

Building Adaptive Capacity in Project Network Organizations: Project Contexts, Network Ties and Relational Practices

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BUILDING ADAPTIVE CAPACITY IN PROJECT NETWORK ORGANIZATIONS: PROJECT CONTEXTS, NETWORK TIES AND RELATIONAL PRACTICES

Abstract

This chapter examines key drivers of variation in adaptive capacity of project network organizations (PNOs). PNOs are defined as strategically coordinated sets of longer-term, yet project-based relationships, which provide for both stability and change in volatile project businesses. While prior research has emphasized the adaptive role of flexible structures and agency, I focus on the role of project variety and contextual embedding and disembedding in building adaptive capacity. Comparing two PNOs in TV movie production, I argue that differences in adaptive capacity are a function of inter-context connectivity, i.e. the level of task and team linkages among diverse project contexts, and the degree to which network ties and relational practices have 'dual quality' in being valuable both within and beyond specific project contexts. Findings have important implications for project, network and organization research.

Key words: Adaptive Capacity, Stability and Change, Network Dynamics, Project-based organizing

INTRODUCTION

Organizational scholars have maintained a keen interest in how adaptability and stability can be reconciled within organizational systems (Farjoun, 2010; Schreyögg & Sydow, 2010). This seems particularly crucial for so-called 'network organizations' (Borgatti & Foster, 2003), which are formed and maintained as inter-organizational settings by legally independent partners to facilitate one-off, repeat or continuous collaboration. Majchrzak et al. (2015) argue that inter-organizational collaborations are inherently unstable and uncertain due to potentially divergent partner interests, competitive forces and other dynamics. It is thus critical for network organizations to develop the quality of "complex adaptive systems [that] exhibit both persistence and change" (Kilduff et al., 2006, p. 1032). That is, in order for network organizations to facilitate collaboration on a regular basis in dynamically changing environments they need to develop an "adaptive capacity". In line with Kilduff et al. (2006), this capacity allows network partners to balance their need for stability and change, while also being able to cope with unknown future circumstances (Parsons, 1964; Sydow & Staber, 2002). Yet, despite growing knowledge about the various drivers of network stability and change (see e.g. Tasselli et al., 2015), we know surprisingly little about

how network partners can build up adaptive capacity effectively within network organizations to facilitate future collaboration. Adaptive capacity is an important part of what some call alliance capability (Schreiner et al., 2009), yet it specifically addresses the capacity of alliances and network organizations to allow for both persistence and change (Kilduff et al., 2006; Das & Teng, 2000).

Having adaptive capacity seems critical in particular when contexts of collaboration change over time or are highly uncertain (Majchrzak et al. 2015). This is the case in so-called project businesses, such as film production, event organizing, complex product and system development, where projects are the dominant form of inter-organizational collaboration (Manning, 2017). Each project is time-limited, often complex and to some extent unique (Lundin & Söderholm, 1995). Yet, project partners in professional project businesses often collaborate repeatedly in similar or changing project contexts. To facilitate this process, they often form “project network organizations” (PNOs), which are typically characterized by “strategically coordinated sets of core project teams and flexible partner pools that sustain beyond singular projects” (Manning, 2017, p. 1399). PNOs have been studied in film and TV production (Starkey et al., 2000; Windeler & Sydow, 2001), advertising (Grabher, 2002), academic research (Manning, 2010), and other fields (Manning, 2017). Prior research on PNOs typically assumes that PNOs have adaptive capacity ‘by default’, mainly thanks to their core-periphery structure of stable core teams and flexible partner pools (Starkey et al., 2000). However, prior studies suggest that, despite these similarities, PNOs may differ in performance, being more or less adaptive in practice (Manning & Sydow, 2011). This study aims to further unpack the adaptive capacity of PNOs and examine why certain PNOs are more adaptive to changing project contexts than others. Findings have important implications for our understanding of how adaptive capacity can develop in network organizations.

The central argument of this chapter is that adaptive capacity in PNOs, including the ability to competently apply existing network resources in new project contexts, can neither be solely explained by *structural network properties* nor by *strategic agency*, but it is also promoted by dynamics of *contextual*

embedding and disembedding of network ties and relational practices, i.e. patterns of building, managing and utilizing network and project relations (Manning, 2010). Based on the cases of two PNOs in film, I show that both network ties and relational practices can have a more or less ‘dual quality’ in being valuable both within and beyond specific PNO collaborative contexts. Such dual quality can increase the adaptive capacity of PNOs because it facilitates both the re-use of established and integration of new network resources and relational practices. One important driver of this quality is what I call inter-context connectivity, i.e. the capacity to relate present projects with potentially diverse past and future projects along their task and team dimensions. Inter-context connectivity allows for economies of recombination (Grabher, 2002) – an important aspect of adaptive capacity. Based on my findings I theorize the importance of such dynamics for the adaptive capacity of PNOs.

Findings have important implications for our understanding of the reproduction of PNOs as adaptive relational systems (see also Manning, 2008, 2017), the duality of stability and change in organizational systems in more general (Farjoun, 2010; Schreyögg & Sydow, 2010), and research on innovation processes and institutional change (Garud et al., 2014; Van Wijk et al., 2013).

PROJECT NETWORK ORGANIZATIONS AS ADAPTIVE RELATIONAL SYSTEMS

Both projects and networks are not only considered important forms of organizing activities (Peters, 1999; Castells, 2000), but forms that feature a certain ‘adaptive capacity’ as they seem highly adaptable in changing social and economic environments (Obstfeld, 2012; Miles & Snow, 1986). *Projects* are typically defined as temporary systems that are constituted by multiple individual or organizational actors to accomplish rather complex and partially unique tasks (Lundin & Söderholm, 1995; Whitley, 2006). They seem more suitable than permanent organizations to take on novel tasks in creative and flexible ways, combining heterogeneous sources of knowledge and competencies (Obstfeld, 2012). *Networks* typically denote sets of longer-term relationships providing opportunities for initial and repeat collaboration

between legally independent partners (Jones et al., 1997; Borgatti & Foster, 2003). As such, they help manage risks, bundle resources and competencies, and manage transaction costs particularly in highly volatile industries (Powell, 1990; Raab & Kenis, 2009; Jones et al., 1997).

Both project and network forms often co-exist and interrelate in so-called *project businesses*, i.e. industries or fields where projects are a dominant form of organizing activities between individuals and organizations. Examples include film and TV production, advertising, event organizing, software development, academic research, construction, complex product and systems development, and international development (Manning, 2017). In such fields, so-called ‘project network organizations’ (PNOs) emerge as specific forms of network organization that are comprised of sets of project-based relationships between legally independent individuals and organizations which get activated for temporary projects, yet sustain beyond the time limitations of projects for potential future endeavors (Windeler & Sydow, 2001; Manning, 2010). PNOs have been studied, partly under different labels, in various fields, including film and TV production (Mintzberg & McHugh, 1985; Starkey et al., 2000; DeFillippi & Arthur, 1998), construction (Eccles, 1981), advertising (Grabher, 2002), academic research (Manning, 2010), and international development (Manning & von Hagen, 2010).

