selection bias by collecting data from an earlier stage of hybrid organizing, as early as its inception.

Another limitation of our study is that we collected data from a single context, namely a scientific unit of a large multinational company. This context may well have shaped our findings, for instance by increasing the salience of scientific capital relative to a non-scientific unit. Future research could investigate hybrid organizing in other organizational contexts to determine if other dimensions and other categories of capital emerge. For example, it could be interesting to carry out a similar empirical study in social enterprises, or within either the creative or financial industries.

Finally, propensity is notoriously difficult to study empirically in as much as individuals rarely articulate their implicit inclinations. Our study points to capital as an implicit force that predisposes individuals to respond in a particular way to multiple logics in a hybrid setting. Our methodology made it difficult, however, to distinguish propensity from strategic behavior since individuals also referred to capital in their account of strategic considerations. Different types of data sources, notably non-verbal ones, could help confirm our findings in future research. For instance, future work could examine in greater depth the pre-reflexive aspect of individuals' responses to multiple logics. Bourdieu’s (1989) notion of habitus could be
mobilized, for instance, to study individuals’ dispositions to respond in particular ways to multiple logics. It would also be worthwhile to study the interaction between strategic uses of capital and its pre-reflexive forms to explain more fully, potentially even predict, individual responses to multiple logics (see Cardinale, 2018).

CONCLUSION

The rapid growth in hybrid organizing has prompted researchers to examine why individuals react differently to the same institutional logics in a hybrid organizational context. Our analysis shows that their structural position helps individuals gain the types of capital they need to effectively navigate multiple logics in hybrid organizing. Such insights may help managers and employees engage with hybrid organizing (see Battilana & Lee, 2014) and enable them to achieve the ambitious goals of innovation and societal problem resolution that we increasingly associate with hybrid organizing.
## APPENDICES

### Appendix table A1: Individual responses to dual institutional logics

<table>
<thead>
<tr>
<th>Compartmentalizing</th>
<th>Hybridizing</th>
<th>Location</th>
<th>Type of individual</th>
<th>Letter proxy</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>Lab F</td>
<td>Industrial researcher</td>
<td>L</td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>Lab F</td>
<td>Industrial researcher</td>
<td>J</td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>Headquarter</td>
<td>Non manager</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>Headquarter</td>
<td>Manager</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>Lab B</td>
<td>Industrial researcher</td>
<td>T</td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>Lab B</td>
<td>Industrial researcher</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>Lab B</td>
<td>Industrial researcher</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>Lab B</td>
<td>Industrial researcher</td>
<td>Z</td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>Lab B</td>
<td>Industrial researcher</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>Lab F</td>
<td>Industrial researcher</td>
<td>K</td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>Lab F</td>
<td>Industrial researcher</td>
<td>M</td>
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<td>X</td>
<td>Lab F</td>
<td>Industrial researcher</td>
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<td>Industrial researcher</td>
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<td>Manager</td>
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<tr>
<td>Headquarter</td>
<td>Non manager</td>
<td>A</td>
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<tr>
<td>Headquarter</td>
<td>Non manager</td>
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<tr>
<td>Headquarter</td>
<td>Manager</td>
<td>E</td>
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### Appendix table A2: Scientific capital

