Elevating design in the organization

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Abstract

Following evidence of its positive contribution to innovation and company performance, many firms are seeking to elevate design to a strategic level. However, little is known as to how this can be achieved. This study draws on the literatures concerned with elevating organizational functions and with organizational legitimacy, and aims to unravel and detail critical practices and potential tensions influencing the elevation of design's status in firms. To do so, 53 in-depth interviews were undertaken with key informants, representing a range of functional specialisms, in 12 companies, including large multinational companies as well as SMEs. Findings show how six practices – top management support, leadership of the design function, generating awareness of design's role and contribution, inter-functional coordination, evaluation of design, and formalization of product and service development processes – affect the design elevation process. In contrast with previous studies on raising the status of organizational functions, this research reveals that the same practive can play both positive and negative roles, and that there are fundamental tensions, which should be reconciled if design's status is to be elevated. Drawing on the concept of organizational legitimacy, we also examine how design moves beyond being seen as pragmatically useful, to being identified as a relevant, alternative way of operating, to being regarded as essential for success. The article concludes by articulating contributions to design and innovation management theory and practice, and to the body of scholarly work seeking to understand how to elevate the status of a function.

Introduction

Design is a primary driver of innovation in both manufacturing and services (Luchs, Swan, and Creusen, 2016; Ostrom, Parasuraman, Bowen, Patricio, and Voss, 2015; Verganti, 2009). It is critical to differentiation and branding (Noble and Kumar, 2010), and positively affects companies' financial and non-financial performance (Gemser, Candi, and van den Ende, 2011; Ravasi and Stigliani, 2012). The business press is rife with examples – from BMW to PepsiCo, from Herman Miller to Nike – of design's significant role in achieving these outcomes, specifically by elevating the design function to a strategic level within the firm (Bangle, 2001; Borja de Mozota, 2003; Brown, 2008; Verganti, 2009). As former chairman and CEO of Procter & Gamble, A.G. Lafley, stated:

> "Historically, P&G was brand- and product-centric. [More recently] we have used design to take a different cut at strategy and organizational planning to do things differently and better. [To do so] we worked hard to grow and develop the design team—gave them time to grow capabilities, gain experience, and prove their value to the product and brand teams." (Lafley, Norman, Brown, and Martin, 2013; p. 5).

Design's strategic significance is being noticed and acted upon. In recent years Accenture acquired service design firm Fjord; the Chinese communication group Blue Focus bought a majority stake in US-based agency Fuseproject; bank holding company Capital One acquired user experience consultancy Adaptive Path; and McKinsey bought product design agency Lunar. Also, companies such as Johnson & Johnson, PepsiCo and Philips have appointed lead designers to their boards (Gardien and Gilsing, 2013; Stuhl, 2014). The success of design-led firms such as Apple (the world's most profitable company and most valuable brand in 2017), along with recent debates on design thinking, bring to the fore a long tradition of attempting to elevate design to a strategic level (Beverland and Farrelly,

2007; Borja de Mozota, 2003; Cooper and Junginger, 2011; Gorb, 1990; Noble, 2011). Drawing on the literature (Karjalainen and Snelders, 2010; Luchs et al., 2016) and on the empirical research reported in this article, we define "strategic design" as designers' ability to influence decisions and set direction over issues that affect the long-term sustainability and competitiveness of an organization, such as development and communication of a brand's core values, positioning, and creation of new markets.

However, how can design be elevated from a functional to a strategic role within the firm? Extant research highlights the need to elevate design (Luchs et al., 2016; Roper, Micheli, Love, and Vahter, 2016) for two main reasons: (1) strategic issues such as branding, innovation, and differentiation benefit from design input, and (2) designers have methods that can bring unique insights to strategy formation and implementation (Best, Kootstra, and Murphy, 2010; Brown, 2008). Yet, little is actually known about the ways in which this could be achieved (Micheli, Jaina, Goffin, Lemke, and Verganti, 2012; Noble, 2011). This gap is reflected in research priorities concerned with infusing design into organizational processes, including those of the *Marketing Science Institute* 2016-2018 (MSI, 2016), *Journal of Product Innovation Management* (Biemans and Langerak, 2015), and *Journal of Service Research* (Ostrom et al., 2015).

This study investigates how to elevate the status of the design function. It aims to contribute to current bodies of literature seeking to understand how to elevate the internal status of an organizational function and draws on organizational legitimacy theory to do so. A function's status is defined as its ability to exert power and influence over decision-making beyond task-related issues (Enz, 1988; Hickson, Hinings, Lee, Schneck, and Pennings, 1971; Pfeffer, 1981). Higher status has three core benefits: sustained resource attraction, authority over other functions, and influence over top management team attention and strategy making (Feng, Morgan, and Rego, 2015; Kahn, 2005). In line with organizational theorists, we

contend that obtaining legitimacy is essential to realizing such benefits. Legitimacy is essentially concerned with ensuring access to resources (Bitektine and Haack, 2015) and informs and provides the theoretical framing for this study. Specifically, three questions direct our inquiry: (1) *which practices underpin the elevation of design's status within the firm?* (2) *Are there tensions related to the identified practices that may inhibit the elevation of design and how are they managed?* (3) *How do the elevation practices relate to seeking and acquiring legitimacy?*

Drawing on an exploratory multiple case study, we contribute to design and innovation management theory and practice in four main ways. First, this research extends findings drawn in relation to other functional disciplines and proposes further practices that enable the elevation of a function's status. Second, by unraveling tensions in the elevation practices, it empirically contributes to enduring debates in the innovation management literature on conflict between formalization and creativity, and between control and adaptability. Third, by considering the elevation of design as the acquisition of legitimacy, this study shows not only how to attain pragmatic legitimacy, which draws on calculative arguments, but also how higher levels of legitimacy – moral and cognitive – could be achieved. Fourth, given recent interest in a strategic role for design, this research provides empirical evidence specifically on how to elevate design's status in organizations.

Literature Review

The elevation of design within the firm

Since Herbert Simon (1969) identified the unique ways in which designers approach problem solving, researchers have explored how design can contribute to an organization's competiveness. One group of advocates for design's strategic role draws on design effectiveness studies (Hertenstein, Platt and Veryzer, 2005; Luchs et al., 2016). Research

shows that design's contributions can go beyond traditional aesthetics to include emotional and functional attributes of products and services (Gemser et al., 2011), as well as workplace design, communications activities to the firm's myriad of stakeholders, and corporate identity development (Borja de Mozota, 2003; Gorb, 1990). Given design's potential impact on such a wide set of aspects, various authors have argued that its status should be elevated to the level of other functions such as marketing, R&D and operations (Roper et al., 2016).

Another argument for increasing design's status draws on the unique insights that the methods of design bring to the strategy-making process *per se* (Chung and Kim, 2011; Cooper and Junginger, 2011; Martin, 2009). This point of view focuses less on the breadth of activities where design can add value, in favor of the unique perspectives designers bring to strategic management, sometimes referred to as "design thinking" (Brown 2008; Liedtka, 2015). Methods associated with design thinking, for example, can address tricky issues in strategic brand management, such as balancing renewal and reinforcement through new product development (NPD) (Beverland, Wilner, and Micheli, 2015).

According to this approach, the elevation of design's status helps infuse a stronger focus on the future and disrupt accepted marketplace norms. Design follows a constructivist logic focused on conception, invention, pattern creation, staging and sensemaking that complements business' positivist logic (Borja de Mozota, 2003; p. 146). Here design seeks to challenge long held assumptions and synthesize existing firm capabilities with emergent opportunities (Beverland et al., 2015). Moreover, authors have emphasized design's distinctiveness from natural and social sciences, because of its capacity to question current states, conceive what does not exist and, therefore, be particularly suitable to address "wicked" problems (Buchanan, 1992; Martin, 2009). Design can also act as an integrating mechanism, bringing together seemingly conflicting functional preferences in addressing NPD problems (Micheli et al., 2012). Specifically, designers can bring a complementary set of practices

focused on validity (rather than reliability) (Martin, 2009) or on 'shape' (rather than 'fit') that are both essential to NPD success (Beverland, Micheli, and Farrelly, 2016).

Elevating an organizational function's status

Research on raising the status of a function is relatively rare. Although there is a wealth of knowledge on how to create a certain orientation – such as market, business process, and supply chain orientations (Gebhardt, Carpenter, and Sherry Jr., 2006; Lockamy and McCormack, 2004; Mentzer, 2001) - little is known about how organizational functions can be elevated to a strategic level. Likewise, studies on intra-organizational power have focused on the antecedents and benefits of higher status (Enz, 1988; Feng et al., 2015; Welbourne and Trevor, 2000), but have not empirically investigated how such elevation is attained.

Yet, scholars and practitioners, especially within the disciplines of human resource (HR) management and marketing, have called for an enhanced strategic role for their functions, drawing on similar arguments to those put forward for design. For example, there is an appeal for HR issues to be addressed by top management teams and for HR professionals to influence strategic decisions (Jackson, Schuler and Jiang, 2014). In marketing, although rare, arguments for raising the function's status are based on demonstrating its importance to performance outcomes (Feng et al., 2015; Homburg, Vomburg, Enke and Grimm, 2015). Indeed, both disciplines lament their declining internal status despite their influence on performance related outcomes (Homburg et al., 2015; Jackson et al., 2014).

Notwithstanding calls for further research, only a few studies have examined how the status of either HR or marketing could be elevated. Two main related issues have been identified: alignment with organizational goals, and internal image. As to the former, authors have speculated that HR's predilection towards flexibility may be at odds with the pursuit of

control and standardization of efficiency-driven organizations (Ulrich, Younger and Brockbank, 2008). Homburg et al. (2015) also posit that the lack of CEOs with a marketing background may also lead to misalignment. Alignment is critical since top management team's perceptions of value congruity (i.e., the extent to which the top management team perceives functional heads to share their strategic goals) are critical to enhanced functional power and internal status (Enz, 1988). This lack of alignment is also driven by poor internal image. For example, Homburg et al. (2015) speculate that lower status is a function of an inability to communicate value-adding activities, indirect relationships between activities and outcomes, the poor quantification of marketing effectiveness, and poor message framing.

