2.1.4 Framing Design Management

This section brings forth some historic visions of Design Management, the beginnings and the importance of certain institutions in its development.

In 1986 Peter Lawrence, then the President of the Corporate design Foundation President and a Design Management Institute President, in collaboration with the IBM Foundation and with support of the National Endowment for the Arts prepared a review of corporate executives speaking on design, from selected presentations given at the Design Management Conferences from 1979 to 1985 (Lawrence, P., 1986). This list includes executives from companies like Herman Miller, Apple Computer, Xerox Corporation, Sony Corporation, 3M and Crate & Barrel, and is a great snapshot of a moment in the Unites States history of design in large corporations. Lawrence talks about the importance of the material that "stems from the almost complete lack of information concerning the role design can play in helping to deal with today's business realities, such as the increasingly complex and global marketplace, and the growing attention paid to quality, the user, and corporate image" 'Table 7'. We read the eight presentations and identified common themes that these corporate executives identified as being reason for the success of design within their corporations, interestingly enough these do not differ much from of what McKinsey (2019) and others are saying about the right conditions for design to thrive, this a good forty years after these executives articulated it. In many cases (quality, risk taking, taking the time,…) , this aligns also with what we have called designer **Ethos**, core components of what designers embrace as good design. These quotes are excerpts of their writing and thinking and are important to establish context.

> *"Top management has long supported – and will continue to support – a strong design organization. We have supported the function with funding for people and resources. We have supported it by involving the Director of design and the design managers in the management of our business.*

The top management design Committee, which we mentioned earlier, is evidence of our commitment. design is so. Ingrained in our corporate operations we could not take it away". James Houghton, Chairman of the Board, Corning Glass Works, 1983

"First, it is an accruing resource. Each year we put a little of what we make and save into a visual and corporate image bank. I cannot imagine a better hedge against a prospect of a depression, of the financial or public relations variety. God corporate design is money in the bank. Second, and more important by far, Atlantic Richfield's design program expresses far more persuasively than any words I can summon the kind of organization we aim to be. We want to be unified and effective. We want to be modern and efficient. We want to be sensitive to the needs of our communities and the people who live there". Robert Anderson, Former Chairman, Atlantic Richfield Company, 1981

"So, you have the design of a company. Can design design a company? Absolutely yes! design influenced in a major way change at Herman Miller. We were a traditional manufacturer of residential furniture. We changed to modern furniture. We changed to institutional and contract furniture, then to office furniture, then to the working and healing environments, and then to systems, software and furniture – an integrated facility program. So, design and development designed a company and redesigned it during these 4 periods." Hugh De Pree, Former President and Chief Executive Officer, Herman Miller, 1979

"Our philosophy, which is reflected even in the first brochure we did, is that one starts off with something and when one first starts to understand the problem, it appears very simple, but then as one gets into it on starts to understand the subtleties of the problem and it appears very complex, and one comes up with a lot of complicated solutions. Most people stop there and end up with complicated stuff. But if one keeps pursuing it long enough, one arrives at the elegantly simple solution. We have tried to

reflect this – which is that simplicity is the ultimate sophistication.” Steven Jobs, Co-Founder and Former Chairman, Apple Computer, 1981

“The most important requirement in design management is that the top management of a company realizes the value of design for their company. In addition, I believe that both design and advertising must be handled in the same group. For example, we may need to think of a slogan prior to designing the product. For the further development of the company in the future, I believe it is indispensable to study the planning of a product in order to write advertising copy and at the same time determine the kind of design most suited for that product” Norio Ohga, President and CEO, Sony Corporation, 1985.

“It is our belief that good design can be used to make a corporate philosophy profitable. It has been so for us. We have grown consistently over the last twenty years, and during the last ten years the corporate growth has been twenty five percent per year compounded. Earnings have kept pace with that, and our company now is the single largest home furnishings retail store in table-top and kitchenware in the country. We do not intend to grow past the point where we might lose any of our quality. We have a strong feeling that people enjoy the quality level” Gordon Segal, President, Crate & Barrel, 1982

Framing the history of design and design management in the US without covering European and Japanese history of design and design management (eg.: Olivetti in Italy and Sony in Japan) is limited but a conscious choice of the corresponding author, because the focus of this thesis is on the United States, and on its large corporations that impact the entire world. We are aware that many of the ideas that evolved in the United States came from what was seen happening in Europe, just as an anecdote the famous statement “Good Design is Good Business” from Thomas J. Watson Jr in 1966 at IBM has a backstory told by Watson himself. Apparently in the 1950's, and while walking around 5th Av. in NYC, he came across the Olivetti store, walked in and was marvelled by the entire

design program they had on display. He then ended up visiting Sr. Adriano Olivetti and that started a period in IBM that culminated with the above referenced memo.

