



Cultivating strategic foresight in practise: A relational perspective



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ABSTRACT

Drawing on relationalism as a theoretical lens, we examine how normative organising structures, rights and authority relationships influence the cultivation of strategic foresight among organisational members lower down the organisational hierarchy. We adopt a case-based approach involving three software firms, whose innovation teams served as our empirical research sites. Our study highlights the triadic influence of individual, organisational and contextual organising practises on the cultivation of strategic foresight. We identify four relational assemblages of practises that enable (or impede) the enactment of strategic foresight in practise. These include strategic conversations, perspective taking and reflexivity-in-practise, over-emphasis on formal knowledge and technical rationality, and benevolent conspiracies. We add to research on strategic foresight by extending our understanding of the vital role that lower-level employees may play in the cultivation of organisational 'foresightfulness'. We therefore urge management advisors to accord lower-level input recognizably respectful consideration, if not adoption.

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1. Introduction

The ability to identify, interpret and (re)configure sources of potentialities into resources and productive outcomes is frequently highlighted as a key capability of foresightful organisations (Chia 2008; Constanzo & Mackay 2010; Rohrbeck 2012). The concept of strategic foresight has enjoyed a sustained rise to prominence in organising, triggering interest in the wider social, historical, and intellectual context within which strategic foresight emerges or fails (Stiglitz & Bilmes 2008; Whitehead 1967). Nevertheless, with respect to the cultivation of strategic foresight, current explanations prioritize the trans-individual 'foresightful' actions of the 'heroic CEO' (Ahuja, Coff, & Lee 2005; Gabriel 1995) and the collective organising practises of Top Management Teams (TMTs) (Andriopoulos & Gotsi 2006; Vecchiato 2012). Against this background, what remains unclear is the contribution of 'ordinary' organisational members positioned further down the organisational hierarchy. The literature is silent on how the situated organising practises and relationships of lower-level employees influence strategic foresight. This line of research may have been sidestepped because strategic foresight is frequently conceptualized as a longer-term objective, while the seemingly run-of-the-mill work of lower-level employees comprises primarily short-term activities.

To better understand the role played by lower-level employees, this paper examines how organising practises and relations influence the cultivation of strategic foresight. Developing our contribution in the

context of the global software industry, we explore the potential for 'relationalism' to encourage new understanding about how the organising social relationships and situated interactions of product innovation teams influence strategic foresight. Our study makes two contributions. First, it contributes to the literature on strategic foresight by demonstrating the importance of lower-level employees in the cultivation of strategic foresight. Second, by drawing on a relational perspective, it illuminates the potential for taken-for-granted everyday organising and authority relations to enable (or impede) the enactment of strategic foresight in practise.

The paper is organised as follows. First, we provide an overview of the concept of strategic foresight and the different perspectives on theorizing strategic foresight in organising. Next, we explore its relational dimension and examine how structural and authority relationships in a bounded system extend understanding of the creative emergence of organisational foresight in practise. We then explain our research methodology, detailing our approach and analytical methods, after which we present our evidence on how the relational orientation of innovation teams might enable or impede organisational foresight. Finally, we discuss our findings and the implications of our research for theory and practise.

2. Strategic foresight

2.1. Concept, process and perspectives

Referring to foresight as a human attribute, Alfred North Whitehead (1967, p.89) defined it as "the ability to see through the apparent confusion, to spot developments before they become trends, to see patterns

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before they emerge, and to grasp the relevant features of social currents that are likely to shape the direction of future events". For Slaughter (1995, p.1), "foresight is not the ability to predict the future... it is a human attribute that allows us to weigh the pros and cons, to evaluate different courses of action and to invent possible futures on every level with enough reality and meaning to use them as decision making aids". Conditioned by these early conceptualizations, strategic foresight is frequently presented as a managerial function and competence (Mackay & Burt 2014; McKelvey & Boisot 2010), which enables organisations to "penetrate and transgress established boundaries and seize the opportunities otherwise overlooked by others" (Chia 2008, p. 27). From this perspective, Rohrbeck and Schwarz (2013) delineate strategic foresight as the ability to implement actions that reflect critical decision-making; to discern, perceive and interpret weak signals and deduce relevant courses of action. The theoretical and managerial implications are that strategic foresight places organisations in a state of preparedness, broadening their vision to probe emerging social and technological trends in ways that result in innovations responsive to fast-paced business environments (De Moor, Saritas, Schuurman, Claeys, & De Marez 2014).

So how can organisations cultivate strategic foresight? Within an organising framework of intervention and 'scientific rationality' (Sandberg & Tsoukas 2011), multifarious methodologies like scenario thinking (Wright & Cairns 2011), business war-gaming (Schwarz 2009) and scenario planning exercises (van der Heijden 1996) have been developed (and promoted by foresight scholars and practitioners) to help organisations enhance their foresightfulness. Underpinned by a complex set of methods and interactive processes, each consisting of sequential discrete actions and prescriptive steps, foresight exercises represent annual rituals in many organisations. However, their episodic, linear nature makes them appear 'cognitivist' and ultra-rational in form. Moreover, the level of employees involved in these exercises is unclear so managers as decision-makers are frequently privileged as protagonists, making the 'visionary' manager the locus of organisational foresight. To address the complications of attributing organisational foresight solely to managers, strategic foresight in the form of strategizing is frequently conceptualized as a distributed capability that enables organisations to produce meaningful, future-oriented knowledge (Bradfield et al., 2005). This shift in locus attribution in unpacking and theorizing strategic foresight prioritizes middle-managers and, sometimes, 'ordinary' employees as people whose 'actions' and 'doings' may influence organisational foresightfulness (Constanzo and Tzoumpa, 2010; Cunha, Palma, & Da Costa 2006).