Similar themes have been suggested in relation to raising the internal status of design. For example, managers often lack appreciation of design (Song et al., 1997), designers may have different mental models than other functional experts' (Micheli et al., 2012), and designers struggle to measure and account for their contribution to organizational performance (Lockwood, 2007). However, such ideas are frequently construed as outcomes or states, rather than practices introduced by employees, such as designers and managers. Hence, although scholars proffer typologies identifying an extended strategic role for design (Best et al., 2010), and practitioners advocate a more strategic role for the design function (Brown, 2009), little is known regarding which practices help elevate design's internal status (Luchs et al., 2016; Ravasi and Stigliani, 2012). Therefore, in this study we focus on unraveling those organizational practices - defined as routinized and repeated sets of activities performed by organizational actors - which are critical to design's status elevation. This leads to our first research question:

1. *Which practices underpin the elevation of design's status within the firm?*

A related, but unexplored question is whether tensions emerge within the elevation process: are the practices necessarily playing a positive role? For example, some scholars have speculated that strong top management support is required to elevate a function's status (Webster, 2005), but is such support inevitably conducive to design acquiring higher status? Also, new product development (NPD) research has long stressed the need to plan and structure disciplined and formalized processes, alongside the need to support the conflicting demands of experimentation, boundary spanning and novelty (Bruce, Daly, and Kahn, 2007; Gilson, Mathieu, Shalley, and Ruddy, 2005). However, the two have often been regarded in opposition; for example, while controlling a function can enhance timely project completion, it can also limit problem solving and creativity (Rijsdijk and van den Ende, 2011). Therefore, the decision to formalize processes and systems to promote a more strategic use of design could either result in elevating its status, as intended, or, on the contrary, in limiting its scope and influence. Hence, we seek to unpick such tensions by exploring the way elevation practices are implemented and investigating how they are managed. This leads to our second research question:

> *2. Are there tensions related to the identified practices that may inhibit the elevation of design, and how are they managed?*

Legitimacy and Functional Status

In this article we utilize the concept of organizational legitimacy to make sense of the way practices operate to elevate design's status. Organizational theory scholars have emphasized that obtaining legitimacy is essential for any entity (be it an organization or a function) to ensure access to resources (Bitektine and Haack, 2015; DiMaggio and Powell, 1983). Legitimacy is defined as "a generalized perception or assumption that the actions of an entity

are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions" (Suchman, 1995, p.574). Specifically, Suchman (1995) identifies three primary forms of legitimacy: pragmatic, moral, and cognitive. The first is a rational kind of legitimacy that "rests on the self-interested calculations of an entity's most immediate audiences" (Suchman, 1995: 578). The second involves questions of values and beliefs about how to best operate (Thomas and Lahm, 2012). The third, cognitive legitimacy, means that an entity's capacity to create value is taken-for-granted and it is considered a necessary part within a socially constructed environment (Tost, 2011).

When studying how organizational entities acquire legitimacy, scholars have tended to adopt two different perspectives - strategic and institutional (Suchman, 1995). In this study we focus on intra-organizational dynamics and consider legitimacy from a strategic point of view, i.e., legitimacy can be purposefully acquired and manipulated within the firm by employing appropriate practices, rituals and symbolisms (Oliver, 1991; Suchman, 1995). Such intra-organizational legitimacy has recently garnered much attention (Ashworth, Harrison and Corley, 2008; Drori and Honig, 2013). For example, Bunduchi (2017) focuses on the tactics through which innovation managers ensure ongoing support for their initiatives with other business units. She finds that ongoing support for innovation initiatives requires moving beyond short-term calculative, rational appeals about the benefit of a particular project (consistent with pragmatic legitimacy) to include normative beliefs about how best to operate and enshrine innovation into the identity or fabric of the firm (i.e., moral and cognitive legitimacy). To do so, Bunduchi, along with Galang and Ferris (1997), emphasizes that symbolic impression management practices targeted at stakeholders are essential to achieving lasting legitimacy and therefore elevating functional status.

In summary, from a legitimacy point of view, arguments put forth in the literature for the elevation of design can be regarded as primarily pragmatic: employing design

strategically can lead to better outcomes and more innovative solutions to enduring challenges. In contrast, researchers examining internal legitimacy and the elevation of functional status suggest there are limits to this approach, and highlight the need to propose moral and cognitive legitimacy arguments that relate to how organizational actors operate, but have not investigated specific practices and potential tensions related to this.

This gives rise to the third research question:

3. *How do the elevation practices relate to seeking and acquiring legitimacy?*

Methodology

Sampling and data collection

A qualitative, multiple case study method was chosen to address the three research questions. Case study research provides rich data and is suitable for investigating deep processes that emerge and change over time (Bluhm, Harman, Lee and Mitchell, 2011), and multiple case studies allow for rigor in identifying patterns across the data (Eisenhardt, 1989). Given the focus on elevating a function, the sampling strategy was both theoretically driven and aimed at achieving maximum variation (Patton, 1990). In so doing, we sampled firms based in the United Kingdom that were of different sizes, yet large enough to have functional structures (including a separate design department). These firms operate in sectors where design would be commonly expected to play a major role (e.g., furniture and automotive) and in sectors where it would not (e.g., financial services and logistics). Interviewees confirmed the role that design was playing in their industry. For example, the chief design officer of Company C, a large financial services firm stated: "the future of the financial services industry all comes down to design and … starting all over, because our industry, as we know it now, will not be the same in three years' time, five years' time, ten years' time. It will be an entirely

different industry." The choice of involving different companies was motivated by our quest to identify practices and potentially related tensions that were neither industry-specific nor related to the degree of embeddedness of design in a particular sector.

In the case sampling stage, key informants, namely designers working in various firms, design experts and consultants, were contacted. Publicly available documentation (including annual reports, trade magazine articles and design awards) was also gathered in relation to several organizations' prevalent use of design. This stage resulted in identifying and gaining access to 14 private companies. Data gathered from the key informants provided initial evidence that all chosen organizations had considered utilizing design not simply in a functional way but were explicitly endeavoring to either elevate it to a more strategic role or to sustain it. Following initial interviews at company sites the sample was reduced to 12, as it was found that two firms had never attempted to elevate design's role beyond a purely functional one (e.g., in both cases the design function had never been properly resourced).

Multiple sources of evidence – in-depth interviews and documentation – were collected. This was to add breadth and depth to data collection and to contribute to the validity of the research (Eisenhardt, 1989). A total of 53 interviews were undertaken, lasting 60 minutes on average and involving key actors working at different hierarchical levels and in various functional areas. In all companies we interviewed at least three individuals. In all cases one was the lead designer[1], whereas the others were relevant personnel, as indicated by the lead designer[2], typically operating at director level in marketing and product development. When design was mainly undertaken in collaboration with design agencies, at least one external designer was also interviewed. Such diversity of respondents was necessary

[1] The only exception was company G where the lead designer was our initial contact, but eventually declined to be interviewed because of company changes happening during the period of data collection. The brand director, who had worked extensively with the design director, replaced him as our main informant and contact point.
[2] In some companies the lead designer had the title of Chief Design Officer, and sat at Board level; in others it was the Head of Design; and in some SMEs it simply had the title of 'designer'.

as interviewees might lack required knowledge to answer all questions, and diverse viewpoints could be expressed (Voss, Tsikriktsis and Frohlich, 2002).

Interviews consisted of three main parts. They started with grand tour questions, allowing interviewees to answer freely, with specific follow-up probes to explore the organizational context and new product and service development processes. In the second part of the interviews, respondents were asked about past and current investments in design, and reasons for such investments. Subsequent questions centered on the roles of design; for example, informants were asked whether and how design was acquiring a more or less legitimated position in the organization, and what the barriers were to its adoption and use. Further questions examined the dynamics, changes and adjustments, which had occurred over time, delving into events, activities and behaviors that accompanied such changes. Finally, questions were posed on specific projects, querying the dynamics of their progression. Respondents were asked to identify at least two projects – one successful, and one less successful (success was identified by the respondents, usually in terms of either innovativeness or business performance). For each project, the researchers investigated reasons for success or failure; changes and differences over time; the roles design had played; the main enablers and barriers to shifts in roles; and main outcomes.

Data were collected over a nine-month period. All interviews were recorded and professionally transcribed. The first author and a trained assistant were involved in the collection and initial analysis of data. The first two authors then further interpreted the data, offering new insights. For validation, draft reports were sent to the case companies, and two presentations were delivered at events where research participants and colleagues had been invited (Eisenhardt, 1989).

Characterization of design's roles within the case sample

An important feature of the case sample is the denotation of the role of design within each organization. Although this was primarily unraveled during data collection and analysis, it is reported here to provide a complete picture of the case organizations and their use and positioning of design. Table 1 reports details about the selected companies[3], the interviewees, and the main role design played. Design roles were derived according to three main criteria: (1) the nature of design activities, which was identified by investigating the tasks designers generally undertook (Perks, Cooper and Jones, 2005); (2) the scope of design's influence in decision-making processes in the firm; and (3) level of design's impact, which was derived by asking interviewees about the development of specific products or services. Sometimes categorization was not clear-cut, as some firms appeared to be in a transitional stage, moving from one role to another.

From this analysis the case studies were categorized into, or in transition towards, three main roles: design as service, design as strategy, and design as dominant perspective. These are illustrated in Table 2 and explained below.

Insert Tables 1 and 2 about here

Initial interviews confirmed that in all selected organizations the CEO or senior management team had invested in establishing a design function and attempted to utilize design strategically. However, in three cases design was still utilized mainly as a "service". For example, at Company A, the design director recalled: "the biggest alliance, when I was hired, was the CEO himself. He was believing in the power of design and he was supporting me, he was putting me on a pedestal in the organization." However, five years after appointing a

[3] For confidentiality reasons, company names have been anonymized.

design director and transferring powers from other business units to a newly constituted design function, design was still "seen somewhat as a service function supporting the overall marketing effort" (marketing director). A global design manager confirmed: "[here] design becomes a service, because that's what we are. In many projects, we are a service industry. … I think we're missing opportunities. We're missing breakthrough."