Table 7 – Peter Lawrence, concepts addressed by different authors (summary). José dos Santos 2020

Views on Design, Editor: Peter Lawrence	
Application of Design to all company areas (products, identity, communication,…)	1, 2, 3, 4, 6, 8
Workplace Design for quality of life, environment where innovation thrives	1, 2, 3, 5, 8
Quality (be as good as you can be)	2, 3, 4, 7, 8
Integral to company mission, objectives, direction, strategy	1, 3, 5, 8
Designers in charge of running programs, not just participating	1, 5, 6
Investing in Design, as well as architecture and art	2, 3, 6
Open to experimentation, acceptance of failure, dealing with risk	4, 5, 6
Consolidating, centralizing Design teams under one leadership	1, 6
Internal function, with specific and occasional external suport	1, 4
Invite well know specialists when necessary (architects, artists,…)	1, 2
Design at top management level	1, 3
Design from the beginning	4, 6
Taking the time, stretching the limits, persistence and preserverence	4, 7
Rewards and recognition	5, 6
Design driving, stimulating innovation	5, 7
Design recognizing customer needs, local market needs	4, 6
Design at the same level of other areas (engineering, marketing, research,…)	1
Design in charge of its own budget and resources	1
Integral part of the company culture	1
CEO + Design manager connection	3
Designers as teachers (how to see, what's important, stretch the thinking,…)	3
Dealing with constraints	3
Design opening up new markets	5
Top management realizing value of Design	6
Design and technical excellene and Research & Development	6
Design as advisor, counselor, auditor, policeman, judge in design issues	7
Embracing challenge of doing good design and making money	8
Design bringing sensuality, good taste into the business	8
Allowing Design to tell a story	8
1. James Houghton, Chairman of the Board, Corning Glass Works (1983)	
2. Robert O. Anderson, Former Chairman, Atlantic Richfield Company (1981)	
3. Hugh De Pree, Former President and Chief Executive Officer, Herman Miller (1979)	
4. Steven Jobs, Co-Founder and Former Chairman, Apple Computer (1981)	
5. Donald Massaro, Former President, Office Products Division, Xerox Corporation (1981)	
6. Norio Ohga, President and CEO, Sony Corporation (1985)	
7. Donn Osmon, Vice President, Marketing and Public Affairs, 3M (1985)	
8. Gordon Segal, President, Crate & Barrel (1982)	

The Design Management Institute started out as the first conference with and for executives focused on design management issues, this took place in Nantucket MA in 1976, Bill Hannon as Chair of design division at the Massachusetts College of Art (MassArt) who was organizing it called the gathering the design Management Institute and it stuck. DMI remained as part of the MassArt for a

decade, was then institutionalized itself and went through several stages, the first edition of the Design Management Review was in the fall of 1989, more than a decade after the institution started with their conferences, it is now commemorating 45 years of existence. Though design management in the United States starts earlier with the experiences of the corporate leaders collected in Lawrence's document (in 1973, IBM CEO Tom Watson declared "Good Design is Good Business"), the DMI has converged a lot of the activity in the design management arena both in the US and abroad, via its European conferences, the corresponding author was a member of its advisory council for a number of years.

2.1.5 Innovation and the role of design

In this section we cover definitions of design innovation and the different roles design leaders have in large corporation innovation. We also cover design thinking with a short history and status, merely because for many it has become synonymous with design innovation.