Recent advances within the foresight literature have redirected attention to theorizing strategic foresight as a social practise, suggesting the everyday organising activities and micro-interactions between organisational actors are relevant for understanding strategic foresight (Cunha et al. 2006; Sarpong & Maclean 2011). Emphasizing practise as the site of the emergence of strategic foresight, this stream of studies treats foresight ontologically as flexible and perpetually *becoming* (Kaplan & Orlikowski 2013; Tsoukas & Chia 2002), recognizing that the intrinsic temporality of organising often treats the past, present, and future as 'durationally' indivisible (Maclean, Harvey, & Chia 2012a; Sarpong & Maclean 2011). In this regard, they strive to accommodate novelty, improvisation and the potential for change arising from collective 'foresightful' actions. While the practise perspective offers compelling and useful ideas, it faces the methodological challenge of sifting, mapping and interpreting the potential teleological structures of normative past and present foresightful actions. Table 1 summarizes the main areas of difference between the two established approaches to cultivating strategic foresight.

Contributing to research on foresight, particularly the practise approach which remains in a pre-paradigmatic stage, our relational approach emphasizes the influence of taken-for-granted relations and organising arrangements on the cultivation of strategic foresight. Thus, the coming to presence of strategic foresight relies not just on

Table 1
Established approaches to cultivating strategic foresight.

| Dimensions | Corporate foresight exercises | Social practise approach to foresight |
|--------------------------------|--|--|
| <i>Representation</i> | Strategic foresight as a derived outcome of ad hoc corporate futures exercises. | Strategic foresight as ongoing creative reconfiguration of sources of potentialities and limits into resources and productive outcomes. |
| <i>Primary emphasis</i> | On purposeful generation of probable futures or heuristic narratives during corporate futures exercises and scenario planning workshops. | On strategic conversations among actors, temporal reflexivity-in-practise, prospective sense-making and improvisation within contingencies of the moment. |
| <i>Process characteristics</i> | Relies on the contribution of external consultants or futurists whose role is to facilitate the filtering and combination of information dispersed in time into meaningful, future-oriented knowledge. | Problematises the use of external consultants. Strategic foresight in the form of strategizing emerges from everyday organising practises that involve micro-interactions and the interpretation of subtle cues in practise. |
| <i>Organising logic</i> | Rational episodic intervention organised around a framework of scientific rationality. | Flexible, relational in context, perpetually becoming. |
| <i>Limitations</i> | Often appear as an act of imposing dominant logic on subaltern groups, either through the truncation of alternative scenarios, or through an ideological understanding of outcomes. | Identifying organising practises and activities that can be counted as partly constitutive of strategic foresight. |

organising practises, but on the relational actions induced by the inter-dependent relationships and interactions of organisational members in their situated practise (Simpson & Mayo 1997; Young, Gilbert, & McIntyre 1996). Experiences obtained through interactions and inflexions can inform the logical accountability of strategic foresight in organising. In what follows, we chart our relational approach to strategic foresight and specify its underlying logics.

2.2. A relational approach to strategic foresight

The notion that all social practises occur in relational contexts has led to the emergence of relationalism as a meta-theoretical perspective in theorizing heterogeneous relationships in organisations (Bello, Chelariu, & Zhang 2002; Cooper 2005; Mehra, Kilduff, & Brass 1998), focusing on their influence on how work is organised (Milton & Wesphal 2005). With its conceptual development rooted in cultural psychology, the contemporary 'turn' to relationalism is grounded in field theory and is concerned with the dialectical analysis of thought and action (Ho 1998; Ho, Peng, Lai, & Chan 2001; Lebra 1976). It privileges the heterogeneous configuration of relations and practises in examining the linkages between social structures and relevant organisational outcomes (Paswan et al., 1998). Chia and Holt (2006, p.38) present 'relationality' as a methodological framework that emphasizes:

Relationships and action by which individual and organizational entities are understood as manifestations of a *latent* movement, or field of re-lat-ionships, that is distinct from any aggregative sum of parts.

Deriving meaning from relations and interactions, relationalism can enrich our understanding of the theory and practise of strategic foresight by providing a dynamic, open-ended approach to account for the emergence of strategic foresight. Following de Jouvenel (1967)

and Schwarz (2007), who framed foresight as a behavioural outcome, we conceptualize strategic foresight as a by-product of ‘organized human activities’ comprising ‘organized, open-ended spatial-manifolds of actions’ (Schatzki 2005, p.471) that permeate social life. Strategic foresight can be viewed as a social practise (Cunha et al. 2006; Sarpong & Maclean 2011) whose emergence is in constant flux, played out in the everyday work of a group of competent actors, as an actualization of a continuous process of becoming (Tsoukas & Chia 2002). This view recognizes an individual’s embeddedness in a community of practise, providing an important insight into relationships and interactions within this and how these enable and constrain ‘foresightful’ actions (Cheng & Sculli 2001). Here, we define strategic foresight as the creative reconfiguration of past and present potentialities into resources and productive outcomes in the future facilitated by the multiplicity of organising relationships and interactions in practise.

