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# **Legitimizing a practice across fields: Microprocesses of theorization of Design Thinking**

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## **ABSTRACT**

Legitimizing a practice is a challenging task because it has to be constantly made understandable and meaningful to prospective users. Garnering such legitimacy is critical for successful practice diffusion and potential institutionalization. The process of theorization - rendering of ideas into understandable and compelling formats - is considered central to legitimacy construction. However, we still have limited understanding of the specific mechanisms through which theorization happens. In this paper we address this issue by examining the microprocesses through which the practice of Design Thinking (DT) was theorized by its proponents in the field of business management. We undertook qualitative analysis, using grounded theory, of archival data. Our analysis revealed three key microprocesses: appropriation (presenting DT as a solution to abstract field level problems), assimilation (integrating DT with current vocabularies and legacy practices within user organizations) and adaptation (redefining DT in order to resolve contradictions with legacy practices within organizations). This study makes two contributions. First, to the literature on theorization by explicating key microprocesses underlying theorization and providing a nuanced understanding of how legitimacy and theorization may be linked. Second, to the literature on management knowledge production, by showing how management practices and concepts may be contextualized and interlinked.

## **KEY WORDS**

- (1) Legitimacy
- (2) Theorization
- (3) Microfoundations
- (4) Institutional Theory
- (5) Knowledge Production
- (6) Management fashion / concepts / ideas

## INTRODUCTION

Whenever I see a business magazine glow about design thinking, as BusinessWeek has done recently with this special report, and which *Harvard Business Review* did last year it gets my dander up. Not because I don't see the value of design (I started a company dedicated to experience design), but because the discussion in such articles is inevitably so fetishistic, and sadly limited.

(Peter Merholz, HBR Blog, 2009)

The introduction and legitimation of practices, concepts, organizational forms and identities in a field faces substantial challenges (see Heusinkveld & Reijers, 2009; Maguire, Hardy & Lawrence, 2004; Rao, Monin & Durand, 2003; Hargadon & Douglas, 2001; Aldrich & Fayol, 1994). As the above quote suggests, even a seemingly familiar practice – Design Thinking - may face skepticism and derision from other field actors, including prospective users, with respect to the meaning and the application of the practice, long after it was introduced in the field. Hence, continually garnering legitimacy for a practice is a critical task for those promoting them, frequently referred to as institutional entrepreneurs (Hardy & Maguire, 2008). How these proponents achieve and maintain legitimacy of a practice in the focal field is a key area of research (see Heusinkveld, Benders & Hillebrand, 2013; Heusinkveld & Reijers, 2009; Kennedy & Fiss, 2009; Suddaby & Greenwood, 2005; Maguire, Hardy & Lawrence, 2004).

Prior research has shown that for practices and concepts to achieve legitimacy in a field, they have to be appropriately “theorized” (Strang & Meyer, 1993). Theorization refers to the process of development and specification of abstract categories and the elaboration of cause and effect relationships, which simplify and distil the properties of practices and explain the outcomes they may produce (Strang and Meyer, 1993). Thus, appropriate theorization confers legitimacy to a practice by “rendering of ideas into understandable and compelling format” (Greenwood, Suddaby & Hinings, 2002:75);

elaborating various cause and effect relationships (Tolbert & Zucker, 1996; Strang & Meyer, 1993); and making some big problems of the focal field salient, while specifying how the new practice can provide solutions to those problems (David, Sine and Haveman, 2013). Overall, theorization is considered an integral stage towards achieving successful legitimation of a practice, by drawing on both moral and pragmatic legitimacy, leading to widespread diffusion across the field and its potential institutionalization (see Greenwood et al., 2002 for full explanation of various stages).

The importance of theorization in institutionalizing, especially legitimating, practices, identities, roles and policies has been well established (see Mena & Suddaby, 2016; David et al., 2013; Nigam & Ocasio, 2010; Maguire et. al., 2004; Greenwood et al., 2002). However current understanding of the theorization process itself, especially various microprocesses through which theorization is undertaken (Bevort & Suddaby, 2016; Harrington, 2015; Reay, Golden-Biddle & Germann, 2006), is limited, as “precise mechanisms that underpin theorization are underspecified and the construct remains a black box” (Mena & Suddaby, 2016: 1671) and more work in varied empirical contexts is required to explicate these mechanisms (Mena and Suddaby, 2016; David et al., 2013; Greenwood et al., 2002). Exploring how theorization occurs in different contexts, focusing upon the language used, by whom, how and with what effect is important for identifying various micro-processes underlying theorization (Greenwood et al., 2002). While research has shown that theorization primarily includes making ideas understandable by contextualizing the focal practice, e.g. through “interlinking theorizations” with respect to existing practices, concepts and ideas in the field (Höllner, Jancsary, Barberio & Meyer, 2019), and presenting it as a solution to known problems,

how these aims are undertaken needs more clarity and specification. Hence, prior work has focused more on what theorization is, and not enough attention has been paid to *how theorization is actually undertaken* (see Mena & Suddaby, 2016; David et al., 2013 and Maguire et al., 2004 for notable exceptions).

Further, prior research on theorization has tended to examine either highly institutionalized established mature fields, such as accounting (see Greenwood et al., 2002) and health care (see Nigam & Ocasio, 2010) or very early-stage nascent fields, such as HIV/AIDS treatment (see Maguire, Hardy & Lawrence, 2004) or management consulting in the early stages of its development (see David et al., 2013). Studies of the process of theorization in a wider variety of empirical contexts and *across* field settings have generally been lacking, despite regular calls for such research (see David et al., 2013:365; Greenwood et al., 2002). The nature of the field matters because it presents its own set of unique challenges to the theorization of a practice. In an established mature field, the challenges are due to the structured setting, presence of multiple audiences, and occupational boundaries. Further, members in such fields may be more oriented to field specific norms, values and beliefs than to external cultural schemas being proposed by the proponents of the practice (David et al., 2013; Suddaby & Greenwood, 2005; Scott, 1995). In emerging nascent fields, while the proponents do not have to face such resistance from entrenched value systems, institutions and structures, they may suffer the double jeopardy of the liability of newness (Singh, Tucker and House, 1986; Stinchcombe, 1965). They must convincingly theorize simultaneously both the practice and the field which may emerge around the practice (see Navis & Glynn, 2010).

In this paper we address these lacunae in our understanding of theorization by analyzing how the practice of Design Thinking (DT from hereon) was theorized by its proponents in the field of business management. In particular, the field of business management shares attributes of both established and emerging fields. On one hand, business management has many attributes of an established field, such as a long history of development, multiple audiences, specializations and occupations, established patterns of interactions among various actors and large-scale societal relevance and impact (see Engwall, Kipping & Usdiken, 2016 for a historical review). On the other hand, the business management field also presents traits associated with emerging fields, especially in terms of openness to introduction of knowledge from other fields. Prior research shows that knowledge production in business management is constantly supplemented by the introduction of practices and concepts from external fields (see Abrahamson, 1991; Abrahamson, 1996; Kennedy & Fiss, 2009). Further, knowledge production in business management is marked by shortening cycles of knowledge commodification (Suddaby & Greenwood, 2001), probably leading to an increase in receptivity towards practices, at least from knowledge producers, that is, business schools, gurus, academics and consultants (Suddaby & Greenwood, 2001; Clark & Salaman, 1998; Guillen, 1994; Hirsch, 1972).

Further, the business management field also represents an important category of professional fields, that of a partially professionalized occupational field or a semi-profession, unlike exemplar professions such as law and medicine. Business management as a field has come a long way from a small, highly dispersed field dominated by executives who trained on the job. Now it is probably one of the largest

fields, with an array of powerful actors, such as global MNEs and top managers, multiple specializations, institutionalized professionalizing agents, such as business schools and professional associations, and dedicated knowledge producers, e.g. gurus, academics and consultants (Höllerer et al., 2019; Greenwood et al., 2002). As the field of business management expanded in twentieth century, so did the field of business media and publication, which increased the reach and power of knowledge producers, though it also probably shortened the knowledge commodification cycle (see Engwall, Kipping & Usdiken, 2016; Suddaby & Greenwood, 2001).

However, while professionalization pressures have been evident in the business management field over some time, especially in terms of credentials and specialist knowledge delivered through business schools and the formation of various professional bodies, it lacks many characteristics of exemplar professions. Especially relevant are the lack of a formal closure regime, since a business degree or a certification is not mandatory for practicing as a manager; lack of professional self-regulation; and, most importantly, lack of “commitment to specialized knowledge as a public good” and “renunciation of profit maximization”, the last being especially central to an exemplar profession (Khurana, 2010; Bolton & Muzio, 2008; Khurana, Noharia & Penrice, 2005:4). Business management can at best be considered a semi-profession (Etzioni, 1969) or an aspiring professional project (Bolton & Muzio, 2008), which has “historically displayed an unwillingness or incapability to professionalize”, especially with respect to the contradiction between professional service being a social good and the overarching motive of profit maximization (Bolton & Muzio, 2008:284; Khurana et al., 2005; Locke & Spencer, 2011; Khurana, 2010).



Therefore, the field of business management may provide both a particular and relevant professional field setting for examining the microprocesses through which theorization of a practice is undertaken by its proponents over time. First, the business management field is marked by the constant introduction of practices in a setting with a plethora of legacy practices, resulting in constant competition for attention between practices themselves (with the associated need for legitimation). Second, the field is also marked by the presence of multiple audiences, including users (practicing managers), whose requirements and contexts may differ substantially. The former may push towards a more abstract field level problem-solution oriented theorization which differentiates the practice from legacy practices, whereas the latter may demand concrete contextualization of the practice in terms of the specific problems faced by users. Such complexity, and competing demands of the field, suggest that the proponents of a practice must undertake extensive, and constant, theorization to legitimize a practice, which should make various microprocesses of theorization evident over time.

To examine various microprocesses of theorization, we qualitatively analyzed the discourse of DT used by proponents of this practice in the field of business management. Specifically, we analyzed the texts produced by key knowledge producers (gurus, academic and consultants) about DT in three major practitioner-centric management journals - *Harvard Business Review*, *California Management Review* and *MIT Sloan Review*. Our grounded theory-driven qualitative analysis revealed three key microprocesses through which theorization was undertaken – appropriation (focused on presenting DT as a solution to abstract management problems), assimilation (focused on integrating DT with current vocabularies and existing practices within management field)

and adaptation (focused on redefining DT in order to resolve contradictions with existing practices within management field). In what follows, we elaborate on key theoretical concepts which form the theoretical background for the study. We then present the research design, methods and data, followed by the analysis. We conclude with a discussion of the contributions made to theorization and management knowledge production literatures.

### **THEORETICAL BACKGROUND**

Practices, concepts and identities introduced in a field are not judged only on the basis of their inherent technical superiority, which may be difficult to assess, but also on the basis of their legitimacy (Scott, 2001), that is, whether the practice is “desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions” (Suchman, 1995: 574). By field we refer to “communities of organizations that, in the aggregate, constitute a recognized area of institutional life: key suppliers, resource and product consumers, regulatory agencies and other organizations that produce similar services or products” (DiMaggio & Powell, 1983: 143), which also form “centres of debates in which competing interests negotiate over issue interpretation” (Hoffman, 1999: 351). Legitimacy building within a field is therefore one of the key factors in winning acceptance (Tost, 2011; Suddaby & Greenwood, 2005; Suchman, 1995) and ensuring persistence of ideas and practices (Rao, Monin & Durand, 2003; Zimmerman and Zeitz 2002; Heusinkveldt & Reijers, 2009; Heusinkveld and Benders 2005). Legitimizing a practice involves transition from an abstract theoretical concept to an appropriate objectified solution to key problems in the field (Heusinkveld & Benders, 2005; Greenwood et al., 2002; Strang & Soule, 1998; Strang & Meyer, 1993). To achieve

these ends, practices and concepts introduced should ideally show how they are consistent with dominant normative prescriptions of the field – providing moral or normative legitimacy in the process – and emphasize the functional superiority with respect to current practices in the field – providing instrumental or pragmatic legitimacy in the process (Tost, 2011; Zimmerman & Zeitz, 2002; Suchman, 1995).

Prior research has shown that the process of “theorization” is one of the key means for achieving and maintaining legitimacy of a practice, which has direct impact on successful practice diffusion and its institutionalization (see Mena & Suddaby, 2016; David et al., 2013; Nigam & Ocasio, 2010; Maguire et al., 2004; Rao et al., 2003; Greenwood et al., 2002; Tolbert & Zucker, 1996; Strang & Meyer, 1993). Theorization refers to the process of development and specification of abstract categories and the elaboration of cause and effect relationships, which simplify and distil the properties of practices and explain the outcomes they may produce (Strang and Meyer, 1993). Thus, practices are accompanied by “theorized accounts” (Strang and Meyer, 1993: 492), which chart abstract categories and outline the relationships between them (e.g. cause and effect). Such theorization is particularly important because existing organizations in fields don’t have direct experience with the structures and practices to be implemented, so what they actually imitate are “rationalizations” – stories constructed by actors in the “exemplary” organizations and their own translations of such stories (Maguire et al., 2004; Sahlin-Anderson, 1996).

