

Assessment of Design Factory Concept's Transferability into the Chinese Cultural Context

International Business

Master's thesis

Ching-Yi Wang

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Abstract

The purpose of this study was threefold. First, to understand what are the core elements that Aalto Design Factory is comprised of in order to examine Design Factory concept's transferability across cultural boundaries. Second, to explain the cultural challenges in localizing Design Factory concept into China. Third, provide managerial suggestions in order to improve the management of Aalto-Tongji Design Factory.

Case study approach was selected for this qualitative research. The research process was conducted by using an abductive approach in two phases. In the first phase, five semi-structured thematic interviews on key informants were conducted in order to induce a theoretical construct for modeling Design Factory concept, which resulted six core elements: 1) physical space, 2) equipments and materials, 3) activities, 4) people, 5) leadership, and 6) philosophy. In the second phase, four semi-structured thematic interviews and one open interview were conducted in order to evaluate the transferability of the theoretical construct's six core elements into the Chinese cultural context. The theoretical reference for these two phases is comprised of literature review from fields such as creativity, motivation, co-creation, organizational culture, and organizational culture in China, "guanxi" (Chinese concept for social relationships), "lian" (Chinese concept of dignity), and change management.

The research findings suggest that it seems rather unfeasible to localize the Finnish Design Factory concept into China as the way it is in Finland due to the strong prevailing Confucian values that are guiding people's minds. There appears to be some changes in the air, although, the existence of Design Factory's experience seems to be missing at Sino-Finnish Centre's Aalto-Tongji Design Factory. However, this research suggests that with careful planning, strong governmental support, a motivated Chinese leader and a committed management team could make the impossible possible.

Tiivistelmä

Tämän tutkimuksen tavoitteet ovat seuraavanlaiset: 1) ymmärtää mitkä ovat Aalto Design Factoryn ydinelementit, joiden avulla voidaan tarkastella Design Factoryn siirrettävyyttä yli kulttuurirajojen, 2) selittää millaisia haasteita on Design Factory-konseptin lokalisoinnissa Kiinaan, 3) antaa johtamisehdotuksia Aalto-Tongji Design Factoryn kehittämiseksi.

Tutkimusmetodina käytettiin case-study-menetelmää tähän kvalitatiiviseen tutkimukseen. Tutkimusprosessiin on käytetty abduktiivista lähestymistapaa kahdessa osiossa. Ensimmäisessä osiossa, tehtiin viisi semi-strukturoitua teemahaastattelua avainhenkilöistä, jotta saataisiin johdettua teoreettisen mallin Design Factory-konseptille. Haastatteluiden tuloksena konseptille muodostui kuusi ydinelementtiä: 1) fyysiset tilat, 2) laitteet ja materiaalit, 3) toiminnot, 4) ihmiset, 5) johtajuus ja 6) filosofia. Toisessa osiossa, tehtiin neljä semi-strukturoitua teemahaastattelua ja yhden avoimen haastattelun arvioidakseen teoreettisen viitekehyksen kuuden ydinelementin siirrettävyyttä kiinalaiseen kulttuuriympäristöön. Teoreettiset lähteet näille kahdelle osiolle muodostuvat kirjallisuuskatsauksessa mm. seuraavista aihealueista: luovuus, motivaatio, yhdessä-luominen, organisaatiokulttuuri, kiinalainen organisaatiokulttuuri, guanxi (kiinalainen konsepti sosiaalisille suhteille), lian (kiinalainen konsepti arvokkuudelle), ja muutosjohtaminen.

Tutkimustulokset viittaavat siihen että saattaa olla mahdotonta lokalisoida suomalainen Design Factory-konsepti sellaisenaan niin kuin se on Suomessa Kiinaan, koska kiinalaisen kulttuurin konfutselaisuuden arvot ohjaavat ihmisten mieltä. Muutosta näyttäisi olevan ilmassa, vaikkakin Design Factoryn kokemuksen olemassaolo vaikuttaisi olevan kateissa Sino-Finnish Centren Aalto-Tongji Design Factoryllä. Kuitenkin tämä tutkimus ehdottaa, että huolellisella suunnittelulla, vahvalla julkisella tuella, motivoituneella kiinalaisella johtajalla ja sitoutuneella johtotiimillä mahdottomuus saattaisi muuttua mahdolliseksi.

