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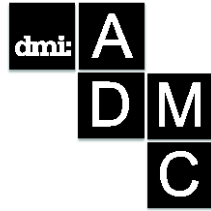
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# Constructing the future of design: How design professionals perceive their changing role

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*Design and design thinking have boomed in the past decade, expanding design considerations into new areas of application and a wide range of organizations across industry types. What implications does the changing role of design have for design practitioners? How do they see their role going forward? To add the voice of designers themselves to research, this study builds on 66 interviews that were conducted in 2017 at six offices of a design agency in North America and Europe. The interviewees reported believing in the continued growth of design, with increasing importance and influence of both technology and the human element in design, designers acting as boundary spanners. Five pairs of opposite myths of the future were identified, representing trends in different directions in their emphasis on key influences, scope, organizing, skills and prestige of design. As our perceptions and the sense we make of the world around us influence our choices and actions, the beliefs we hold of the future can be self-reinforcing. The results emphasize the expansion of skills in creating and harnessing interconnections between technology, people and design that designers believe will be required in the future for the field to flourish.*

**Keywords:** designer; design agency; future of design; design thinking; digitalization; narratives

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## Introduction

In the innovation economy of today, design has come to play a greater role in helping companies gain a competitive advantage (Brown, 2008; Gruber et al., 2015). Not only do customers expect well-designed experiences and products, but the organizations need to be well designed to thrive in the ever changing business environments. Investments into design talent, acquisitions of design agencies and the continuous rise of designer ratios (e.g. Maeda et al., 2017, 2018) indicate that many companies have acknowledged the benefits of employing design professionals and have started to implement design more comprehensively in their daily activities. Indeed, design centric organizations have outperformed the S&P 500 for several years in a row now (Rae, 2016).

In addition to more traditional design activities within for example product development, the now booming design thinking movement has expanded the realm of what is considered as the playfield for designers into e.g. new strategies and employee experiences (Gruber et al., 2015), using design activities within non-design fields and operations within companies (e.g. Brown, 2008; Dorst, 2011; Martin, 2009). Although the past two decades have seen design thinking research rise to accompany the studies that have been conducted since the 1960's on designers' ways of working and thinking (Cross, 2004; Johansson-Sköldberg, Woodilla & Cetinkaya, 2013), a unified definition on what design thinking actually is has yet to emerge (Buchanan, 1992; Carlgren, Rauth & Elmquist, 2016; Dorst, 2011; Johansson-Sköldberg et al., 2013). Design thinking is often referred to as an innovation *process* (e.g. Brown, 2008; Glen et al., 2015), a set of *activities* that keep the customer or end-user in the centre of focus, ranging from user research to prototyping and building valid business cases (e.g. Brown, 2008; Gruber et al., 2015), or as a *tool or approach* to build strategies (Brown, 2008), change organisational culture (Brown & Martin, 2015; Kolko, 2015) or solve problems (Cross, 2004; Dorst, 2011; Liedtka, 2014). Regardless of how it's defined, it is clear that companies are increasingly turning towards design thinking to improve their offering and operations.

As a result of the increasing role and prestige of design, designers may find themselves in positions where they are outside of their personal previous professional experience as well as charting new waters for the role of design in general in the entire organization or even industry. Faced with little precedents, designers can end up acting as change agents (Clavert et al., 2018) and champions (Howell & Higgins, 1990), having to push for the issues that they find important so that managers and companies will devote

*Constructing the future of design: How design professionals perceive their changing role* more attention and resources towards them (Dutton & Ashford, 1993). However, there has been surprisingly little research on how designers themselves perceive their role and future. Much of design research has been carried out on design students rather than professionals, and those studies that use professional designers tend to rely on just a few participants (Björklund, 2013; Cross, 2004; Defazio, 2008). Based on a study on students of instructional design, uncertainty and designers' attitudes towards it seemed to have a significant role in forming designer identities, but more work is needed to understand professional identities of designers (Tracey & Hutchinson, 2016). Amongst the few exceptions of looking at the designers' perception of their practice and profession, Fayard, Stigliani and Bechky (2017) examined how service designers created a mandate for the occupation. They found a combination of values and material practices to have been important in differentiating the occupation, namely taking a holistic approach, being empathetic and co-creating combined with conducting design research, visualizing and prototyping. Another exception that has focused on professional designers' interpretations of their work can be found in Daly and colleagues' (2012) interview study of a variety of designers (mainly from engineering design, but including also e.g. professional painters and fashion designers). They found several different categories of how design work was experienced by the designers: design as evidence-based decision-making, organized translation, personal synthesis, intentional progression, directed creative exploration, and freedom. This highlights the variety of potential interpretations and experiences within the design profession.