PNOs may vary in their composition, longevity of partnerships and geographical embeddedness (see Manning, 2017), but they typically share three main features (see also Figure 1). *First*, they are strategically built up and coordinated by project-based firms and affiliated project entrepreneurs, e.g. film producers (Jones, 2001; Ferriani et al., 2009) or entrepreneurial researchers (Manning, 2010), who regularly initiate project ideas, set up project teams and manage project contingencies (DeFillippi & Arthur, 1998). *Second*, PNO coordinators typically build up core project teams that are repeatedly mobilized for particular types of projects and that develop mutual trust and interdependencies (see also Soda et al., 2004). Examples include film production firms employing different producers who prefer to work for particular clients or with particular directors (Manning & Sydow, 2011), and entrepreneurial researchers

network interaction. The practice view has been applied to explain processes of network reproduction.

For example, Sydow and Windeler (1998) formulate with reference to Anthony Giddens (1984):

“The reproduction of interfirm networks is essentially seen as a recursive process which is constituted in and through interorganizational practices via the duality of structure. In this process, ‘the structural properties of social systems [such as the interfirm network] are both medium and outcome of the practices they recursively organize’ (Giddens 1984, p. 25)” (p. 272).

Based on this idea, several authors have tried to describe how networks and alliances in general (see e.g. Ness, 2009) and PNOs in particular (Starkey et al., 2000; Windeler & Sydow, 2001; Manning, 2010) get constituted and reproduced as adaptive relational systems (see Figure 1). Two processes are typically distinguished. On the one hand, scholars have looked at activities project entrepreneurs and their core partners engage in to enact pre-existing relations and partner pools, but also new partners, for upcoming projects. For example, Manning and Sydow (2011) show how TV producers engage in ‘connecting practices’ by re-activating and recombining latent ties for novel project endeavors (see similar, Mariotti & Delbridge, 2012; Levin et al., 2011). On the other hand, studies have shown how particular projects can help re-produce and ‘update’ longer-term PNO relations, and facilitate future projects. This includes for example the status position of project participants (Faulkner & Anderson, 1987) as well as the future ability of project entrepreneurs to initiate similar or different projects (Manning, 2010). Thereby, PNO relations and practices always stay connected with and are subject to gaining legitimacy from the larger organizational field, i.e. the area of institutional life within which participants share norms, practices and status properties across PNO contexts (DiMaggio & Powell, 1983; Manning, 2017).

However, we still lack a more nuanced understanding of how PNOs actually develop and maintain a certain adaptive capacity as PNO relations get (re-) produced over time. Importantly, unlike various *capabilities* PNO participants may develop individually or jointly, e.g. contracting capabilities, *capacity* denotes a system-level property and measure as to how much the system can ‘contain’. Adaptive capacity in our case thus describes how much variety and change in project types and contexts a PNO can ‘contain’ based on given network resources and practices. Early work on PNOs assumes that PNOs have adaptive

capacity by definition (Windeler & Sydow, 2001; Starkey et al., 2000). More recent work draws a more nuanced picture by suggesting that PNOs not only vary quite substantially across industries in their structure and ability to change and adapt (Manning, 2017), but that even within the same industry the ability of particular PNOs to take on new or a range of projects differs quite significantly (Manning & Sydow, 2011). Relatedly, even though we know in principle how PNO structures and practices support the initiation and implementation of new projects, we still know little about the conditions and extent to which PNOs can effectively turn new ideas into projects. In other words, what affects the capacity of a particular PNO to adapt existing network relations and practices to new project contexts? This study attempts to uncover some core mechanisms whose specification brings us closer to understanding where the adaptive capacity of PNO – or the lack thereof – actually comes from.

Next, I discuss three potential key drivers of adaptive capacity – structure, agency, contextual embedding. Focusing on the latter, I then discuss differences in adaptive capacity comparing two PNO in TV production. This is followed by a theorization of adaptive capacity in PNOs for future research.

PROMOTING NETWORK STABILITY AND CHANGE: STRUCTURE, AGENCY, CONTEXTUAL EMBEDDING

In order to understand antecedents of adaptive capacity in PNOs, it is important to review prior research on network dynamics, in particular those studies that have dealt with antecedents of stability and change. I show that many studies on this topic have emphasized the role of relational structure, whereas other more recent studies have focused on the role of agency. I argue that both perspectives have shortcomings that can be addressed by a more processual perspective I introduce below.

Studies on network dynamics (see e.g. Ahuja et al., 2012) typically focus on network *structures*. In their review article, Zaheer et al. (2010) formulate that in particular “the pattern or structure of ties among organizations and the tie strength and content have a significant bearing on firm behavior and on important firm outcomes such as performance” (p. 62). Specifically, network research has emphasized

how structure contributes to the capacity of networks to balance both stability and change. Balancing these properties helps networks sustain in competitive and volatile environments (Lavie & Rosenkopf, 2006; De Rond & Bochikhi, 2004). PNOs seem 'well-equipped' in this regard as they combine stable and flexible network structures (Starkey et al., 2000; Manning, 2010, 2017).

On the one hand, repeat interaction patterns may stabilize network relations and positional configurations within networks (Wellman, 1988; Smith-Doerr & Powell, 2005). Stability of ties, for example, is typically explained by repeat transactions and exchanges that develop mutual trust and reciprocity (Gulati, 1995; Uzzi, 1997). Also, the embeddedness of ties in interdependent multilateral network structures is often considered an important driver of stability (Gulati & Gargiulo, 1999; Rosenkopf & Padula, 2008; Polidoro et al., 2011). Accordingly, several studies in project businesses have focused on strong ties and cohesive structures to explain why project partners repeatedly collaborate (Soda et al., 2004; Schwab & Miner, 2008; Peretti & Negro, 2006; Sorenson & Waguespack, 2006). In line with this, one important role or function of 'core project teams' in PNOs (Manning, 2010, 2017) is their inherent potential to repeatedly initiate projects and stabilize PNO relations.

On the other hand, networks are "a special kind of system [of interaction] whose internal interdependencies [may] change over time" (Thorelli, 1986, p. 39; Gulati & Gargiulo, 1999). Network scholars have investigated various, both endogenous and exogenous, drivers of structural change. These may include changing interdependencies between network partners (Gulati & Gargiulo, 1999), the changing nature of ties (Rosenkopf et al., 2001), structural holes and bridging ties (Burt, 2004; Rosenkopf & Padula, 2008), the arrival of new network entrants (Powell et al., 2005; Ahuja et al., 2009), or technological changes and industry events (Madhavan et al., 2008). In the context of PNOs, in particular structural holes and bridging ties between cohesive structures (Uzzi & Spiro, 2005; Zaheer & Soda, 2009), and flexible pools of redundant ties to potential project partners have been identified as drivers of change and adaptability (Manning & Sydow, 2011).

There are, however, limitations to this structural perspective. *First*, it remains relatively silent about *how* pre-established ties and team structures are enacted for particular collaborations, and how they get re-produced following these collaborations. This is a particular problem in volatile project businesses where project partnerships, at least to some extent, ‘dissolve’ after the completion of projects (Starkey et al., 2000; Hadjikhani, 1996; Cova & Salle, 2000). As a result, many prior ties turn into ‘latent ties’ whose properties are still not well understood (Kilduff et al., 2006; Mariotti & Delbridge, 2012). *Second*, studies focusing on structural network dynamics typically share a rather abstract view of projects as ‘transactions’ and omit a more elaborate analysis of project properties and contingencies of project-based organizing (see the critique by Manning & Sydow, 2011; for a notable exception, see Schwab & Miner, 2008). As a result, the very mechanisms by which certain ties and teams get reactivated for particular types of projects remain unclear.