In cases where design is used as a service, its influence is tightly defined and bounded to cost control, strengthening existing brands and enhancing product recognition. The organization does not trust design's capacity to extend its role, such as proposing something new to the market. Its main activity therefore is to respond to specific briefs and information developed in other departments, with low involvement in cross-functional work. In this role, designers are also heavily reliant on customer feedback generated by other departments. Some of them expressed dissatisfaction and frustration with this situation: **"**you're not recognized, you're not appreciated as a … valuable function. People still see you as … a 'design waitress'. I tell you what I want and you need to organize it for me" (design director, Company A).

In several of the other sampled companies, design is elevated, or in the process of being elevated, to a strategic level. Here design informs strategic product decision-making, such as product branding, positioning, and creation of new markets. Its impact is perceived as organization-wide and as a critical way to attract customers and achieve competitive advantage. At Company G, for example, design emerged as the primary means of creating a new and uncontested market space, particularly significant as the company operates in a relatively saturated market: "we identified a white space opportunity. … We used design ... as a major factor for that product to make sure it was basically creating a segment" (director of business transformation, Company G).

In the third role, dominant perspective, design leads not just in product or service development, but in everything the organization does. For example, at Company L, a large airline, design was regarded as the main way of operating: "What you are embedding is the important bit. Are you embedding design and the design team? Or are you embedding a point of view?" (head of design, Company L). Such a stance means that the organization does not consider design as a discrete unit; instead, it is part of the mindset of the organization: "the [internal] design team is really just a problem solving function, a creative problem solving function, expert in human behavior, so: how we see ourselves and understand the things that make people tick" (head of design, Company L). Fundamentally, what distinguishes this approach from the previous two is that design's influence and impact permeate the organization.

Data analysis

Data analysis was conducted in four main steps, following the process proposed by Gioia, Corley and Hamilton (2012) (see also Pratt, Rockmann, and Kaufmann, 2006). The initial, first-order analysis – similar to Corbin and Strauss' (2008) notion of open coding – led to the identification of many codes, which were labeled using respondent-centric terms. Second-order categories were then obtained through axial coding (Corbin and Strauss, 2008). This helped reduce the initial codes to a smaller number, and researcher-centric concepts, either drawn from the literature or emerging from the data, were utilized. In the third step, the aggregate theoretical dimensions were identified. These categories (e.g., top management support, leading role of the design director) were defined in order to explain practices affecting the design elevation journey (Gioia et al., 2012). The authors iteratively re-elaborated and refined them to ensure that their understandings were sufficiently aligned (Voss et al., 2002). For example, some interviewees referred to the importance of educating

non-designers to make them aware of what design can help achieve: “over time what we've done is educate the business to say: design … stands the opportunity to make a strategic difference with a lot more than just the packaging” (global design director, Company D) (see also quotes from interviews conducted at Company C in both the text and Table 3). These passages were coded as ‘education over what design could do’. Subsequently, this was regarded as an instance of the wider category ‘clarity over design’s role’. Finally, this category and ‘lack of appreciation of design’ were brought together under the aggregate dimension of ‘generating awareness of design’s role and contribution.’

Finally, adopting a dynamic perspective, the findings were mapped against the elevation routes undertaken and main patterns were identified along these journeys. Figure 1 shows the first-order codes, second-order categories, and aggregate theoretical dimensions. Table 3 presents representative evidence in relation to the main categories identified.

Insert Figure 1 and Table 3 about here

Findings

The findings consist of two sections. In the first one, practices that underpin the elevation of design are presented and discussed. In doing so, each practice is first described and then tensions that arise in relation to such practices are unraveled in detail, as we show how each practice has the potential not only to facilitate but also to inhibit the elevation of design. Specifically, we demonstrate how the identified practices influence the elevation journey with reference to cross-case patterns (see Table 4) and how some firms were able to manage and reconcile the identified tensions (Table 5). Importantly, although all companies had intended to introduce and elevate design to a strategic role, outcomes varied. In some cases, despite senior management’s attempts, its role remained confined to a mainly operational

role. Other cases, where tensions were reconciled, demonstrated progression in making design more relevant to the point sometimes of becoming the dominant perspective across the organization. The second part of the findings frames the elevation of design as the acquisition of different forms of legitimacy, and shows how some case companies were able to attain not only pragmatic, but also moral and cognitive legitimacy.

Insert Tables 4 and 5 about here

Practices underpinning the elevation of design and related tensions

Six major practices emerged as critical in influencing the elevation of design's status in the firm: top management support, leadership of the design function, generation of awareness of design's role and contribution, inter-functional coordination, evaluation of design, and formalization of product and service development processes. The findings suggest such practices appear to be relevant both in sectors where design is expected to play a major role and in sectors where it is not, and in both manufacturing and service-based organizations. Except for the importance of the CEO and the presence of less formalized processes in SMEs, no other major differences were found in relation to company size.

Although some of these practices have been previously reported as influencing the elevation of a function, our study identifies novel ones and develops new insight by digging deeper into each practice. In so doing we unravel inherent tensions by showing how the way the same practice is implemented can act as either an enabler or a barrier in elevating design's status (see Tables 4 and 5). Specifically, in those firms where design was regarded as a service, the manner in which such practices were implemented frequently had adverse effects on the elevation of design's status. For example, in Company B the CEO's support mainly translated into excessive involvement in design-related matters, thus leaving little

room for design to acquire greater autonomy and relevance, or for the lead designer to engage in strategic conversations. Also, insufficient awareness of design beyond mere aesthetics (see Table 3) was generated inside the company and this limited its role. In organizations where design was transitioning from service to strategic level, many of the identified practices were starting to be implemented in such a way as to play a positive role, but some practices were still having an adverse effect. For example, in telecommunication Company E, top management support was present and considerable changes had been made to the service development process, but clear design leadership had not been established.

In companies where design was used either strategically or as a dominant perspective, companies were able to manage the identified tensions and the six practices helped elevate or sustain design's status. At Company G, for instance, design had progressively acquired strategic relevance thanks to the influential work of the lead designer (recently appointed to the board) in clarifying and emphasizing design's role, and to structural changes that had made design a more integral part of the NPD process. At Company J, where design had been considered the dominant perspective for decades, there was constant positive support from senior management; awareness of design's role was kept high across functions; the NPD process was sufficiently structured, but not to the point of constraining creativity; and design was evaluated both qualitatively and quantitatively at the end of projects. In the next section we examine each practice, identify the nature and sources of tensions, and then examine ways in which such tensions were overcome.

Top management support

Top management support was present in all organizations in the sample. The majority of cases appear to demonstrate that support from top management and, particularly in SMEs, from the CEO is necessary to embed design at a strategic level. At financial services firm C,

the head of design stated: "[the chief design officer] personally has a strong relationship with our CEO. ... That's been incredibly helpful to the whole team ... [The CEO] gets it. He understands the value of customer experience starting with the customer and good design." At Company H, a medium-sized enterprise, strategic design was only possible thanks to the Chairman's belief in design as a means to create and sustain the business in the long-term (Table 3).

However, this study finds that having a direct link with the CEO or the Board is not always positive. Indeed, issues were clearly recognizable in situations where increased top management support ended up weakening design's influence and impact. For example, several respondents cited examples of the company CEO or Board interfering and hanging onto an existing, unsuccessful service or product, and determining its design. At Company B, the commercial director discussed details of an unprofitable product, to which the Board felt so attached that they had become involved in its actual design, leaving designers with no freedom to act: "the internal designers have reworked it probably eight or nine times, and [the CEO and customers have] always came back with: "no, we don't want to change it." … So we have tried redesigning it lots of times and none of them have come to fruition, so it's a complete waste of time." In other cases, top management support translated into the fairly abrupt, top-down decision of creating a centralized design function, which resulted in other departments eventually developing a negative perception of design that then impeded its acceptance and integration. For example, at Company A, the CEO and CMO somewhat imposed the introduction of the design unit, and designers soon began to feel "resentment within the organization", as identified in Table 3.

Several case organizations appeared capable of resolving the tension between initial endorsement, but lack of sustained support, and excessive involvement in two main ways. First, the CEO or members of the senior management team had an in-depth understanding

and a positive view of design. For example, at Company C the shift to a strategic use appeared to be greatly influenced by the CEO's previous successful experiences with design. At Company K, the elevation of design to dominant perspective in the organization was driven by the CEO's background in product design: "being the CEO with design training, it's all about problem solving and looking at things differently. Why do we do things that way? Is there a better way of doing it? So, that thinking has been applied across the business rather than just in the product" (CEO and founder, Company K).

Second, sufficient autonomy for the design function coupled with a direct link with the top management team was identified as crucial. For example, the head of design at Company L stated: "you can be the best designer in the world and have great ideas, but unless you have directness and linkage and a common point of view, you often fail". At Company I, the CEO clearly attributed importance to design: "for us I would say that design is everything, because without it we have no business." However, as a designer stated: "here there's a lot more freedom than where I used to work, because you'd have the owner of the company looking over your shoulder, seeing what you were doing, kind of thing, whereas here it's not like that."

Leadership of the design function

In several cases, the decision to invest in design was followed by appointing a director of the design function. However, how this role was carried out emerged as critical. In some companies leadership of the design function was perceived as weak and fragmented. For example, Company E appointed a head of design, but the design team remained dispersed: "[Here designers] do work together but not all in one team … Really we should all be sitting together [and] having a central design director. I don't know exactly how high [in the

organization], but particularly high, who champions and has enough influencing power to drive an organization more powerfully towards design" (head of design, Company E).

Conversely, in some companies design directors adopted an overly centralized and controlling approach, which resulted in them focusing principally on operational issues, thus failing to support the elevation of design. At Company A, for example, "I have to say quite a bit of [the design director]'s time has been diverted into systems and processes and budgets and policeman and all that kind of stuff" (marketing director).