Adding to the few studies of professional designers' interpretations, the current study aims to extend understanding of how designers themselves see their role evolving and perceive the future of their field. Irrespective of whether these represent accurate judgements and predictions of the field, what the designers themselves perceive plays an important role through shaping their behavior. In particular, we explore the myths that designers construct on the future of their field. Myths can be seen as social attempts to "manage" and cope with uncertain future (Boje, Fedor and Rowland, 1982). Rather than being true or false, myths are believed in or not (Emmet & McIntyre, 1970; Mosco, 1998). They can be seen as ideology in narrative form that serve to make sense and organize experience in order to explain the past and to anticipate the future (Lincoln, 2006; Miscione, 2015). So in our context, myths are not seen as opposite to reality, but as a way to look at it and to provide explanations and justifications, helping to deal with

uncertainty and contradictions (Miscione, 2015; Lévi-Strauss, 2001). Helping us to cope with the unknown future by making it seem rational (Boje et al., 1982), myths play a defining role in framing sense-making, shaping collective action while at the same time leaving out alternative views (Miscione, 2015). As such, examining the myths of the future of design that designers construct offers an intriguing window into how design professionals themselves portray the changing role they play in many organizations.

## **Methods**

To add the voice of designers themselves to academic discussion on the changing role of design, this study builds on 66 interviews that were conducted in 2017 at six offices of a design agency in North America (n=45) and Europe (n=21). The agency offered a wide variety of services particularly in digital design, employing a variety of design professionals ranging from visual and interaction design to user experience and strategic design. The interviewees included 27 individual contributor designers, 15 lead designers or design managers and 24 other roles within the design agency, such as creative directors and project managers. Most of the interviewees were between their late twenties and early forties, had more than five years of experience in the field of design, and had a college degree.

Interview requests were sent for the entire staff of the design agency, and 66 interviews were booked. The interviews lasted between 20 minutes to one hour, with open-ended questions asked on organizational culture, design practices, and the future of the field, allowing designers to tell their stories in their own words. The interviews were audiorecorded and transcribed for analysis.

Reflections on the future of design were identified from the interview transcripts and segmented into individual arguments. These were then categorized based on thematic similarity of the content (Braun and Clark, 2008). First, we identified 88 repeated or thematically similar segments, which were then categorized into 9 categories, and finally grouped into five larger groups: the influence of technology, the human element, the changing scope, increased emphasis and changing organization. After this, the emerged themes were re-examined to identify the different myths of the future perpetuated in the designers' predictions and visions (Boje et al., 1982). We conceptualize myths as type of narrative: temporal, discursive constructions that provide a means for individual, social, and organizational sensemaking and sensegiving (Vaara et al., 2016), focusing on the future.

## Results

### Themes in the future of design

Table 1 The distribution of segments across the identified categories and interview groups.

Group	Category	Amount of segments in the category					Total (n=66)
		From interviewees in the position of			From interviewees in the region of		
		Designers (n=27)	Design managers (n=15)	Other ((n=24)	North America (n=45)	Europe (n=21)	
Influenced by technology	Increasing influence of new technology and digitalization	67	26	21	83	31	114
Human element	Focus on people and experiences	15	15	5	23	12	35
	Increasing collaboration, communication and storytelling	9	4	5	15	3	18
Scope changing	More multidisciplinary, broad and holistic	16	10	8	23	11	34
	More specialized and detail-focused	4	1	2	6	1	7
Emphasis increasing	Growth and increasing importance	14	15	8	19	18	37
Organization changing	Moving into larger organizations	5	3	6	6	8	14
	Smaller agencies	2	1	0	1	2	3
	Increasingly outsourced	0	0	1	1	0	1
	Other	3	2	3	7	1	8
	Total	135	77	59	184	87	271

The largest category formed by the thoughts on the future of design was the increasing influence new technology and digitalization (n=114). The large influence and particularly virtual reality and augmented reality were highlighted in North America (n=18 and n=18, respectively, compared to n=2 and n=2 in Europe).