In particular the first shortcoming has stimulated network research to focus more on the role of *agency* in network dynamics in general (Kilduff et al., 2006; Berends et al., 2011; Jack, 2005; Vorley et al., 2012; Mariotti & Delbridge, 2012), and PNO dynamics in particular (e.g. Lingo & O’Mahony, 2010; Manning, 2010; Manning & Sydow, 2011). Agency can be understood as the continuous flow of conduct, linking past, present and potential future activities (Giddens, 1984; Emirbayer & Mische, 1998). Agency is both structured and structuring: it is patterned by the positions agents obtain within networks (Battilana, 2006; Padgett & Ansell, 1993) and the social practices they apply (Pozzebon, 2004; Sydow & Windeler, 1998), and it has the potential to shape and transform structural conditions. In the context of PNOs, studies have looked in particular at the strategic conduct of project entrepreneurs (Ferriani et al., 2009; Manning, 2010), but also the career-making strategies of project partners (O’Mahony & Bechky, 2006; Dahlander & O’Mahony, 2011).

Agency has been seen as an important element in reconciling the need for stability and change. For example, the ability of project partners to re-connect even after long periods of non-activity exploits

stabilizing trust in volatile environments (Levin et al., 2011; Mariotti & Delbridge, 2012). In the face of novel projects, project partners may thereby re-negotiate roles and relations in order to accommodate for changing demands while also promoting relational stability (Bechky, 2006). At the same time, project entrepreneurs and regular project partners are typically able to reframe past project experiences and capabilities in order to initiate or get engaged in new projects, which contributes to the adaptive capacity of PNOs (O'Mahony & Bechky, 2006; Manning & Sydow, 2011).

Importantly, several of these studies have emphasized that agency is more than an idiosyncratic episode of action, but is typically embedded in recurrent and regularized patterns of activity affecting the initiation of projects as well as the development and coordination of project-based relationships (Windeler & Sydow, 2001; Manning & Sydow, 2011). In other words, agency typically happens through the application of 'relational practices' (Ness, 2009; Manning, 2010), which complements the adaptive capacity coming from structural properties of PNOs.

However, while these practice perspectives have further clarified how PNO relations are enacted, reproduced and modified over time, they have focused mainly on the project level. For example, studies have looked at governance practices (Ness, 2009), connecting practices (Manning & Sydow, 2011), nexus work (Lingo & O'Mahony, 2010), and role-building practices (Bechky, 2006). While certainly important, I argue that the effectiveness of many of these practices is based on a more systemic capacity at the PNO level – specifically: the capacity to adapt network resources and relational practices to ever new project contexts. In other words, both perspectives – network structure and agency – do not sufficiently explain how PNOs can actually sustain and adapt as relational systems. That is, we need to better understand how novel projects build on and potentially (re-) produce the adaptive capacity of PNOs.

One key to understanding this adaptive capacity – beyond structure and agency views – is a more processual analysis of the contexts of collaboration PNOs evolve around. The value and utility of network structures and strategies of project entrepreneurs are highly contextualized, and, likewise, different

collaborative contexts vary in the degree to which pre-existing network ties and relational practices can be re-utilized. This makes collaborative contexts an important factor in analyzing a PNO's adaptive capacity. Similarly, Garud et al. (2014) argue that one key to understanding entrepreneurial innovation is 'contextualization', in addition to structural enablers and agentic drivers. According to the authors, and paraphrasing Giddens (1984), contexts are both medium and outcome of action. Organization scholars have similarly pointed to the importance of ongoing contextualization in determining the value of resources (Deken et al., 2018; Feldman, 2004) and routines (Pentland et al., 2012).

Taking a more context-sensitive view, the specific case of PNOs is further complicated by another important organizational challenge. Whereas in many organizations and alliances, contexts of interaction and collaboration may be rather continuous, while being subject to change, in PNOs, episodes of collaboration are rather distinct and temporarily bounded – interrupted by times of idleness or latency (Starkey et al., 2000; Hadjikhani, 1996; Cova & Salle, 2000). One critical implication of this is that effective contextualization in PNOs involves processes of 'de-contextualization' and 're-contextualization'. At certain points in time, particular network resources and relational practices may be 'in-use' – within particular contexts of collaboration; at other times, they may be 'available', yet not in any context-specific way. We seek to better understand these contextual dynamics.

In this regard, Giddens (1990) introduced the useful idea of disembedding-reembedding of social relations and practices:

„By disembedding I mean the ‚lifting out‘ of social relations from local contexts of interaction and their restructuring across indefinite spans of time-space. [...] By [reembedding] I mean the reappropriation or recasting of disembedded social relations so as to pin them down [...] to local conditions of time and place“ (Giddens, 1990, pp. 21, 79-80).

According to this dynamic, social practices and relations are not permanently integrated within just one context but rather subject to processes of disembedding and reembedding. Furthermore, Giddens developed the idea that relations and practices can be embedded in multiple systemic or interaction contexts at the same time, at different levels of abstraction – from very local and specific contexts of

interaction to society at large. This dynamic is at the heart of his understanding of social reproduction. In line with this argument, Manning (2008) develops the idea that projects as temporary systems with their task, team and time properties are systemically embedded in multiple systemic contexts simultaneously – the project itself, organizations, project network organizations and the wider organizational field. Further, Manning (2008) argues that “project constitution and embedding are inseparable systemic processes” (pp. 30-37). Each project context thereby ‘re-embeds’ established relations and practices, and, at the same time, project properties get ‘disembedded’ and enter repositories of relations and practices at the level of PNOs and larger fields as projects end and project teams dissolve.

I argue in the following that these mechanisms are key to the understanding of the adaptive capacity of PNOs. For this purpose, I first introduce the empirical context of TV movie production. After that I introduce two cases of PNOs – one with high, one with low adaptive capacity – before analyzing in more detail how processes of contextual embedding differ in these two cases. Based on the findings, I theorize key mechanisms of contextual embedding as drivers of adaptive capacity in PNOs.

EMPIRICAL CASE: REVISITING TWO CASES OF PROJECT NETWORK ORGANIZATIONS

I take an inductive comparative case-study approach (Yin, 2003) to examine how adaptive capacity gets established in PNOs. Case studies are ideal for studying complex social dynamics that cannot be easily tracked with survey-based designs. Multiple case studies help generate stronger evidence for theoretical constructs and hypotheses (Eisenhardt, 1989; Yin, 2003). However, case studies are not representative in a statistical sense. Rather, they allow for analytical generalization (Yin, 2003). That is, they serve to develop and refine theories and analytical categories to inform future studies (Eisenhardt, 1989).

The selection of suitable cases is critical. In this study, the German TV movie industry serves as the empirical field to control for extraneous variation (Eisenhardt, 1989). The film and TV industry has often been selected for studying PNOs (e.g. DeFillippi & Arthur, 1998; Windeler & Sydow, 2001; Manning,

2005; Ferriani et al., 2005, 2009; Starkey et al., 2000). The production of TV movies, which usually have a feature length of 90 minutes, is project-based, whereby each movie is relatively unique. Because TV movie production is financially risky, TV production firms seek to maintain long-term relationships with client TV channels to sustain profitability. Production firms also maintain flexible pools of creative and technical service providers to serve their clients on a project-by-project basis (Starkey et al., 2000; Windeler & Sydow, 2001). Whereas the production firms themselves typically only employ producers and production assistants long-term, their networks, which are mainly developed and maintained by the producers, may contain hundreds of directors, script writers and film actors who get hired on a project-by-project basis.