Operationally, theorization revolves around three major tasks. First, specification of a general organizational failing or a field level problem for which the advocated practice or innovation is a solution (Strang and Meyer, 1993). Second, it concerns

justification of the practice itself, that is, how the focal practice is more appropriate than the existing set of practices in the field. Such linking of the focal practice to the field through an existing, ideally abstract, field level problem and juxtaposing it against legacy practices within the field allows for both moral and pragmatic legitimacy building (Tolbert & Zucker, 1996; Suchman, 1995). Third, theorization concerns building causal relationships between constructs, boundary conditions, as well as actions of engaged actors (Strang and Meyer, 1993). Process tracing enables to identifying ‘who did what, when and how’ in order to trace instances of theorization in fields. Theorization applies to both practices and social artefacts (Zilber, 2008) and actors, that is, concerns those roles assigned to legitimation of practices via their theorization (Strang and Meyer, 1993). Overall, theorization is about the actors rendering of ideas into understandable and compelling formats - how issues are interpreted, represented, translated, and normatively developed – especially by linking them to prevailing problems of the target field (Greenwood et al., 2002).

Recent empirical research focusing on the process of theorization has variously looked at institutional work through theorization (Mena & Suddaby, 2016); practices in both established (see Rao et al., 2003; Greenwood et al., 2002) and emerging (see Maguire et al., 2004) fields; organizational forms (see David et al., 2013); policy reform proposals (see Nigam & Ocasio, 2010); professional services models (see Harrington, 2015); limited institutionalization of a professional practice (see Nicklich & Fortwengel, 2017) or the professional expertise (see Brady, 2018). For instance, Greenwood et al. (2002) identify theorization as a key stage in the institutional change process, wherein the professional model of multidisciplinary practices was presented as a solution to two field

level problems – the need for change and need for responding to clients or client service. David et al. (2013) further elaborated on this aspect of theorization to show how management consulting pioneers theorized the new organizational form by making salient contradictions between status quo and professed societal values (e.g. between structures and practices in client firms and the progressive values of efficiency and rational organization). Hence, theorization may involve highlighting inconsistencies with abstract societal values, and not just the generalized problems within a field. Further, they also show the new practice as not just a solution to the current problem, but rather by linking it to another established category of expertise external to the field (e.g. psychology or natural science methods, see David et al., 2013). In the same vein, Rao et al. (2003) show how culinary journalists promoting nouvelle cuisine helped create a “shared symbolic environment for the chefs and public to appreciate the new logic and identity” (p. 816) by developing ten commandments of nouvelle cuisine (specifying what it is and isn’t), articulating its virtues and rationales for adoption, and chronicling success stories.

Maguire et al. (2004) further elaborated the process of theorization by showing how institutional entrepreneurs in the emerging field of HIV/AIDS treatment developed an array of arguments that translated the interests of diverse stakeholders. Referring to this more dynamic multi-actor aspect of theorization, Nigam & Ocasio (2010) show how the theorization of managed care logic evolved over time, as different actors theorized individual dimensions of the logic, based on their relationship with hospitals. Mena and Suddaby (2016) further highlighted dominance of practice-focused view of theorization to recognize aspects of role theorization – that is, how views of oneself (or others)

changed around emergence of new practices in fields. In a more recent study, Niklich & Fortwengel (2017) highlight another aspect of theorization - how partial theorization, especially failure to link the professional practice with identifiers of formal training and occupational status led to insufficient institutionalization of the apprenticeship program in Germany's private security services. Relatedly, Höllerer et al. (2019) show that theorization of a practice might be highly contextual, with varying levels of interlinking theorizations vis-à-vis other practices in the field. In table 1 we present a summary of key aspects of studies pertaining to theorization.

*[Table 1 about here]*

Overall, current literature on theorization has clearly established the importance of theorization process in the legitimation and institutionalization of practices, especially through matching of problems and solutions, and contextualization of the practice within the field. However, despite substantial empirical research on how theorization leads to legitimation, institutionalization and diffusion of practices, the specific microprocesses through which theorization is undertaken are still mostly underspecified (Mena and Suddaby (2016), especially with respect to the mechanisms of theorization that occurs *across* fields (Daft and Levin, 2008). Identifying the specific microprocesses through which theorization is undertaken is important for three reasons.

First, in order to better understand the underlying dynamics of theorization process itself, and not treat it as a 'black-box', since it has implications for understanding how legitimacy is constructed and institutionalization (or deinstitutionalization) happens. Second, while substantial research has shown that appropriate theorization of a practice is a precursor to successful adoption and diffusion (see Rao et al., 2003; Greenwood et al.,

2002; Strang & Meyer, 1993; Whitson, Weber, Hirsch & Bermiss, 2013), research also suggests that adoption of practices is not an unproblematic template-driven model (Zilber, 2008; Sahlin-Anderson, 1996). Instead, practices have to constantly translated, a contested process requiring redefining the practice itself, as the proponents contend with established institutions, legacy practices, competitors and powerful users or recipients (Heusinkveld, Benders & Hillebrand, 2013; Heusinkveld & Benders, 2005; Czarniawska-Joerges, 1997). For instance, Heusinkveld et al., (2013), in their study of management consultants, found that instead of simply maintaining or abandoning the original formulation of a practice, management consultants undertook three actions – optimizing, repositioning and remarketing. These strategic actions, especially repositioning, involved extensive re-theorization of the practice, through change in key associated vocabulary, labels, definitions, target problems and target users. In the same vein, Fiss, Kennedy & Davis (2012), in their study of “golden parachute” contracts across corporations in 1980s, found that firms differed significantly in terms of the extent to which they adopted this practice, making substantial changes in the contract type. Such literature points towards a much more dynamic process of (re)theorization of a practice in a field over time. However, our current understanding of theorization is not nuanced enough to explicate such a dynamic process.

Third, examining the microprocesses underlying theorization may also help us better explain agency (or limits to thereof) of the promoters of practices, especially with respect to contextualization or linking of multiple theorizing accounts (Höllerer et al., 2019) and the resonance of particular theorizing discourses, as they may become ‘worn out’ over time (Heusinkveld & Reijers, 2009:871) or may be challenged by other actors

in the focal field (Heusinkveld, Benders & Hillebrand, 2013; Suddaby & Greenwood, 2005; Gurses & Ozcan, 2015; Kaplan, 2008). This suggests the need for a near constant process of re-theorization, as proponents attempt to keep the practice both topical and applicable.

Accordingly, in this paper we explicate various microprocesses underlying theorization of a practice by examining the practice of DT in the field of business management. Specifically, we analyze how the proponents of design thinking – key management knowledge producers, such as, gurus, academics and consultants - theorized design thinking over time in key practitioner-oriented journals of the field.

## **RESEARCH CONTEXT**

Design Thinking (DT) has been variously defined as “a process for creative problem solving, with a human-centered core, encouraging organizations to focus on the people they are creating for” (IDEO) or “an approach to problem solving that uses tools traditionally utilized by designers of commercial products, processes, and environments” (Elsbach & Stigliani, 2018: 2274). The origins of DT can be traced back to 1960s, rooted in the works of scholars drawing distinction between natural science and the science of design (see Gregory, 1966; Simon, 1969). The Conference on Design Methods held in London in 1962 is generally regarded as the critical event which marked the launch of design methodology as a subject and field of inquiry (Cross, 2001). These scholars portrayed DT as a method “aimed at creating new forms, new artefacts or more generally, new knowledge” (Elsbach & Stigliani, 2018: 2276). In contrast to previous understanding of design associated with creating and beautifying physical objects, these scholars postulated the science of design as concerned with all activities aimed at creating



artefacts or “the transformation of existing conditions into preferred ones” (Simon, 1969: 4). For these scholars the process of a design is the same whether it deals with a design of an oil refinery, the construction of a cathedral or the writing of Dante’s Divine Comedy (Gregory, 1966).

However, in subsequent decades the overtly positivist underpinnings of the design-as-science approach was challenged by a more constructivist stance of design-as-practice. In particular, Rittel & Weber (1973) and Schon (1983) criticized the design as science approach as being too focused on solving well-formed problems. Rittel & Weber (1973) identified the problems in design as ‘wicked problems’, wherein designers often face challenging, ill-formulated problems that do not have a linear pre-determined plan for a solution. In the same vein, Schon (1983) stressed that, in contrast to the design as science approach, designers face much messier and problematic situations and emphasized the reflective aspect of designers’ practice, which is predominantly an artistic and intuitive process used to understand and solve problems in situations of uncertainty, ambiguity and instability.

Building on such constructivist theorizing, scholars attempted to unpack some specific aspects of the design method; the ‘wicked’ nature of design problems (see Buchanan, 1992), design process as open-ended and highly ambiguous with multiple plausible solutions (see Goldschmidt, 1997), and designer’s attitude towards solving such problems (see Boland & Collopy, 2004). More recently, the designer’s key task has been identified as that of “organizing complexity” and “finding clarity in chaos” (Kolko, 2010: 15), in order to achieve appropriate solutions through an abductive thinking process aimed at collecting, organizing, pruning and filtering data regarding aesthetic, cultural

and technological trends and consumer and business needs.

During this period, probably due to somewhat foundational links between DT and organizing, interest in how designers work and think progressively moved from the field of design and architecture to the field of management, with specific focus on using design tools to solve management problems (Elsbach & Stigliani, 2018). The early champions of the use of DT approach in the field of management focused on how DT can influence innovation and help companies gain competitive advantage (see Brown, 2008). In last couple of decades, DT has attracted substantial interest from key knowledge producers – gurus, academics and consultants - in the field of business management. Tim Brown and his design consulting firm – IDEO - became a business media sensation, with a dedicated *Business Week* special report, a special issue in *Harvard Business Review* and publication of best-selling book, *Change by Design*. In parallel, management researchers have explored the influence of DT on various firm level outcomes, including innovation, decision making, growth and profitability, stock market prices and social innovation. For a full review of academic research on design thinking in the field of management, please see Elsbach & Stigliani (2018).

Alongside increasing academic attention, DT also became structurally embedded within the business management field through the development and diffusion of design thinking consultancy or specialized practices across management consultancy industry. One of the first design consultancies – Frog - was founded in 1969. However, the emergence of design thinking as a fully developed specialist consultancy practice can be marked by the merger of three design firms leading to the foundation of iconic DT consultancy IDEO in 1991. More recently, DT consultancy practice has been established

by most major management consultancies, either through acquisition (e.g. FJORD by Accenture) or in-house development of specialist practice unit (e.g. by McKinsey, Deloitte and IBM).

Further, beyond business management field, recently the application of DT has been explored in several other important domains, such as, sustainability and development studies (see Gould et al., 2019; Buhl et al., 2019; Shapira, Ketchie & Nehe, 2017; Geissdoerfer, Bocken & Hultink, 2016; Andrews, 2015; Brown & Wyatt, 2010); education, including higher education (see McLaughlan & Lodge, 2019; Yeager et al., 2016; Glen, Suci & Baughn, 2014; Razzouk & Shute, 2012); medicine and healthcare (see Hamington, 2019; Goodman, Schneeweiss & Baiocchi, 2017; Roberts et al., 2016); public administration (see Mintrom & Luetjens, 2016); and entrepreneurship and social entrepreneurship (see Sarooghi et al., 2019; Chou, 2018).

## **METHODS**

As the aim of this paper is to explore a not so well understood mechanisms underlying the process of theorization or microprocesses of theorization of a practice (Mena and Greenwood, 2016:1702), we adopted an inductive iterative methodology (Gioia, Corley & Hamilton, 2013; Langley & Abdallah, 2011). Specifically, we undertook grounded theory driven analysis of qualitative archival data (Ventresca & Mohr, 2002). The qualitative approach is appropriate because it increases the researcher's ability to describe a complex social system due to its emphasis on interpretation (Marshall and Rossman, 1989) and allows for revelatory exploration (Lincoln & Guba, 1985). As archival sources related to Design Thinking (DT) are not located in any particular repository, we used a purposive theoretical sampling approach (Glaser &

Strauss, 1967) to collect relevant representative data. Following Suddaby and Greenwood's (2001) model of management knowledge production and consumption, we traced the emergence of DT practice through the efforts of key management knowledge producers - management gurus, consultants and the academic community, especially these actors have emerged as particularly salient in theorization literature (please see table 1) broadly and management knowledge production literature. Our purposive sampling therefore focused on how business gurus (e.g. Roger Martin, previously of Monitor Group, or Tim Brown of IDEO), prolific academics (e.g. Robert Sutton, Jeanne Liedtka, or Roberto Verganti) and business consultants (e.g. Josh Bersin of Deloitte) discussed DT in text targeted towards management practitioners. As we are interested in exploring how promoters theorized the practice in the field of business management, we purposefully focused data collection on sources that can appropriately capture attempts by promoters of DT to legitimate this practice to management practitioners.

To do so, we focused on articles about DT published in the three most influential practitioner-focused business management journals – *Harvard Business Review*, *Sloan Management Review* and *California Management Review*. Consistent with similar studies (e.g. Höllerer et al., 2019), practitioner focused journals were found to play an explicit 'mediating function' between legitimating proponents and managers since they contained the material aimed at making adoption of DT among business practitioners more appealing. After the appropriate sources were identified, we searched for relevant articles with the term "design thinking" or "design method", either in the title or in the key words. Through this process we identified 27 articles in these outlets which were explicitly about DT. Next, we undertook a wider search for articles about design thinking

from other sources catering to management practitioners. This approach yielded four more articles, three from *Academy of Management Learning & Education* and one report published by the Business Process Management Institute. These 31 articles, 272 printed pages of text in total, form the data corpus we qualitatively examined. Appendix A contains the full list of articles included in our data and the distribution of articles over time.