<table>
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<tr>
<th>Elements of structural position</th>
<th>Verbatim</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional training</td>
<td>- “I did my bachelor and PhD in Greece – my PhD was more experimental in laser, in a different sector, nothing to do with PV. Then I did a short post doc in Greece, which was half experimental and half simulation (…). It is good to have experience; since there isn’t anyone as experienced as me in my area, despite confidentially challenge, if you explain to USE what you need it is clear why I ask; they tend to sympathize so far!” (Z)</td>
</tr>
<tr>
<td></td>
<td>- “I am an engineer (…) My background, before joining this company; I did a PhD on mechanical processes for PV solar cells also and I did it between Frauenhoffer and the university in Spain (…) each institute has its own policies (…) if you are an analytical person, more interested in how things are working in a very scientific way, analytical; then you get frustrated here! Even me, sometimes I am afraid that I may lose a bit what is going on if I am not taking care of my own academic training (…) We are working through very compartmented areas; also we cannot talk too each with each other; we have very compartmented tasks and only have info on ‘need to know’ basis.” (Y)</td>
</tr>
<tr>
<td>Type of organizational position occupied</td>
<td>- “My current title is ‘senior advisor technology and strategy solar’; I have a role essentially of expert, internal council mainly with the direction; not doing research on the ground. (…) In collaborative projects, you can not really speak of a joint research team, rather a detached team, which is part of a common project.” (C)</td>
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<td></td>
<td>- “I report directly to the head of R &amp; D. I have been in this position for 3.5 years at headquarters. (…) The conditions for a successful partnership between academics and industry are: a very, very great preparation in governance, in the processes that govern collaboration.” (G)</td>
</tr>
<tr>
<td>Length and variety of individual work experience in a hybrid organizational setting</td>
<td>- “It takes experience, someone with just a thesis is not enough for most of the jobs here – you must have done something else, different to acquire the malleability needed. But I talk about my experience. When I talk with my colleagues, what I do is very easy. Their work and context is much more complex and I am not sure I would have the knowledge, capacity to manage it myself with my background (…) The collaborative institute is a long-term, it’s several partners, while our industrial partner with whom I work is the exclusivity, the confidentiality – so for me, it’s difficult to make the two at the same time (…) I understand that sometimes we can not share things with colleagues in the academic lab, because we are not part of the same company and I have nothing to get from it; I prefer to detach myself.” (L)</td>
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<td>- “It’s so different from how I’ve been working before (…). I need to talk a lot, I need to have all the information, there is more mistrust – of overall, I feel like that, if I do not have enough information, data, I have no idea, I lose my creativity of scientist (…) I had the impression of having to do development, it was difficult for me, even if I had already worked in an industrial environment, but more pure research than here. Here I almost had the impression to forget what I knew how to do, I did not manipulate anymore.” (S)</td>
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<td></td>
<td>- “What I did in Frauenhoffer was also different; very German so they only work with German industry; it was different. So here is again another collaborative model, closer to academics. But all those experiences allow to adapt more easily to feel at ease in a collaborative partnership.” (K)</td>
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<td></td>
<td>- “Despite the partnerships, we have to manage the need for confidentiality, so, although in a relationship of trust, we must set up appropriate firewalls to avoid leaks. But this is something I always observed, it is normal.” (G)</td>
</tr>
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<td></td>
<td>- “According to my experience when you are in a high degree of maturity of research, you have sequences that repeat themselves a lot of times. This is the case in the life process of a project at USE, constantly repeat. The systematic iteration in one place will be useful at other times, because we know that it will be able to be reproduced. But here, we cannot apply such principles, because here, there are few reproducible things. There is not a routine; every project is different, performance criteria and partners are different. So in this partnership, you cannot mix things.” (G)</td>
</tr>
<tr>
<td></td>
<td>- “I am an engineer (…) My background, before joining this company; I did a PhD on mechanical processes for PV solar cells also and I did it between Frauenhoffer and the university in Spain (…) each institute has its own policies (…) if you are an analytical person, more interested in how things are working in a very scientific way, analytical; then you get frustrated here! Even me, sometimes I am afraid that I may lose a bit what is going on if I am not taking care of my own academic training (…) We are working through very compartmented areas; also we cannot talk too each with each other; we have very compartmented tasks and only have info on “need to know basis.”” (Y)</td>
</tr>
</tbody>
</table>
## Appendix table A3: Social capital