For the purpose of this study, I revisit two cases of PNOs that have been examined in previous studies (Manning, 2005; Manning & Sydow, 2011). One PNO was established by Hood Productions (HP), a midsize TV production firm that has specialized in producing crime shows for a major public TV channel, while also occasionally developing independent productions for various channels. The other PNO was established by Beach Productions (BP), also a midsize TV production firm that, however, specializes in developing novel-based films mainly for two major public TV channels. While previous studies have mainly focused on describing the structural properties of these PNOs as sources of flexibility and change (Manning, 2005), as well as the way TV producers operate as project entrepreneurs in crafting project ideas and assembling teams around those ideas, supported by the PNO structure (Manning & Sydow, 2011), this study takes a closer look at the adaptive capacity of these two PNOs. In particular the study by Manning and Sydow (2011) indicated that the two PNOs differ quite substantially in their capacity to take on new types of projects. Whereas BP has managed to expand their range of productions across genres and formats, using a wide array of creative directors, script writers and actors, HP has struggled to utilize their network resources in a similar way, thus resulting in a rather narrow range of projects.

In this study I will analyze why the adaptive capacity of HP's PNO is relatively low, whereas the adaptive capacity of BP's PNO is relatively high. What makes these two PNOs particularly interesting is

that both are strikingly similar in terms of their structure and the way they are managed. As detailed by Manning and Sydow (2011), both PNOs are similarly rich in resources. Based on project and team data collected between 1997 and 2003, HP's PNO has utilized 58 script writers, 39 directors and 59 film actors in major roles across 62 projects; BP's PNO has used 70 script writers, 45 directors and 154 film actors in major roles across 73 projects. The lower number of film actors at HP has been largely due to the greater importance of serial movies with recurring protagonists. In terms of their agency, both PNOs are operated by producers who partially bring in their own networks and who typically maintain project-based ties with a variety of creative professionals they draw from on demand and hire from outside the production firm, thereby responding flexibly to project needs and contingencies. However, despite these similarities, the overall capacity of both PNOs to take on new types of projects has been very different.

To analyze these differences, I revisit two particular project examples that help reveal some core micro-mechanisms supporting the adaptive capacity of PNOs beyond their structural properties and the role of strategic project entrepreneurs. Importantly, while adaptive capacity is a property of the PNO as a whole, it 'plays out' at the project level by both enabling and constraining new project implementation. However, to get a better understanding of this interplay, I will make several references to other projects the focal projects were related to – in terms of task and team characteristics. As I elaborate below, those connections are a central component in the development of adaptive capacity. The projects and their history are described in detail below. For this study I use data from 19 semi-structured interviews with producers, editors of TV channels, script writers, directors, and technical service providers. The focus of these interviews was on project-based relationships between the TV producers, TV channels, and key creative service providers—both at the level of particular projects and on a long-term basis. All interview partners were involved in the development of the two selected projects. Interviews focused on the history of project partnerships, the development of ideas for the selected projects, and the involvement of project partners in these projects. Interviews lasted around 1 hour on average.

The analysis of data focused on facilitators and obstacles of enacting established network ties and relational practices for implementing new projects. Giddens' structuration theory thereby served as a sensitizing device (Pozzebon, 2004), especially in guiding attention to understanding processes of 'dis-embedding and re-embedding' in project development. Furthermore, based on prior literature on sources of adaptive capacity, I paid special attention to how processes of dis-embedding and re-embedding modify the role of both structure (especially here network ties) and agency (here project-specific decisions of film producers) in project development. Based on that analysis, I identified two mechanisms affecting the adaptive capacity of PNOs, in addition to (and in combination with) network ties and agency. I call these mechanisms the "dual quality" of network ties and relational practices and "inter-context connectivity". They will be defined and described in detail below. Following the empirical analysis, these inductive concepts will be linked to a larger theoretical paradigm to inspire future research.

BRIEF HISTORY OF THE TWO PNOs

Both HP and BP started the production of TV movies for various public TV channels at about the same time. HP was founded in 1997 as a spin-off of a larger production firm. Their main product from the very beginning was the development of a TV movie series called 'Police' for Channel A (see for details, Manning & Sydow, 2011). The main connection between Police movies have been the genre and main cast—the Police officers; otherwise, episodes may have different plots, employ distinct camera techniques, and take place in distinct settings. Over time, 29 script writers, 17 directors and 9 actors in main roles were employed for 29 Police episodes to allow for both continuity – especially the main protagonists – and some creative variety – directors and script writers. Yet, several writers and directors were recruited repeatedly for different Police episodes based on their prior engagements.

Whereas HP continued to be very successful with producing Police episodes, over time, the pressure to expand production beyond this show increased, both to reduce financial risks and to

demonstrate creative ability towards key stakeholders in the industry – film foundations, TV channels, critics, and audiences. To meet the demand for novelty, HP started developing Police “spin-off” projects featuring some of the main protagonists of the Police movie series.

Below, I use the example of one of these spin-off movies – Tough Guy – to analyze the ability of HP and their PNO to effectively expand their range of projects. This project was developed as a single movie in 2003 for Channel A, featuring Joe Kramer—one of the major protagonists of the Police series. The project was initiated right after Honor and Glory—the first Police spin-off movie with Joe Kramer. Tough Guy was expected to follow up on the success of the first spin-off. However, as analyzed by Manning and Sydow (2011), this project almost failed due to significant creative difficulties. I argue that these difficulties were to a great extent the result of the limited adaptive capacity of HP’s PNO.

By comparison, BP’s PNO serves as an example of high adaptive capacity. BP has developed a range of TV movies in particular for public television. These movies differ quite substantially in terms of genre, cast, and format (e.g. event, regular single TV movie, serial movie). They are connected primarily by the fact that they are based on successful novels. BP has thereby maintained core project teams with certain TV channel editors and successful novel writers (see also Manning & Sydow, 2011). For these movies, which range from love stories to dramas and historical movies, BP has employed a large number of script writers, directors and main actors over time.

To better exploit their network resources, BP launched several mini-series based on best-selling novels. However, unlike the Police series by HP, those mini-series are only loosely connected. For example, BP would typically employ a new cast for each movie within a mini-series. Similarities between movies may include a common theme, the targeted time slot and audience, and the format.

Below, I use the example of one movie as part of a mini-series – Black Rose – based on a novel by Kathleen Welch. Similar to the HP movie Tough Guy, Black Rose followed up on a successful predecessor, in this case another Kathleen Welch novel-based production (“Wind of Change”). Even though both

projects were very different, in terms of format, cast, creative direction etc., Black Rose would become another successful project. While continuing the tradition of producing novel-based films, Black Rose would also be the first in its series to employ the format of an 'event film' (i.e. a multi-part production) which was previously only used by BP for unrelated productions, such as documentaries and biopics. Black Rose thus helped BP further expand its film-making capacity by combining the genre of novel-based production with the event format. This demonstrates rather high adaptive capacity of not only the production firm but the PNO as a whole. Reviewing the development of this production will help uncover major drivers of adaptive capacity in PNOs.

THE DUAL QUALITY OF NETWORK TIES AND RELATIONAL PRACTICES

Based on the comparative case of HP's and BP's PNO, I argue that one major systemic driver of the adaptive capacity of PNOs is what I call the dual quality of network ties and relational practices. The role of tie strength, cohesion, and other structural drivers of stability and change in network dynamics is well established in the literature (see e.g. Zaheer, 2010; Gulati, 1995). Much less understood are the conditions under which previously established ties become useful again for often entirely new projects or contexts of collaboration. In project businesses, ties between project professionals are often "established [yet] currently inactive" (Mariotti & Delbridge, 2012, p. 512; see also Starkey et al., 2000; Vorley et al., 2012; Levin et al. 2011). This is because project-based relationships are typically discontinuous and/or disrupted by idle time (Hadjikhani, 1996; Cova & Salle, 2000). Accordingly, Starkey et al. (2000) called PNOs "latent organizations [which] remain dormant until market demand presents an opportunity for them to reanimate themselves as active production systems" (p. 300).