A distinctive characteristic of organizations utilizing design more strategically was their capacity to reconcile the tension between fragmented and centralized approaches to the leadership of the design function. This was achieved by having design directors who concentrated their efforts in promoting design inside the company. For example, the global design director at Company D argued, "if we only talk to people on the financial level, then we're completely missing the boat. Of course we have to talk the language of business, and finance, and return on investment ... but it is also our job as leaders of design within organizations to help people understand the thinking behind it". At Company G, the design director's capacity to engage with strategic matters such as long-term planning and product positioning was valued by colleagues and this led to his appointment to the board: "previously in our business we had the design director working for the engineering director. We deliberately don't have that. The design director is at the same level as the engineering director, and I think that is hugely important, because that helps to demonstrate the importance we associate with design" (brand director).

Generation of awareness of design's role and contribution

The practice of raising awareness in the organization about what design could do was apparent across the sampled organizations. However, findings show that insufficient

awareness can act as a formidable barrier to design's elevation. On the one hand, some interviewees complained about lack of appreciation within the organization, as design was still regarded by many as a mere means to "make things look good" (see Table 3). Also, as the group design director of Company C stated: "things go wrong [when] you have designers and design working with people who are not design literate, who are uncomfortable with the design process". On the other hand, problems emerge when the benefits of design are overemphasized, whereby there is an overemphasis on design myths and promises of unattainable outcomes. This can create unrealistic expectations, for example in relation to brand repositioning (see Table 3), and actually impede design's elevation. Too high expectations can also inhibit the development and integration of common goals between professional groups, which are necessary for design to fulfill a more strategic role. For example, when reflecting on the interface between marketing and design, the design director at Company A stated: "I always call [marketers] unconsciously incompetent [as] they think that the physical world is something like an advertising storyboard and you can change it every other hour."

This tension between low and unrealistic expectations was mainly resolved by purposefully exposing non-designers to design processes and practices. For example, at Company F the CEO recalled the importance of a design program run by an external agency to "create knowledge and awareness of design and what it could do." Similarly, financial services Company C had started an education program in various business units: "If you look at the [name of unit], they just have no orientation around design at all. So, I spent last week in New York City … and they are extremely finance driven. … However, with education at the most senior levels here ... plus the success of [recently launched product], they all now are getting on board" (head of design). Where design had already been elevated to a strategic role and where it was the dominant perspective, respondents emphasized that design was

widely understood in the organization and that it had become "a fundamental part of our DNA. There is a real strong recognition that innovation and design is what makes our brand strong" (director of brand and customer experience, Company L). Here all interviewees were taking for granted that design was playing a unique and critical role.

Inter-functional coordination

The coordination of functions emerged as a dominant practice underpinning the elevation of design. At various case companies, examples emerged of conflict among functions in the initial phases of product or service development, which led to inadequately developed and disagreed briefs, and, eventually, to failure: "when the design team and the brand team aren't in full agreement with what the brief is, that's when it doesn't work … it goes into a … bit of a car crash" (external designer, Company D).

As part of their efforts to elevate design, several firms were trying to reduce "silo mentality" by "bringing the organization together – business, technology, control functions – all together, centered and anchored on the customer or the client through human-centered design" (group design director, Company C). However, excessive inter-functional coordination can entail involving too many parties and going through unnecessary iterations. This proved ineffective, especially when coupled with unclear decision-making processes, and led to 'design by committee' (see also Table 3): "the project took a very long time, and it went through multiple iterations of everyone having their say, everyone wanting to see different versions. So the design agency went through something like 26 stages … too many iterations that led to sort of dilution" (global design director, Company D).

Reconciliation of the two extremes was achieved by creating cross-functional teams at the beginning of projects and "healthy tensions" among functional groups in the product or service development process: "we do have to have difficult conversations, but that, kind of,

increased tension in the process is really fascinating creatively because it makes you think harder" (design manager, Company D). At automotive company G, the sales and operations director talked about a "healthy debate ... between manufacturing, engineering and design, in terms of the purest what we want, to what feasibly can we deliver in a volume way, in a quality way, in a cost effective way." To do so, different agendas and plans were developed coherently from the beginning. For example: "I've been in this position three years ago, and I made up my mind very early on that it was really important that my role and [the chief designer's] role were very, very close and I think the design agenda and the brand agenda are the same agenda. And historically that hasn't been the case, you know, they've been miles apart" (brand director, Company G).

Evaluation of design

The cases exhibit great diversity in the ways organizations evaluate design's contribution to innovation and business performance. As expected, the sampled SMEs tended to rely more on informal evaluation rather than on performance targets and indicators. In the larger firms practices varied.

Nonetheless, a tension emerged between lack of evaluation of design's impact on one hand, and excessive emphasis on measurement on the other. Indeed, some interviewees lamented their incapacity to quantify design's contribution and impact to organizational success, as indicated by the head of design at Company E (see Table 3). However, dysfunctional consequences also arose when organizations attempted to accurately and precisely quantify the effects of design, both during development phases and after launch: "we will, you know, over time decompose [the project] with econometric modeling and understanding the true impact", exclaimed the marketing director of Company A. Talking about the initial stages in NPD, a design manager at the same company added: "you write a

concept board, that's the first step in the innovation which has a product idea on it, a price on it, and short description. Then you can test this is an online environment … and it is measured against a database … It may tell you that you're in a plus 25% top box, so you know that, okay, that's something I can move forward with. … So my incentive is on two times 25 million [net revenue], two ideas that are 25 million or higher, which is huge. … Nobody, and even less so in this day and age, is rewarded for taking risks. You're rewarded for success. You are probably fired for failures, but that breeds a certain culture". A paradox therefore emerges: the greater the requirement for design to prove its contribution through detailed analysis early on, the more conservative the design approach taken. As further quotes in Table 3 exemplify, constantly monitoring and challenging design to provide evidence may reflect a lack of trust in the organization and eventually make design's impact negligible.

Organizations where design's status was higher were capable of managing the tension between lack of measurement and excessive emphasis on it by conducting evaluations at the end of projects, often through the use of non-financial measures such as customer satisfaction and time to market, or performance proxies, such as design and innovation awards (see quotes in Table 3). In other cases, relatively simple measures of success were introduced. For example, the Director of HR and external affairs at Company L explained that, when assessing newly designed services, "we do look at our employees' engagement and we look at our customer satisfaction – I think those are the two things that will tell you whether you're getting it right". Furthermore, in organizations where design was utilized as dominant perspective, financial targets were only considered at later stages in the NPD process: "Initially, [sales targets] are not even considered at all. I think the initial discussion is: what ideas are there? It doesn't matter whether they're good or bad. … A lot of things, like profit margins [are] not really necessarily considered initially because you're just trying to get a load of ideas together. That will come later on when you start whittling the ideas down to

fewer and fewer" (head of design, Company K).

Formalization of product and service development processes

In most of the cases, changes to processes and routines were needed to increase design's scope and impact. When this did not happen, design struggled to play a strategic role. For example, at Company C, a financial services firm which had recently set up a design unit, the digital director lamented that sometimes "the business rather engaged through known processes" and did not involve the designers. The design director reiterated this point by complaining that in the firm "there's no real, well executed and documented design process yet. We're definitely focused on that and understand the need for it, we don't have it today." Indeed, firms using design more strategically appeared to benefit from formalized processes where design was an integral component. For instance, Company G had recently established a new NPD process where design was given more prominence. This was regarded as an important contributor to one of the firm's major successes: "I think the process that we've created … is producing winners. And the process itself, I wouldn't say it guarantees, but they will always be very good designs" (director of business transformation).

However, a tension emerged in the case sample between insufficient and excessive formalization. In some instances, over-formalization led to rigid processes and suboptimal results. This is exemplified in situations where too many stakeholders were involved, resulting in 'design by committee' (see Table 3). In other cases, the lack of a sufficiently codified process, because of either overconfidence or the belief that process could hinder creativity, led to project failure. For example, the CEO of Company F explained a poor new product introduction as the result of a weakly structured process: "we probably missed some key stages of design development … we probably didn't give enough consideration to the strategic considerations of how … we might compete … what difference did we bring?"

Weak structuring of process was also evident in cases where users were not involved, and this was often attributed to overconfidence: "what went wrong was: in that design and innovation process, for a very innovative product we weren't testing it and embedding it and listening to the users of that product enough. … It's an example where we've almost tried to over-innovate without taking our consumers along that journey with us" (finance director, Company I). Similar complaints were made in relation to poorly developed briefs: "Not putting enough time into the brief … tends to create lots of re-works in the project. … You end up with a weak design that is not going to change anything" (marketing director, Company A).

Striking the right balance between flexibility and formalization is not simple; however, some organizations succeeded in introducing clear processes that were not overly rigid, especially in the more exploratory phases. At company E, the introduction of a structured, but sufficiently flexible process enabled the organization to have a "very clear customer focus" (see Table 3). At furniture Company J: "there is an extensive vetting process that we go through before a design firm is granted a project to work with us" (director of insight). However, its development process is rather exploratory and open-ended: "Find a few really good designers … then trust them … We kind of go: 'Well, here's a problem to solve. Send it out to the designers and see what they bring back'" (director of finance, Company J). At Company J, the open-endedness of the process and the trust placed in external designers was clearly reflected in designers' freedom to challenge briefs.

Elevation of design as seeking and acquiring legitimacy

After examining the six practices and related tensions, we further analyzed the data considering the elevation of design's status from an organizational legitimacy perspective. In doing so, we show how three types of legitimacy - pragmatic, moral, and cognitive

(Suchman, 1995) – were acquired across the cases and highlight differences according to how the practices were deployed (Table 6).

Insert Table 6 about here

Pragmatic legitimacy

In this study, pragmatic legitimacy was often expressed in terms of "making the business case" for design and proving its effectiveness. Attempts to acquire pragmatic legitimacy were most evident in companies attempting to elevate design from service to a strategic level. At Company C, the head of design asserted: "once we prove ourselves with multiple product launches, get great customer feedback, make lots of revenue off of those ... and the design around it becomes something that people talk about, then all of a sudden, the message is a hell of a lot easier to sell throughout the group." Other interviewees stressed the importance of demonstrating design's value to internal stakeholders as early as possible through commercial successes and of sustaining it over time: "Our board of directors on an annual basis reviews our design output. [The design director] creates a very large space … where he sets up an extraordinary showcase of the work that's been done in the previous 12 months. And everyone in the company files through that space, but particularly, you know, it is the real focus and attention of our board of directors" (innovation director, Company D). Conversely, the global design director at Company A, discussing the difficulty of elevating design's status within the firm, reflected: "when I started in this position I maybe made the mistake, I don't know, to not lead by example. So, take five projects, do them very well, hope that they will be successful in the market and then the success will lead other people into following that process of creation. … I did not decide to go that way. … And now we often,

and it's almost funny, yes, we think we can do design in six weeks' time because nobody understands what design is and what it's about and what the final deliverable will be."