<table>
<thead>
<tr>
<th>Elements of structural position</th>
<th>Verbatim</th>
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</thead>
</table>
| Professional training | - “I have a particular profile compared to others, I went to a major engineering school where I specialized in materials science, and then I did a postgraduate degree in project management in a business school. That is something I can use and help me navigate between academic and more business people.” (T)  
  - “My training is an engineering school, a PhD and an aggregation. Then I worked almost 10 years in the para-public interface between industry and research laboratories and then I went into the industry in industrial research (…) I work in a transverse function where you will work with a lot of services (including finance, legal). Indeed, there are interactions of influence (…) At the moment there are these discussions between how to mix R & D, innovation and how to generate new commercial products; this is the right vision!” (D)  
  - “For a year now, the information has become extremely restrictive, but as a PhD student, we do not know what the engineers are doing here, they do secret manipulation, so I do not even ask them for it. I am used to being isolated and it is easier in a way (…). What can help me is to meet people who agree to discuss the technical recipes. But when other academic researchers hear that I do an industrial thesis, it puts a distance, because it annoys them that I pose too many questions so do better do not make waves and work separate.” (J)  
  - “We may have more legitimacy by working as I have for a long time at headquarters, so I know a lot of people (…). I also have a communication role I am a good intermediary between the scientific contributors, up to the program managers and the link with the hierarchy, to pass the messages on what is going and what is wrong. Ears at all levels: people will not hesitate to come to confide, whether more or less anonymous.” (A)  
  - “If you hire the big ‘neerd’, a scientific expert who knows his field very well but is unable to work with others, to be flexible, it’s difficult to manage here from what I experience currently on the job. (…). It was a little bit compartmentalized at the beginning because of confidentiality issues, but I find that people have come to know each other, and share. The goal was to get to know each other, to work together with others. a common vocabulary and there is, it also facilitates the sharing of best practice (…). We can push the logic further on the cooperation to promote the feeling of belonging to a team. There is no tension, but more but then you also have more pressure. If you very far, doing more explorative research, then you have less attention. The greatest is to be between research and applications. It is a perfect balance, close to USE, but still research.” (K)  
  - “If you hire the big ‘neerd’, a scientific expert who knows his field very well but is unable to work with others, to be flexible, it’s difficult to manage here from what I experience currently on the job. (…). It was a little bit compartmentalized at the beginning because of confidentiality issues, but I find that people have come to know each other, and share. The goal was to get to know each other, to work together with others. a common vocabulary and there is, it also facilitates the sharing of best practice (…). We can push the logic further on the cooperation to promote the feeling of belonging to a team. There is no tension, but more but then you also have more pressure. If you very far, doing more explorative research, then you have less attention. The greatest is to be between research and applications. It is a perfect balance, close to USE, but still research.” (K)  
  - “Currently, understanding in detail what everyone does on different projects is complicated: there is confidentiality, which must be managed by contracts – you can just say that you work in a particular collaboration, It’s rare that you can talk more, you have to keep things separate.” (G)  
  - “In collaborative subjects where both academic and industrial partners are involved, as I experience in my current job; well, this line is very difficult for me, so I prefer to work only on industrial subjects, then bridge with the academic lab, supervising a PhD student. But not myself directly with the lab (…). The collaborative institute is a long-term, it’s several partners, while our –industrial partner with whom I work is the exclusivity, the confidentiality - so for me, it’s difficult to make the two at the same time.” (L) |
| Type of organizational position occupied | - “Here you can more easily have a coffee with someone from HR, finance or someone else and they tell you things which is even more important how French culture IS like this! I can know people here, not just for my research but for also for other things, and it is great. (…). Who ‘we’ are for me is two things: our hosting academic partner and the whole group; I think sometimes I prefer to work more thinking about the academic partner because the rest can be quite complicate sometimes but yes it is both (…). From my experience now, I learned that if you are closer to pilot/production research activities, USE will know you more but then you also have more pressure. If you very far, doing more explorative research, then you have less attention. The greatest is to be between research and applications. It is a perfect balance, close to USE, but still research.” (K)  
  - “We may have more legitimacy by working as I have for a long time at headquarters, so I know a lot of people (…). I also have a communication role I am a good intermediary between the scientific contributors, up to the program managers and the link with the hierarchy, to pass the messages on what is going and what is wrong. Ears at all levels: people will not hesitate to come to confide, whether more or less anonymous.” (A)  
  - “I interact a lot with our American and also academic industrial partner in France. There are a lot of collaborations with them, with projects that are straddling between the industrialist and our two partner academic labs. The most important point for me is really working on projects with nice people to work with. (…) I place the human before everything else and especially the technique. Yes, there is clearly a unit that has been built between us, partners both academic and industrial – we are quite complicit. The projects that bind us, create links between the various people, including worries that we all shared together. The human, social assets we develop is important for the collaborations to work. (…) The insane researchers alone on his microscope, that’s not enough, it’s important this more humane vision of work, not the classical researcher who has spent his whole life in a lab.” (T)  
  - “I interact a lot with our American and also academic industrial partner in France. There are a lot of collaborations with them, with projects that are straddling between the industrialist and our two partner academic labs. The most important point for me is really working on projects with nice people to work with. (…) I place the human before everything else and especially the technique. Yes, there is clearly a unit that has been built between us, partners both academic and industrial – we are quite complicit. The projects that bind us, create links between the various people, including worries that we all shared together. The human, social assets we develop is important for the collaborations to work. (…) The insane researchers alone on his microscope, that’s not enough, it’s important this more humane vision of work, not the classical researcher who has spent his whole life in a lab.” (T)  
  - “You can have more exchanges if you are in an industrial environment, there are more opportunities.” (V) |