Underscoring the importance of relationalism as a pluralist perspective in theorizing strategic foresight, Goffman (1967, p.2) argues “it is not the individual and his psychology, but rather the syntactical relations among the acts of different persons mutually present to one another” that shape the bundles of everyday practises of actors in their situated activities (Schatzki 2001). In theorizing strategic foresight, it is imperative to re-orient attention from the individual or set of individuals to their social relationships and interactions which together define their social life. Hence, in accounting for the emergence of strategic foresight, emphasis was placed on “the patterned consistency of actions emerging from such interactions rather than on the micro-activities of individual agents” (Chia & MacKay 2007, p. 24); what Somers (1998, p.67) calls “the relational processes of interaction between and among identities”. In seeking to explain how specific social syntactical relationships and interactions in teams might influence the cultivation of strategic foresight, we place emphasis on persons-in-relations. The central question addressed by this inquiry is therefore: how do the structural arrangements and authority relationships among lower-level employees influence the cultivation of strategic foresight in everyday organising? Next, we present the research methodology which guides our empirical inquiry.

3. Research methodology

Our empirical research context was the global software industry. Our choice was based on the premise that the software industry offers a rich context to study and theorize a durable, flexible capability like strategic foresight because it features rapidly evolving technologies and uncertain fast-moving markets (Hartmann, Trew, & Bosch 2011; Parry, Jones, Rowley, & Kupiec-Teahan 2012). We adopted an exploratory research design and methodology, our aim being to develop theoretical insights into strategic foresight within real-life contexts where the boundaries between theory and practise are ill-defined (Stoecker 1991). Employing a multiple-case design (Eisenhardt & Graebner 2007; Yin 2003), we selected three software firms (‘Interlab’, ‘Mercury’ and ‘Kemitech’) located in the South West of the UK on the basis of their comparable sizes and organisational structures to permit meaningful comparison (Eisenhardt & Graebner 2007; Tsang 2014). All three were pioneering a series of innovative products for different market segments and had professionals drawn from varying sections of the business working in their innovation teams. We devised three theoretical sampling criteria to select the projects included in our inquiry. First, all projects required the commitment of significant resources (time, technologies, money). Second, each project needed to entail the development of an innovative product incorporating new, unfamiliar technology. Third, selected projects had to employ Microsoft’s computing technologies including their user and data interfaces in creating the platform architectures of product innovations. The logic was to reduce variations in the technological context in order to ease comparability between projects. Four projects were selected for inclusion: (a) a planning application software for a national sports agency; (b) a traffic

congestion software for local governments; (c) a graph application software for rail companies; (d) and investigation software for security services and law courts. Our chosen level of analysis was the product innovation teams of the case organisations, representing the “level at which observable changes take place in the way work is done and the management of innovation process can be witnessed” (Birkinshaw, Hamel, & Mol 2008, p. 282). Table 1 provides an overview of the four projects.

Given the dearth of research emphasizing ‘relationalism’ as the site for the emergence of organisational foresight, an explorative qualitative approach was deemed appropriate (Lincoln & Guba 1986), enabling us critically to explore the dispositional ‘in-betweens’ rather than the isolated subjects or wider structuring forces in practise (Chia & Holt 2006; Rasche & Chia 2009). Given the flexible, ethereal nature of organisational foresight, qualitative methods of data collection were considered useful in capturing actors’ lived experiences and inherited knowledge, which were of prime importance in generating insight into their everyday working relationships and ‘foresightful’ actions. Table 2 summarizes the data collected for the inquiry.

Data were collected over a 12-month period through semi-structured interviews, observations and documents. Face-to-face interviews were the primary source of data; we interviewed all innovation team members for the specific projects, including their respective project leaders. Each interview lasted approximately 1 h and all were digitally recorded and transcribed. We asked respondents about their roles, duties, responsibilities, and individual visions of the yet-to-be-realized innovation. We “drilled down into explanations of why [they perceived] specific aspects” (Jarratt & Stiles 2010, p. 31) of their organising practises and relationships to be (un)important to future innovations, how they experienced working life, and the kind of things that were meaningful to them (Alvesson 2003). We supplemented this with archival project documents (including electronic share points, corporate brochures, project records, and internet pages), and some 20 observations of innovation teams’ meetings and informal conversations.