While it is possible for us to supplement this data with other media resources, for example, media interviews with promoters championing DT and business media articles, we have avoided doing so in order to maintain the integrity of our data. The articles published in the chosen journals represent structured texts specifically targeting management practitioners, in contrast to interviews published in the general media, and comprise the targeted “social set through which managerial discourse circulates, and from which ideas are shaped into concrete practices with commercial properties and value” (Suddaby and Greenwood, 2001: 940). As discourse is central to the process of legitimation, such a structured collection of text that exist in a particular field may directly influence understanding and behavior of other actors (Philips, Lawrence & Hardy, 2004). Consequently, this collection of texts, produced by key business gurus, academics and consultants promoting DT practice is an appropriate source for exploring how they theorized this practice over time (Zilber, 2008; Philips & Hardy, 2002; Suddaby and Greenwood, 2001). However, we acknowledge that these three journals are primarily consumed by management practitioners in North America and Europe, latter to a lesser extent, leading to limits on global representativeness of the data. Having said that, we would expect the theoretical microprocesses we have identified to be largely applicable to

different contexts, even if specific usage patterns may vary.

To analyze our data corpus, we used a multistep analytical strategy. First, we developed a clear case narrative (presented in the research context section) showing how design thinking practice developed and evolved over time, from its origin in the field of architecture and design to its application in business management. Second, using a grounded theory driven inductive coding approach (see Charmaz, 2006; Gioia, Corley & Hamilton, 2013; Langley, 1999), we identified key themes present in our data. Our coding was particularly driven by how DT or design method was discussed in the data. Grounded theory approach is relevant to this study because it is well suited for studying complex phenomena and allows us to derive themes from immersive examination of the data and capture substantive aspects of the research situation (Locke, 2001; Gioia et al., 2013).

Initially, we used an open coding approach (Strauss & Corbin, 1998) to identify all the interesting and relevant segments of data, typically one to three sentences long, and coded them based on in-situ or within quote vocabulary – identifying 592 relevant data segments during this process. Next, we started seeking “similarities and differences” (Gioia et al., 2013: 20) amongst our many open codes and through a process of integrating, renaming and deleting various codes we identified 28 first order codes. Next, we looked for second order themes, that is, deeper structures or patterns of potential aggregation or relationships across our first order codes, asking “whether the emerging themes suggests concepts that might help us describe and explain the phenomena we are observing” (Gioia et al., 2013: 20). Through this process we aggregated 28 first order codes into seven higher level second order themes, each theme containing 3 to 5 first

order codes. Finally, we further aggregated the seven second order themes into three theoretically driven aggregate dimensions, which represented the three microprocesses through which the theorization of DT was undertaken. All qualitative coding and analysis of the data was undertaken using NVIVO.

### **MICROPROCESSES OF THEORIZATION**

Our inductive data analysis identified three key microprocesses through which promoters theorized the practice of Design Thinking (DT) within the business management field: appropriation, assimilation and adaptation. First, appropriation, that is, these promoters ‘appropriated’ the practice of DT from the external field of design and architecture and juxtaposed it as a solution for various limitations of existing dominant practices in the management field. Second, assimilation, that is, they ‘assimilated’ DT tools within the management field by integrating it into both management education and key managerial practices, while acknowledging inherent challenges that come with their application in the non-native (i.e. business management) field. Third, finally, adaptation, that is, they also ‘adapted’ DT through re-interpretation of its basic premises with respect to challenges arising from the application of DT and inconsistencies and contradictions therein. Please see Figure 1 for a thematic representation of the full data structure, figure 2 for the temporal distribution of the three microprocesses in our data and table 2 for illustrative evidence for each first order code. In what follows we describe the three microprocesses of theorization in details.

*[Figure 1 about here]*

## **Appropriation**

The first microprocess of theorization of DT in management field entails appropriating a paradigm from the external field of design and architecture. By appropriation we refer to the processes by which promoters identify limitations of existing methods and practices in management field and formulate the potential superiority of an alternative paradigm (DT in this case) for addressing key managerial problems in business practice. This aggregate dimension includes two second order themes. First, critique of traditional strategy formulation includes codes about limitations and shortcomings of the current strategy formulation paradigms in management. Second, positioning of DT as a solution, which includes codes about inserting design vocabulary in managerial vocabulary, especially the need for focus on users, experimentation and organizational structure.

For instance, promoters of DT portray the premise of traditional methods in strategy as not being ‘fit for purpose’, which stems from the fact that the competitive landscape has changed significantly in the past two decades. Reliance on the ‘deductive’ logic – continuous re-use by managers of traditional metrics and objectives to focus solely on ‘cost reduction’ and ‘profit maximization’ – is argued to substantially disadvantage strategy-making (see Martin, 2010; Dunne and Martin, 2006) by hampering organizational innovativeness (e.g. Liedtka, 2018) or undermining its competitive (e.g. Kim, Beckman and Agogino, 2018) and societal relevance (Wastell, 2014). This is primarily due to managers being less inclined to attend to structural market changes and the user-centric approach, which would otherwise be treated as the ‘enemy’ of traditional strategy-making. Within organizations, adhering to the traditional reasoning implies lack



of support for managers to think about such innovative solutions that place users (or society, broadly defined) and their needs at the center of strategy-making processes (Liedtka, 2000). As the result, managers are said to be less capable of predicting or even to responding meaningfully to nascent competitive pressures in the market due to entrenched assumptions formed by organizations as part of their ‘established business models and behaviors’ (Brown and Martin, 2015:59).

On the other hand, the use of DT in strategy formulation, referring to ‘managing as designing’ and ‘managers-as-designers’, entails revision by organisations of both the strategic targets and means of achieving them. Thus, proponents of DT argue for a more prominent embeddedness of the human-centric focus into strategy (Brown, 2015), enabling managers to formulate more ‘real’ and ‘realizable’ strategies with the ultimate end-user in mind (Liedtka, 2000). For example, Liedtka (2018) advocates incorporation of ‘user-driven criteria’ to enable managers to evaluate how effectively the strategy may support their organizations to remain at the forefront of innovation. Contrary to the traditional methods in management, DT is argued to position user experience as the ultimate purpose of strategy (Kolko, 2015:70) and not simply as the vehicle for helping the business to attain performance objectives (Glen, Suciu and Baughn, 2014:657). In effect, this can create a ‘win-win’ situation for both the users and the company (Dunne and Martin, 2006).

The new lens is also theorized to require revision of organizational processes that reinforce strategy-formulation. Here, DT challenges the traditional stasis inside organizations (e.g. the ongoing ‘rootedness in the status quo’) in favor of embracing change as a necessity (Liedtka, 2018:74). To achieve that, proponents of DT advocate

creation of the intra-organizational “virtual world in which experiments (mental rather than physical) can be conducted” to foster a ‘trial-and-error’ culture to the tune of time and cost savings (Liedtka, 2000:14). Ultimately, managers “must be willing to let go of bad ideas – or “call the baby ugly”” (Liedtka, 2018:74) as part of the more experimental culture that “relish[es] the lack of pre-determined outcomes” (Wastell, 2014:642). A more fundamental change proposed by the proponents of DT, which affects strategy implementation, relates to re-thinking the organizational structure (Dunne and Martin, 2006). While functional division is the existing source of organizational competitiveness in the market, the means of fostering the ‘sense of overall purpose’ (Liedtka, 2000) is the area in which DT is said to offer unique benefits. To counter the methodological individualism of existing methods, DT offers a more integrative view of strategy formulation, where each functional task is a piece of a larger (and more inter-connected) set of business activities brought together (‘synthesized’) by practitioners (Glen et al., 2014:654). This would pave the way for wider deployment of cross-functional groups in organizations aided by the ‘flat’ structure (see Sutton and Hoyt, 2016; Martin, 2011) or the greater use of customer input in strategy formulation as part of the ‘boundary-spanning’ structure (see Brown and Martin, 2015). As such, adoption of DT affords established (and larger) companies the benefits of agile and integrated-strategy-making of start-ups (Kim et al., 2018; Weiblen and Chesbrough, 2015). Taken together, theorizing by institutional entrepreneurs includes appropriating a paradigm from an external theoretical and practice field (that is, design) and outlining to stakeholders in the focal field its benefits compared to the traditional methods of strategy formulation.

## **Assimilation**

The second mechanism of theorization entails assimilation of the DT into the management field. By assimilation we refer to processes by which promoters incorporate principles of the focal practice into business education and training, as well as link it with current managerial practices. This aggregate dimension includes three second order themes. First, integrating DT in management education and training, which includes codes about incorporating DT in management education to help develop integrative thinkers who use abductive logic of decision making in order to solve complex, inter alia wicked, problems. The second theme is about integrating DT in strategy making within firms, which includes codes about flexibility and market responsiveness, prototyping, and restructuring firms based on projects, not resource centers. The third theme is about challenges in applying DT, which includes codes about unproven and unclear benefits of DT, the difficulties organizations face in integrating DT and under-estimation of organization-wide change required.

At the outset, reasoning by promoters revolves around pollination of the business education with ideas from design education. For Dunne and Martin (2006), the Harvard MBA model is an archetypical educational model that underpins the traditional strategy-making. This rational-analytical model, accordingly, is said to revolve around the ‘discounted cash flows’, ‘ROIs’ – in other words, the traditional measures of business performance – and prizes development of skills, including the analysis of ‘airtight’ business cases, individual (as opposed to collaborative) work and self-advancement at the expense of developing listening skills. The proponents of DT, on the other hand, follow Herbert Simon’s seminal assertion (Simon, 1996) to argue for the necessity of abductive

logic to be planted at the core of business education, or a logic of ‘what might be’ in order to equip business students to come up with creative resolutions to deductive (‘what should be’) and inductive (‘what is’) business challenges (Glen et al., 2014; Dunne and Martin, 2006). Moreover, business education is to benefit from design’s emphasis on collaborative forms of work and the multi-stakeholder vision of performance outcomes (Liedtka, 2000).

Fundamentally, proponents of DT do not see these principles as being absent in MBA courses altogether. Instead, the distinction is made in a degree to which collaboration takes place among inter-disciplinary, as opposed to homogenous student perspectives (a ‘broader’ vs a ‘narrower’ form of collaboration) and the extent to which interests of multiple stakeholders – consumers or the society at large – are integrated into the pedagogy of business decision-making (Dunne and Martin, 2006). Additionally, integration of DT amplifies the extent to which business students embrace not only the technocratic dimensions of management but also, the ‘swampy lowlands’ of symbolic and visual communication, abstract reasoning, or the ability to predict idiosyncratic customer preferences at times of economic instability and discontinuity (Glen et al., 2014). The incorporation of DT principles is therefore argued to rectify at least three fundamental problems in MBA programs – producing business graduates who are integrative thinkers when it comes to solving the ‘wicked’ – fundamental environmental, social and societal problems and also, amplifying a sense of social responsibility in business education (Ghoshal, 2005). Additionally, it enables graduates to reconcile tensions between exploitation (focus on efficiency) and exploration (focus on innovativeness) that to a large extent defines their roles as future managers. Therefore,

DT in business education is not concerned with training more designers but managers with a more inclusive (design) mindset and skills capable of tackling ill-defined, including wicked, problems (Dunne and Martin, 2006).

Next, greater incorporation of DT into managerial practice revolves around changes to the organizational structure and planning. Promoters articulate how strategic planning needs to depart from its ‘inappropriately applied’ standardized management techniques that drive organizational efficiency at the expense of reducing variation and responsiveness to market changes and customer needs (e.g. Sutton and Hoyt, 2016; Liedtka, 2000). With that, creativity does not narrowly concern aesthetic considerations of core product or service offering, but entails managers foreseeing market opportunities and responding to them creatively. Considering that it is “impossible to know in advance what impact an idea will actually have” on an organization (Deichmann and van der Heijde, 2016:3), *prototyping* has been promoted as a mean of bringing structure to the idiosyncratic processes of experimentation and exploration (e.g. Sutton and Hoyt, 2016; Kolko, 2015). It revolves around ‘far-from-finished’ or ‘low-fidelity’ options – adding a new stage in strategy-making prior to the finalization of the product or service offering in which creative and potentially risky decisions are tried and tested in close interaction with potential users (Liedtka, 2018; Glen et al., 2014). Prototyping aids by deferring managerial commitment to potentially expensive organizational failures, bringing evidence (as opposed to prediction)-based support for the final decisions (e.g. Kim et al., 2018) and reduces levels of bureaucratic approvals and the speed of arriving at decisions (Sutton and Hoyt, 2016; Glen et al., 2014).

A further contribution of DT to managerial practice revises the view of organization as pursuing ‘ongoing activities’ that require constant and large deployments of people, resources and time (Dunne and Martin, 2006). Instead, business organizations are re-defined as ‘bundles of projects’, which have set terms, timeline and objectives. With that, organizations learn how to capitalize on resource limitations, whereby constrained environments and market imperfections empowered organizations to implement differentiation strategies to achieve “something that is near impossible” even with the limited resource base (Dunne and Martin, 2006:513; 519). As part of this ‘constraints-as-inspiration’ attitude (Dyer, Gregersen and Christensen, 2009:64), stasis, lack of innovation or issues with the speed of communication can be tackled by management through project-based agility and synergetic organizational planning (Liedtka, 2018; 2000).