Moral legitimacy

While pragmatic legitimacy was recognized as necessary, various interviewees working at firms where design was in the process of or already being utilized strategically argued for design's role as morally legitimate, intended as "design is the right thing to do." For instance, the design director at Company D stated: "the funding of design is based on the *belief* that we'll make a difference. So the data that makes a difference, but [it is] the belief that it makes a difference, backed up by data, and the importance that people place on doing it." Such "belief" derived not only from continued evidence of success, but also from the wider appreciation of designers' ways of working, and their alternative perspective on business challenges. At automotive Company G, the global brand director exemplified: "We're going through a pitch process for our motor shows … we spend literally tens of millions of pounds, and the design of the motor show stand is really important. And I could quite legitimately not involve [the design director] in any of that, but I actually very, very deliberately do involve him in that process because he has a designer's eye. … He's the most creative person we've got … and he has a point of view on how we should present our cars and he's probably much better able than I am to judge a stand design and whether that would be a good environment in which to present our cars. So I kind of work very, very hard to involve him in more than being just a car designer."

Cognitive legitimacy

When design was being elevated to or already being used as the dominant perspective, it was perceived as cognitively legitimate, as its importance was not questioned and value creation

was taken for granted; for example: “as far as I’m concerned, everybody [in the company] is responsible for design in some shape or form” (project manager, Company H). Discussing how cognitive legitimacy was being attained at Company H, a design engineer emphasized the formalization and, at the same time, flexibility of their NPD process: “it can be anything from a very very well put together brief which will identify what the problem is, what the potential customers are, it will identify the volumes that we might be looking to sell, the market price, the competitors. [But,] you know, we are fairly flexible. Sometimes we have done a project and it is only at the end of the project that we have actually had the design brief.” In other companies where design was utilized as dominant perspective, several respondents spoke of the founders’ approach to design and of the need to keep this relevant in the firm: “the founders are present in the culture, and that story is told over and over and over.... and embedded, you know” (director of finance, Company J). Another major explanation of how cognitive legitimacy was attained and sustained relates to the deeper understanding of design’s nature and benefits acquired over time; as an external designer working for Company J stated: “it’s because [employees] have experienced it and experienced it positively over time, so much so that they’ve come to understand [design] as a positive practice.”

Discussion

This study explores the elevation of design within the firm and identifies six practices that underpin the enhancement of design’s status (research question 1). Importantly, this research shows that there are fundamental tensions, which should be identified and addressed if design is to be elevated to a strategic level, since the same practice can play both positive and negative roles (research question 2). The results are consistent across sectors and in both manufacturing and service-based organizations. However, a salient contingency is that some

tensions emerge more prominently in those organizations that have recently started to invest in design. For example, companies C, D and E clearly experienced tensions in relation to formalization of processes and evaluation of design (see Table 4).

The investigation of six major practices unravels tensions that need to be managed if design's status is to be elevated. Hence, this study shows that support from top management is required to trigger investment in design (Homburg et al., 2015). However, it may also hamper the work of designers, because of either lack of sustained backing over time or excessive involvement in design activities. Therefore, a direct and continued connection with the design function appears essential, but sufficient autonomy should also be granted. Similarly, the appointment of a design director can act as a catalyst in the design elevation process, but only if the design director is able to play a leading role, lobbying and effectively communicating design's value. Generating design awareness emerges as another key enabler, but only as long as expectations over design's contribution do not become unrealistic. The promotion of inter-functional coordination also helps elevate design to a strategic level, as it can promote collaboration and mutual appreciation of different functions' processes and mindsets (Beverland et al., 2016). However, balance needs to be stuck between too loose connections among functions and consensus-based decision-making among many stakeholders, as both can act as barriers and lead to suboptimal results. Evaluation of design effectiveness emerges as another important practice, but it appears to play a positive role only when measurement is used either retrospectively or mainly in the latter stages of the product or service development process. Finally, the formalization of the development process supports the elevation of design when design is an integral component and when the process is clearly structured, but kept sufficiently flexible, especially in the initial phases.

This research also shows that the six practices should not be considered in isolation, as they contribute in combination – rather than individually – to either enabling or inhibiting

the strategic use of design. For example, although top management support aids design's elevation, the concurrent reconfiguration of processes is also required. Furthermore, the progressive introduction of a clear process and the constitution of cross-functional teams at the beginning of projects can offset initial lack of organizational awareness of design. Similarly, newly appointed design directors may be capable of playing an influencing role in organizations if top management supports them without either excessive interference or constant monitoring. Moreover, by unraveling the dynamics of the cases, this study shows how time is an important dimension in relation to the elevation of a function's status. It is the interplay of several practices, *over time*, which can increase a function's relevance and effectiveness, making the transition from strategic to dominant perspective possible. Indeed, sufficient time is required to modify or introduce new processes, create awareness of what a function can do, and, ultimately, foster a culture where a function is embedded. Therefore, this research warns against potential oversimplification and static consideration of facilitating practices and related tensions.

Findings show how the elevation of design's status relates to seeking and acquiring legitimacy (research question 3). In particular, pragmatic legitimacy appears to be a necessary, but not sufficient condition for status elevation. Indeed, calculative, rational appeals and a constant focus on demonstrating design's effectiveness may eventually act as barriers to elevating design. The acquisition of moral legitimacy appears to be a discriminant factor between organizations where design was regarded as a service and those that were utilizing design strategically. Design as dominant perspective corresponds to a high level of cognitive legitimacy, whereby design is widely utilized as the main explanation for the organization's success.

Theoretical contributions

This study makes four main theoretical contributions. First, it extends the body of literature intent on identifying the practices that explain a function's enhancement of status. Broader debates on the importance of elevating particular functions to a more strategic level – in areas such as marketing (Feng et al., 2015; Homburg et al. 2015) and HR (Jackson et al., 2014; Ulrich et al., 2008) – are relatively few and largely silent about *how* this is done. This research provides richer insight to extant preliminary findings drawn in relation to other functional disciplines and proposes further practices. Marketing and HR management scholars have identified alignment with organizational goals and internal image as two critical issues (Homburg et al., 2015; Ulrich et al., 2008). This study supports this finding by highlighting the fundamental role of generating design awareness across the organization and support by top management in raising and sustaining design's status. However, it also shows the importance of appointing a design director who plays a leading role, promoting inter-functional coordination, evaluating and communicating design's contribution, and embedding design in structured business processes.

Secondly, the examination of the last two practices in particular provides an empirically based perspective on two enduring debates in the innovation management literature, between formalization and creativity (Gilson et al., 2005; Leenders, van Engelen and Kratzer, 2007), and between control and adaptability (Rijsdijk and van den Ende, 2011). The first conflict emerges between the requirement to ensure clarity and accountability, often through the use of measurement systems, and the importance of delegation and trust. Here, the findings show that positive results can be attained by communicating clear direction at the beginning and evaluating performance at the end, while leaving sufficient discretion to the design function (or to external design agencies) during the development process. By delaying questions about design's potential contribution in the NPD process, its influence and impact can be enhanced. Conversely, requesting detailed information in the early stages of NPD

followed by constant monitoring proves particularly dysfunctional.

The second conflict relates to the seemingly incompatible need for systems and processes to guide design tasks and innovation more broadly, but also to the autonomy and slack necessary for 'designerly ways of working'[4]. The findings suggest that organizations may be able to address this conflict, at least in part, by creating clear processes that ensure the alignment and coordination among functions necessary for NPD success, but also accommodate design practices (Beverland et al., 2015). Instead, when processes become overly structured and rigid, or excessively loose and chaotic, companies are likely to experience failure, because of either insufficient innovativeness or disregard of fundamental elements (e.g., lack of customer focus).

Thirdly, considering the elevation of design from a legitimacy point of view, higher status can be seen as deriving from greater legitimacy, as a function is increasingly perceived "not only as more worthy, but also as more meaningful, more predictable, and more *trust*worthy" (Suchman, 1995; p. 575). In marketing and HR management studies, arguments for elevating a function to a strategic level mainly focus on demonstrating its importance to performance outcomes, namely to acquire pragmatic legitimacy. Similarly, design scholars have often framed their arguments in pragmatic terms and considered the link between design and organizational performance (see, e.g., Lockwood, 2007; 2012). While these are necessary, they are insufficient to achieve long-term legitimacy. This study shows that when design is proposed - and eventually understood by non-designers - as a relevant, but alternative way of operating, it can lead to the acquisition of moral legitimacy, i.e., "judgments about whether the activity is the 'right thing to do'" (Suchman, 1995; p. 579), rather than decisions made purely on the basis of calculated returns. The attainment of cognitive legitimacy - in this context, the elevation of design to dominant perspective within

[4] We thank one of the anonymous reviewers for this insight.

the firm – is not only an outcome of moral legitimacy over time, but it can be facilitated by strategic approaches, whereby "managers must go beyond simply selecting among existing cultural beliefs; they must actively promulgate new explanations of social reality" (Suchman, 1995; p. 591). This was apparent in cases where design was persistently communicated as the principal way of operating and regarded as the main success factor to the point of being perceived as indispensable (Tost, 2011).

Finally, given the interest in design-driven innovation and a strategic role for design, the contextual focus of this study makes a contribution to the field of NPD by moving beyond the recognition that design can play different roles in organizations (Perks et al., 2005) to understanding *how* to elevate design's status in organizations (Beverland and Farrelly, 2007; Noble, 2011). Moreover, it relates to debates on design thinking and shows that, rather than relying on simplistic messages (e.g., "we all need to think like designers" (Brown and Katz, 2011, p. 382)), for design to become the dominant perspective, pragmatic and moral arguments should be put forward consistently and over time, so that design becomes integral part of what an organization does and its contribution to value creation is taken for granted.