*Like, we've got a lot of VR and AR, and we just have so many technologies that help us build better experiences.*

*Definitely excited about the AR side of things, or the more seamless and integrated designing as opposed to - I'm at my computer, then I'm gonna go on a run, and seeing these things as separate, I think it's gonna just continue to blend more and more together.*

Automatization, a tighter combination between designers and developers, and moving away from screen based user interfaces were also brought up frequently, as was the subsequent need for better understanding these new technologies. 73% of segments in the category were mentioned by those in the North American design studios. This largest category accounted for 45% of all of the segments based on the North American responses and 36% of European responses.

*I think design's heading in a direction where people need to understand technology better. The designers need to. So people that are hybrids like me should be better positioned. Because the technology stuff is just so complicated now. And we're gonna move away from screens and we're going to other things, right?*

On the other hand, balancing the technology trends were beliefs in an increasing focus on experiences and people in design in the future (n=35), particularly in the view of the management within the design agency (n=15).

*You need to understand so many more contexts, on one hand of all of these devices and applications, also going now into the organization, how organizational practices change through design. It's kind of, expectations of what we deliver have expanded and expanded all of the time.*

This was perceived to increase the importance and role of collaboration, communication and storytelling within design (n=18).

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*For me, I think storytelling is becoming more and more important. A better understanding of, kind of KPIs and how that relates back into design. So if it could, I don't know, it's kind of like the sandwich; the top of it that's story and it leads people into it, and then big data is the end of it where you understand that it is relevant.*

A further 37 segments contained expressed beliefs that the field of design is growing in size and recognition. Here North American and European interviews yielded comparable amounts of segments. 40% of these segments came from the interviews of design leads and design managers.

*I see that a lot of companies, or most companies now recognize that they need some kind of user and customer experience team. So, you're seeing a lot of these more old-school companies catching up and saying like: Oh, I need a design team now, but I'm not really sure what they really do.*

*I think we're starting to see that design is becoming more respected and more valued. So, I don't really know where it's going, but I think the field is continuing to grow, and people are starting to understand things like service design, and understanding cohesive, like holistic, experiences, and these things matter. So, I think we're going to see a lot more of that, like just a lot more opportunities than we have previously.*

This growing recognition was thought to have an impact on the scope of design in the future. Many of the interviewees expressed beliefs that the increased recognition of importance would lead to design becoming more multidisciplinary and holistic, taking the context into account to a further degree (n=34).

*If you're for example a visual designer, you need to understand coding, it's becoming a bit more diverse. There's a plethora of titles, that's a good term at this moment as well, but perhaps increasingly so that there are no two equal, everyone has their combinations, specialties what they can do, but it's not enough anymore that you can do one thing in a silo, you need to diversify.*



Some, however, saw the implication of design expanding as needing to become more narrow, going into more details, or design becoming more automated (n=7).

*I think it's just gonna continue to expand into more and more areas, so I see the need to specialise more and more within design as a broad field because now it's getting so large that - I mean you can be an interaction designer, visual designer, service design, customer experience design, industrial design, there's all these subcategories to design. So I honestly, I see the need to specialise more.*

*The logic of the interactions can be automatized, and it can easily be automatized what I'm doing, because I draw pictures of how things should work. [...] So I should be thinking maybe about the logic then that is partly automatized, developing the platform.*

In addition to changes in scope, the growing role of design was thought to have an impact on the way design is organized. Some saw design becoming more incorporated into larger organizations (n=14), whereas a few designers foresaw a revival of smaller design agencies (n=3) and one interviewee predicted increasing outsourcing of design (n=1).

*[The diversifying in design] can be seen also in companies, that's why there are these type of acquisitions, all consultancies are buying design agencies, development houses are buying design agencies, design agencies are buying development houses.*

*I think that [smaller agencies] are slowly dying away. And what I've discussed with people quite a lot, and heard from our customers as well, that clients are, we have a lot of clients who have worked earlier with [these small agencies]. And they are really skeptic, they are really skeptical towards us, have a bit of this attitude that well, what do you actually know about product development. Yeah, it's really strange, they hire agencies, but then simultaneously they are picky and[...] have already a prejudiced attitude.*

Finally, nine segments reflected foreseeing a general change in the role of design, increased measuring of the impact design, increased need for adaptability and iteration, design for efficiency and difficulties in talent retention.

### ***Underlying myths of the future***

From the responses and the themes that emerged from the thematic analysis, we identified five pairs of opposite myths of the future, that while not necessarily mutually exclusive, represented trends in different directions in their emphasis on key influences, needed skills, scope, organizing, and prestige of design in the future (see Table 2, below).