However, at a closer look, inactive ties potentially embody a certain adaptive capacity that relates to what I call their dual quality of being valuable both within and beyond a particular range of project contexts. On the one hand, while being inactive, project-based ties carry, based on past projects, a

potential of being relevant for upcoming project contexts within a particular PNO. For example, film directors often collaborate with certain camera operators and cutters for particular producers and types of movie projects. Any tie within this constellation therefore becomes potentially valuable as part of similar or related collaborative contexts even when there is no actual project in-the-making. On the other hand, inactive or latent ties may also carry a value *beyond* such contexts. This value builds for example on relational trust and reciprocity between partners, e.g. directors and camera operators, which transcends and gets reproduced *across* projects and PNOs. Dual quality therefore means that ties are valuable for new projects based on both their specific history within a particular PNO and on generic value that translates across projects and PNOs. This allows PNOs to repeatedly enact ties based on prior projects but also use and recombine them for new types of projects and with new partners. However, as I show below, PNOs may differ in terms of how much 'dual quality' network ties may carry.

Importantly, network ties in the context of PNOs do not get enacted 'randomly', but in line with "relational practices", which, again, potentially have a dual quality in being valuable both within and beyond a particular range of collaborative contexts. In general, and in line with the emerging practice paradigm of network organizing (Sydow & Windeler, 1998; Ness, 2009; Manning, 2010), relational practices in project businesses include regularized activities of initiating project ideas, building teams, and implementing projects; they get institutionalized across the field; and they guide but also constrain project organizing activities (Grabher, 2004; Manning, 2008).

In addition, however, relational practices may embody an adaptive capacity which has not been well understood. On the one hand, these practices may carry *generic* principles of coordinating network partners and collaborating within projects that are typical in the field. This allows PNO coordinators to develop and act upon 'swift trust' between project partners, no matter whether they have worked together before or not (Meyerson et al., 1996). For example, film producers would typically let directors choose their preferred camera operator. Recruiting director-camera operator teams is an institutionalized

practice in the industry (see e.g. Ferriani et al., 2005; Manning & Sydow, 2011). Partners within particular PNOs enact such practices and, thereby, contribute to their reproduction and modification in the field. On the other hand, PNO partners also *specify* over time how or under what conditions field-wide practices are enacted in a particular PNO. For example, certain producers may allow directors to bring their ‘own’ camera operators for particular types of movies rather than others, because producers seek ‘creative control’ over the process when making higher-risk movie projects. By specifying the use of practices, producers may develop certain capabilities that allow them to initiate and manage certain projects more easily, while potentially also hindering the implementation of other kinds of projects.

Importantly, the PNO-specific adoption of relational practices is interrelated with the PNO-specific development of network ties. For example, applying the field practice of recruiting director-camera operator teams may not work if in a focal PNO directors typically do not work with the same camera operators across projects. While enacting this practice in generic form may establish swift trust, lack of actual experience with this practice will make implementation more risky. At the same time, deviating too strongly from this field practice will make it more difficult to establish ‘swift trust’ and recombine established with new project partners. This is why developing ties and practices of dual quality, combining generic with historically grown specific qualities, is important for building adaptive capacity.

To illustrate, let us review first the development of *Tough Guy* by HP. One important field norm is “never change a winning team”. Reasons include the exploitation of established trust and the reduction of coordination costs with respect to related project contexts. However, research suggests that engaging in this practice is not correlated with project success (see e.g. Sorenson & Waguespack, 2006). This is because the ability to utilize a previously successful team for new projects varies across PNOs.

In the case of HP’s project *Tough Guy*, the “winning team” that was assembled to develop the new project was composed of the production firm, the client channel, the main actor Joe Kramer and the script writer of the predecessor project *Honor and Glory*. Following the dual principle, the generic rule of

“never change a winning team” was applied to re-hire a particular project partner team around another ‘Joe Kramer’ spin-off movie. The channel editor remembers:

The editor of Honor and Glory had the idea in 2000 to make a similar film, and most preferably again with Joe Kramer. [. . .] He came to me, and I brainstormed with the director of Honor and Glory. We met with HP, and we decided to ask the script writer of Honor and Glory to develop a new script around Joe Kramer. (Editor, Channel A)

In this project, however, the script writer did not deliver as planned:

“One problem was the character Joe. He possibly stood in the way of the writer’s imagination. Otherwise [Writer 1] is a nice person and good writer, but this time he did not meet our expectations. . . . After two versions, [he] was not engaged again.” (Film Producer)

While pointing to very common contingencies in the creative process of film project development, the failure of Writer 1 to develop a new script around actor Joe Kramer also points to a deeper dilemma – the limited resource value of Joe Kramer and relatedly Writer 1. While ‘winning’ in a particular context, the more generic ‘winning’ potential of the same team across contexts is much more limited.

Following the field practice of hiring ‘script doctors’ in case initial script writers fail to deliver a usable script, the producer of Tough Guy then hired Writer 2 – a friend he had known for many years and with whom he had enjoyed a strong personal bond. In other words, in that case, Writer 2 had very high generic resource potential based on established trust and reciprocity, as well as his qualification as script doctor in previous projects. The writer elaborates:

“I know the producer from the time when he was still a junior editor. That was ten years ago. When he calls me and says: ‘I have a problem, please have a look at it!’ and I have time, of course I try to help. There is a personal bond between us. The project was not a big challenge, neither from a financial nor an artistic point of view. . . . For some years now, I have been doing such rewrites, but only for some producers.” (Writer 2)

However, Writer 2 also failed to develop a script that would satisfy the expectations of the client channel editor. This is because the writer’s generic resource potential was not linked to specific experiences – neither with the subject matter, nor the main protagonist, nor the client channel – that could have facilitated effective script improvement. This is partly why the resource potential of the writer – and the

related practice of hiring script doctors – did not translate into the requirements of this particular project. Again, there was limited dual quality of both network resource and relational practice.

After several rewrites and interventions by the channel editor the project finally came to a close. Yet this experience demonstrated the limited capacity of HP's PNO to adapt network resources and relational practices to new project contexts. One core driver of that limitation is the fact that network ties and relational practices did not have the dual quality needed to be enacted and recombined effectively for this new project. While having some generic value in developing swift trust, enacting the practices of "never change a winning team" and hiring "script doctors" did not effectively apply. One major reason is that for example the principle of "never change a winning team" has not manifested itself in guiding the implementation of new kinds of projects in HP's PNO. Relatedly, the adaptability of strong project-based ties in this PNO has been rather limited across different kinds of projects.