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Long and variety of individual work experience in a hybrid organizational setting

- “To better understand what certainly fueled my decision to stop ... this is my career. I did before that an engineering school, then a thesis that I started in 2007 (...). I always had a foot in one institution and a foot in another, with difficulties because I had on one side a university lab with relatively few means, a functioning more familial and an organization, a non-profit public research center, but a big part of the funding comes from private organizations. So I always had to juggle organizations with different interests. But here we worked too much in silo.” (S)

- “If it does not work, it does not work and there, either we are very strong and we come to find a solution, or we will ask questions to the neighbor. The one who remains locked – in any case, I learned that from working both on fundamental and applied physics – that you will advance less quickly than the one who will look for information, to interact with people, maybe to make collaborations, so when we interact, we must remain more humble, make efforts”. (N)

- “When you do modeling, as I do and used doing, you are not doing something very specific, so you need info on the whole cell; you do not care about what they do, but how they do to have the whole understanding of how the various stakeholders work. Also I need an overview for the parameters and attributes for the whole cell.” (Z)

- “My training is an engineering school, a PhD and an aggregation. Then I worked almost 10 years in the para-public interface between industry and research laboratories and then I went into the industry in industrial research (...). I work in a transverse function where you will work with a lot of services (including finance, legal) Indeed, there are interactions of influence (...). At the moment there are these discussions between how to mix R&D, innovation and how to generate new commercial products; this is the right vision!” (D).
### Appendix table A4: Cultural capital