Managerial implications

In contrast to existing design research, which tends to be framework-driven (Best et al., 2010; Danish Design Centre, 2003), this study derives its findings from deep insight into managerial decision-making and practices, which suggest specific pathways for practitioners intent on raising design's status. Undoubtedly, senior management support is necessary to facilitate and sustain the transition from design as service to a more strategic level. However, senior managers should develop clear signposts early on of how the organization is going to benefit from design and, progressively, grant autonomy to the design function. The appointment of a lead designer at senior level is crucial to manage expectations and influence

colleagues on the value and contribution of design. If successful, these influencing efforts could contribute to positioning design beyond operational and functional constraints.

Creating cross-functional teams could help design build internal alliances with other functions and ultimately lead to improved NPD outcomes. However, clarity over decision-making powers should be ensured, and creative, healthy tensions between groups maintained. Therefore, terms such as 'design thinking' and 'design-led' should be downplayed, because they may suggest an attempt by designers to increase their power at the expense of other functions, or to introduce a single way of approaching product and service development. Moreover, modifications to existing organizational processes should be made to enhance design's status; however, a careful balance should be struck between formalization and flexibility to ensure clarity and structure as well as empowerment and adaptability. Introducing clear objectives and milestones at the beginning of a project, and leaving sufficient discretion to designers and other NPD professionals during it could achieve this.

Elevating design's status can be considered a positioning problem, which initially requires design's capacity to articulate its unique contribution in terms of functional performance advantages, while also addressing points of parity (the organization's strategic goals). Subsequently, greater emphasis should be given to the unique ways design operates. In this context, a key method of design thinking – framing – may play a critical part. Designers must frame their contributions carefully for different audiences and explain how design complements other functions' value building activities and helps them achieve core goals, be they operational efficiency, customer engagement, sales, launch success, or higher margins. However, as this research shows, formal performance targets and indicators should be created to positively challenge employees rather than to monitor them, and evidence of good performance may be drawn from non-financial measures, proxies and awards, particularly at the end of projects.

Finally, this research has implications for designers and design education. Designers often start their careers as technical specialists with functional expertise. However, for strategic design to work, they have to be able to join cross-functional teams and act as influencers who champion design. They have to be capable of using and understanding different languages and perspectives and be fully aware of commercial considerations. Having gained a high level of trust and position, they can then play leading roles, and get increasingly involved in articulating strategies and future scenarios.

Limitations and future research

This study has several limitations, which provide potential avenues for future research. First of all, the chosen organizations are based in the United Kingdom, where the role of design is likely to be more strategic than in other countries, for example Asian ones. Future studies could consider different geographical contexts, as practices and tensions in elevating design may differ.

Although this research focused on generalizing to theory rather than to a statistical population, further studies are required to validate the findings with a larger sample. These could investigate the pervasiveness of the identified practices and related tensions, as well as the effectiveness of the strategies proposed in the managerial implications section. Also, qualitative and quantitative research could consider (a) where strategic design contributes, (b) how it adds value uniquely, and (c) under what competitive and industry conditions elevation becomes critical. Moreover, while in this study interviewees were asked to reflect on the elevation journey of design over time, longitudinal studies in which change is tracked over time could shed further light on how design's status is elevated.

Future research could also examine the limitations of a strategic role for design[5].

[5] We are indebted to a reviewer for pointing this out.

Although not the focus of this study, some informants highlighted problems with 'design over-confidence', often expressed as the rushed introduction of a new product or service, the lack of customer orientation, or becoming enamored with a product design at the expense of market analysis. Although this paper is predicated on elevating design's status, future research on the potential dangers of this elevation is necessary.

Finally, this study suggests that different conceptualizations of design are intimately related to how individuals make sense of design. Past research has considered this issue, but only to a limited extent. Beverland and Farrelly (2007), for example, drew on widespread industry interest in becoming 'design-led' in their exploratory study, although they did not explain how this could be achieved. Similarly, in their extensive review on design management Ravasi and Stigliani (2012) called for research on 'design-driven capabilities'. Building on recent work on resourceful sensemaking in new product development (Beverland et al., 2016), research could further explore the sense-making and sense-giving practices used by designers to enhance their internal status. For example, specific attributes of designers, such as problem-solving skills particularly in the context of "wicked" problems, could be considered as facilitators of the elevation of design's status.

References

Ashforth B., S. Harrison, and K. Corley. 2008. Identification in organizations: An examination of four fundamental questions. *Journal of Management* 34 (3): 325-374.

Bangle, C. 2001. The ultimate creativity machine: How BMW turns art into profit. *Harvard Business Review* 79 (1): 47-55.

Best, K., G. Kootstra, and D. Murphy. 2010. Design management and business in Europe: A closer look. *Design Management Review* 21 (2): 26-35.

Beverland, M. B. and F. J. Farrelly. 2007. What does it mean to be design-led? *Design Management Review* 18 (4): 10–17.

Beverland, M. B., P. Micheli, and F. J. Farrelly. 2016. Resourceful sensemaking: Overcoming barriers between marketing and design in NPD. *Journal of Product Innovation Management* 33 (5): 589-609.

Beverland, M., S. Wilner, and P. Micheli. 2015. Reconciling the tension between consistency and relevance: Design thinking as a mechanism for brand ambidexterity. *Journal of the Academy of Marketing Science* 43 (5): 589-609.

Biemans, W., and F. Langerak. 2015. From the editor - More research priorities. *Journal of Product Innovation Management* 32 (1): 2-3.

Bitektine, A. and P. Haack. 2015. The "macro" and the "micro" of legitimacy: toward a multilevel theory of the legitimacy process. *Academy of Management Review* 40 (1): 49-75.

Bluhm, D. J., W. Harman, T. W. Lee, and T. R. Mitchell. 2011. Qualitative research in management: A decade of progress. *Journal of Management Studies* 48 (8): 1866-1891.

Borja de Mozota, B. 2003. *Design management: Using design to build brand value and corporate innovation*. New York: Allworth Press.

Brown, T. 2008. Design thinking. *Harvard Business Review* 86 (6): 84-92.

Brown, T. 2009. *Change by design: How design thinking transforms organizations and inspires innovation*. New York: Harper-Collins.

Brown, T. and B. Katz. 2011. Change by design. *Journal of Product Innovation Management* 28 (3): 381-383.

Bruce, M., L. Daly, and K. B. Kahn. 2007. Delineating design factors that influence the global product launch process. *Journal of Product Innovation Management* 24 (5): 456-470.

Buchanan, R. 1992. Wicked problems in design thinking. *Design Issues* 8 (2): 5-21.

Bunduchi, R. 2017. Legitimacy-seeking mechanisms in product innovation: a qualitative study. *Journal of Product Innovation Management* 34 (3): 315-342.

Chung, K. and Y-J. Kim. 2011. Changes in the role of designers in strategy. Cooper, R., S. Junginger, and T. Lockwood, *The handbook of design management*, pp. 260-275, Oxford: Berg.

Cooper, R. and S. Junginger. 2011. General introduction: Design management – A reflection. In Cooper, R., S. Junginger, and T. Lockwood, *The handbook of design management*, pp. 1-34, Oxford: Berg.

Corbin, J. and A. Strauss. 2008. *Basics of qualitative research: Techniques and procedures for developing grounded theory*. 3rd ed. Thousand Oaks, CA: Sage Publications.

Danish Design Centre, 2003. *Design Ladder*. Available at http://www.seeplatform.eu/casestudies/design%20Ladder, last accessed on July 17, 2016.

DiMaggio, P.J. and W. W. Powell. 1983. The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48 (2): 147-160.

Drori, I. and B. Honig. 2013. A process model of internal and external legitimacy, *Organization Studies*, 34 (3): 345-376.

Eisenhardt, K. M. 1989. Building theories from case study research. *Academy of Management Review* 14 (4): 532-550.

Enz, C.A. 1988. The role of value congruity in intraorganizational power. *Administrative Science Quarterly*, 33 (2): 284-304.

Feng, H., N. A. Morgan, and L. L. Rego. 2015. Marketing department power and firm performance. *Journal of Marketing*, 79 (5): 1-20.

Galang, M. C. and G. R. Ferris. 1997. Human resource department power and influence through symbolic action. *Human Relations* 50 (11): 1403-1425.

Gardien, P. and F. Gilsing. 2013. Walking the walk: Putting design at the heart of business. *Design Management Review* 24 (2): 54-66.

Gebhardt, G. F., G. S. Carpenter, and J. F. Sherry Jr. 2006. Creating a market orientation: A longitudinal, multifirm, grounded analysis of cultural transformation. *Journal of Marketing* 70 (4): 37-55.

Gemser, G., M. Candi, and J. van den Ende. 2011. How design can improve firm performance. *Design Management Review* 22 (2): 72-77.

Gilson, L. L., J. E. Mathieu, C. E. Shalley, and T. M. Ruddy. 2005. Creativity and standardization: complementary or conflicting drivers of team effectiveness? *Academy of Management Journal* 48 (3): 521-531.

Gioia, D., K. J. Corley, and A. L. Hamilton. 2013. Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organizational Research Methods* 16 (1): 15-31.

Gorb, P. 1990. *Design management*, New York: Van Nostrand Reinhold.

Hertenstein, J. H., M. B. Platt, and R. W. Veryzer. 2005. The impact of industrial design effectiveness on corporate financial performance. *Journal of Product Innovation Management* 22 (1): 3–21.

Hickson, D. J., C. R. Hinings, C. A. Lee, R. E. Schneck and J. M. Pennings. 1971. A strategic contingencies' theory of intraorganizational power. *Administrative Science Quarterly* 16 (2): 216-229.

Homburg, C., A. Vomburg, M. Enke, and P. H. Grimm. 2015. The loss of the marketing department's influence: is it really happening? And why worry? *Journal of the Academy of Marketing Science* 43 (1): 1-13.