In the case of BP's project Black Rose, similarly, a "winning team" from a predecessor project was re-established to develop the new project. The core team consisted of producer, channel editor and novel writer. In this PNO, typically, the novel writer Kathleen Welch would already inform the production firm about the possibility of a new film production – a relational practice that has proven useful for the implementation of novel-based films. The editor remembers:

"Black Rose is not the first Kathleen Welch production for our channel. [. . .] The interest in making follow-up productions, after Wind of Change was mutually shared. In fact, Kathleen Welch had told us about Black Rose even before her book was finished, and, therefore, an interest in making the film [with BP] arose very early." (Editor, Channel B)

Like in the case of HP, BP would hire a script writer who promised to be capable of translating a novel by Kathleen Welch into a script. The producer found a script writer who had worked for the same TV channel and who was experienced in turning novels into scripts. Unlike in the case of HP, this writer delivered a product in line with the expectations of the client channel. The writer remembers:

"I just find it a bit easier, because you got a central theme, you know how the author wants to have it done; of course it always depends on the novel. [. . .] I think if you believe what you write

is something special, something big, literature, then novel-based script writing is like hell.” (Script writer, BP)

While creative processes are to some extent unpredictable, the case of BP suggests that the script writer BP hired for this project has ‘dual quality’ as a network resource. Like the script doctor HP hired for their project, the BP writer had an established reputation for delivering certain types of scripts – here: novel-based scripts – and he enjoyed the trust of the producer based on prior collaborations. Thus, his skill set and network position had a generic quality relevant for such a project. However, unlike the HP script doctor, this writer also delivered upon the trust given to him, in part because expectations were clearer and because the script writer was familiar with both the TV channel editor and the novel writer. At the same time, the script writer was able to apply his novel-converting skills to a new format: a multi-part event movie, aided by experience-based directions from the producer and channel editor, who had produced event movies before in a different context. In other words, his skill set was not only re-usable, but also contributed to the adaptive capacity of the production firm and their PNO.

INTER-CONTEXT CONNECTIVITY

To better understand the difference in HP’s and BP’s adaptive capacity, another mechanism becomes important, which I call ‘inter-context connectivity’. Prior research on project-based organizing has established the idea that in order for project entrepreneurs to be successful they need to combine what Grabher (2002) called “economies of repetition and recombination”. Economies of repetition are about developing project routines and capabilities that can be reliably applied and exploited across project contexts over time thus reducing the need to learn from scratch, increasing professionalism and lowering costs (see also Davies & Brady, 2000; Brady & Davies, 2004). Economies of recombination are about recombining once established resources and capabilities in novel ways, thereby combining the need to exploit established and explore new project features (Grabher, 2002).

Developing economies of recombination in particular requires the initiation of projects whose task and team properties are “connectable” with future projects without severely limiting the potential range of such projects. Again, comparing BP and HP helps illustrate this. In HP’s case, the majority of their projects are indeed highly connected – namely the various episodes of the Police show HP has become so famous for. The projects are connected along various task and team dimensions. However, their connectability with *other types* of projects is rather limited. The attempt – and partial failure – of HP to initiate several Police ‘spin-off’ movies by reutilizing network resources in new ways demonstrates this dilemma. By comparison, in BP’s case, connectivity between *specific* projects may be much lower than in HP’s case, but the connectability of any project with others across *different* project types is much higher. I call this important dimension “inter-context connectivity”.

The importance of inter-context connectivity becomes obvious when examining the case of BP’s Black Rose production. It was the first novel-based event film, yet it connected well with previous project experiences. The executive producer remembers (parentheses added):

“Black Rose totally connects to the tradition of making films based on best-selling literature [Connection 1] and very much fits the profile of BP. [. . .] There are certain novels which are used for these films. There have been films based on Kathleen Welch [Connection 2] before, and there will be ones after that. [. . .] It is also an event film. There are some experiences with events for Channel B. [Connection 3].”

Combining these connections with partially unrelated prior projects allowed BP to utilize network resources and relational practices both in terms of their generic and historically specific value. For example, whereas the script writer BP hired for this project was not familiar with Kathleen Welch novels or event films, he was experienced in novel-based script writing and in working for Channel B. Since, in addition, both BP and Channel B had worked together on event films, as well as in collaboration with Kathleen Welch, this provided important reference points to guide expectations in the creative process. However, since the combination of genre and format was novel at that time, the script writer was also given sufficient ‘creative range’ to convert the novel into an acceptable script. As a result, the script writer was able to utilize and ‘update’ his value and skill set as a network resource in a concrete project context,

while also setting himself up for future projects displaying familiar features (event, novel-based, Channel B audience) – either in part or in combination with other (old and new) features.

At the same time, the practice of “never change a winning team” got actualized and further legitimized in its concrete manifestation, thus guiding future productions. Specifically, the core team of Channel B, BP and novel writer Kathleen Welch proved to embody a significant adaptability in allowing for an expansion of formats, while maintaining a sufficient level of familiarity and cohesion guiding project developing processes. In other words, the dual quality of ‘never changing a winning team’ – in guiding ‘any’ new project and in specifically guiding projects combining features from various previous projects – is strongly interrelated with the high degree of inter-context connectivity in BP’s PNO and has thus become an important driver of BP’s adaptive capacity over time.

In HP’s case, by comparison, the development of the project Tough Guy suffered from rather limited inter-context connectivity between HP’s very popular Police show and the occasional ‘spin-off’ movies HP started to produce. The main connection between these movies and the show have been the serial protagonists who have been given the opportunity to explore new characters in spin-off movies outside of their serial role. Consequently, for the script writer of Tough Guy, developing a script for actor Joe Kramer was the main task to be accomplished:

“It was not like: ‘We have an idea and we’ll see which actors fit in.’ No, from the beginning I was told we are making a film for Joe Kramer. For me as a script writer this was a precise instruction, a part of the assignment.”

However, other than Joe Kramer, the script writer had no reference point to work with. Unlike BP, HP had not explored many genres or formats to draw experiences from. HP’s potential to generate economies of recombination across project contexts was relatively low. This also partly explains the limited generic value of Joe Kramer as a network resource, and the limited reusability of the script writer. Thus the generic principle of “never change a winning team”, in the case of HP, has very little value in project contexts

outside of the Police show. Due to limited inter-context connectivity and limited availability of network resources and relational practices with dual quality, HP's adaptive capacity has been constrained.

DISCUSSION

This paper contributes to our understanding of drivers of variation in adaptive capacity of project network organizations (PNOs). PNOs, in terms of longer-term, strategically coordinated sets of project-based relations between legally independent partners (Windeler & Sydow, 2001; Manning, 2010), are often associated with a certain adaptive capacity that helps them balance needs for stability and change in volatile project businesses (Starkey et al., 2000; Manning, 2017). Yet, as shown in the two cases, PNOs may differ in the degree to which they are adaptive to new collaborative contexts, thus shedding light on the micro-mechanisms underlying adaptive capacity.

Prior studies on network dynamics in general, and PNOs in particular, have emphasized certain structural conditions, e.g. combinations of coherent ties and flexible partners pools (Soda et al., 2004), as well as strategic agency, e.g. the ability of project entrepreneurs to recombine network resources and capabilities (Ferriani et al., 2009; Manning & Sydow, 2011), as constituents of adaptive capacity. This study shifts emphasis to the importance of contextual embedding and related processes in establishing and reproducing this capacity. Thereby, the study builds on and extends the emerging practice paradigm of network organizing (Sydow & Windeler, 1998; Ness, 2009; Manning, 2010; Berends et al., 2011), which regards recursively reproduced 'relational practices' as central in building, maintaining and utilizing network relationships. Following Giddens (1984), relational practices get embedded in multiple systemic contexts simultaneously, e.g. projects, PNOs and organizational fields (Manning, 2008). I argue that this dynamic can be related to the adaptive capacity of PNOs.