"Innovation can be a couple of things. It can be introducing something new. When I talk about introducing something new, what I mean is either a new product into an existing marketplace, or a new product into a new marketplace, which means basically creating a new market. It also can mean the changing of the established way of doing things. I am not going to talk about the latter. I am going to focus on the former, that is introducing something new, whether it be a new product into an existing market or a new product into a new market. I am also not going to be talking about innovation in small start-up companies. Because that is not a problem in this country. All you have to do is take a trip out to Silicon Valley on the West coast and you see an incredible number of start-up companies with innovation flowing out of all the doors. I really want to address the problem that we have, and that is innovation in large companies – large companies being over fifty or one hundred million dollars. This is where we have a problem, and we have to solve it if we really expect to keep this country in its industrial position on a world-wide

basis" Donald Massaro, Former President Office Products Division, Xerox
Corporation, 1981 (Lawrence, P., 1986).

There are many ways to address the role of innovation in large companies and society at large, innovation matters for growth and renewal, it is critical for firm growth (Schumpeter J., 1934, 1942; Penrose E.T., 1959), and society growth (Romer P., 1986). All large consulting firms make similar arguments when they rank companies (BCG, 2020; Forbes, 2020). Innovation can come in many forms, it can vary between radical vs. incremental (Albertnathy et al, 1978), modular vs. architectural (Henderson et al, 1990), competence-enhancing vs. competence - destroying (Gatignon et al, 2002), and sustaining vs. disruptive innovation (Christensen C., 1997), to name a few.

According to those who have studied how to elevate design's status within corporations, there is enough evidence to state that design is a major driver of innovation (Utterback et al, 2006; Verganti R., 2009), it is critical to differentiation and branding and positively affects companies' financial and nonfinancial performance (Micheli et al, 2017; Kelley et al, 1995).

The role of design in innovation seems to be a topic of ongoing discussion, in the majority of cases requiring clarification of what is meant by design. For some, design is more a requirement of certain more consumer facing industries and inherently connected to materialization of products and services, and for those the role of design in innovation might be disputable since they see design coming at the end of the product development curve as an embellisher and packager of offerings, they see the role of design in innovation as a nice-to-have, not a required discipline. But as customer end-to-end experience becomes a necessity, the role of design has expanded beyond beautification (Breschi et al, 2017).

For others, design is a component of strategy and vision, a way of thinking that allows integration of innovation with customer experience and brand value, for these the role of design in innovation is perhaps more central to the company activity and a must-have (Lockwood T., 2009).

There are also those that relate the value of design in innovation to the stages of the innovation, while many believe in Larry Keeley's definition of the 10 types of Innovation (Keeley et al, 2013) and might agree or disagree with the role of design

in all those 10 stages, reality is many companies see innovation as a cash curve like Sirkin, where managers struggle to achieve the required cash payback by managing the overall innovation process with the understanding that payback can come as planned but also take a lot longer, come indirectly, or even not come at all (Sirkin et al, 2007, p.7). The ones that champion this approach might see design coming in the Idea generation stage of the curve, less in the Commercialization and even less in the Realization (online solutions have in some cases shortened this curve tremendously, but the stages, even in agile instead of traditional waterfall, are still there). This is, of course, a limited view of design, or in many cases semantic misalignment of design, by calling design efforts in Commercialization and Realization stages different things (marketing research, marketing communications, packaging, merchandising, customer experience, life-cycle management, etc.)

There are still others that describe innovation as a cyclical activity of diversification based upon hidden assets (Zook, 2007, p.29), cycles rotating between Focus/ Expand/ Redefine require design in its many forms, if the Focus cycle requires a) core business definition, b) cost reductions, c) differentiating offer, it is understandable the role of design in one if not all of these success findings. If in the Expand cycle the attention is on a) repeatable formula, b) geographical and customer expansion, c) avoiding over-expansion, again, design Is crucial. Zook mentions in his book 'Unstoppable' corporate internal demons, as he calls them, linked to self-awareness, companies not knowing who they are, not knowing where they are, and not knowing what they are really good at. Depending on your vision of design, it may or may not help the organization become more self-aware, but we would add to this a fourth component linked to self-awareness, knowing what design is and can do for them, in line with McKinsey's question "Are you asking enough from your design leaders" (Dalrymple et al, 2020).

But even if design might not be seen as comprehensive as some would expect (Design Council, 2019) or even if design is seen as more impactful in some industries and less in others, independently of the quantitative definition, general consensus is that design has a part to play in innovation and there is not only correlation but causation in its use and application. The level of understanding of

design, even when not understood as vital or core, dictates the extent to which design is applied and also to the proximity to the C-Suite that design and designers may have, as the place where innovation strategy and growth is discussed, prioritized and ultimately budgeted.