Jackson, S. E., R. S. Schuler, and K. Jiang. 2014. An aspirational framework for strategic human resource management. *The Academy of Management Annals*, 8 (1): 1-56.

Karjalainen, T., and D. Snelders. 2009. Designing visual recognition for the brand□. *Journal of Product Innovation Management* 27 (1): 6-22.

Kahn, K. B. 2005. Department status: An exploratory investigation of direct and indirect effects on product development performance, *Journal of Product Innovation Management* 22 (6): 515-526.

Lafley, A. G., Norman, D., Brown, T. and Martin, R. (2013). Q&A, *Design Management Review*, 24 (2): 4-11.

Leenders, R., J. van Engelen, and J. Kratzer. 2007. Systematic design methods and the creative performance of new product teams: do they contradict or complement each other? *Journal of Product Innovation Management* 24 (2): 166-179.

Liedtka, J. 2015. Perspective: linking design thinking with innovation outcomes through cognitive bias reduction. *Journal of Product Innovation Management* 32 (6): 925-938.

Lockamy, A. and K. McCormack. 2004. The development of a supply chain management process maturity model using the concepts of business process orientation. *Supply Chain Management: An International Journal* 9 (4): 272-278.

Lockwood, T. 2007. Design value: A framework for measurement. *Design Management Review* 18 (4): 90-97.

Lockwood, T. 2012. Editorial - Design management metrics: Assessing quality and outcomes. *Design Management Review* 22 (2): 5.

Luchs, M. G., K. S. Swan, and M. E. H. Creusen. 2016. Perspective: A review of marketing research on product design with directions for future research. *Journal of Product Innovation Management*. 33 (3): 320-341.

Martin, R. 2009. *Design of business: Why design thinking is the next competitive advantage*. Cambridge, MA: Harvard Business Review Press.

Mentzer, J. T., W. DeWitt, J. S. Keebler, S. Min, N. W. Nix, C. D. Smith, and Z. G. Zacharia. 2001. Defining supply chain management. *Journal of Business Logistics* 22 (2): 1-25.

Micheli, P., J. Jaina, K. Goffin, F. Lemke, and R. Verganti. 2012. Perceptions of industrial design: The "means" and the "ends". *Journal of Product Innovation Management* 29 (5): 687-704.

MSI (2016), *MSI Research Priorities 2016-2018*, Marketing Science Institute. http://www.msi.org/uploads/articles/MSI_RP16-18.pdf. Accessed July 30th 2016.

Noble, C. H. 2011. On elevating strategic design research. *Journal of Product Innovation Management*, 28 (3): 389-393.

Noble, C. H., and M. Kumar. 2010. Exploring the appeal of product design: A grounded, value based model of key design elements and relationships. *Journal of Product Innovation Management*, 27 (5): 640-657.

Oliver, C. 1991. Strategic responses to institutional processes. *Academy of Management Review*, 16 (1): 145-179.

Ostrom, A. L., A. Parasuraman, D, E. Bowen, L. Patricio, and C. A. Voss. 2015. Service research priorities in a rapidly changing context. *Journal of Service Research* 18 (2): 127-159.

Patton, M. Q. 1990. *Qualitative evaluation and research methods*. 2nd ed. Thousand Oaks: Sage Publications.

Perks, H., R. Cooper, and C. Jones. 2005. Characterizing the role of design in new product development: An empirically derived taxonomy. *Journal of Product Innovation Management* 22 (2): 111-127.

Pfeffer, J. 1981. *Power in organizations*. Marshfield, MA: Pitman.

Pratt, M. G., K. W. Rockmann, and J. B. Kaufmann. 2006. Constructing professional identity: The role of work and identity learning cycles in the customization of identity among medical residents. *Academy of Management Journal* 49 (2): 235-262.

Ravasi, D., and I. Stigliani. 2012. Product design: A review and research agenda for management studies. *International Journal of Management Reviews* 14 (4): 464-488.

Rijsdijk, S. A., and J. van den Ende. 2011. Control combinations in new product development projects. *Journal of Product Innovation Management* 28 (6): 868-880.

Roper, S., P. Micheli, J. Love, and P. Vahter. 2016. The roles and effectiveness of design in new product development: A study of Irish manufacturers. *Research Policy*, 45 (1): 319-329.

Simon, H. A. 1969. *The sciences of the artificial*. 1st ed. Cambridge: MIT Press.

Song, X. M., M. M. Montoya-Weiss, and J. B. Schmidt. 1997. Antecedents and consequences of cross functional co-operation: A comparison of R&D, manufacturing and marketing perspectives. *Journal of Product Innovation Management* 14 (1): 35-47.

Stuhl, M. 2014. What is behind the rise of the Chief Design Officer? *Forbes* (online edition), November, 11 [accessed July 30, 2017] Available at: http://www.forbes.com/sites/groupthink/2014/11/11/what-is-behind-the-rise-of-the-chief-design-officer/

Suchman, M. C. 1995. Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review,* 20 (3): 571-610.

Thomas. T. E. and E. Lahm. 2012. Legitimacy and organizational sustainability. *Journal of Business Ethics*, 110 (2): 191-203.

Tost, L. P. 2011. An integrative model of legitimacy judgments. *Academy of Management Review*, 36 (4): 686-710.

Ulrich, D., J. Younger, and W. Brockbank. 2008. The twenty-first-century HR organization. *Human Resource Management* 47 (4): 829-850.

Verganti, R. 2009. *Design driven innovation. Changing the rules of competition by radically innovating what things mean*. Cambridge, MA: Harvard Business Press.

Voss, C., N. Tsikriktsis, and M. Frohlich. 2002. Case research in operations management. *International Journal of Operations and Production Management* 22 (2): 195-219.

Webster, F. E. (2005). Back to the future: integrating marketing as tactic, strategy, and organizational culture. *Journal of Marketing*, 69 (4): 4-6.

Welbourne, T. M. and C. O. Trevor, 2000. The roles of departmental and position power in job evaluation. *Academy of Management Journal* 43 (4): 761-771.

Table 1. Details of case organizations, interviewees, and roles of design

Case	Core Focus	Sector	Employees	Design role	Interviewees
A	Product	Consumer goods	10,000-50,000	Service	Design director (interviewed twice), two design managers, marketing director, SVP product category
B	Service	Logistics	250-500	Service	Founder and chairman, two designers, commercial director, finance director
C	Service	Financial services	100,000-150,000	Service	Chief design officer, digital director, group design director, head of design
D	Product	Consumer goods	10,000-50,000	From service to strategic	Global design director, design manager, innovation director, external designer
E	Service	Telecommunications	10,000-50,000	From service to strategic	Head of design, consumer and marketing director, head of service management, senior design manager
F	Product	Consumer goods	50-100	Strategic	CEO and founder, production and technical director, production manager, finance manager
G	Product	Automotive	10,000-50,000	Strategic	Brand director, sales operations director, director of business transformation
H	Product	Manufacturing	250-500	From strategic to dominant perspective	Senior project manager, design engineer, product manager
I	Product	Apparel and fashion	1,000-5,000	From strategic to dominant perspective	CEO, senior designer, junior designer, marketing manager, finance director
J	Product	Furniture	1,000-10,000	Dominant perspective	VP product design, SVP marketing, director of insight, director of finance, team leader R&D, external designer
K	Product	Luggage manufacturing	50-100	Dominant perspective	CEO, head of design, head of sales, marketing manager
L	Service	Airline travel	1,000-10,000	Dominant perspective	Head of design, director of sales and marketing, director of brand and customer experience, director of HR and external affairs

Table 2. Main roles of design in sampled cases

Role of design	Main characteristics	Illustrative quotes
Design as service	Aesthetic orientation; design is mainly required to respond to external demands, often in the form of a narrowly defined brief.	"I think there is still a fundamental misunderstanding of what design can offer and how it could be applied. And this is a cliché, but it's amazing how many people you meet who still think design is about aesthetics" (group design director, Company C). "The word 'design' is a very hard word in this organization. … Many people still think that we are putting the lipstick on the pig" (design director, Company A).
Design as strategy	Design is involved in defining the company direction in collaboration with other functions.	"We use very deliberately the word 'design', not 'styling'. This isn't styling. This is design and it's design integrity, and that combination of design integrity and modern world capability is a killer combination for this business" (brand director, Company G) "You follow a good process, you know, you work with the right designers, you do really good quality design, and it leads to business growth" (design manager, Company D).
Design as dominant perspective	Design is regarded as the primary means to set direction.	"Design is not something that is done by this team of crazy kids on the third floor, but it's part of everything, part of everybody's world. And being responsible for innovation and creativity is a responsibility that everybody can have, or everybody should have." (director of brand and customer experience, Company L) Design "is not just a shape or a form or a function, but it's a new way of seeing things, it's a new point of view, and the product itself is only one way of expressing that idea" (external designer, Company J).

Table 3. Analysis: second and first order coding of critical practices in elevating the role of design, with representative evidence

Second-order codes	First-order codes	Representative evidence
Sustained positive investment	Top management investment in design	"To succeed you have to have the senior management buy in, you have to have that agenda where they want to invest in [design]" (design manager, Company D).
	Board / CEO's belief in design	"It runs through [the CEO's] DNA, you can see it in him when you talk to him, that's who he is. So he is very aware of the importance of good design" (finance director, Company F).
	Direct connection with the CEO or Board	"Five weeks ago, they announced [name] promotion to chief design officer. So, not only does [name] have a say in, you know, the executive leadership team … he has a dotted line into [CEO's name]" (head of design, Company C).
Destructive role of senior management	Controlling top management team	"We get a new design come in, we get different mock ups made, and then you end up with five middle aged men [i.e., the Board] deciding which one to go with; and I don't think that's a good profile at all" (finance director, Company B). "With the previous CEO [known for his controlling style], there's no way I would have thought about working for [company C], I would have stayed happy at [competitor]" (digital director, Company C).
	Poor management of power relations in the organization	Designers felt "resentment within the organization particularly as budgets were taken from countries and given to [the design unit] … you can imagine that in the local organizations they didn't like [the design team] to be around, because we were interfering in the empowerment that they had in order to create the design for the brands" (design director, Company A).
Strategic role of design director	Providing a design perspective on strategic questions	Strategic decisions triggered by the design director "really did push people here, senior managers outside of their comfort zone, as well. Which is really good for the company, because that's actually instilled a level of confidence in our approach moving forward" (sales operations director, Company G).
	Influencing role within the organisation	"We have got a big influencing job here to do, to find [our] sponsor, to persuade, to help people understand" (global design director, Company D).
Poor influence of the design director	Lack of a senior design lead	"We're hiring a new head of marketing and design soon. [The current one – a middle manager] is spread very thinly, and I don't think she's necessarily specialised in design" (finance director, Company B).
	Focus on mainly operational matters	"It's essential to influence [the board] on a strategic design thinking level … and I think that's where a lot of my peers fall down: they don't do that" (global design director, Company D).