Particularly, I have argued that network ties and relational practices within PNOs have more or less 'dual quality', i.e. in terms of having (1) *generic* qualities that make them valuable across the field and

allow them to be enacted and combined across a wide range of projects with old and new partners, and, having (2) *specific* qualities that come from experiences in prior projects and teams within a PNO and that can be reused and recombined for future use in new projects. Combined, both qualities may contribute to the adaptive capacity of PNOs, whereas only generic *or* specific qualities may not. To illustrate, some relational qualities, such as historically grown trust and reciprocity, can be valuable across projects but they may not be sufficient to make new projects work, as illustrated by the relationships of HP's producer with various script writers who failed to deliver in a specific project context. Similarly, certain relational practices can be valuable in giving orientation in principle, such as "never change a winning team", which, however, does not mean they automatically lead to project success (see also Sorensen and Waguespack, 2006). In turn, certain project partners may be very valuable in certain project contexts, but this does not necessarily make them valuable in other contexts. A good example of a network resource that seems valuable only in a specific context is HP's celebrated serial film actor Joe Kramer. Likewise, project partners may experiment with a certain practice in a given context, e.g. to solve a crisis, but this does not mean this practice will enter any repertoire of 'useful practices' across project contexts.

By contrast, BP's PNO is rich with ties and practices that have a dual quality thus promoting adaptive capacity. For example, the rather stable project-based relationships between BP's producers, TV channel editors and novel writers, such as Kathleen Welch, not just exploit generic trust and reciprocity but have proven to be exploitable in ever new collaborative contexts. I argued that one central facilitating factor is what I called 'inter-context connectivity', i.e. the capacity of a PNO to reutilize and recombine tested project properties, e.g. certain formats, genres, creative styles and team constellations, in new project contexts. Inter-context connectivity promotes adaptive capacity both directly – in making new projects more connectable with previous (and future) ones – and indirectly, by promoting the 'dual quality' of network resources and relational practices (see Figure 2). For example, the more reference experiences a certain project partner has the more valuable he/she becomes in a particular project. Likewise, the more

demonstrates that. In their past, HP's project variety was very low in that all their productions were part of the TV show *Police* which is united by a combination of task and team properties. However, whereas project connectivity *within* that show was arguably very high, the ability of the PNO to exploit network resources and practices *beyond* that show was very low. This changed when HP introduced new spin-off movies, thus increasing project variety and also potentially increasing inter-context connectivity. However, by attempting *several* new movies that were drastically different from one another (in genre, format, style, cast), and that would only connect by a single participant, project variety would rapidly increase while inter-connectivity would stay rather low. By contrast, BP has gradually expanded their experience with different formats, genres, and project teams, thereby increasing but not overstretching project variety. In other words, new projects would always differ from previous ones in certain aspects, while in other ways they would resemble previous experiences. Thus, project variety across all projects would stay 'medium', allowing for a higher level of inter-context connectivity over time (see Figure 3), which, in turn, has a positive effect on the PNO's overall adaptive capacity (see Figure 2).

FURTHER IMPLICATIONS

Findings have implications for our understanding of the reproduction of PNOs as adaptive relational systems (see also Manning, 2008, 2017), the duality of stability and change in organizational systems in more general (Farjoun, 2010; Schreyögg & Sydow, 2010), and research on innovation processes and institutional change (Garud et al., 2014; Van Wijk et al., 2013).

First, in order for PNOs to continuously facilitate project collaboration involving core project teams and network resource pools, they need to maintain 'systemic boundaries', i.e. have a mechanism by which certain project opportunities are pursued while others are not. Inter-context connectivity could thereby serve as an important selection mechanism as it affects the adaptive capacity of a PNO at any one point in time. However, we still need to better understand how certain project ideas rather than others

translate into actual projects within PNOs and thereby shape inter-context connectivity going forward. Social theorist Niklas Luhmann (1984) notes that system reproduction happens through the ‘fixation’ of otherwise undetermined possibilities, whereby the “fixation of use of these possibilities [happens] through the structure of emerging systems [...] which may exclude other possibilities [of interpretation].” (Luhmann, 1984, pp. 300, 302; translated by the author). In this dynamic understanding, inter-context connectivity not only enables but also excludes certain possibilities. Thus, adaptive capacity, like any property of self-sustaining social systems, has by definition ‘limits’ in allowing certain adaptations while constraining others. We need to better understand this condition.

Furthermore, this study has suggested that one important driver of adaptive capacity is the recombination of network resources and relational practices, based on their generic and specifically tested qualities. This idea invites future research to better integrate an analysis of network relations and relational practices within PNOs (see also Manning, 2010), to better understand how they get enacted, reproduced and transformed in conjunction over time. Giddens’ (1984) notion of ‘position-practice relations’ may be relevant here. According to Giddens (1984), “a social position involves the specification of a definite ‘identity’ within a network of social relations, that identity, however, being a ‘category’ to which a particular range of normative sanctions is relevant” (p. 83). In other words, ‘position-practice relations’ not only constitute how actors position themselves vis-à-vis each other (see e.g. Ibarra et al., 2005), but how actors obtain certain roles and status positions in certain collaborative contexts (see also White et al., 1976; Podolny, 1993). Similarly, White et al. (2007) argue that tie structures may get linked to ‘domains’ – in terms of sets of expectations and narratives – resulting in what they call ‘netdoms’. In project businesses, these ‘domains’ can be described as configurations of team structures, task specifications and project organizing practices. Future studies are encouraged to study how network ties, relational practices and collaborative domains are enacted and reproduced in conjunction, to better capture the systemic qualities of PNOs as relational adaptive systems.

Second, the notion that social relations, resources and practices may be valuable both within and beyond particular organizational contexts, and thereby increase a system's adaptive capacity, may inform research about the balancing of stability and change in organizational systems (Farjoun, 2010; Schreyögg & Sydow, 2010). Several scholars have called for a dynamization of resources and routines (Pentland et al., 2012; Feldman, 2004; Feldman & Pentland, 2003; Deken et al., 2018). For example, Feldman (2004) argues that the value of resources gets shaped by the process through which they are enacted. Deken et al. (2018) argue that 'resourcing' is an ongoing process including changing visions of resource use and configuration. Likewise, Feldman and Pentland (2003) argued that routines combine performative properties in-action with more abstract, 'ostensive' patterns or principles of action that get re-enacted in different contexts (see also Pentland et al., 2012). My study adds to this research by providing a more multi-level understanding of properties of resources and practices.

While prior studies have shown how the enactment and reproduction of routines and resources embody the potential of change while also providing stability, this study helps extend this understanding in two ways. First, it helps further embed resource and practice use within relational systems, such as network organizations, and their specific properties. For example, in the context of PNOs, trust and reciprocity between network partners are important generic and portable dimensions of relationships that potentially add to a system's adaptive capacity. One key aspect of 'resourcing' in this respect would describe the ongoing negotiation and determination of how established 'trust' between partners can be of value in particular contexts. Second, this study helps better understand how organizational systems can employ resources and practices effectively to implement *new* ideas. Whereas other studies have noted the importance of recombination of established resources, rules and practices in support of new ideas and contexts of collaboration (Pentland et al., 2012; Deken et al., 2018), it has been less clear what actually facilitates effective and feasible (re-) combinations. Prior work suggests that for example simplicity (and portability) of rules (Eisenhardt & Sull, 2001; Davis et al., 2009) can be an important facilitator. In addition,

this study suggests that compatibility of relational practices and qualities of network ties with field norms can be an important facilitator of recombination. For example, one major reason why film producers refer to field-wide rules such as “never change a winning team” is because it helps develop swift trust (Meyerson et al., 1996) and legitimize team-building practices towards external stakeholders, such as clients, or new partners. Whereas Feldman and Pentland’s (2003) differentiation between ‘structural’ and ‘action’ aspects of routines is important, I emphasize the equally important distinction between properties that are *specific* vs. those that are *non-specific* to particular organizational systems. This dual quality establishes an interface between specific logics of the organizational system – here: the PNO – and the field within which the system operates. It also allows the system to add specific value to field resources and practices (Schmidt & Keil, 2013), and to interact with its (changing) environment while maintaining system integrity – an important boundary condition for adaptive capacity.