While claiming “the people who rise to the top of these companies are designers more often than not” (Dunne and Martin, 2006:516), promoters increasingly highlight that differences between design companies and businesses are rapidly fading. First, managers place DT much closer to the strategic center of the enterprise. For example, Mauro Porcini joined PepsiCo in 2012 as its first-ever chief design officer (Ignatius, 2015), while IBM as part of its strategic reorientation towards a software-driven business model prioritized investment and hiring policies to become a ‘massive design organization’ (Kolko, 2015:70). Boeing similarly adopted DT at the core of its manufacturing operations (Bason and Austin, 2019:90). DT, thus, can be directly integrated with and carrying greater influence over organizational culture and strategy. Second, popularity of ‘open innovation’ (Chesbrough, 2006) means that companies can

obtain more readily novel ideas from customers and clients (Bason and Austin, 2019) or external designers and scientists (Verganti, 2016) as well as other for-profit peers (Dunne and Martin, 2006). This potential ability to tap into contribution from insiders as well as outsiders enables business managers to recreate permeability of organizational boundaries commonly attributed to ‘design shops’ (Dunne and Martin, 2006:513).

However, the challenges for promoters to incorporate principles of DT into the management field have remained. At the outset, there was an uncertainty regarding the definition and utility of DT in business education. In MBA education, the perceived lack of focus on statistical, quantitative-based and self-oriented learning objectives draws criticism from both the students (themselves business managers) and business schools, who are concerned with performance metrics and competitive rankings (Dunne and Martin, 2006). From another perspective, promoters under-perform when it comes to communicating benefits of and the complementarity between DT and traditional methods in consulting to justify deeper incorporation of DT into management education (Glen et al., 2014). As design thinking is not sufficiently clarified, it frequently struggles to establish itself as credible pedagogic paradigm – both as a “method of practical reasoning” within the business school community or as a mean of “addressing the unmet needs of business school students” (Glen et al., 2014:653). As the result, MBA programs are broadly reluctant to incorporate DT deeper into their curricula (Dunne and Martin, 2006).

Similarly, DT faces push-back from managers as promoters are seeking to incorporate it into managerial practice. The hallmark of the design paradigm – the simultaneous ability to consider the ‘here and now’ and ‘distant futures’ – raises

difficulties for organizations to be ambidextrous (Raisch and Birkinshaw, 2008) and pursue such diverging objectives concurrently and meaningfully (Liedtka, 2000). Accordingly, DT does not spell out those tools that enable managers to capture and to implement the most promising possibilities (Dunne and Martin, 2006). Relatedly, DT is problematic in established companies that have achieved ‘stability’, and optimized and perfected the key organizational functions, such as R&D, production and after-sale customer care (Kolko, 2015:71; Bason and Austin, 2019). Also, the demarcated (functional) division of labor in large and established companies limits the perceived utility of design thinking as “strategists and HR people consider it too far afield from their practices” (Interaction, 2015:22). In such companies, incorporation of DT is commonly considered as a disruption of the business model more generally and of those key organizational functions in particular, and therefore faces stiff resistance from within the ranks (Ignatius, 2015).

DT is creative and to that extent is chaotic, which make its integration into business practice extremely uncertain. In fact, it explicitly declares the need for ‘accepting more ambiguity’ and ‘embracing risk’ by organizations (Kolko, 2015). By employing the ‘traditional talk’, promoters acknowledge that managers may face difficulties in calculating the “return on investment in creativity” or the ‘value’ that better customer experience will deliver to the company (Kolko, 2015:71). Benefits of DT may not be realized if not aligned with organizational culture, that is, not reflected in hiring, promotion or in setting strategic objectives (Kupp, Anderson and Reckhenrich, 2017) with performance objectives being sufficiently flexible. Alternatively, DT is risks being



put ‘on a shelf’ and never pursued consistently or pursued superficially and only as a temporal management fad (Brown and Martin, 2015).

Overall, promoters theorize the need for adopting DT within the management field by incorporating its principles into business education and training, as well as managerial practice. Proponents of DT recognize its elevated role within organizations but also highlight limitations of its application within established, larger organizations and dangers of treating design as a fad and not as a true paradigmatic shift in management field.

*[Figure 2 about here]*

### **Adaptation**

The third mechanism of theorization entails adaptation of DT within the management field. By adaptation we refer to processes by which promoters re-interpret and weigh DT methods and techniques and gauge the potential need and possibility for their change or extension, specifically with reference to the challenges arising from within the management field with respect to the application of DT. This aggregate dimension includes two second order themes. First, redefining DT, which includes codes about balancing various organizational priorities, drawing on the contribution of other stakeholders, and acknowledging the moderating role of intra-organizational factors. Second is the articulation of DT tools in business terms, which includes codes about how DT can be integrated into all stages of organizational activities, how DT must span organizational boundaries and relevance of prototyping for developing an agile organizational value chain.

DT emphasizes resolution of ‘wicked’ – societal, social and environmental – problems (Liedtka, 2000) and promotes involvement of key external stakeholders in this process. Implicitly, this paradigm underestimates the inherent ‘for-profit’ nature of business organizations and overlooks interests of shareholders. While organizational researchers recognize the necessity of involving customers and key stakeholders into organizational decision-making (Stewart, 2008:14), managers continue to face the stronger (in fact, legally binding) need to attend to interests of shareholders (Ghoshal, 2005). These tensions are specifically pronounced in corporations, whereby DT in management faces the need to balance between these ‘inexorably linked’ but formally varying interests (Dunne and Martin, 2006:516).

Relatedly, the outward focus and heightened permeability of organizational boundaries as part of DT may threaten the valuation of internal human resources (Bason and Austin, 2019). With the resource-based view of the firm holding internal knowledge-based (including, managerial) resources as the key organizational asset, the contribution of the employees is important for companies to remain competitive in the market (Barney, 2001). As stipulated by Kolko (2015), the utility of DT should indeed improve product/service functionality based on end user input; the ‘outside-in’ nature of this paradigm in management may however create a complexity - “an overabundance of ideas for new offerings and business models” (Verganti, 2016:91). As a mean of reducing this complexity, design thinking should be enhancing processes of ‘how people work’ and how they contribute to improving ‘customer experiences’ (Kolko, 2015:68). In other words, managers are not solely the ‘transmitters’ of user experience but are qualified ‘interpreters’ based on “their ability to find meaning in trends that might not occur to the

product's users" (Verganti, 2016:95). Particularity of DT in the management field therefore lies in attending to 'external' bases of superior customer experience in greater part based on heterogenous sources of 'internal' organizational efficiency and competitiveness (Liedtka, 2018:74).

To a great extent, prototyping is the most important front-end stage of the DT process (Kolko, 2015). Introducing prototyping to strategy-making constitutes developing 'virtual spaces' for organizations to engage with ideas and designs by accommodating input from various (external and internal) key stakeholders as early in the design process as possible (Liedtka, 2000). At the same time, prototyping is geared towards working with physical artefacts (e.g. models, sketches, charts) and only recently towards intangible concepts, which fundamentally differ for designing or maintaining human processes (e.g. Hoyt and Sutton, 2016; Deichmann and van der Heijde, 2016). Against this backdrop, DT in management is said to require developing a distinctive behavioral element – to 'humanize' complex processes (Kolko, 2015:12) – as a reflection of organizational inertia, rigidity/flexibility of organizational structure, internal power dynamics, as well as existing of multiple and conflicting performance objectives among organizational business units. As for a solution, Liedtka (2018:74-76) suggest the incorporation of "social technology that addresses these behavioral obstacles" to reduce structural rigidity through the work of cross-functional teams and articulating the spirit of organizational consensus ('alignment') around customer-focused objectives to reduce tendencies to politicize intra-organizational interactions.

Additionally, the prototyping stage is explicitly geared towards explorative invention of products/services (Glen et al., 2014:657) and less so to the later

organizational activities that are equally (if not more) important to the organizational performance, such as time-to-market, in-time logistics or after sales customer service. An extension of DT in the management field would therefore model prototyping onto all key stages of organizational value chains (Brown, 2008:86) and would strategically promote agility in previously unaffected organizational processes (Ignatius, 2015:83). Articulating functional areas in organizational value chains (e.g. production/manufacturing, distribution, after-sales, etc.) opens up the ‘black box’ of post-design application of design thinking in the management field frequently referred to as a broad ‘implementation’ stage (Brown, 2008:89).

As a further reflection of ‘value chain’ thinking in the management field, organizational activities are said to be vertically integrated across multiple and independent companies. This tacit (i.e. through socialization and networking, see Dyer et al., 2009) or even explicit coordination among companies (Ignatius, 2015) places a requirement for DT to be diffused not only within one organization but also across multiple organizations (e.g. supply chains) that are frequently globally dispersed, in order to benefit focal organizations. Within the original design thinking school there is lesser focus on coordination across organizations in developing design capabilities. This was a premise taken by Verganti (2016) in explaining how Alfa Romeo’s diffusion of design thinking across its direct and indirect value chains enabled the company to launch a hugely successful 4C model in 2013. Inherently, the lack of hierarchical control over external organizational processes may restrict the scope for innovation and creativity. Its application in the management field therefore requires ‘pushing design into supply chain’ (Ignatius, 2015) and warrants the spread of a networked DT in the management field.

Lastly, whereas design thinking concerns *horizontal* engagement with various stakeholders (e.g. suppliers, end-users or society at large), its application in the management field articulates relevance of the *vertical* engagement within organizations with the view of fostering strategic and cultural flexibility. With designers occupying central positions in design studios (Dunne and Martin, 2006), the work of their counterparts in business organizations – engineers or experts – need to be specifically amplified within ranks by the senior management teams (Bason and Austin, 2019:87). This is, in fact, the premise behind Liedtka’s assertion regarding the ‘beauty of structure’ for fostering better customer responsiveness (2018:74-75). Applied in the management field, design thinking promotes collective work at all organizational levels, which is the opposite to the top-down (i.e. the ‘bottom-up’) organizational processes (Glen et al., 2014:661). This ‘bottom-up’ flexibility, which shall append and not replace the traditional management hierarchy, should lead to the two-way ‘strategic conversations’ inside design-driven business organizations (Beckman, 2007: 26). Evidently, adaptation is underpinned by bilateral, as opposed to unidirectional processes. In the course of theorizing, DT extends traditional methods in business consulting, leading to emergence of unique – and a more synthetic – set of management concepts and practices in response to business realities.

*[Table 2 about here]*

## **CONTRIBUTIONS & DISCUSSION**

Our analysis of how the practice of DT was theorized by its proponents in the business management field led to identification of three distinct microprocesses – appropriation, assimilation and adaptation. First, appropriation process, which is about

presenting DT as a new paradigm for solving key field level problems, such as lack of innovativeness, which legacy managerial practices are argued to be not equipped to deal with. Second, assimilation process, which is about applying DT in a firm, or how to integrate it within current operating structures and processes of a firm (and acknowledgement of challenges to thereof). Third, adaptation process, which includes active reinterpretation, redefinition and reformulation of how DT can be applied alongside existing practices, structures and processes within a firm. Though this analysis we make theoretical contributions to two specific literatures. First, to the literature on legitimacy building through theorization, by showing how actors actually undertake theorization in discourse; and, second, to the literature on management knowledge production, specifically, how management ideas, concepts or practices may be (re)theorized as they travel across fields.

Our first contribution is to the literature on legitimacy attainment and institutionalization through theorization. While prior research has clearly established theorization as a key aspect of legitimation, institutionalization and diffusion of practices (see Mena and Suddaby, 2016; David et al., 2013; Maguire et al., 2004; Greenwood et al., 2002; Tolbert & Zucker, 1996; Strang & Meyer, 1993), attaining legitimacy through theorization has been considered unproblematic. The general argument is that appropriate theorization leads to attainment of *moral* legitimacy by drawing attention to abstract field level or societal problems, such as need for change or developing rational organizations, which the focal practice may presumably solve; and of *pragmatic* legitimacy by highlighting how the legacy field level practices cannot address those problems. However, our analysis of the three microprocesses of theorization – appropriation,

assimilation and adaptation – shows that the relationship between legitimacy and theorization, in terms of how and which problems the focal practice is associated with, which has implications for the type of legitimacy targeted, may be much more nuanced than previously assumed.

More specifically, our findings show that the current prevailing understanding of theorization as linking abstract field-level problems with the focal practice as a solution (e.g. David et al., 2013; Greenwood et al., 2002) may in fact only represent one of the dimensions of theorization. Consistent with this dimension of theorization, one of the microprocesses we identified – appropriation – is indeed explicitly about arguing how application of design thinking may solve dominant problems of business management field, such as lack of innovation, and how existing management practices are inadequate. Hence, appropriation represents the moral legitimacy seeking function of theorization, as it juxtaposes an abstract practice as superior to existing practices and capable of solving big field level problems. However, our results also show that appropriation is not the most dominant microprocess of theorization. As presented in figure 2, our results, albeit indicative at this stage, show that the most dominant microprocess of theorization is assimilation. In contrast to appropriation, the process of assimilation seems to be focused on application-oriented “how to” issues, that is, how to apply the practice of design thinking in an existing organization (Mena and Suddaby, 2016) or what are the challenges to such an application by organizations (Møller, 2019). Assimilation process operates at a lower level of abstraction, that is, at the firm level, and is concerned with how to apply design thinking in an existing organization, against the backdrop of its legacy structures, processes and practices (Møller, 2019). Hence, assimilation seems to

represents increasing embeddedness and localization of the practice in an organizational setting and achieving pragmatic legitimacy in the process.