4. Data analysis

Our data analysis followed three steps. First, we followed Strauss (1978), engaging in open coding by re-reading the textual data to see whether they matched correctly with what we heard in the field. We probed the data from individual cases to identify recurrent comparative phrases which were used to develop provisional categories and first-order codes, focusing on the roles, duties, responsibilities and relational

Table 2
Case organisations, their project(s) and data.

| Case organisation | Selected project(s) | Data sources |
|---|--|--|
| Interlab Founded 1991, employs 150 staff, annual turnover £10 m in 2000–10 | Planning application software for national sports agency | 8 Interviews, 6 observations, <i>Archival sources:</i> electronic share point, company brochures, documents, internet pages, project records |
| Kemitech Founded 2000, employs 20 staff, annual turnover £2.5 m in 2009–10 | (a) Traffic congestion software for local governments (b) Graph application software for rail companies | 7 Interviews, 5 observations <i>Archival sources:</i> company documents, newsletters, internet pages, project records |
| Mercury Founded 1982, employs 60 staff, annual turnover £6.2 m in 2009–10 | Investigation software for security services | 11 Interviews, 9 observations <i>Archival sources:</i> company brochures, documents, newsletters, internet pages, project records |

rights of lower employees, since we had not elaborated a priori hypotheses.

Second, we embarked on a cross-case analysis to compare and search for relationships among the initial categories and then systematically probed the statements across the innovation teams to categorize them according to themes. The resulting data were analysed and interpreted iteratively until common themes emerged and became saturated (Strauss & Corbin 1998; Suddaby 2006). Using an inductive approach (Thomas 2006), we embarked on recursive comparisons between the themes and ideas discussed by interviewees until we could make conceptual linkages between our cross-case analysis, theoretical lens and insights generated from the data. We further coded the emerging categories, their descriptions and organising logics of strategic foresight to converge on four overarching themes, namely 'strategic conversations', 'perspective taking and orthogonal reflexivity', 'over-emphasis on formal knowledge and technical rationality' and 'benevolent conspiracies'. These were then applied to the dataset by annotating the data with numerical codes (Strauss & Corbin 1990). The codes were supported with short descriptors elaborating the various headings.

Third, we built up our understanding of how the organising relationships facilitated (or constrained) the enactment of foresightful actions in practise to explore viable theoretical explanations. On the basis of this interpretive analysis, emerging patterns were used to develop greater insight, raise the theoretical level and form descriptive explanations to produce generalities (Denzin 2009; Ritchie and Spencer, 1993) of the influence of lower-level employees on the cultivation of strategic foresight. Table 3 summarizes our analysis.

We now present our research findings in three stages. First, we delineate the patterns of organising arrangements and authority relationships identified in the various innovation teams. Second, we 'unpack' how the situated organising relationships of lower-level employees facilitated strategic foresight. Finally, responding to the contradictions of everyday organisational life, we present how the situated organising relationships of lower employees may constrain the cultivation of strategic foresight.



5. Findings

5.1. Emerging organising regimes in practise

The analysis of the data collected, particularly the project documents, produced insights regarding product innovation teams as flexible organisational subsystems (Brown & Eisenhardt 1997, Tushman & Nadler 1986), each with an organising architecture which implicitly (or explicitly) specified institutionalized power structures, control systems and rituals (Cornelius 2005). Following Sarpong, Maclean, and Davies (2013), we call these adaptive formal and informal emergent structures that governed the situated organising practises and relationships of the various innovation teams as 'organizing architectures'. Comprising the organisation of the innovation process, including its canonical rules, authority relationships, duties and responsibilities, an organising architecture shapes what members of an innovation team can(not) do in their situated practise. Before presenting the fine details of our findings, we need to clarify precisely how the conceptual apparatus associated with organising architectures becomes more apparent, giving form to the patterns of foresightful actions geared towards the creative exploration of past and future possibilities in the present.

Comparative analysis of our data within and across the cases revealed that while the innovation teams structured their work around specific areas of expertise, their individual organising configurations (Tushman & Nadler 1986) produced and legitimized normative duties, rights and responsibilities of team members. We found that some case organisations had their innovation processes organised around formal methodologies which were sometimes documented in manuals, and/or made available on intranet share points. As suggested by the Interlab project leader, such methodologies can reduce 'scope-creeping' and over-engineering what people do in practise, reinforcing compliance. Worryingly, our case evidence showed that such methodologies acted as surveillance tools and sometimes latently conditioned employees' visions of potential innovations. Our data suggested that an organising architecture can have a profound impact on strategic foresight. However,

Table 3
Data structure.

| First-order codes | Evolving Theoretical categories | Organizing practices and relationships in practice |
|---|---|---|
| <ul style="list-style-type: none"> • Objective discourse on possibilities and limits • Reasoned analysis of existing relations and organizing processes | Strategic conversations |  Facilitating strategic foresight |
| <ul style="list-style-type: none"> • Making temporal connections between past-present-future of the organizing social orders • (Re) construction of limits and potentials of present social forms | Reflexivity-in-practice and perspective-taking | |
| <ul style="list-style-type: none"> • Performative ordering of social order • Privileging scientific knowledge /dismissing experiential knowledge | Privileging technical knowledge and rationality |  Constraining strategic foresight |
| <ul style="list-style-type: none"> • Active advancement of sectional interests • Discursive and opaque power-loyalty structures • Perceptual and cognitive representation of normative beliefs | Benevolent conspiracy | |

to understand this fully, it is imperative to conceptualize it as occupying a continuum ranging from flexible to rigid, emphasizing the interplay between formalization of the innovation processes and the structural orientation of the organising milieu. The innovation processes of those teams characterized as having flexible organising architectures were less formal, their organising structures loose and less hierarchical. Rigid organising architectures, conversely, resembled an over-compartmentalized iron cage (Paswan et al., 1998) that restricted actors in challenging their assumptions about their working world. Their innovation processes were formal, mirroring their organising structures (see Table 4).