Innovation will continue to be important for every company, and a survival element of large companies that will dictate many different actions, one of them has been the growth of Chief Innovation Officers in large corporations, and some have speculated that the future Chief Design Officer will be the CIO. Same applies to organizations relying heavily in digital, by naming Chief Digital Officers. It is still unclear what will be the impact of this influx of many different Chiefs into the C-Suite and not necessarily the Chief design Officer. Maria Giudice actually believes the time is for Design Executive Officers (DEO) as a CEO that is either a designer or strongly infused and trained in design, many believe Jim Hacket/ Ford is a great modern example of a DEO (he has left Ford October 2020).

We need to address design thinking and its many detractors, it is not the purpose of this thesis or our intent to approve or disapprove of design thinking, merely to acknowledge it as a part of the design reality, now and in the future, in small and large organizations, public and private and governmental.

First mentioned in the early 2000s, highly influenced by IDEO (Brown, 2009; Kelley & Littman, 2001), who by the way have had to retract some of their recent posts on diversity because the Design Thinking model has been called out for not being inclusive enough (Fortune, 2020), and management scholars who were close to the phenomena (Boland & Collopy, 2004; Martin, 2009), the notion of design thinking has been covered by many (Dunne & Martin, 2006; Brown, 2008; Brown, 2009; Martin, 2011) and it suggests that anyone can learn and apply the process to any innovation challenge (Martin, 2009; Brown and Katz, 2011).

In a recent study by Prof. Dr. Jan Oliver Schwarz of AMD, a global assessment of the practice of design thinkers, after presenting the state of Design Thinking, justifying its present popularity and proposing a definition "design thinking can be understood as the application of design methods by multidisciplinary teams to innovation challenges". Design thinking is therefore helpful for business challenges which goes beyond the traditional focus of industrial design (Seidel and Fixson,

2013). Liedtka describes design thinking, when viewed as a practice, as comprising an integrative framework bringing together creative and analytic modes of reasoning while being accompanied by a process and a set of tools and techniques" (Liedtka, 2015, P.12). The report goes on to address two areas of focus: 1) How do design thinkers understand the world of the customer? 2) How do design thinkers deal with the future in their projects?, and concludes that generally described as design user research techniques are still critical to understanding consumers, that future thinking using design tools is still necessary to deal with the future, and ends with a warning, that the rapid adoption of design thinking in practice is outpacing academic research when it comes to understanding its practice and impact, and in many ways this might be the origin of the current backlash against design thinking.

Lee Vinsel, in an article titled 'The Design Thinking Movement is Absurd', states that design thinking has allowed an invasion of "Sunday designers" (Vinsel, Lee., 2018), and cites Natasha Jen from Pentagram who famously stated that "design thinking is bullsh*t", he ends his article with "design thinking's not about design. It's not about the liberal arts. It's not about innovation in any meaningful sense. It's certainly not about "social innovation" if that means significant social change. It's about commercialization."

Natasha Iskander wrote that 'design thinking Is Fundamentally Conservative and Preserves the Status Quo', an associate professor of Urban Planning and Public Service at New York University, she believes that design thinking is a way to preserve the privileges of the designer above those she should be serving, the people (Iskander, N., 2018). And this is just a small sample of the backlash about design thinking, above all coming from the design community but not entirely.

Organizations have jumped to the opportunity to establish a design thinking culture inside their organizations, an article in the Executive Magazine states that "design thinking allows organizations to thrive in today's ever-changing landscape. To realize its full value, design thinking must be pushed beyond "Innovation Centres" to everyone in the organization, with the goal of improving all aspects of the enterprise, not just product development. It requires the right mindset and toolset embedded in a culture that supports risk taking, divergent thinking and

freedom to collaborate" (Korn Ferry, 2019). While others have written about the necessity for those corporations to keep a close control of the use and deployment of design thinking because it fundamentally pushes employees to embrace something they have at all cost been trying to avoid: failure, leading to findings that leave employees feeling shocked and dismayed, while demonstrating their difficulty in distancing themselves from what they are accustomed to do. Charlie Hill, an IBM Fellow, brings in a different perspective that combines scaling design with a notion of design thinking rolling out to the entire organization, combining a craft/ technical career path with a management track, all the way to VP (Design Museum Foundation, 2019).