*Table 2 The identified pairs of myths of design in the future.*

Effect on design	Myths	
	Ends of the continuum	Example quote
Being influenced by	New technology	It's so open right now. There's so much going on, with all that's coming out. And, you know, it's interesting to kind of say, okay, well, the future is voice UI, voice-activated UI or VR or AR or something like that. But then, thinking about realistic applications for it is one of the interesting things for me, because having been doing design for so long, one of the things sometimes I look out for is kind of the novelty idea.
	Human needs	It's really interesting because I think a lot of tools as far as like automation and AI will play a big role in design, and so then how as a visual designer do I make myself relevant. The design process as design is getting more and more systemised and things like different AI can build components for you. And I think it's being able to demonstrate under, with deep empathy of the user as well as the behavioral science behind design and visual elements, being able to understand that, translate it, and being able to offer unique experiences outside of maybe what something can be automated.
Required skills	Understanding technology	I think the future for designers, you have to, it's getting where you need to understand the underlying technology a lot more than you used to, it used to, I think even just a couple of years ago it felt like you could just understand what's going on on the screen and be a good designer, but now [...] it's not, it's more complicated than designers need to know how to code or something like that, it's just, I need to actually have a technological fluency that wasn't required before.
	Collaboration and storytelling	The best designers I've ever worked with are great storytellers. And not only so they can sell work, because they can sell their idea to a client, but they can also sell their actual designs to a client. And that's, to me, and I preach that to everyone here, storytelling is the biggest thing you can work on.

Scope	Wide and holistic	So, I think we're just going to keep seeing it grow and the value of it continue to grow. I don't know, like in terms of roles, or, you know, you see a lot of people becoming more hybrid and wanting to do more. Typically, people have been pretty siloed in their expertise. But I see a lot of the designers on my team, like they don't want to be cornered into being one specific thing, they want to be...they want to be knowledgeable in lots of things, from visual design and interaction design to motion graphics or...there's a lot more that goes into things now; versus, just like making some wire frames or just doing a visual comp. Like, people are starting to become design thinkers, all-around design thinkers, and how that applies to every problem.
	Narrow and specialized	This is probably the same type of cycle that there was in the advertising industry at some point, companies wanting to create internal advertising agencies and internalize all of the advertising know-how. The ten, twenty years later understanding that hey, this actually kills creativity, that this isn't a good idea. And then they left outside again, and you can tell that the same is maybe going on in design, that large companies are creating design departments and companies are trying to merge, and then at some point I could imagine that the same thing happens, realizing that this wasn't such a good thing, and then we specialize again
Organizing	Moving into large organizations	Well the trend is clear, now companies like ours are being bought almost weekly someone buys a design agency, the future is more delivering whole entities I imagine. Now development houses and design agencies have been merging or have been bought.
	Revival of small boutique agencies	Even though companies are investing in their own teams, it hasn't negated the need for external design teams, simply because some cannot manage such a large bunch of designers, and then the project nature, projects are, there can be internal designers who are in charge of the whole, but then when there are projects, more hands are needed on deck so much.
Prestige	Highly regarded	Awareness is increasing, so the interaction with clients will improve [...], the role of agencies like ours is growing in these organizations, because they are coming to understand the value that we bring.
	Offshored and outsourced	It starts to move, that drive towards lower cost without compromising the quality or whatever you offer, moves your delivery resources to lower and lower the cost. Which means, usually moving to different geographies.

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In the first two pairs of myths – the degree of influence by new technology or the human element and the required skills in technology and communication – narratives on both ends of the continuum were frequent in the data and could appear in the same interviews side-by-side. However, in the latter three pairs of the scope, organizing and prestige of design in the future, there was a clearly dominant myth – design becoming more multidisciplinary and holistic, design moving into larger organizations and design becoming more highly regarded – that was perpetuated in most of the interviews. The opposite end – design becoming more narrow and specialized, moving into smaller organizations or being offshored – was construed only in a few interviews and to the exclusion of the opposing myth.