Adaptation process, in turn, represent re-abstraction of the practice by its theorizers. However, it does not possess the same level of abstraction as appropriation. Rather, it includes redefinition of the practice with reference to other stakeholders and limitations of the prior practice definition (see Slavich et al., 2019; Kipping and Kirkpatrick, 2013) and involves rearticulating the practice using vocabulary from the focal field (David et al., 2013).

Overall, differentiating among these three microprocesses of theorization explicitly draws our attention to how proponents of a practice may target different bases of legitimacy. For instance, the two key second order themes underlying appropriation – critique of traditional strategy formulation and positioning DT as a solution – suggest that the process of appropriation may be driven primarily towards achieving moral or normative legitimacy, by arguing how the legacy practices are inadequate and how the new practice may the answer. In contrast, the firm-level problems specific theorization through the work of assimilation process may be driven primarily towards achieving pragmatic legitimacy, as managers in those firms are the key end-users who need to be convinced about applying the practice. Adaptation process, then, shows a balance of both moral and pragmatic legitimacy claims as it involves both the redefinition of the practice with reference to field level problems and re-articulation of tools in terms of firm-level business problems and vocabulary. Hence, our work may also have implications for the broader literature on how actors attempt to attain legitimacy by using different types of rhetorical devices and discourses to target different types of legitimacies (see Patala et al.,



2017; Bitektine & Haack, 2015; Cornelissen, Durand, Fiss, Lammers & Vaara, 2015; Vaara, Tienari, & Laurila, 2006; Phillips, Lawrence, & Hardy, 2004).

Our contribution to theorization literature also includes specifying ways in which a practice may be contextualized within the focal field, with respect to other practices, concepts and ideas, or how “interlinking theorization” (Höllerer et al., 2019) may happen. Prior research suggests that management practices and concepts are not theorized in isolation, rather they are theorized in relation to each other, that is, they become meaningful as part of a network of theories (Strang & Meyer, 1993), population of concepts (Wruk et al., 2013) or stocks of management knowledge (Höllerer et al., 2019). Most recently, Höllerer et al. (2019) have developed the lens of *interlinking theorizations*, using keyword analysis to map how various management concepts are directly or indirectly linked to each. Their network analysis shows that management concepts may be interlinked in four distinct ways. First, “fragmentations”, that is, as independent theorizations with very little in common with other concepts. Second, “concentrations”, as cohesive bundles of concepts with high level of overlapping theorizations. Third, “juxtapositions”, as part of the same debate but different theorizations. Finally, fourth, “parallelization”, as unconnected management concepts with similar theorization content.

Our research contributes to the understanding of how practices are contextualized within the focal field or interlinked with existing practices by showing the specific discursive microprocesses through which the practice of DT was re-theorized over time. By doing so, we further build on the interlinking theorizations idea by looking beyond “interpretations of patterns of co-occurrence and discrete building blocks of meanings”

and provides “a more focused study” of a single management practice (Hollerer et al., 2019: 22). While the notion of interlinking theorizations presents an excellent lens for assessing how different theorizations may (or may not) overlap, it primarily provides a static model of co-occurrence of existing management concepts. The model does not tell us *how interlinking happens*.

Our study provides indicative results which may help us explain how a practice brought from outside the field of management is contextualized through interlinking theorization with respect to the existing population of concepts. Our analysis suggests that such theorization may operate on multiple dimensions. Thus, the microprocess of appropriation may represent interlinking of a practice *in contrast* to existing management concepts, which is consistent with the fragmentation quadrant or “disparate strangers” analogy in the typology presented by Hollerer et al. (2019). Such linking is adversarial in nature, as it presents the focal practice as a prime solution to big field level problems which existing concepts in the field are not equipped to address. In contrast, the other two microprocesses – assimilation and adaptation – represent more integrative interlinking theorization, with respect to existing management concepts. These microprocesses explicitly invoke and integrate existing management practices in organizations and articulates consistencies (or lack of thereof) with them. Such integrative linking suggests how the focal practice may share high level of cohesion with other legacy management practices, consistent with juxtaposition quadrant or “melting pot” analogy. Further, the temporality of the usage of various DT theorization microprocesses in our data (see figure 2) shows that the usage of assimilation and adaptation microprocesses dominate the usage of appropriation microprocess over time. These results present tentative

indications of increasing localization of DT within the management field, exemplified by potential movement of a practice across quadrants presented in Hollerer et al's., (2019) typology over time.

Accordingly, our study draws attention to the potential contextuality and temporality of how practices are (re)theorized. In an established multi-actor, self-referential field theorization of a practice may not be limited to linking the practice to abstract field level problems. As the inconsistencies across the focal practice and existing practices of the field and the contradictions between the normative guiding principles of key stakeholders (e.g. profit maximization) and the expected outcome of the practice (e.g. option generation) become apparent, proponents may increasingly focus on (re)theorization, increasingly drawing upon assimilation and adaptation processes, which may help contextualize the focal practice and help alleviate these inconsistencies and contradictions. Hence, theorization of a practice may be highly contextual, cognizant of dominant actors and practices within the focal field (see Niklich & Fortwengel, 2017; Maguire et al., 2004) and may change over time. This pertains to not just what the practice is about and which problem it will solve, but also about how the practice fits with respect to the existing set of practice, concepts and ideas within the field (Höllerer et al., 2019; Zundel and Kokkalis, 2010).

Our second contribution is to the literatures on management knowledge production, specifically translation and evolution of management ideas, concepts and practices. While earlier work on diffusion of practices tended to assume an economic rationality driven diffusion of templates (David et al., 2013), with overemphasis on mimetic isomorphism (Boxenbaum & Jonsson, 2008; Mizruchi & Fein, 1999), a parallel,

and now burgeoning, set of literature emphasizes the constructivist aspect of legitimation process, focusing on how meanings associated with a practice are constantly constructed, translated and edited over time (see Cassel & Lee, 2016; Heusinkveld, Benders & Hillebrand, 2013; Heusinkveld & Benders, 2005; Czarinaawska-Joerges, 1997; Czarinaawska and Joerges, 1996; Sahlins-Andersson, 1996). However, much of the literature in this tradition has tended to consider how this meaning re-construction or translation is undertaken by practicing managers or the end users (e.g. see Gill et al., 2019; Alvesson, Kaareman, Sturdy, Handley, 2009), especially how they translate “ideas as a way of improving organizational performance” (Cassel & Lee, 2016: 2). Comparatively less attention paid to how management knowledge producers, that is, gurus, academic and consultants reconstruct or stretch ideas, concepts and practices (see Heusinkveld et al., 2013 for an exception), as they grapple with maintaining the legitimacy of a practice.

Our analysis contributes to this literature by showing that, first, instead of just producing and diffusing standard templates of a practice, knowledge producers engage in near constant meaning re-construction. While previous research found this to be true for the initial stages of institutionalization (see Møller, 2019), our findings demonstrate that meaning re-construction continues even at the later stages of practice introduction, when the design thinking practice seems to have gained traction and became disseminated among business managers. Second, relatedly, our analysis also suggests that how a practice is theorized may be a good lens for examining how meanings associated with a practice evolve. By showing how dynamic and multi-dimensional the process of theorization of DT was, we find support for recent research which suggests that

commodification of a concept or practice may not be a straightforward process (Heusinkveld et al., 2013; Suddaby & Greenwood, 2001). This research supports the idea that organizational practices may not simply be stable labels and products which are translated during implementation (see Ansari, Fiss & Zajac, 2010). Instead, the process of knowledge commodification, which requires converting abstract concepts into prescriptions, may drive constant re-theorization of a practice by its proponents.

Further, our study makes a contribution to understanding the subject of knowledge production as it occurs through practice transfer *across* fields. With previous research asserting that theorization of practices ‘borrowed’ from outside fields is unlikely to be legitimated (David et al., 2013:365), in great part due to the lack of referent structures and meanings in the focal field, our findings show that proponents of change can nevertheless leverage acceptance of focal practices in original (design and architecture) fields in order to justify benefits of its acceptance in the new field (business management). Against the backdrop of calls for research into theorization as it occurs across fields (Höllerer et al., 2019), we show only a partially successful translation of (DT) practice across fields. Knowledge production by means of translation across fields is not only achieved through transfer and local adaptation of a practice but also through re-theorizing relevance of existing and novel practices to deal with business tasks at hand.

Finally, our study also contributes to the current understanding of the cycle of management knowledge production and consumption (Suddaby & Greenwood 2001: 941) by showing how knowledge production may not be a sequential stage wise activity led by distinct actors. Instead of three distinct stages of due diligence and innovation, legitimation and commodification, led by business schools and academics, gurus and

consulting firms, respectively, our case of DT suggests a messier process in which these stages overlap significantly, something which Suddaby & Greenwood (2001) also expected. It seems that all three actions are being undertaken simultaneously, with due diligence and commodification being represented by the microprocesses of assimilation and adaptation, whereas different types of legitimacy being sought through different microprocesses of theorization. However, our analysis is consistent with Suddaby & Greenwood's (2001: 945) assessment that "the quickening pace of commodification" may be responsible for a complicated picture apparent in our study.

Overall, their model offers an 'idealized' image of practice theorization that omits complexity, or even failings, of this process. To that effect, the findings in this paper demonstrate not only social (e.g. legitimacy-related) but also functional challenges of incorporating DT from its original field into management practice. Ensuing adaptation of DT as part of its theorization, rather than its migration 'with minor modifications', becomes a necessity required for realizing tangible organizational benefits from DT. Further, their model highlights a 'critical' elements of practice theorization, which is being driven by desire of actors to dominate domains of management knowledge creation more broadly, and to monetize on their knowledge in adjacent fields due to saturation of the original fields (p. 946-948). Benefitting from introduction of the 'positive organizational scholarship' to institutional literature (e.g. Nilsson, 2015), our findings highlight the work of microprocesses of theorization that extend boundaries of DT across different field and make DT practices more inclusive through the "continual experimentation and customization of practices in the service of positive experiential goals" (Nilsson, 2015:387). The rationale behind DT promotion in management field, we

propose, includes promoters' desire to improve management practices, e.g. tapping into bottom-up organizational innovation, drawing corporate attention to the interests of wider stakeholders, or making value distribution fairer across value chains.

### **LIMITATIONS AND FUTURE RESEARCH**

In this paper we identify three distinct microprocesses through which theorization of a practice in the field of business management is undertaken by its proponents – appropriation, assimilation and adaptation. Our analysis offers an exploratory step towards developing a more fine-grained understanding of how a practice (or a concept) is legitimized in a field through theorization. However, there are several ways in which future studies can complement and build on our analysis to address other remaining question in this area.

First, we focus on explicating microprocesses of theorization, while speculating that the usage of different theorization microprocesses may vary over time, due to potential industry effects, life cycle stages (see Heuinkveld et al., 2013) or impact of critical events (Lampel & Meyer, 2008), which may signify episodes of acceptance or de-legitimation of a practice. Future research may take a more robust quantitative approach and test these possibilities. Such an analysis may contribute to our understanding of how legitimacy is constructed over a longer periods of time, as our analysis suggests that dominance of legitimacy types may vary across various microprocesses: specifically, appropriation being geared more towards gaining moral legitimacy, assimilation towards pragmatic legitimacy, while adaptation a balance of both.

Second, prior research suggests that end users may be directly involved in consumption and co-evolution of management concepts (see O'Mahoney & Sturdy,

2016; Fosstenløkken, Løwendahl, & Revang, 2003; Nijholt & Benders, 2007). Our analysis also supports this assessment, though indirectly. As we found, assimilation involves clear acknowledgement of issues organizations may face in applying DT, while adaptation involves re-definition of DT with references to those challenges. Future research may examine this co-evolution process by looking at both the knowledge producers and consumers simultaneously, something still largely under-explored in theorization literature (see Table 1). Of special interest may be the influence of power differential between idea promoters and recipients on usage of theorization mechanisms. For instance, we may speculate that a highly prestigious consulting firm promoting DT practice to a low status firm may use appropriation mechanism a lot more than when promoting it to a high-status client firm, wherein they may undertake a lot more assimilation and adaptation. Such an analysis will help us move beyond the knowledge production-centric approach which dominates the research area.

Third, in this analysis we assumed that management knowledge producers – gurus, academics and consultants – are a structurally equivalent set of actors, with similar aims, powers and proclivities. However, future research may challenge this assumption regarding management knowledge producers and their relationship with knowledge commodification (Suddaby & Greenwood, 2001). It can be argued that university-based academics or scientists may differ substantially from consultants and gurus, who may be more interested in knowledge commodification (Höllerer et al., 2019). Relatedly, current literature ceremonially recognizes the role of certain actors (e.g. media) around theorization, an approach also followed in our studies. Recently (e.g. Slavich et al., 2019) the role of media became acknowledged, albeit only as passive transmitters of the



specialist knowledge, *en route* from its theorizers to the end-users. Future research may pay greater attention to media around theorization, supported by evidence of its plausible role as ‘scrutinizers’ of business schools and management consultants (Engwall and Kipping, 2006). Lastly, in this analysis we attended to the North American context only, as it largely dominates the discourse of DT. This context may display diverging traits compared to theorization of practices in the UK (Kipping and Kirkpatrick, 2013) or in broader European context (Engwall and Kipping, 2006). Taken together, future research will contribute directly to our current understanding of knowledge production and commodification by including a wider set of actors and drawing upon a wider geographic and cultural scope.