Our data provided empirical bases to assume none of the case organisations had an extremely rigid organising architecture. Mercury exhibited a singularly flexible organising regime, followed by Interlab and Kemitech.

5.2. Leveraging the 'ingenuity' of 'ordinary' employees

From our analysis, the influence of flexible organising architectures and the opportunities they present for interaction in a highly relational context leveraged the ingenuity of lower-level employees to exploit organising ambiguities (Simpson & Mayo 1997). This manifested itself in two closely related forms of activities that stimulated employees to enact foresightful action: "action in conditions of limited knowledge concerning both the extent to which future events may be anticipated and how to deal with them" (Tsoukas and Shepherd, 2004b, p. 7). The first is strategic conversations about the future potentialities and limits of the emerging innovation. The second is perspective taking and reflexivity-in-practise, providing possibilities for the continuous elaboration of projected courses, and the corresponding (re)construction of meanings (Maclean, Harvey, & Chia 2012b).

5.3. Strategic conversations about potentialities and limits

The term 'strategic conversation' refers to verbal interactions among team members in their situated activities (Chermack et al., 2007) that exceed mere information exchange to focus on improving product innovativeness. Heralded as the backbone of strategic foresight in competitive organisations, it is not about stimulating debates about factual knowledge regarding the future (van der Heijden 1996). It concerns triggering conversations that lead to conscious locally reflexive orders of actions challenging collective assumptions about the world.

What we have done in the past when we have a big problem is literally to bring the whole team up here and work through it together so people can pitch their ideas. One person may be making a very important point which might be extremely important for the product as a whole. It also makes people clearer on the thing we're doing. [Mercury team leader]

This manner of organising significantly downplays power inequalities in the team. Here, while the idea of seeking the views of lower-level employees to deliberate 'what to do' may seem trivial, a habitual tendency in sharing identified 'maps of the future', it mobilized actors towards active participation in search of viable interpretations and meanings. Adopted pathways are legitimized and homogenized,

enabling team members to generate a shared interpretation and common language. As one Kemitech member recounted:

Yesterday we were doing a gooey design, so we all just came to the whiteboard and said, it would be great to have these ideas sorted because it could enhance the ability of the product to 'think for itself'... You see, we have a real agile environment down there. [Kemitech team member E]

These interactions provide the locus for validating the integrity of ideas and insights that require further exploration. As Gratton and Ghoshal (2002, p.209) state, "such conversations build a shared understanding of the situation and create the foundations for rational and robust group decision making". Such conversations allocate "resources more efficiently once a common mission has been widely sought and jointly identified" (Dator, 1997, p. 34) and mobilize compelling differential visions of the emerging innovation into an idealized vision (Sarpong & Maclean 2012). Such open fora stimulate sense-making (Barnett, 1996; Weick 1995) and encourage maverick lower-level employees adept at advancing 'unusual' ideas to share their experiences (Cunha & Chia 2007). This can be gleaned from the following assertion:

The fact that there is no one arrogant, or with a massive ego in the team, there are no blocks of communication between the project leader and those of us in the team. Everyone's view counts, especially if we are about to make some major changes to the product. You can ask each other questions and give each other help. [Interlab team member A]

These reciprocities foster existing trust in the team and sustain members' inner satisfaction derived from sharing their knowledge (Wang and Wang, 2012). The exchange of ideas provides members with the opportunity to experiment on combining established routines with received signals. Thus, the team can "maximize recombinatory options between a diverse range of skill sets, biographical backgrounds and cultural orientation" (Grabher 2002, p. 255), as they confront a particular problem or decide on alternative pathways. Strategic conversations do not produce authentic closures. They initiate a causal chain until a particular possibility is actualized, stimulating thought experiments and encouraging lower-level employees to share tacit assumptions, igniting collective imagination.

5.4. Perspective taking and reflexivity-in-practise

Our analyses revealed that a flexible organising architecture empowers employees temporarily to transcend their functional tasks and roles to participate in strategic upstream decisions concerning an emerging innovation. We delineate this capability around two lines of attention. The first is perspective taking. Here, we refer to the imaginative act of putting oneself in the shoes of managers whose prescribed space for possible action could be seemingly unlimited. This is supplemented by reflexivity-in-practise: ongoing collective, deliberate locally reflexive orders of actions engaged in by lower-level employees that undergird perception, reproduction and transformation of their social structures (Maclean et al. 2012b; Sarpong & Maclean 2011). Perspective taking and reflexivity-in-practise are not mutually exclusive. Both are intrinsic to the identification of past and future possibilities and limits within current contingencies. Without perspective taking, the prestige of temporarily changing ranks becomes impossible. Likewise, reflexivity-in-practise, enabling the continuous elaboration of projected courses of action, the

Table 4
Profiles of emerging organising regimes.