## **Discussion**

Based on 66 interviews at six sites of a fast-growing design agency in North America and Europe, the current study examined how design professionals themselves see the future of their field. In addition to recurring themes in their responses, we identified five pairs of myths of the future. By myths, we refer to discursive constructions rather than true or false representations of the future. Boje et al. (1982) identified four different types of myths: (1) myths that create, maintain, and legitimize past, present, and future actions and consequences, (2) myths that maintain and conceal political interests, (3) myths that help explain and create cause and effect relationships, and (4) myths that rationalize complexity and turbulence to allow for taking predictable action. Out of these, the myths expressed by the designers in the current study were perhaps most closely aligned with those that create and legitimize present and future actions and rationalize complexity.

*What I see [is] that design is obviously getting more acceptance than it did several years ago and we're finally getting a seat at the table, we are at the forefront of incoming technologies.*

This study makes three theoretical contributions. First, this study helps us to better understand how designers make sense of the future and in particular how myths are constructed to understand the unknown and to reduce uncertainty related to it. The myth's purpose is to essentially define meaningful relationships to mysteries or make sense of an inaccessible, enigmatic future (see Nicholson and Anderson, 2005). Mythmaking is an

adaptive mechanism whereby individuals and groups maintain logic frameworks within which to attribute meaning to activities and events; without such an adaptive system, we would lack sufficient shared meaning to serve as a basis for coordinated behaviors in the face of uncertainty (Boje et al., 1982).

Second, this study allows us to see what are the dominant future myths among designers. Almost two thirds of the reflections of the designers were focused on the increasing role new technology or the human context of design will play in the future. The influence of new technologies on the profession was the single most highlighted issue, and particularly the Northern American designers emphasized technological advances in virtual and augmented reality, the internet of things, artificial intelligence and other technology trends as having an impact on their professional practice. Designers were frequently portrayed as bridge builders between the potential of these new technologies and the needs faced by people. The first pair of myths on two different key influencers of the design field, new technology and human needs, thus went hand in hand. These were mirrored in the second pair of myths of designers needing more skills in and understanding of technology on one hand, and more skills in collaborating and communicating with diverse stakeholders, partners and users on the other hand.

Myths can vary between different groups, and different myths compete in ongoing negotiation (Boje et al., 1982). In three of the pairs of myths, there was a clearly dominant myth: the scope of design as widening and becoming more holistic, design moving becoming more incorporated to large organizations and the prestige of design continuing to grow. Myths are related to questions of power, and these myths can be seen as legitimizing the profession and its contribution (similar to the mandate of service designers explored by Fayard et al., 2017). The opposite pairs of these myths, on the other hand, were found much less often in the data: designers needing to narrow the scope of their work to specialize more, working in smaller agencies and design work being offshored. It is perhaps unsurprising that particularly the last myth of these was found in only one of the interviews of the current study, as it somewhat implies decreasing valuation of the designers' contribution. Holding or conveying such perceptions could be incongruent with maintaining positive professional identities. More narrow scope and small agencies, however, do not clearly translate to a lesser mandate of design, although the former might imply individual designers contributing to a smaller portion of the overall impact of design. It

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is interesting that these themes represented a clear minority of the themes identified in the designers' responses.

Third, this study shows how future oriented myths are used to construct designer identity. As designers construct myths to legitimize their past, current and future actions, they also construct and legitimize themselves. Thus future oriented myths have implications for designer identity and can be seen as one form of narrative identity work (Ibarra & Barbulescu, 2010), which allows designers to continuously construct and reconstruct their identities in dialogue with others (Angouri, 2016; Ybema et al., 2009; Svenningsson & Alvesson, 2003). Designer identity and identity construction in the context of design have been largely overlooked in existing research. This is unfortunate, as the concept of identity could provide us insights on who designers are and what they do (Alvesson et al., 2008; Alvesson, 2010). We find it important that future research explores key questions of designer identity and how it is constructed. Traditional myths are often resistant to change (Boje et al., 1982), and the current results raise the question of whether the centrality of technology may have achieved this status in the design context. However, the current study focused on a single design agency, albeit at multiple locations on two continents – the role of technology might be construed as less central by designers in other agencies. The presence of competing myths in the current study, furthermore, illustrate how difficult it is to construct or legitimate one sole correct myth of the future in a fast-changing environment - the negotiation of the future of design is continuous.

The study has also several practical implications. Although based on a single interview round in a single design agency, and thus cannot be taken to represent the views of the field in general, the results reveal some shared beliefs of the changing role of design from the designers' perspective in this particular agency - designers as the mediators of technology and human needs through their practice.