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### **REFERENCES**

- Abrahamson, E., 1996. Management fashion. *Academy of management review*, 21(1), pp.254-285.
- Abrahamson, E., 1991. Managerial fads and fashions: The diffusion and rejection of innovations. *Academy of management review*, 16(3), pp.586-612.
- Aldrich, H.E. and Fiol, C.M., 1994. Fools rush in? The institutional context of industry creation. *Academy of management review*, 19(4), pp.645-670.
- Alvesson, M., Kärreman, D., Sturdy, A. and Handley, K., 2009. Unpacking the client (s): Constructions, positions and client–consultant dynamics. *Scandinavian Journal of Management*, 25(3), pp.253-263.
- Andrews, D., 2015. The circular economy, design thinking and education for sustainability. *Local Economy*, 30(3), pp.305-315.

- Bévort, F. and Suddaby, R., 2016. Scripting professional identities: How individuals make sense of contradictory institutional logics. *Journal of Professions and Organization*, 3(1), pp.17-38.
- Bitektine, A. and Haack, P., 2015. The “macro” and the “micro” of legitimacy: Toward a multilevel theory of the legitimacy process. *Academy of Management Review*, 40(1), pp.49-75.
- Boxenbaum, E. and Jonsson, S., 2008. Handbook of organizational institutionalism. *The Handbook of Organizational Institutionalism*, pp.78-98.
- Boland, R. J., & Collopy, F. 2004. *Managing as designing*. Stanford, CA: Stanford University Press
- Bolton, S. and Muzio, D., 2008. The paradoxical processes of feminization in the professions: the case of established, aspiring and semi-professions. *Work, Employment and Society*, 22(2), pp.281-299.
- Brady, J., 2018. Toward a critical, feminist sociology of expertise. *Journal of Professions and Organization*, 5(2), pp.123-138.
- Brown, T. and Wyatt, J., 2010. Design thinking for social innovation. *Development Outreach*, 12(1), pp.29-43.
- Brown, T., 2008. *Design consultancy*. Harvard Business Review, 86 (6), 84-92, 141
- Buchanan, R., 1992. *Wicked Problems in Design consultancy*. Design Issues, 8 (2), 5-21
- Buhl, A., Schmidt-Keilich, M., Muster, V., Blazejewski, S., Schrader, U., Harrach, C., Schäfer, M. and Süßbauer, E., 2019. Design thinking for sustainability: Why and how design thinking can foster sustainability-oriented innovation development. *Journal of cleaner production*, 231, pp.1248-1257.
- Charmaz, Kathy. *Constructing grounded theory: A practical guide through qualitative analysis*. Sage, 2006.
- Chou, D.C., 2018. Applying design thinking method to social entrepreneurship project. *Computer Standards & Interfaces*, 55, pp.73-79.
- Clark, T. and Salaman, G., 1998. Telling tales: Management gurus' narratives and the construction of managerial identity. *Journal of Management Studies*, 35(2), pp.137-161.
- Cornelissen, J.P., Durand, R., Fiss, P.C., Lammers, J.C. and Vaara, E., 2015. Putting communication front and center in institutional theory and analysis. *Academy of Management Review*, 40(1)
- Cross, N., 2001. Designerly Ways of Knowing: Design Discipline versus Design Science. *Design Issues*, 17 (3), pp. 49-55
- Czarniawska, B. and Joerges, B., 1996. Travels of ideas (p. 13-48). Göteborg University-School of Economics and Commercial Law/Gothenburg Research Institute.
- Czarniawska-Joerges, Barbara. "Symbolism and organization studies." In *Theorien der Organisation*, pp. 360-384. VS Verlag für Sozialwissenschaften, Wiesbaden, 1997.
- Daft, R. L., and Lewin, A.Y., 2008. Rigor and relevance in organization studies: Idea migration and academic journal evolution'. *Organization Science*, 19(1), pp.177–183.

- David, R.J., Sine, W.D. and Haveman, H.A., 2013. Seizing opportunity in emerging fields: How institutional entrepreneurs legitimated the professional form of management consulting. *Organization Science*, 24(2), pp.356-377.
- Elsbach, K.D. and Stigliani, I., 2018. Design thinking and organizational culture: A review and framework for future research. *Journal of Management*, 44(6), pp.2274-2306.
- Engwall, L., Kipping, M. and Üsdiken, B., 2016. *Defining management: Business schools, consultants, media*. Routledge.
- Engwall, L., & Kipping, M., 2006. Management education, media and consulting and the creation of European management practice. *Innovation: The European Journal of Social Science Research*, 19(1), pp. 95-106.
- Etzioni, A., 1969. *The semi-professions and their organization: Teachers, nurses, social workers*. Free Press.
- Fiss, P.C., Kennedy, M.T. and Davis, G.F., 2012. How golden parachutes unfolded: Diffusion and variation of a controversial practice. *Organization Science*, 23(4), pp.1077-1099.
- Fosstenløkken, S., Løwendahl, B., & Revang, Ø. (2003). Knowledge development through client interaction: A comparative study. *Organization Studies*, 24, 859–880.
- Geissdoerfer, M., Bocken, N.M. and Hultink, E.J., 2016. Design thinking to enhance the sustainable business modelling process—A workshop based on a value mapping process. *Journal of Cleaner Production*, 135, pp.1218-1232.
- Gill, M.J., McGivern, G., Sturdy, A., Pereira, S., Gill, D.J. and Dopson, S., 2019. Negotiating Imitation: Examining the Interactions of Consultants and Clients to Understand Institutionalization as Translation. *British Journal of Management*.
- Gioia, D.A., Corley, K.G. and Hamilton, A.L., 2013. Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organizational Research Methods*, 16(1), pp.15-31.
- Glaser, B. Strauss, and Anselm Strauss. 1967. The discovery of grounded theory. *York (1971)*: 581-629.
- Glen, R., Suci, C. and Baughn, C., 2014. The need for design thinking in business schools. *Academy of Management Learning & Education*, 13(4), pp.653-667.
- Goldschmidt, G., 1997. Capturing indeterminism: representation in the design problem space. *Design Studies*, 18(4), pp.441-455.
- Goodman, S.N., Schneeweiss, S. and Baiocchi, M., 2017. Using design thinking to differentiate useful from misleading evidence in observational research. *Jama*, 317(7), pp.705-707.
- Gould, R.K., Bratt, C., Mesquita, P.L. and Broman, G.I., 2019. Integrating sustainable development and design-thinking-based product design. In *Technologies and Eco-innovation towards Sustainability I* (pp. 245-259). Springer, Singapore.
- Gregory, Sydney A. "Design science." In *The design method*, pp. 323-330. Springer, Boston, MA, 1966.
- Greenwood, R., Suddaby, R. and Hinings, C.R., 2002. Theorizing change: The role of professional associations in the transformation of institutionalized fields. *Academy of Management Journal*, 45(1), pp.58-80.

- Guillen, M.F., 1994. The Age of Eclecticism: Current Organizational Trends and the Evolution of Managerial Models. *MIT Sloan Management Review*, 36(1), p.75.
- Gurses, K. and Ozcan, P., 2015. Entrepreneurship in regulated markets: framing contests and collective action to introduce pay TV in the US. *Academy of Management Journal*, 58(6), pp.1709-1739.
- Hamington, M., 2019. Integrating care ethics and design thinking. *Journal of Business Ethics*, 155(1), pp.91-103.
- Hardy, C. and Maguire, S., 2008. Institutional entrepreneurship. *The Sage handbook of organizational institutionalism*, 1, pp.198-217.
- Hargadon, A.B. and Douglas, Y., 2001. When innovations meet institutions: Edison and the design of the electric light. *Administrative Science Quarterly*, 46(3), pp.476-501.
- Harrington, B., 2015. Going global: professionals and the micro-foundations of institutional change. *Journal of Professions and Organization*, 2(2), pp.103-121.
- Heusinkveld, S. and Benders, J., 2005. Contested commodification: Consultancies and their struggle with concept development. *Human Relations*, 58(3), pp.283-310.
- Heusinkveld, S., Benders, J. and Hillebrand, B., 2013. Stretching concepts: The role of competing pressures and decoupling in the evolution of organization concepts. *Organization Studies*, 34(1), pp.7-32.
- Heusinkveld, S. and Reijers, H.A., 2009. Reflections on a reflective cycle: building legitimacy in design knowledge development. *Organization Studies*, 30(8), pp.865-886.
- Hirsch, P.M., 1972. Processing fads and fashions: An organization-set analysis of cultural industry systems. *American Journal of Sociology*, 77(4), pp.639-659.
- Hoffman, A. J., 1999. Institutional evolution and change: Environmentalism and the US chemical industry. *Academy of Management Journal*, 42(4), pp. 351-371.
- Höllerer, M. A., Jancsary, D., Barberio, V., & Meyer, R. E., 2019. The Interlinking Theorization of Management Concepts: Cohesion and Semantic Equivalence in Management Knowledge. *Organization Studies*. doi.org/10.1177/0170840619856033.
- Kennedy, M.T. and Fiss, P.C., 2009. Institutionalization, framing, and diffusion: The logic of TQM adoption and implementation decisions among US hospitals. *Academy of Management Journal*, 52(5), pp.897-918.
- Khurana, R., 2010. *From higher aims to hired hands: The social transformation of American business schools and the unfulfilled promise of management as a profession*. Princeton University Press.
- Khurana, R., Nohria, N. and Penrice, D., 2005. Is business management a profession?. *Harvard business school Working Knowledge*, 21.
- Kolko, J., 2010. Abductive thinking and sensemaking: The drivers of design synthesis. *Design issues*, 26(1), pp.15-28.
- Langley, A., 1999. Strategies for theorizing from process data. *Academy of Management Review*, 24(4), pp.691-710.
- Langley, A. and Abdallah, C., 2011. Templates and turns in qualitative studies of strategy and management. In *Building methodological bridges* (pp. 201-235). Emerald Group Publishing Limited.
- Lincoln, Y.S. and Guba, E.G., 1985. *Naturalistic inquiry*. berry Park.

- Locke, K. D. (2001) *Grounded Theory in Management Research*. Sage Series in Management Research. Sage Publications, London.
- Locke, R.R. and Spender, J.C., 2011. *Confronting managerialism: How the business elite and their schools threw our lives out of balance*. Zed Books Ltd.
- Maguire, S., Hardy, C. and Lawrence, T.B., 2004. Institutional entrepreneurship in emerging fields: HIV/AIDS treatment advocacy in Canada. *Academy of Management Journal*, 47(5), pp.657-679.
- Marshall, C., 1989. Rossman. GB (1989). *Designing qualitative research*. California. bury Park.
- McLaughlan, R. and Lodge, J.M., 2019. Facilitating epistemic fluency through design thinking: a strategy for the broader application of studio pedagogy within higher education. *Teaching in Higher Education*, 24(1), pp.81-97.
- Mena, S., & Suddaby, R., 2016. Theorization as institutional work: The dynamics of roles and practices. *Human Relations*, 69(8), pp. 1669-1708.
- Mintrom, M. and Luetjens, J., 2016. Design thinking in policymaking processes: Opportunities and challenges. *Australian Journal of Public Administration*, 75(3), pp.391-402.
- Mizruchi, M.S. and Fein, L.C., 1999. The social construction of organizational knowledge: A study of the uses of coercive, mimetic, and normative isomorphism. *Administrative Science Quarterly*, 44(4), pp.653-683.
- Møller, A. M., 2019. Explicit professionalism. A cross-level study of institutional change in the wake of evidence-based practice. *Journal of Professions and Organization*, 6 (2.), pp. 179–195.
- Navis, C. and Glynn, M.A., 2010. How market categories emerge: Temporal dynamics of legitimacy, identity, and entrepreneurship in satellite radio, 1990–2005. *Administrative Science Quarterly*, 55(3), pp.439-471.
- Nicklich, M. and Fortwengel, J., 2017. Explaining the puzzling stagnation of apprenticeships in Germany's security services: A case of insufficient institutional work? *Journal of Professions and Organization*, 4(3), pp.302-323.
- Nigam, A. and Ocasio, W., 2010. Event attention, environmental sensemaking, and change in institutional logics: An inductive analysis of the effects of public attention to Clinton's health care reform initiative. *Organization Science*, 21(4), pp.823-841.
- Nijholt, J., & Benders, J. 2007. Co-evolution in management fashions: The case of self-managed teams in the Netherlands. *Group & Organization Management*, 32, 628–652.
- O'Mahoney, J. and Sturdy, A., 2016. Power and the diffusion of management ideas: The case of McKinsey & Co. *Management Learning*, 47(3), pp.247-265.
- Patala, S., Korpivaara, I., Jalkala, A., Kuitunen, A. and Soppe, B., 2017. Legitimacy under institutional change: How incumbents appropriate clean rhetoric for dirty technologies. *Organization Studies*, 40(3), pp.395-419.
- Phillips, N., Lawrence, T.B. and Hardy, C., 2004. Discourse and institutions. *Academy of Management Review*, 29(4), pp.635-652.
- Phillips, N. and Hardy, C., 2002. *Discourse analysis: Investigating processes of social construction* (Vol. 50). Sage Publications.