More and more research keeps being published on the topic. Recently, a group of researchers created a questionnaire to measure design thinking mindset (Dosi, Rosati, Vignolli, 2018), after a comprehensive literature review defined the 19 constructs of that mindset and tested them with two different sample populations, many of these constructs of design thinking mindset are in core tenants of design, and they served us to define **Ethos**, one of the insights impacting the question underlying this thesis.

A. Tolerance for - Resilience of - Being comfortable with Ambiguity – Uncertainty.
B. Embracing Risk.
C. Human centeredness.
D. Empathy / Empathic.
E. Mindfulness and awareness of process.
F. Holistic view/consider the problem as a whole.
G. Problem reframing.
H. Team working.
I. Multi- / inter- / cross- disciplinary collaboration.
J. Open to different perspectives/diversity.
K. Learning oriented.
L. Experimentation or learn from mistake or from failure.
M. Experiential intelligence / Bias toward action.
N. Critical Questioning.

O. Abductive thinking.

P. Envisioning new things.

Q. Creative confidence.

R. Desire to make a difference.

S. Optimism to have an impact.

In an article published in the Swedish Design Research Journal entitled 'Exploring the Use of design thinking in Large Organizations: Towards a Research Agenda' (Carlgren et al., 2016), the authors state their paper seeks to contribute to closing the gap in knowledge by describing what happens when large firms embrace design thinking and start applying it in practice. The conclusion of the empirical research was that, in the three clusters they collected their feedback on design thinking: 1) perception of the term design thinking, 2) use of design thinking, and 3) who uses design thinking, they state that "perceptions of design thinking vary a lot among individuals using it, and also that it is used in a variety of ways in organizational settings. Depending on how design thinking is defined it is used for different purposes and by different people" (Carlgren et al, 2016, p.14).

There have been many attempts to kill design thinking or replace it for something different, but none of them really succeeded. Roger Martin proposed a concept of Integrative Thinking as an essential tool for design leadership in the future, "modern leadership needs integrative thinking. Integrative thinkers embrace complexity, tolerate uncertainty, and manage tension in searching for creative solutions to problems" (Martin & Austen, 1999, p.2). Though presented in 4 steps (Salience, Causality, Sequencing and Resolution) much like the 5 steps of design thinking (Empathise, Define, Ideate, Prototype, Test), the authors present this as a heuristic process, not as an algorithm, they call the process an art form, and the practitioner a relentless learner who builds a tool box that allows them to sort out the tensions resulting from natural complexity, a management style for "enigmatic problems that face our organizations in the new millennium." The journalist and author that made the term design thinking popular in the business world, Bruce Nussbaum, also attempted to distance himself from the concept. In an article entitled "Design Thinking is a Failed Experiment: So, What's Next" (Nussbaum, B., 2011) argued "design thinking has given the design profession and society at large

all the benefits it has to offer and is beginning to ossify and actually do harm…
Companies absorbed the process of design thinking all too well, turning it into a
linear, gated, by-the-book methodology that delivered, at best, incremental change
and innovation" and goes on to introduce a new concept that connects to the one
mentioned above by Roger Martin, Creative Intelligence, or CQ and defines it as
"the ability to frame problems in new ways and to make original solutions. You can
have a low or high ability to frame and solve problems, but these two capacities
are key and they can be learned. I place CQ within the intellectual space of
gaming, scenario planning, systems thinking and, of course, design thinking. It is a
sociological approach in which creativity emerges from group activity, not a
psychological approach of development stages and individual genius." This
concept too never left the pages of the academic articles.

It is fair to say that design thinking is here to stay, it occupied a void caused by
designers failing to engage all others than designers themselves in the design
process, it stems from a 'black box' approach that designers engaged in while
going on about designing, and the simplicity of design thinking principles and
generic qualities that allow them to be applied to almost any situation makes it
hard to go away of be substituted by any other similar construct. More importantly,
if and when designers do not embrace design thinking dissemination and
application in corporations, others will occupy themselves with it, many times
without the backing of the 'design doing' brought in typically by designers.