*Now of course new technologies are emerging all of the time, VR, AR, AI, you name it, that are actually hard for people to understand. So once again there needs to be someone who creates and designs the experience to that all of us are able to benefit from it and enjoy it.*

Many designers in the current study construed themselves as boundary spanners (Tushman & Scanlan, 1981; Walter et al., 2011), and highlighted both the importance of understanding technology and the need for skills and attitudes such as empathy, curiosity and storytelling. This is in line with

what seems to be a growing demand for multidisciplinary education, complementing for example design excellency with collaboration skills and a wide understanding of both the behavioral and organizational context as well as the technological landscape. (Similar collaboration and contextual competence needs are reported in research on engineering education, see e.g. Passow and Passow, 2017.) On the other hand, championship behaviors (Howell et al., 2005) can be assumed to continue to be in practical demand in the midst of the changing role of design and designers and conflicting myths of the scope, organizing and prestige of design in the future even amongst designers.

Indeed, the results reveal tensions between dominant and opposing myths of the future of design, moving towards opposite directions in the scope, organization and prestige of design work. We believe binary myths can provide a useful framework for organizations and individuals for foresight work and constructing, but also for questioning future scenarios. Binaries help us to pay attention to competing views, and at their best, encourage discussion on dominant myths and taken-for-granted elements related to them. Promoting critical thinking and being able to question the dominant myths, acknowledging that they often present only one side of complex phenomena, remains important for design practice and research alike. The current study offers a first glimpse into the nuances of the designer perspective into the changing role of the profession and future of the field. Further research on the narratives and discourses constructed by the designers themselves will help us to better understand the changing role of design – after all, the designers are at the forefront of championing design.

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## References

- Alvesson, M. (2010). Self-doubters, strugglers, storytellers, surfers and others: Images of self-identities in organization studies. *Human Relations*, 63(2), 193-217.
- Alvesson, M., Ashcraft, K. L., & Thomas, R. (2008). Identity matters: Reflections on the construction of identity scholarship in organization studies. *Organization*, 15(1), 5-28.

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- Angouri, J. (2016) Studying Identity. In Hua, Z. (Ed.) *Research Methods in Intercultural Communication: A Practical Guide*. John Wiley & Sons, 37-52.
- Björklund, T.A. (2013). Initial mental representations of design problems: differences between experts and novices. *Design Studies* 34(2), 135-160. DOI: 10.1016/j.destud.2012.08.005
- Boje, D. M., Fedor, D. B., & Rowland, K. M. (1982). Myth making: A qualitative step in OD interventions. *The Journal of Applied Behavioral Science*, 18(1), 17-28.
- Brown, T. (2008). Design Thinking. *Harvard Business Review*, 85-92.
- Brown, T., & Martin, R. (2015). Design for Action. *Harvard Business Review*, 56-64.
- Buchanan, R. (1992). Wicked Problems in Design Thinking. *Design Issues*, 8(2), 5-21.
- Carlgrén, L., Rauth, I., & Elmquist, M. (2016). Framing Design Thinking: The Concept in Idea and Enactment. *Creativity and Innovation Management*, 25(1), 38-57. DOI:10.1111/caim.12153
- Clavert, M., Löfström, E., Niemi, H., & Nevgi, A. (2018). Change Agency as a Way of Promoting Pedagogical Development in Academic Communities: a Longitudinal study. *Teaching in Higher Education*. DOI: 10.1080/13562517.2018.1451321
- Cross, N. (2004). Expertise in Design: An overview. *Design Studies*, 25, 427-441. DOI: 10.1016/j.destud.2004.06.002
- Daly, S., Adams, R.S., & Bodner, G. (2012). What does it mean to design? A qualitative investigation of design professionals' experience. *Journal of Engineering Education*, 101(2), 187-219.
- Defazio, J. (2008). The identification of design experts. *Journal of Design Research*, 7(1), 84-96.
- Dorst, K. (2011). The core of 'design thinking' and its application. *Design Studies*, 32(6), 521-532. DOI: 10.1016/j.destud.2011.07.006
- Dutton, J., & Ashford, S. (1993). Selling issues to top management. *Academy of Management Review*, 18(3), 397-428. DOI: 10.5465/AMR.1993.9309035145
- Emmet, D. M., and A. McIntyre. 1970. *Sociological Theory and Philosophical Analysis: A Collection*. London: MacMillan.
- Fayard, A.-L., Stigliani, I., & Bechky, B.A. (2017). How nascent occupations construct a mandate: The case of service designers' ethos. *Administrative Science Quarterly*, 62(29), 270-303.