- Rao, H., Monin, P. and Durand, R., 2003. Institutional change in Toque Ville: Nouvelle cuisine as an identity movement in French gastronomy. *American journal of sociology*, 108(4), pp.795-843.
- Razzouk, R. and Shute, V., 2012. What is design thinking and why is it important?. *Review of educational research*, 82(3), pp.330-348.
- Reay, T., Golden-Biddle, K. and Germann, K., 2006. Legitimizing a role: Small wins and microprocesses of change. *Academy of Management Journal*, 49(5), pp.977-998.
- Rittel, H. and Webber, M. (1973) 'Dilemmas in a General Theory of Planning'. *Policy Sciences*, Vol. 4, No. 2, pp. 155-169
- Roberts, J.P., Fisher, T.R., Trowbridge, M.J. and Bent, C., 2016, March. A design thinking framework for healthcare management and innovation. In *Healthcare* (Vol. 4, No. 1, pp. 11-14). Elsevier.
- Sarooghi, H., Sunny, S., Hornsby, J. and Fernhaber, S., 2019. Design Thinking and Entrepreneurship Education: Where Are We, and What Are the Possibilities? *Journal of Small Business Management*, 57(sup1), pp.78-93.
- Scott, W. Richard. 2014. "Institutions and organizations: Ideas, interests and identity." Sage.
- Sahlin-Andersson, K., 1996. Imitating by editing success. The construction of organizational fields and identities.
- Schon, D. (1983) *The Reflective Practitioner: How Professionals Think in Action*. Aldershot, England: Arena
- Shapira, H., Ketchie, A. and Nehe, M., 2017. The integration of design thinking and strategic sustainable development. *Journal of Cleaner Production*, 140, pp.277-287.
- Singh, J. V., Tucker, D. J., & House, R. J., 1986. Organizational legitimacy and the liability of newness. *Administrative Science Quarterly*, 31(2), pp. 171-193.
- Slavich, B., Svejnova, S., Opazo, M. P., & Patriotta, G. (2019). Politics of Meaning in Categorizing Innovation: How Chefs Advanced Molecular Gastronomy by Resisting the Label. *Organization Studies*.<https://doi.org/10.1177/0170840619835268>
- Simon, H. A. "The sciences of the artificial." *Cambridge, MA* (1969).
- Stinchcombe, A.L., 1965. Organizations and social structure. *Handbook of organizations*, 44(2), pp.142-193.
- Strang, D. and Meyer, J.W., 1993. Institutional conditions for diffusion. *Theory and Society*, 22(4), pp.487-511.
- Strang, D. and Soule, S.A., 1998. Diffusion in organizations and social movements: From hybrid corn to poison pills. *Annual review of sociology*, 24(1), pp.265-290.
- Strauss, A. and Corbin, J.M., 1997. *Grounded theory in practice*. Sage.
- Suchman, M.C., 1995. Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review*, 20(3), pp.571-610.
- Suddaby, R. and Greenwood, R., 2001. Colonizing knowledge: Commodification as a dynamic of jurisdictional expansion in professional service firms. *Human Relations*, 54(7), pp.933-953.
- Suddaby, R. and Greenwood, R., 2005. Rhetorical strategies of legitimacy. *Administrative Science Quarterly*, 50(1), pp.35-67.
- Suddaby, R., & Viale, T. (2011). Professionals and field-level change: Institutional work and the professional project. *Current Sociology*, 59(4), 423-442.

- Tolbert P.S., Zucker L.G. 1996. The institutionalization of institutional theory. Clegg S, Hardy C, Nord W, eds. *The Sage Handbook of Organizational Theory* (Sage, London), 176–190.
- Tost, L.P., 2011. An integrative model of legitimacy judgments. *Academy of management review*, 36(4), pp.686-710.
- Vaara, E., Tienari, J. and Laurila, J., 2006. Pulp and paper fiction: On the discursive legitimation of global industrial restructuring. *Organization studies*, 27(6), pp.789-813.
- Ventresca, Marc J., and John Mohr. "Archival methods in organization analysis." *Companion to organizations* (2002): 805-828.
- Whitson, Jennifer, Klaus Weber, Paul Hirsch, and Y. Sekou Bermiss. "Chemicals, companies, and countries: The concept of diffusion in management research." *Research in Organizational Behavior* 33 (2013): 135-150.
- Yeager, D.S., Romero, C., Paunesku, D., Hulleman, C.S., Schneider, B., Hinojosa, C., Lee, H.Y., O'Brien, J., Flint, K., Roberts, A. and Trott, J., 2016. Using design thinking to improve psychological interventions: The case of the growth mindset during the transition to high school. *Journal of educational psychology*, 108(3), p.374.
- Zilber, T.B., 2008. The work of meanings in institutional processes. *The SAGE handbook of organizational institutionalism*, pp.151-169.
- Zimmerman, M.A. and Zeitz, G.J., 2002. Beyond survival: Achieving venture growth by building legitimacy. *Academy of Management Review*, 27(3), pp.414-43

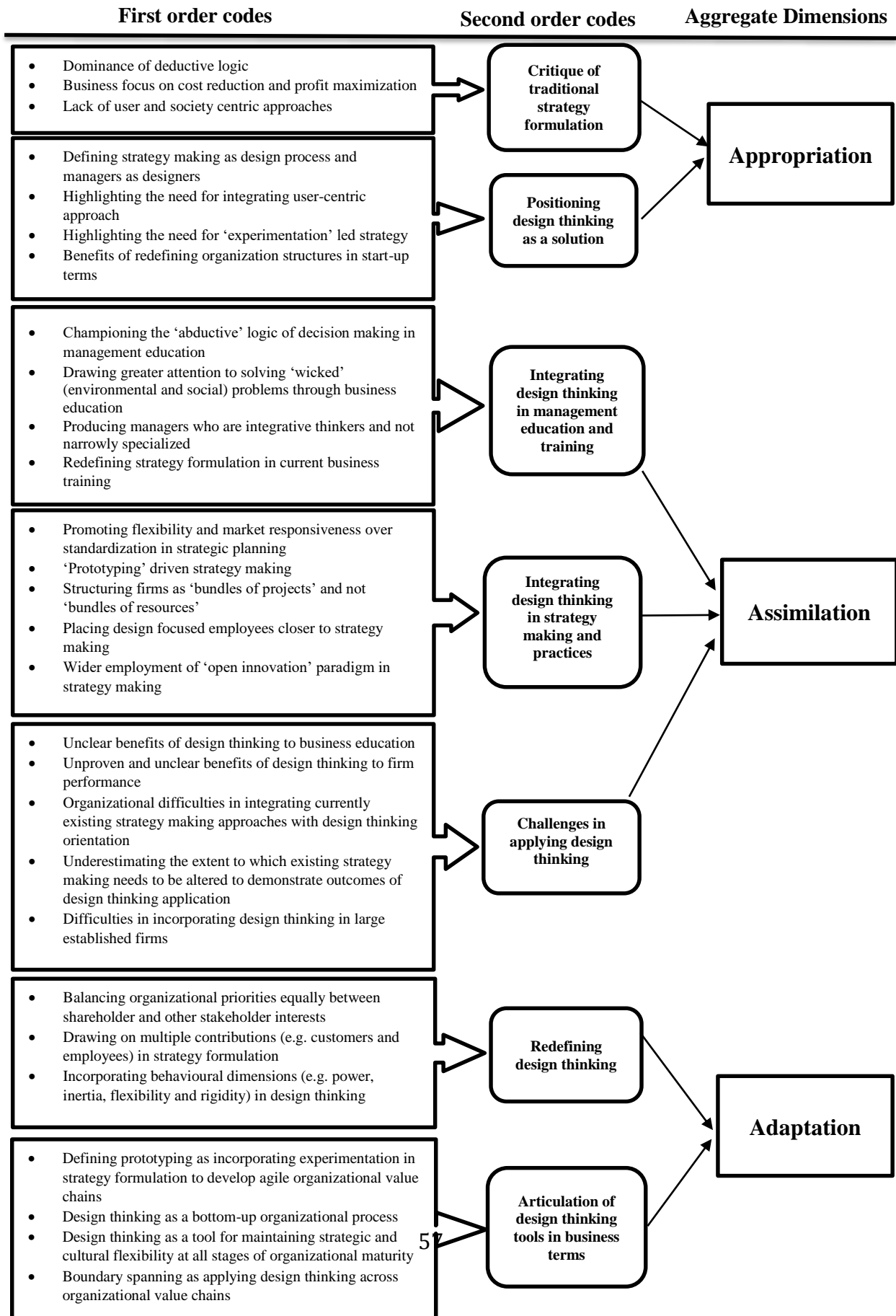
**Table 1: Summary of existing research on theorization of practices and concepts**

Source	Practice types	Application	Activities of theorization	Drivers behind practice adoption	Actors and roles	Perspective on theorization
Møller (2019)	Professional practice standard	Replacing the old ('knowledge-based') with the ('evidence-based') practice in a professional field	Examining existing practices; Disseminating knowledge about tools; Coalition building; Certifying and overlooking implementation of standards; Shaping identities for self-moderation	Government pressures	NGO (theorizer); Local authorities (enforcers); Professionals (consumers)	Discourse
Slavich et al., (2019)	Categorization of practices	Legitimizing innovative work among field participants	<i>Experimenting</i> with a style; <i>Communicating</i> the style; <i>Contesting</i> the dominant label; and <i>Legitimizing</i> the category meaning	Political efforts to reshape meanings among target audiences	Practitioners (theorizers); Scientists (enforcers); Media and Critics (consumers)	Semiotics
Höllerer et al., (2019)	Management concept	Constructing the architecture of the management knowledge	Within the context of theorization: clustering old concepts with the ones ( <i>building 'cohesive bundles'</i> – linkages – between concepts); Within the content of theorization: drawing <i>semantic equivalence</i> ('indirect associations')	Expansion of the body of management knowledge	Consultants (theorizers); Managers (consumers)	Vocabulary perspective
Nicklich and Fortwengel (2017)	Vocational training programme	Failure to diffuse a training program	<i>Cognitive articulation</i> of a need for a practice; <i>Positioning</i> to address existing problems in the industry; <i>Formalisation</i> of the practice closure; <i>Lobbying</i> creation of a professional regulation; <i>Marketing</i> a practice attractive;	Failing to recruit government (regulative) support; Failing to attend to national institutional configurations	Employers (theorizers); Labor unions (co-theorizers); Employer associations (co-theorizers);	Institutional work
Mena and Suddaby (2016)	Industry's CSR code of conduct	Supporting institutional stability following institutional change in the field	<i>Practice theorization</i> : Policing; Educating; Changing normative associations; <i>Role theorization</i> : Reconstructing subject positions; Reconfiguring interactions; Redefining legitimacy	Escaping government regulation with self-regulation	Labour Association (theorizer); Governments (enforcers); Companies (consumers)	Institutional work
David et al., (2013)	Organizational form	Legitimation of the management consulting organizations in a field	<i>Amplifying</i> contradictions between existing organizational forms and broader business objectives; <i>Specifying</i> novel expertise-based solutions; <i>Crafting</i> ties to external/internal sources of authority; <i>De-emphasize</i> self-interest; <i>Working collectively</i> to create a template for practice replication	Broader conditions – degree of field maturity; Recognition by the Government bodies; Use of social / political connections in the field; Personal competencies of actors (cultural competences; rhetorical skills)	Consultants (theorizers); Professional Associations (co-theorizers); Government (consumers); Companies (consumers)	Institutional entrepreneurship