| Flexible ← Organizing architecture → Rigid | | |
|--|-----|------|
| Formalization of innovation process | Low | High |
| Structural hierarchy | Low | High |

(re)construction of meanings, becomes non-existent. According to Chia (1998, p.5), “the shadow of the other is always implicated in the articulation of the one”. As the Mercury team leader recounted:

They are better developers than I am and I know that. They also know that I am a better project manager, so in that sense it works and it literally boils down to that. When we find a problem with the software, I talk to the analyst, talk to the support person, the programmer. Then I say, come and talk to me, how are you going to fix it? I give them the responsibility of getting the issue resolved. [Mercury technical director]

Such ‘Galilean moments’ provide lower-level employees with the chance to actively contribute to upstream decisions. The risk that an upstream specialist might pass on work to downstream actors without knowing their upstream choices, potentially leading to technical constraints, is reduced (Postrel 2009). This kind of organising process encouraged employees to move from truncated, obvious reasoning to engage in non-habitual ways of thinking and acting. Our evidence suggests that lower-level employees, freed from their organising regimes, can reflect on their practise in ways that bring them to challenge their own beliefs and assumptions, leading to the temporary reconfiguration of their organising structures. Evolving social orders lend coherence and introduce contradictions concerning the emerging innovation. However, manifesting through pattern recognition and projection of future problems, they heighten imagination. Simultaneously, via collective agency, employees acquire embodied social dispositions and capacities like knowledge, know-how, understanding and skills that anchor perspective taking and reflexivity-in-practise.

The following extracts from a conversation between a Mercury team member and a researcher are illustrative:

Researcher: So, what is it you are doing now that you think will contribute to the ‘make or break’ of the product in the market?
Team Member: Well, not to blow my own trumpet, I am currently working on ‘validators’ at a sort of object level, which will hopefully be very useful for customers so that they will be able to modify their business logs without having to come to us to say, “I would like it if it did this, this and that”. I have got a feeling that kind of functionality is probably going to be quite a big selling-point if it is done properly. There is a decent interface, and they have got people in position to come up with business rules and say, “I would like that, that and that”.
Researcher: Sounds interesting, did you come up with the idea yourself?
Team member: The technical director originally had a sort of vague, fluffy idea, it would be nice if we do this, this and that, and I stumbled into it, because I got bored of going through every one of my pages where one date needs to be less than another date that somebody has put in. Currently, all we’ve got are ‘validators’ that say this date has to be before Wednesday, or this date has to be before now. There is no way to say this date has to be before this other date. So, I was fiddling with ‘validators’. I then discussed with the technical manager who said, yes, I thought it would be a good idea if we made evaluators at a higher level that could look at all the attributes of the object.
Researcher: What is actually going to happen after this?
Team member: Well, I saw a problem or at least an opportunity, checked with the technical director and the project manager that something needs to be done. I was given a free rein to go off and implement it and make it something useful... Once the technology is there, it will be up to the team to take it on. We actually will then know how much time we need to spend putting these rules into the system. Maybe at the moment, all we need is the ability to do it for a few fields like comparing dates.

This ‘dialogic encounter’ (Beech, MacIntosh, & MacLean 2010; Maclean et al. 2012b) illustrates the role of strategic conversation and reflexivity-in-practise, emphasizing how the notion of minimal structures encourages improvisation in everyday organising (Cunha,

Clegg, & Kamoche 2012). By virtue of the flexible organising regime, lower-level participants, on receiving thought categories from the technical director, engage in retrospective and prospective acts whilst drawing on their existing technical knowledge to explore familiar, but unintelligent observed patterns in new situations. With regard to making such ‘validators’ useful, the flexible organising regime provided the ‘design space’ (Baldwin et al., 2006) wherein lower-level participants ‘played’ with the ‘validators’ in ways that enabled them to recognize the changing meanings and identity of ‘epistemic objects’ (Knorr Cetina 2001), whose inarticulate configurations and open-ended latent spatial-relations were not visible to the Technical Director.

5.5. The politics of imaginary pluralism

Following Clancy et al. (2012, p. 519), imaginary relational pluralism as used in organising our findings refers to observed “fantasy of [openness], control and coherence, where [lower employees] behave as if [their] organizations are the stable containers of rational decision-making and problem-solving”. Our evidence revealed that often, employees embedded in rigid organising regimes over-identified with their organising architectures, and were reluctant to challenge taken-for-granted assumptions about their organising world. As Nohria and Gurtler (2004, p.3) state, they engaged in ‘unreflective obedience’ to the organising regime. We observed that those employees who escape their shackles to challenge their organising social order quickly realized that their polyphonic voices may be interpreted as dissent or challenge to authority relations. The resultant impact of the ‘politics of pluralism’ in constraining strategic foresight manifested itself in two ways. The first involved the legitimization of rigid authority relations which structure the organising context by over-emphasizing the relevance of formal knowledge and technical rationality, subordinating dispositions, bodily and interpretive knowledge, which underlie learning and change in practise (March 1991). The second is an exercise of agency we call ‘benevolent conspiracies’. Here, lower employees formed episodic ‘tribes’ with others sympathetic to their beliefs without provoking an all-out fight against management.