Table 3. Analysis: second and first order coding of critical practices in elevating the role of design, with representative evidence, continued

Second-order codes	First-order codes	Representative evidence
Clarity over design's role	Education over what design could do	"The only thing that stops [embedding design] is really the education, awareness and human capital" (chief design officer, Company C). On the need of educating colleagues: "I think for a lot of people … they see design a little bit as, you know, like a dress you put on. They don't see the business value of design … They'll know it as making something look pretty. And I think it's that thinking in this specific organisation that we need to shift" (design manager 1, Company A).
	Creating a design DNA	"In the 1930s, when (Company J) was really making this ornate very heavy wood furniture, there was this one designer who came in and told [the company founder]: "what you're doing is really wrong, people don't live like this anymore. People need, you know, things that are simple and that are lighter that could go into smaller rooms", and he defined what modern living is. [The founder] trusted that new vision and started working with him and said: "okay, well, so what should furniture be like?" And this was the beginning of much more Bauhaus-like style. I think that collaboration and the collaboration with [famous designers], you know… we are eating the fruits of this DNA in a way" (external designer, Company J).
Lack of appreciation of design	Reductive view of design	"You can't get precious about design [here]. We are trying to do the right thing for customers" (consumer and marketing director, Company E). "We spend a lot of money on making sure the working environment is as pleasant as possible… And that includes design - making sure it looks good" (finance director, Company B).
	Unrealistic expectations	"To genuinely be able to successfully revitalize this brand … you can't just put a [new product design] on the shelf and expect this brand to be repositioned. It's got to be, you know, from the core, from the heart, as well" (design manager 2, Company A).
Positive relations among functional specialists	Bringing people together from the start	"The collaboration [between operations, design and marketing] was very strong from the outset. So I think that one of the key reasons for success was the strength of collaboration internally across, you know, multiple functional areas" (head of service management, Company E). "We have cross-functional teams on all the projects that we're working on whether it's a new product or whether it's a new process. You know, there'll be people involved from manufacturing, from marketing, from [the design unit], you know, right from the very beginning, really, I mean, as soon as we get concepts" (product manager, Company H).
	Healthy tension between groups	"Our decision-making is centred around sort of what we believe about design. It's a healthy tension. I mean, there's always tension with a new design and the more innovative, the greater the tension, obviously. But it is what we do." *So you would see tensions as a positive thing?* "Yes. I mean, it's a good, healthy tension" (SVP marketing, Company J). "I think sometimes those tensions [between functions] are fine. If you have no tension, there nobody's challenging each other. And so, you don't want an environment with absolutely no tension" (director of sales and marketing, Company L).

Poor interactions across functions	Silo mentality	"We are a pretty silo organization, and collaboration is still a bit of a difficult word in [the company], and if people collaborate it's more out of, I would almost call it out of need and based on personal relationships" (design director, Company A).
	Design by committee	"The design process was too democratic and we had, you know, the Americans saying they wanted this [product] to look like this and be more sophisticated … and we had the Australians and the South Africans saying "no, we actually want [product name] to really go back to the basics." And so the design brief wasn't single-minded and the design, therefore, wasn't single-minded and I think it suffered as a result of that" (brand director, Company G). "A camel is a horse designed by a committee, because a committee is actually the process itself working against the original concept, the idea" (head of service management, Company E).

Table 3. Analysis: second and first order coding of critical practices in elevating the role of design, with representative evidence, continued

Second-order codes	First-order codes	Representative evidence
Measurement as a means to understand performance	Simple performance measures to positively challenge employees	"25% of our products must be new products. … What makes (Company H) unique is the fact that we are measured on 25%. We are encouraged to be different. We are encouraged to fix problems. We are encouraged to move into markets that nobody else wants to go into" (design engineer, Company H).
	Reliance on assessments and awards	"We have an assessment, in terms of internal assessments around the attributes, but also externally, we get awards, effectively, design awards, which give us a clear view that we're on the right track" (director of business transformation, Company G). *Do you have specific measures of success?* "No…because we *believe* in effective design, so there are now various competitions, [such as the] Design Effectiveness Awards. So, it's something we track" (external designer, Company D).
Measurement as a control mechanism	Difficulty in proving design's contribution	"We are being asked by the company for evidence for how much money we saved doing things. It is a difficult question to answer because there are so many aspects that drive customer satisfaction that are beyond our control … And these kind of things to say, ok, we have now gone up by 5% on measure x. It is very tough to measure that. I mean I have been wrestling with that ever since we started" (head of design, Company E).
	Requiring evidence as sign of lack of trust	"We're a business that is very sceptical until there's evidence. … We won't be given more resource just because we feel this is a good idea" (marketing director, Company A). "The worst thing is when that trust disappears or is not there and so you become constantly questioning the values, the expertise, the knowledge and the drivers of the other people, and that's hell, you know" (external designer, Company J).
Incorporating design in clear and structured processes	Modifications to existing processes to benefit from design	"We spent a lot of time working out what [the 'customer centred design process'] would mean and how we would adapt our process to that sort of design focus and create a different life cycle stages" (head of service management, Company E).
	Reliance on clear processes	"It's very important to have a process, because it gives everyone a common understanding of the goal at the time of it. I think that is the base of the conversation" (senior designer, Company I). "People only see processes as being bureaucracy when the end result to them is a constraint … But when actually [they] contribute to a very clear customer focus in terms of the end to end design, then actually everyone has a common purpose there which is design the best outcome for customers. And I think that's really influenced how we design things" (head of service management, Company E).

Under- or over-formalization	Belief that formal processes constrain creativity	"People don't like the word process [in this company]; it's a little bit of a cowboy culture, it has always been like that... there is a bit of a fear to come up with processes and things like that. People think it will take the entrepreneurial spirit of the culture away." (design manager 1, Company A).
	Introduction of overly formal processes	"We fired the previous Ideas and Innovation Director who, within about three months, actually came up with a 50-page document. So, there's a moral there." (senior project manager, Company H).

Table 4. Occurrence and influence of identified practices in the selected companies

Practice	A	B	C	D	E	F	G	H	I	J	K	L
Top management support	-	-	+	+	+	+	+	+	+	+	+	+
Leadership of the design function	-	-	+	+	-		+	+			+	+
Generation of awareness of design role and contribution	-	-	-	+	-	+	+	+	+	+	+	+
Inter-functional coordination	-			-	+	+	+		+	+	+	
Evaluation of design	-		-	+	+			+		+	+	+
Formalization of development processes	-		-	-	+		+	+	+	+		+
Design role (*)	Serv	Serv	Serv	S-S	S-S	Strat	Strat	S-D	S-D	D	D	D

(*) Key: Serv = Service; S-S = From service to strategic; Strat = Strategic; S-D: From strategic to dominant; D = Dominant perspective

Table 5. Practices and tensions in the elevation process

Practice	Inherent tension		How tensions were reconciled
	Pole	Opposite pole	
Top management support	Support only initially and as a result poor management of internal dynamics and tensions with existing functions	Excessive involvement and control over the design function's operations	Investment and continuous support; direct connection between CEO / board and design lead, but freedom and autonomy given to the design function
Leadership of the design function	Fragmentation of design leadership	Design leadership is centralized, but overly controlling as the design director overly focuses on operational matters and fails to connect with other functions	The design director leads the design function, understands that her/his main role is to influence, and therefore lobbies for design to play a more strategic role inside the firm
Generating awareness of design's role and contribution	The understanding of design is rooted in the notion of 'design as aesthetics'; this leads to low expectations over design's role and contribution	Expectations are not managed and become unrealistic	Awareness of design's broad role and contribution is enhanced through education and experience of what design can do, without expecting design to immediately impact the organization's performance
Inter-functional coordination	Despite changes in policies, functions operate quite separately and there are limited interactions between them	Excessive involvement of too many parties results in endless iterations and unclear decision-making	Cross-functional teams are constituted at the beginning of projects, a healthy tension is created, and clear decision-making is established
Evaluation of design	Lack of formal measurement is a barrier to providing evidence of design's contribution	Constant requests for evidence both at the beginning and during the development process overly constrain design	Measurement is used mainly in the latter stages of the development process, results are evaluated at the end, and financial, non-financial indicators and proxies are considered
Formalization of product and service development processes	Process is too unstructured and does not provide either sufficient boundaries or clarity over how and what to do	Process is mainly intended to provide control and becomes overly rigid	Process is clearly articulated, but is kept flexible, especially in the more exploratory phases

Table 6: Links between elevation practices and forms of legitimacy

Form of legitimacy	Nature of elevation practices
Pragmatic – relates to making the business case for design	*Top management supports* the introduction and resourcing of design *Awareness of design*'s role and contribution starts to be generated The success of specific projects that involved design is *evaluated* and demonstrated
Moral – relates to design being the right thing to do	*Leading role of the design director* in championing design as a relevant but alternative way of operating Designers are part of *cross-functional teams* constituted at the beginning of projects Product and service development *processes are formalized* and design plays a salient role
Cognitive – relates to value creation through design being taken for granted	*Top management support* is always present *Awareness of design*'s role is constantly generated and reminded to employees Projects are *regularly evaluated* and evidence of success communicated within the firm Product and service development *processes are formalized* but kept flexible to allow design to play a relevant role especially in the initial phases