Table of Contents

| | |
|---|----|
| Abstract | 1 |
| Tiivistelmä..... | 2 |
| Table of Contents | 3 |
| 1. Introduction..... | 5 |
| 1.1. Background of the research..... | 5 |
| 1.1.1. CASE 1: Aalto Design Factory (ADF)..... | 6 |
| 1.1.2. CASE 2: Aalto-Tongji Design Factory (ATDF) | 7 |
| 1.2. Research Gap and Research Problem | 9 |
| 1.3. Research Objectives..... | 12 |
| 1.4. Research Questions..... | 12 |
| 1.5. Research Process in Two Parts | 12 |
| 1.6. Limitations | 14 |
| 1.7. Structure of the Thesis | 14 |
| 2. Literature Review..... | 16 |
| 2.1. Creative Spaces | 16 |
| 2.2. Co-creation to Enable Innovations..... | 20 |
| 2.2.1. Supporting will – motivation | 23 |
| 2.2.2. Supporting shared will – shared motivation..... | 25 |
| 2.3. Organization culture | 27 |
| 2.3.1. Definition of organization culture | 28 |
| 2.3.2. Culture as a phenomenon | 28 |
| 2.3.3. Schein’s Iceberg Model | 29 |
| 2.3.4. Hatch’s Cultural Dynamics Model..... | 31 |
| 2.3.5. Hofstede’s Cultural Dimensions Model | 33 |
| 2.3.6. Communication Context..... | 38 |
| 2.4. Chinese Cultural Context..... | 38 |
| 2.4.1. Organization Culture in China..... | 39 |
| 2.4.2. Western and Chinese paths to modernization..... | 43 |
| 2.4.3. Obstacles in China’s modernization | 43 |
| 2.4.4. Guanxi..... | 45 |
| 2.4.5. The Concept of Face | 46 |
| 2.5. Change Management..... | 48 |
| 2.5.1. Organizational Change process..... | 49 |
| 2.5.2. Change Resistance..... | 49 |
| 2.5.3. Managing Change Tools..... | 50 |
| 2.5.4. Project Champion..... | 51 |
| 2.5.5. Importance of change context..... | 51 |
| 3. Methodology..... | 52 |
| 3.1. Research Approach | 52 |
| 3.2. Research Design..... | 53 |
| 3.2.1. Research Process in Two Parts | 53 |
| 3.3. Data Collection..... | 54 |

| | |
|---|-----|
| 3.3.1. Interviews | 55 |
| 3.4. Analysis and Interpretation | 59 |
| 3.5. Validity and reliability evaluation..... | 60 |
| 3.5.1. Researcher as an instrument:..... | 61 |
| 4. Findings & Analysis: PART I – CASE 1: ADF | 63 |
| 4.1. Aalto Design Factory’s Core Elements..... | 63 |
| 4.1.1. Hardware – Physical Space | 64 |
| 4.1.2. Hardware –Equipments & Materials | 66 |
| 4.1.3. Software – Activities | 67 |
| 4.1.4. Software – People | 69 |
| 4.1.5. Software – Leadership..... | 71 |
| 4.1.6. Software – Philosophy..... | 72 |
| 4.2. Theoretical Construct of Design Factory Concept | 78 |
| 5. Findings & Analysis PART II – CASE 2: ATDF | 82 |
| 5.1. Hardware – Physical Space..... | 83 |
| 5.2. Hardware – Equipments & Materials | 86 |
| 5.3. Software – Activities | 86 |
| 5.4. Software – People..... | 88 |
| 5.4. Software – Leadership | 92 |
| 5.6. Software – Philosophy | 94 |
| 6. Conclusions..... | 100 |
| 6.1. Theoretical Contribution and Main Findings | 100 |
| 6.1.1. Theoretical Construct of Design Factory Concept..... | 101 |
| 6.1.2. Design Factory vs. Confucian values | 103 |
| 6.2. Managerial Implications..... | 105 |
| 6.3. Limitations and Suggestions for Further Research | 107 |
| 7. References | 108 |

1. Introduction

This introduction chapter is structured as follows. First, I will introduce the background for this research by unveiling the birth and the goals of both Aalto Design Factory (ADF) and Aalto-Tongji Design Factory (ATDF). Second, I will indicate the research gap by demonstrating the real-life problem of transferring the concept of Aalto Design Factory into China. Third, I will present the research objectives and questions. Fourth, I will outline the structure of this master's thesis.