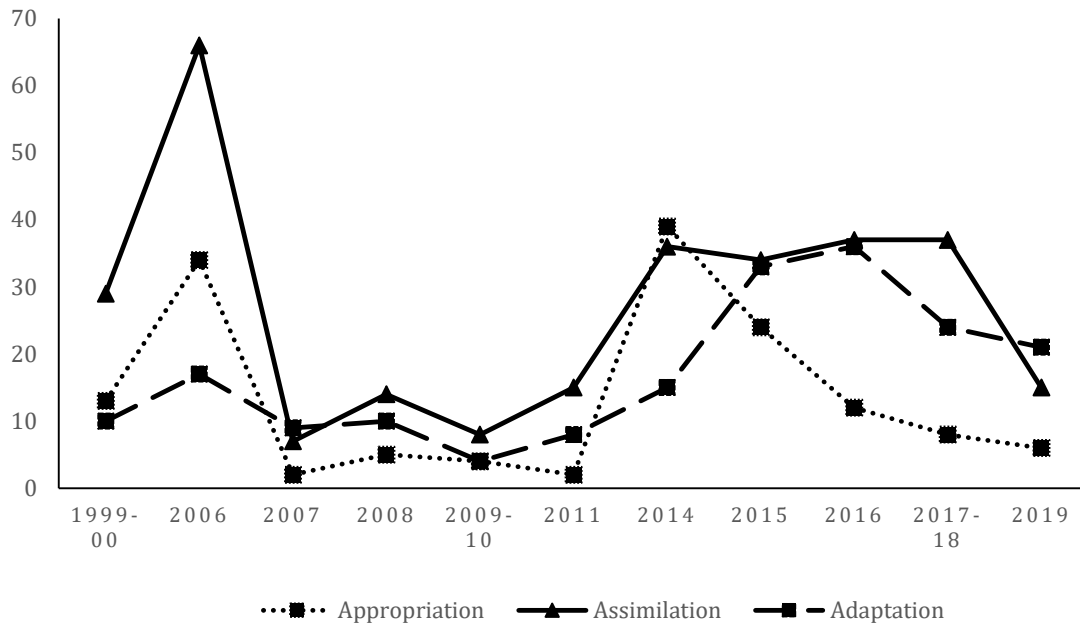


Suddaby and Viale (2011)	Professionalization projects	Creating field-level change	<i>Challenging</i> existing orders; <i>Defining</i> open and uncontested space; <i>Populating</i> the field with actors and creating identities; <i>Creating</i> status hierarchies and social orders	Theorizers' social and political skills	Professions (theorizers); State (enablers); Supra-national bodies (enablers)	Institutional work; Rhetoric; Discourse
Nigam and Ocasio (2010)	A practice of managed care	Adoption of organizing principles in organizational field	<i>Theorizing</i> a practice as an alternative to the existing one; <i>Positioning</i> practice as part of changing relationships of existing practice relevance in the field; Using a practice as a cumulative construct for field-level activities;	Field-level changes; Accretion (accumulation) of multiple efforts	Policy-elites (theorizers); Interest groups (co-theorizers); Government (enforcer)	Rhetoric
Zundel and Kokkalis (2010)	Conception of 'theoretical' in academic and management domains	Transfer of the 'theoretical' academic research into professional (managerial) practice	Emphasising <i>overlap</i> between distinct practices; Proposing <i>possibilities</i> regarding continual relevance of existing practices	Reigning relevance of the academic 'theoretical' work to the managerial practitioners	Academics (theorizers); Management consultants (co-theorizers); Practitioners (consumers)	Practice theory
Maguire et al., (2004)	Practice of consultation and information exchange	Diffusion of treatment advocacy in Canadian HIV/AIDS field	<i>Resonating</i> with a multitude of field actors; <i>Bargaining</i> with stakeholders as a trade off; <i>Devising</i> a chain of cause and effect for failure to agree; <i>Entering</i> into a compromise agreement; <i>Attaching</i> practice to the old one; <i>Aligning</i> practice with interests of existing stakeholders	Tapping into resources and support of powerful stakeholders; Occupying important subject positions in the field	Activists and patient associations (theorizers); Government; Companies; Patients (consumers)	Discourse
Rao et al., (2003)	Professionals' individual autonomy	Creating field-level identity change	<i>Creating</i> negative vision of the old identity; <i>Amplifying</i> discrepancy between existing and identity; <i>Crafting</i> desire for identity; <i>Encouraging</i> defectors	Recruiting credible supporters; Recruiting powerful supporters	Activists/Critics (theorizers); Practitioners (co-theorizers); Professional bodies (co-theorizers); Schools (enforcers); Customers (consumers)	Rhetoric
Greenwood et al., (2002)	Management knowledge	Diffusion of management knowledge within and across fields	<i>Commodification</i> (abstraction of knowledge; codification of knowledge to a portable format; translation of knowledge across domains); <i>Colonization</i> (self-legitimation and advancement; analysis and refinement of the existing knowledge)	Advancement of individual power and control in fields; Increased transparency of practice in fields	Consultants (theorizers); Business Schools (validators); Gurus (translators of practices across fields); Firms (consumers)	Discourse

**Figure 1: Data Structure**



**FIGURE 2**  
**THEORIZATION OF DESIGN THINKING OVER TIME**



**Table 2: Representative evidence for data structure**

1st Order Codes	Representative Quote
Dominance of deductive logic	“A traditional manager would take the options that have been presented and analyze them based on deductive reasoning. You typically get those options on the basis of what you have seen before”
Business focus on cost reduction and profit maximization	“Focus on cost reduction and profit maximization is the primary goal of business and that remains the same despite the human centric approach”
Lack of user- and society-centric approaches in management education	“Writers in the field of business strategy have argued recently that many issues in strategy formulation are ‘wicked’ as well, and that traditional approaches to dealing with them are similarly incapable of producing intelligent solutions”
Defining managing as design process and managers as designers	“Several authors from the fields of design and management comment on the parallels between the two domains and explore the intellectual foundations for approaching managing as designing...In exploring the transition of the design metaphor to business in a more complete way, the opportunity is to see all managers as designers (and builders as well)”

Highlighting the need for integrating user-centric approaches	“We need metaphors that better capture the challenges of making strategies both real and realizable, metaphors that bring life to the human dimension of creating futures for institutions, to move beyond the sterility traditional approaches to strategic planning in large organizations”
Highlighting the need for ‘experimentation’ led strategy	“Design’s value lies in creating a “virtual” world in which experiments (mental rather than physical) can be conducted on a less costly basis. This offers a very different perspective from which to think about the creation of business strategies”
Benefits of redefining organization structures in start-up terms	“As a business, we know that we might be able or be forced to change our strategies as we go along – but we’d rather not. This apparent paradox is what gives the design process – with its use of constructive forethought – its utility”
Championing the ‘abductive’ logic of decision making in management education	“Business education has to be made more like design education. It means, first, getting MBAs to think in terms of projects where you solve wicked problems using abductive reasoning
Promoting greater collaboration skills in management education	“MBAs have to learn collaborative skills. They have to learn to listen to other people and understand their reasoning process. Not spend their time saying, “Their reasoning process is different than mine; therefore, it is wrong; therefore, I must stomp it out.” That would be the traditional MBA approach”
Drawing greater attention to solving ‘wicked’ (environmental and social) problems through management education	“There are big questions that could be addressed by business education, like integrative thinking, like integrating corporate social responsibility into the business world”
Producing managers who are integrative thinkers and not narrowly specialized	“For our part, we have to teach students integrative thinking, the broader notion of what is salient, what the important relationships are, to look at things as a whole, not piece parts that you put together”
Redefining strategy formulation in current business training	“Taken together, these characteristics borrowed from the field of design – synthetic, adductive, dialectical, hypothesis-driven, opportunistic, inquiring, and value-driven – describe strategic thinking”
Promoting flexibility and market responsiveness over standardization in strategic planning	“The design field sets the bar far higher: designers are expected to find creative higher-level solutions that honor both the current reality and some different future. Perhaps we should expect the same of business strategists”
Prototyping-driven strategy making	“Design thinking advocates user-centered design by examining the context of the end user, creating empathy for end user needs and promoting a culture of generative research, rough and rapid iterative prototyping and end user feedback throughout the process lifecycle”
Structuring firms as ‘bundles of projects’ and not ‘bundles of resources’	“Design shops work on projects that have defined terms; whereas a traditional firm sees itself as engaged in an ongoing task. The traditional

	firm treats its activities as an ongoing assignment even though it is really a bundle of projects. As a result, it ends up with big budgets and large staff”
Placing design focused employees closer to strategy making	“There is a shift under way in large organizations, one that puts design much closer to the center of the enterprise”
Wider employment of ‘open innovation’ paradigm in strategy making	“Thanks to powerful ideation approaches such as design thinking and crowdsourcing, it has become incredibly easy and relatively inexpensive for companies to obtain a vast number of novel concepts, from both insiders and outsiders such as customers, designers, and scientists”
Unclear benefits of design thinking to business education	“[C]haracteristics of design thinking would need to be sufficiently clarified beyond “what designers do” to provide a tangible alternative, and knowledge of these practices would need to be disseminated to a critical mass of those in the business school community”
Unproven and unclear benefits of design thinking to firm performance	“Nevertheless, the idea of applying design approaches to management is and, as yet, largely undeveloped...Design thinking isn’t . But many companies still aren’t sure how it can improve their business”
Organizational difficulties in integrating existing strategy making approaches with design thinking orientation	“Traditional ideation methods, such as...design thinking, result in an overabundance of ideas for offerings and business models. But managers lack a method for capturing the most promising possibilities”
Underestimating the extent to which existing strategy making needs to be altered to demonstrate outcomes of design thinking application	“The problem is not one of designing better programs or simply replacing or upgrading learning platforms. Rather, there is something more fundamental going on — a need to totally rethink corporate R&D, to shift the focus to design thinking and the employee experience”
Difficulties in incorporating design thinking in large established firms	“[C]omplex innovations often encounter stiff resistance from intended beneficiaries and those delivering the product or service, because they jarringly disrupt existing behaviors and business models”
Balancing organizational priorities equally between shareholder and other stakeholder interests	“Design is not about either/or but about integrative thinking. So, there is no reason why it has to be either about customers or about shareholders...[T]hose two things are inexorably linked”
Drawing on multiple contributions (e.g. customers and employees) in strategy formulation	“Unlike open innovation approaches, involving outsiders is not intended to generate ideas. Rather, it is meant to raise good questions—to challenge the innovative direction you propose in order to help you strengthen it”
Incorporating behavioral dimensions (e.g. power, inertia, flexibility and rigidity) in design thinking	“Design thinking, first used to make physical objects, is increasingly being applied to complex, intangible issues, such as how a customer experiences a service...The nature of design work is shifting from physical to non-physical”

Defining prototyping as incorporating experimentation in strategy formulation to develop agile organizational value chain

“Prototyping (hands-on approach) is an important part of design thinking methodology...The basics of design thinking, a hands-on approach that focuses on developing empathy for others, generating ideas quickly, and testing rough “prototypes” that, although always incomplete or often impractical, fuel rapid learning for teams and organizations. Now our teams are pushing design through the entire system, from product creation, to packaging and labelling, to how a product looks on the shelf, to how consumers interact with it”

Design thinking as a bottom-up organizational process

“This social process accommodated a less top-down view of the design process and relied less on experts to provide the solutions, instead engaging a broader range of players”

Design thinking as a tool for maintaining strategic and cultural flexibility at all stages of organizational maturity

“Design offers a different approach and would suggest processes that are more widely participative, more dialogue-based, issue-driven rather than calendar-driven, conflict-using rather than conflict-avoiding, all aimed at invention and learning, rather than control. In short, we should involve more members of the organization in two-way strategic conversations”

Boundary spanning as applying design thinking across supply chain

“We’re forcing the design thinking way back in the supply chain”

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### APPENDIX A: Articles included in the data sample

Year	Article
1999	1. Maruca (1999) “Is your brand at risk?”, HBR
2000	2. Liedtka (2000) “in Defense of Strategy as Design”, CMR
2006	3. Dunne and Martin (2006) “Design Thinking and How It Will Change Management Education: An Interview and Discussion”, AMLE 4. Owen (2006) “Design Thinking: Driving Innovation”, Institute of Design, Illinois Institute of Technology 5. Gerber (2006) “Relations in Design Thinking: A Case Study of a Social Network”, AOMP
2007	6. Beckman and Barry (2007) “Innovation as a Learning Process: Embedding Design Thinking”, CMR
2008	7. Stewart (2008) “Tools for Change”, HBR 8. Brown (2008) “Design Thinking”, HBR
2009	9. Dyer, Gregersen and Christensen (2009) “The innovator’s DNA”, HBR
2010	10. Merholz (2010) “Why Design Thinking Won’t Save You”, HBR
2011	11. Martin (2011) “The Innovation Catalysts”, HBR
2014	12. Brown, Martin and Berger (2014) “Capitalism Needs Design Thinking”, HBR 13. Glen, Suciu and Baughn (2014) “The Need for Design Thinking in Business Schools”, AMLE 14. Wastell (2014) “Archarios: A Dialogue Between Socrates and a Novice Manager on the Relevance of Design to Management Practice and Education”, AMLE
2015	15. Weiblen and Chesbrough (2015) “Engaging with Startups to Enhance Corporate Innovation”, CMR 16. Brown (2015) “When Everyone Is Doing Design Thinking, Is It Still a Competitive Advantage?”, HBR 17. Ignatius (2015) “Design as Strategy”, HBR 18. Interaction (2015) “Design Thinking Infuses Corporations”, HBR 19. Kolko (2015) “Design Thinking Comes of Age”, HBR 20. Brown and Martin (2015) “Design for Action”, HBR 21. Ignatius (2015) “How Indra Nooyi Turned Design Thinking into Strategy”, HBR
2016	22. Dong, Garbuio and Lovallo (2016) “Generative Sensing: A Design Perspective on the Microfoundations of Sensing Capabilities”, CMR 23. Sutton and Hoyt (2016) “Better Service, Faster: A Design Thinking Case Study”, HBR 24. Hoyt and Sutton (2016) “What Design Thinking Is Doing for the San Francisco Opera”, HBR 25. Deichmann and van der Heijde (2016) “How Design Thinking Turned One Hospital into a Bright and Comforting Place”, HBR 26. Verganti (2016) “The Innovative Power of Criticism”, HBR 27. Bersin (2016) “Using Design Thinking to Embed Learning in Our Jobs”, HBR
2017	28. Kupp, Anderson and Reckhenrich (2017) “Why Design Thinking in Business Needs a Rethink”, MIT
2018	29. Kim, Beckman and Agogino (2018) “Design Roadmapping in an Uncertain World: Implementing a Customer-Experience-Focused Strategy”, CMR 30. Liedtka (2018) “Why Design Thinking Works”, HBR
2019	31. Bason and Austin (2019) “The Right way to lead design thinking”, HBR