- Glen, R., Suciu, C., Baughn, C., & Anson R. (2015). Teaching design thinking in business schools. *The International Journal of Management Education*, 13, 182-192. DOI: 10.1016/j.ijme.2015.05.001
- Gruber, M., De Leon, N., George, G., & Thompson, P. (2015). Managing by design. *Academy of Management Journal*, 58(1), 1-7. DOI: 10.5465/amj.2015.4001
- Howell, J., & Higgins, C. (1990). Champions of Change: Identifying, Understanding, and Supporting Champions of Technological Innovations. *Organizational Dynamics*, 19(1), 40-55.
- Howell, J.M., Shea, C.M., & Higgins, C.A. (2005), Champions of product innovations: defining, developing, and validating a measure of champion behaviour. *Journal of Business Venturing*, 20(5), 641-661.
- Ibarra, H., & Barbulescu, R. (2010). Identity as narrative: Prevalence, effectiveness, and consequences of narrative identity work in macro work role transitions. *Academy of Management Review*, 35(1), 135-154.
- Johansson-Sköldberg, U., Woodilla, J., & Cetinkaya, M. (2013). Design thinking: past, present and possible futures. *Creativity and Innovation Management*, 22(2), 121-146. DOI: 10.1111/caim.12023
- Kolko, J. (2015). Design Thinking Comes of Age. *Harvard Business Review*, 66-71.
- Lévi-Strauss, C. 2001. *Myth and Meaning*. London: Routledge.
- Lincoln, B. (2006). An Early Moment in the Discourse of "Terrorism:" Reflections on a Tale from Marco Polo. *Comparative Studies in Society and History* 48 (02): 242-259.
- Maeda, J., Xu, J., Gilboa, A., Sayarath, J., & Kabba, F. (2017). *Design in Tech Report 2017*. Retrieved from <https://designintechreport.files.wordpress.com/2017/03/dit-2017-1-0-7-compressed.pdf>
- Maeda, J., Xu, J., Gilboa, A., Kabba, F., Sayarath, J., Ku, B., Fan, L., Malhotra, S., & Arnal, L. (2018). *Design in Tech Report 2018*. Retrieved from <https://designintech.report/>
- Martin, R. (2009). *The Design of Business: Why Design Thinking is the Next Competitive Advantage*. Cambridge MA: Harvard Business Press.
- Miscione, G. 2016. Myth, management of the unknown. *Culture and Organization*, 22(1), 67-87.
- Mosco, V. (1998). Myth-ing links: Power and community on the information highway. *The Information Society*, 14(1), 57-62.
- Nicholson, L., & Anderson, A. R. (2005). News and nuances of the entrepreneurial myth and metaphor: Linguistic games in entrepreneurial

- Constructing the future of design: How design professionals perceive their changing role sense-making and sense-giving. Entrepreneurship Theory and Practice, 29(2), 153-172.*
- Passow, H.J., & Passow, C.H. (2017). What competencies should undergraduate engineering programs emphasize? A systematic review. *Journal of Engineering Education, 106(3), 475-526.*
- Rae, J. (2016). Design value index exemplars outperform the S&P 500 index (again) and a new crop of design leaders emerge. *Design Management Review, 27(4), 4-11.*
- Svenningsson, S., & Alvesson, M. (2003). Managing managerial identities: Organizational fragmentation, discourse and identity struggle. *Human Relations 56(10), 1163-1193.*
- Tracey, M.W. & Hutchinson, A. (2016). Uncertainty, reflection, and designer identity development. *Design Studies, 42, 86-109.*
- Tushman, M. L., and T. J. Scanlan. (1981). Characteristics and external orientations of boundary spanning individuals. *Academy of Management Journal 24 (1): 83–98.*
- Vaara, E., Sonenshein, S., & Boje, D. (2016). Narratives as Sources of Stability and Change in Organizations: Approaches and Directions for Future Research. *The Academy of Management Annals, 10(1), 495-560.*
- Walter, A., Parboteeah, K.P., Riesenhuber, F., & Hoegl, M. (2011). Championship behaviors and innovations success: An empirical investigation of university spinoffs. *Journal of Product Innovation Management, 28(4), 586-598.*
- Ybema, S., Keenoy, T., Oswick, C., Beverungen, A., Ellis, N., & Sabelis, I. (2009). Articulating identities. *Human Relations, 62(3), 299-322.*