5.6. Over-emphasis on formal knowledge and technical rationality

Our case evidence revealed that the context of rigid organising regimes places considerable emphasis on factual and procedural knowledge at the expense of interpretive knowledge, which stresses ‘ways of knowing’ like improvisation to cope with ambiguity (Schwartz 2011). The implicit assumption here is that “capability to procure and to utilize information is and will be a core competence of progress, innovativeness and competitiveness” (Patokorpi and Ahrenainen, 2009, p. 2). Nevertheless, we found that the quest to amass a wide range of information or complete information before taking simple but pragmatic intelligent actions furnished little space for lower-level employees to engage in playfulness (Levitt & March 1988; March 1991), forcing them to trade off reflexivity-in-practise for control and coordination.

Sometimes you get a blatant ‘No!’ as an answer, and you think that’s because they haven’t thought about what I said. It is not worth fighting... Other times, you get a ‘No!’ and you just have to realise that actually there are other forces at play, you know? Other people have other priorities, so that might mean that your brilliant idea isn’t so great when it is put into context. It is a hard one to swallow. [Interlab team member D]

Another participant observes:

I am used to being able to engage in reasonably lively debates where I argue my side and get things sorted. Here, I do get the impression that it’s generally been what the management says goes. You can sort of argue a little bit about those that are important to you but

the big bits always go the way they want. It just comes down to being handed parcels of work on a week-to-week basis. Because of this, I've always found myself thinking I could do much better than what I'm asked to do. [Kemitech team member B]

In both cases, team members report being psychologically and emotionally disengaged from the innovation process. Unable to break free from their organising architectures, they come to view their respective innovation processes as a threat rather than an enduring challenge to be mastered (Bandura 1994). Worse, they are unlikely to risk putting their stock of referential knowledge and creative efforts into action to enhance their identities. The following excerpts are illustrative:

It's quite devastating when you have no chance to prove your worth. You essentially become subordinate, quiet, and cut off because [the manager] basically squashes everything including the very thing that made you want to get up in the morning and go to work. [Kemitech team member E]

The worst experience was when we worked in a very small team which had absolutely no overlap of roles. So if I had a problem with something, the only choice I had was to go to my manager and see if he had some time to come and point out what I should do. It makes you feel stupid. [Mercury team member G]

Unable to surpass the limits imposed by the rationalist model of working, the motivation of lower-level employees to explore potentialities may be curtailed, resulting in premature closure of potential alternative pathways. The evaluation of specific pathways then becomes rule driven or the preservation of select members privileged to have an issue fall within their technical domain. Here, alternative futures which appear melodramatic or slightly unintelligible are discarded, the evaluation of alternatives disingenuously directed to discount the worldview or experience of those occupying lower positions in the team. Two participants explain:

I will say your input frequently counts based on your position in the team and partly based on the value of the idea. But that idea might be misconceived but would still get pushed through if you are a senior. Yes, so I won't even suggest something weird because there isn't an open forum for it. That's the reality of it, I think. [Kemitech team member D]

...You just have to swallow it in the end don't you? You can kick and make a fuss for a bit, but in the end, you know, in this working environment, if somebody says yes, who has the authority to say no? [Interlab team member B]

Such relational dynamics stifle the emergence of diverse epistemologies required to explore future possibilities and limits in the present (Nonaka, Von Krogh, & Voelpel 2006; Whipp 1999), diminishing the expertise of lower-level employees that they aim to reinforce (Dreyfus & Dreyfus 2005). For these employees, this was a deliberate attempt by those vested with authority to 'down-skill' by socializing them into accepting their interactional lower status or role obligations as fixed. Instead of being disenchanted and rebellious, these actors may accept the rules of engagement even if they intuit that it goes against achieving the group's desired future.

5.7. Benevolent conspiracies

We use the term 'benevolent conspiracies' to delineate what some employees do as 'resistors' to challenge extant power relations when their visions of innovations are not accommodated by inflexible organising architectures. From our case evidence, the early signs of

dissipation of strategic foresight induced by such organising regimes manifest in creative resistance (Courpasson, Dany, & Clegg 2012; Mainemelis 2010) and the (un)conscious pursuit of sectional interests emphasizing the compartmentalization of team members within technical domains.

I have put it on record, if you like, that I haven't been happy with some of the decisions, not necessarily with the person who took the decision but with somebody else on a similar level like me who potentially has the same reservations. Instead of going to the actual person and saying I told you, he shouldn't have done it that way, I can go to the other person, more or less on my side and say, we were right and he was wrong. [Mercury team member B]

This narrative highlights two issues related to benevolent conspiracy and its dysfunctional impact on strategic conversation and strategic foresight. First, it shows innovation team members, given their formally prescribed positions within the organising regime, are accorded little room to share their visions or "co-produce the future" (Deetz 2008, p. 389). Although this rule of engagement may quell distractive or unnecessary ideas while slowing the innovation process, in practise it discounts people's experience outside their technical domain, encourages compartmentalized thinking, and suppresses dissenting views and the creative tensions required for the identification of novel possibilities. A Mercury team member responsible for quality assurance lamented:

We may come up with something which technically seems to be a minor problem, but could still influence the overall performance of the product. The developers will say, well, it is not really urgent or related to testing for 'bugs' and then override that point of view, or simply push it back for the next cycle. It is easy for the smaller issues that are important to you to get pushed back until you end up in a dilemma. Maybe the tester's point of view could be taken more seriously. They need to bear in mind we are also looking at the bigger picture. [Mercury team member A]

The tester, whose primary role is to provide quality assurance feedback, is not expected to be concerned with interface development which falls beyond the boundaries of her role. While she may make a valuable point, little effort is expended into evaluating the viability of her inputs, and her concerns are ignored. Feeling undervalued, other members of the quality assurance group may take unwarranted actions to support their friend.