Third, findings can inform research on innovation processes and institutional change (Garud et al., 2014; Van Wijk et al., 2013; Levy et al., 2016). Recent studies have emphasized that understanding the unfolding of entrepreneurial innovation and institutional change requires a more nuanced treatment of contexts as both medium and outcome of action (see also Garud et al., 2014). Innovation and change processes are subject to ongoing collective meaning-making and contextualization. For example, Levy and Spicer (2013) find that in the domain of climate change corporate and political stakeholders continuously engage in constructing imaginaries by linking normative discourses to potential business models and governance structures that in conjunction may form alternative value regimes. This process is often contentious as incumbent industry leaders and challengers engage in strategic battles around which value regimes are feasible and desirable (see also Levy et al., 2016; Van Wijk et al., 2014).

This study adds to this research by making the important observation that contextualization is not necessarily a continuous process, but may happen through repeated episodes of contextual embedding of ideas, resources and practices, driven by temporarily bounded innovation and change projects that

potentially connect with prior and future projects. One good example are multi-stakeholder development projects focusing on sustainable coffee growing practices in various countries, which in combination feed into the development of global sustainability standards, such as the Common Code for the Coffee Community (Manning & von Hagen, 2010). Each project re-contextualizes larger sustainability goals in a specific local context, while also helping shape and (re-) produce larger sustainability goals through particular project experiences. Inter-context connectivity between locally embedded sustainability projects both enables and constrains the agenda of future projects and shapes the boundaries of the longer-term sustainability movement in-practice (see also Manning & Reinecke, 2016). Like organizational systems, change processes and movements are also characterized by a certain 'adaptive capacity', for example in being able to respond to changing discourses, interests of new stakeholders, changing economic constraints, etc. Applying the concept of inter-context connectivity may help better determine how and to what extent change processes develop adaptive capacity.

In conclusion, this study complements previous work on drivers of adaptive capacity in PNOs and organizational systems in more general, by focusing on contextual embedding dynamics, in addition to the importance of structure and agency, in establishing adaptive capacity. Findings are not only relevant to network and organizational research, but they also have practical relevance in making entrepreneurs, managers and policy-makers aware of the contextualized journeys of ideas, agendas and policies and the capacity of organizations to adapt to but also bring about these changes.

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FIGURES

FIGURE 1: Abstract Model of Project Network Organization (short: Project Network)

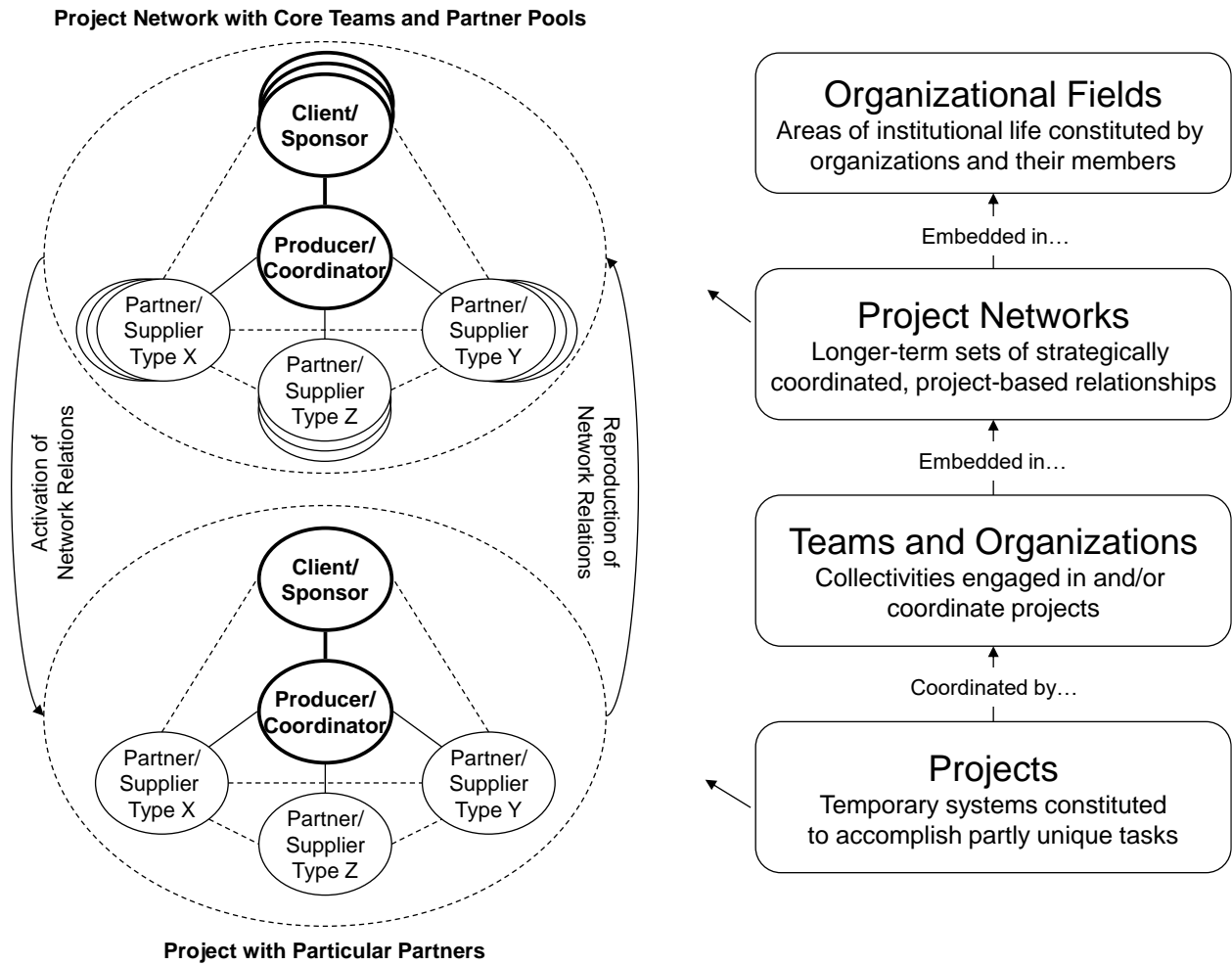


FIGURE 2: Inter-Context Connectivity and Adaptive Capacity of PNOs

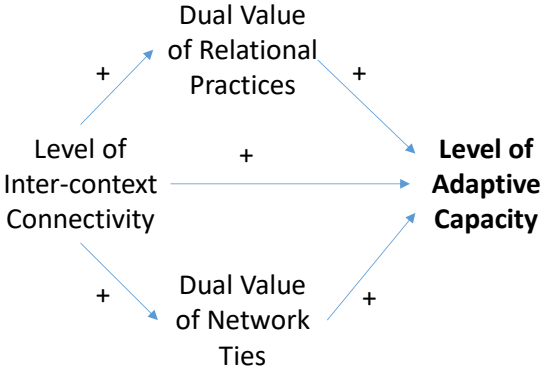


FIGURE 3: Relationship between Project Variety and Inter-Context Connectivity