<table>
<thead>
<tr>
<th>Elements of structural position</th>
<th>Verbatim</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Professional training</strong></td>
<td>- “I have a fairly broad formation; I am a graduate engineer and an electronic doctor, I also have a master’s degree in engineering before I was in another big company. (…) Researchers are not necessarily the most avid of risk and change (…), they like to have clear views and they are intelligent in general, it’s not easy to reassure them. Researchers are people who need a high level of explanation. (…) After the degree of uncertainty due to dealing with different scientific worlds, then is not so high if you are able to give them explanations that satisfy them. (…) My philosophy is mostly not to specialize people, but from time to time people work with a real industrialist and adapt to it, sometimes working on upstream research and adapt to the upstream context.” (I)</td>
</tr>
<tr>
<td></td>
<td>- “Our partnership with an academic has brought us a lot of expertise, freedom, creativity, things we cannot do in our more constrained industrial environment, it brings flexibility, openness to do new things (…). So now the criteria for success (concerning our partnerships) are also numerous in their nature, as can be seen for example in the exchange of people between industrialists, if someone sends people to USE or, conversely, young people from academic partners, it can be the publications, the patents, these are the kind of things that are good indicators, the number of PhD students trained.” (I)</td>
</tr>
<tr>
<td></td>
<td>- “In the organizations I’ve seen everything is always pushed and decided by finance, ‘if I give you 10, do you give me how much?’ But that does not work with research. The spirit here is: – I’m ready to invest in it because I know that expertise and techno are important.” (D)</td>
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<td></td>
<td>- “At the end, my experience working with the various partners of the collaboration is that the objective is to be ahead of the market, for this you need to be as cheap as possible and to be as efficient as possible. For all partners, some goals are the same: how they might do it might be different, but there seems to be a unanimous idea of what we are trying to achieve; so yes, there is agreement. (…) We are doing more exploratory job always in collaboration with our American industrial partner, exploring good options for the future, while he maintains the control of the factory and the exploitative research – of course you cannot decouple totally the long term from the short term research, even more we should tie them, but we are on the ‘far end’ while they are on the ‘close end’”. (Z)</td>
</tr>
<tr>
<td>Length and variety of individual work experience in a hybrid organizational setting</td>
<td>- “I learned that you have to spend time all over the production line to learn. (…) Now, I’ve been working on this job at the headquarter for 2.5 years and before I managed the value chain of integrated research projects, in a company also based in Norway – something pretty close to what I’m managing here (…) Whether in fundamental or applied research, I know that it is not possible for researchers to work without context. So, our industrial partner, I do not give him the choice. If they do not want to give the context to my teams for reasons of confidentiality, in this case, the order is that my teams do not work.” (E)</td>
</tr>
<tr>
<td></td>
<td>- “The aspect of collaborative partnerships with logic, different approaches that include a certain complexity, a certain amount of ambiguity (…). Well, it suits me very well. I probably developed specific skills through all my experiences in a complex setting! You have to be a cat, to be flexible, to adapt as you do not speak in the same way to all your interlocutors (…) These are elements that can totally disrupt people are in fact for me are motivators (…). If we want science to develop, we have to let everyone participate and decide (…). We are in two different minds (…). A researcher must be able to work with a pure academic partner but also with a totally industrial partner, a pure producer, it is a sensitivity that we ask for.” (A)</td>
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<tr>
<td></td>
<td>- “From my limited experience, I have the impression that the people in an academic partnership cannot sacrifice the theory in order to move forward, I have the impression that if we had to share projects with so different mentalities, it would slow us down, so probably best not to keep distance (…) The ways of working are very different. So, it is probably better to keep things separated in order not to break the trust.” (J)</td>
</tr>
<tr>
<td></td>
<td>- “This R&amp;D and I learned through time that at the end, there are big technological affinity, so no history of strategy, no matter who you are, if you’re in science, it does not matter. you are in a company X or Y. So, projects of collaborations were quickly launched.” (X)</td>
</tr>
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<td></td>
<td>- “The challenge we have with our industrial partner is to balance exploitative vs. explorative research does not surprise me; that’s the rule of the game, these things happen; you could have expected this naturally. I also experienced this in other companies.” (B)</td>
</tr>
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<td></td>
<td>- “With my collaborative research fashion years, I am used to share things, even when there is confidentiality; I learned how to navigate. But I know that there are a lot of people that it affects a lot more these privacy issues, maybe harder to live for the younger researchers who experience this for the first time.” (T)</td>
</tr>
</tbody>
</table>
REFERENCES


Virginie Svenningsen-Berthélem is PhD candidate at École des Mines ParisTech. Using neo-institutional theory, she conducts research on structural factors explaining individuals and organizations’ capacity to reconcile multiple institutional logics in hybrid organizations.

Eva Boxenbaum is Professor of Organization and Management Theory at Copenhagen Business School and affiliated with École des Mines ParisTech. She conducts research on how organizational actors shape the innovation and spread of new management practices and organizational forms, using verbal, visual and material modes of communication.

Davide Ravasi is Professor of Strategy and Entrepreneurship at the UCL School of Management, University College London, and Visiting Professor at the Aalto School of Business, Helsinki. His research examines interrelations between organizational identity, culture, and strategy in times of change, and socio-cognitive processes shaping entrepreneurship, design and innovation.

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