Second, the employees become 'prisoners' caught in an organising vortex that affords them little latitude to escape their creative shells. While their expectations, experiences and language may lead others to assume they are committed to the innovation process, in fact they may carry out their formalized duties without committing to exploring opportunities that present themselves. An Interlab team member observed:

We are never told anything, we just sort of plough along doing the best we can, or what they have told us to do. [Interlab team member C]

The conspiracy to adopt a 'ploughing along' tactic can be interpreted as a mechanism for team members to cope with their structural and relational constraints. Such acts make it difficult, or impossible, for employees to claim appropriate relational rights during strategic conversations, impeding their understanding of the emerging innovation.

6. Discussion and conclusion

Our objective in this study was to examine how organising structures and relationships influence the cultivation of strategic foresight. Emphasizing the structural orientations of innovation teams, their everyday situated activities and relationships in context, our study

highlights the triadic influence of individual, organisational, and contextual organising practises on the cultivation of strategic foresight. Four salient relational assemblages of practises that enable (or impede) the enactment of strategic foresight were identified: strategic conversations; perspective taking and reflexivity-in-practise; over-emphasis on formal knowledge and technical rationality; and benevolent conspiracies. Our data suggest these practises are culturally and historically situated, operating in combination or serially, and contributing simultaneously to enable or constrain knowledge-based action in situated interaction regimes on strategic foresight. In this regard, we found that the flexibility (or otherwise) of the organising regime of an innovation team provides a salient 'antecedent' to shape employees' ability to enact foresightful actions. Organising regimes therefore have ramifications and implications beyond structuring work to embody and govern situated organising practises and relationships. Given this, strategic foresight from a practise approach cannot be viewed as a *fait accompli*. Rather, its creative emergence and cultivation rely on the transformational character of emerging organising regimes.

Our research contributes to the literature on strategic foresight by explicating the relevance and influence of relationships and situated interaction regimes on the creative exploration and exploitation of limits and opportunities within organising: a crucial lens that remains under-researched. Drawing on relationalism, our study responds to calls for new approaches to theorizing strategic foresight (Fuller & Loogma 2009) bringing in an array of influences to its theory and practise by showing how organising processes as a causal factor influence talk, doings and hence the enactment of strategic foresight by employees in their situated practise. Note that the relational perspective, as advanced in this paper, makes no attempt to replace or invalidate the two existing perspectives on strategic foresight relating to episodic intervention and practise (see Table 2). Rather, the relational perspective complements them by seeking cumulatively to enrich our understanding of how strategic foresight as a distributed capability (McKelvey & Boisot 2010; Tsoukas & Shepherd, 2004a) can be harnessed practically beyond the annual intervention rituals facilitated by external consultants. Contributing to the emerging practise perspective, we hope our theoretical and conceptual advances may help foresight scholars and practitioners to better understand the logic and dynamics of strategic foresight beyond the specific context of their temporal emergence.

Our research holds implications for practising managers, especially those charged with managing new product innovation teams. First, we do not expect them to relinquish episodic interventions like scenario planning exercises. However, there is a need for managers to recognize that lower-level employees can, and do, contribute to organisational foresightfulness. Their latent potential to explore and exploit future opportunities and limits could be leveraged by entertaining maverick, dissenting views in organising and promoting flexible organising systems (processes, structures, relational rights) that give form to authority relationships in organisations (Tushman & Nadler 1986). Such flexible organising systems may encourage employees to share their visions and take ownership of joint enterprises. We therefore urge management advisors to give lower-level input respectful consideration, if not adoption. The wisdom of project teams may percolate through the glass ceiling of power to influence organisational learning and foresightfulness, especially for organisations structured for intense support of project-based work.

Like all studies, ours has limitations. First, we recognize the danger in assuming the generalizability of our findings with regard to all software organisations or technology-based firms (Eisenhardt & Graebner 2007). More geographically, culturally diverse companies might have produced different findings. Future research may consider focusing on different organisational or environmental settings (e.g. biotechnology) to ascertain whether additional insights can be observed or generated. Second, we concede that organising practises, relationships and interactions evolve and adapt over time, and we studied our innovation teams

over a limited period of 1 year. We therefore invite future research to adopt a longitudinal approach to investigate how changes in the organising practises and relationships during the course of innovation projects influence strategic foresight over the longer-term.

In conclusion, as strategic foresight becomes a distributed capability, organisations need to know more about how employee foresightfulness can be nurtured and captured. This study represents a first step in that direction.

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