1.1. Background of the research

Aalto University, tentative name “Innovation University”, was formed in the beginning of 2010. The new university was a result of combining Finland's three leading universities: Helsinki School of Economics (HSE), Helsinki University of Technology (HUT), and University of Art and Design (UIAH). It is a flagship project in the larger scale development of the higher education and innovation systems in Finland, and also a national-level holistic approach to innovation. (Green, 2009; Kao, 2009) The aim of the merger was to bring new possibilities for strong multi-disciplinary education and research creating a “*unique, integrated seedbed for innovation*” (Green, 2009:12).

Aalto Design Factory (ADF) is one of three interdisciplinary platforms of Aalto University. Other Factories are Media Factory and Service Factory. The Factories are designed to facilitate new forms of collaboration in an environment where academic teams, researchers and students work together with companies and communities. (ADF's Annual Report, 2010) Out of all three Factories, Design Factory has received most of the attention when looking at external communication about Aalto University. ADF is the showcase window of Aalto University's mission statement, and ultimately a tool for change.

1.1.1. CASE 1: Aalto Design Factory (ADF)

Aalto Design Factory is an experimental passion-based co-creation platform. It brings together students, teachers, researchers, industry partners and society under the same roof. It is a creative environment that encourages supportive interaction, learning, and the joy of creating something new together with different stakeholders. Students can solve real-life problems through company projects. Companies may use the environment in the spirit of open innovation, and it is also a great place to recruit new talents. For researchers, it provides a platform to test theory against practice. ADF offers its passionate users dynamic facilities, tools and materials, and a fun environment to support concrete realization from an idea into a prototype. (ADF's Annual Report 2009; Euris, 2012)

This student-centric creative environment is a successor of an earlier project called Future Lab of Product Design (FLPD), which was initiated in 2007 by passionate professors and researchers. The mission for FLPD was to create the most ideal working environment for product developers and researchers. In the fall of 2008, most of the FLPD's philosophies, ideas and elements were transferred to the new Aalto Design Factory. (ADF's Annual Report 2009; Euris, 2012)

After three years later from its birth, ADF has proven itself as a successful pioneer in the field of global higher education (Euris, 2012). The success of ADF does not rely simply on its hardware as the Factory Director of ADF Prof. Kalevi "Eetu" Ekman wrote in ADF's Annual Report 2010:

"The place has its architecture and certain enabling and supporting technologies, but perhaps even more important are the soft elements – philosophy, attitudes, our ways of working."

- Prof. Kalevi "Eetu" Ekman, Factory Director of ADF

It is not the physical space that makes ADF special, but essence is in the spirit of the passionate active users, who give their heart and soul in making ADF alive.

Aalto Design Factory (ADF) is a tool for changing Aalto University, other Finnish organizations, and ultimately the world. It is about challenging the traditional linear way of thinking and breaking out from outdated ways of doing things by introducing fresh philosophies for a better tomorrow. The objectives of Aalto Design factory are:

1) better learning outcomes in education,

“...how could we inspire people who are responsible about education to think about the activities, and the operation objectives... instead of students there at café tells about how badly something is, perhaps the change could be that there would be more stories about how well some course or something else has been organized in Aalto...” – Kalevi “Eetu” Ekman, Factory Director of ADF

2) utilization of academic theories in society, and

“...I think the biggest problem is that compared to research volume, only very small amount of it is ever been realized to benefit society and economy...” – Kalevi “Eetu” Ekman, Factory Director of ADF

3) making companies and organizations more productive.

“... change could be done in product development organizations, that could help companies to enhance productivity...” ...” – Kalevi “Eetu” Ekman, Factory Director of ADF

1.1.2. CASE 2: Aalto-Tongji Design Factory (ATDF)

Aalto-Tongji Design Factory (ATDF) is the first phase of Sino-Finnish Centre (SFC) of Tongji University in Shanghai China. The aim of SFC is grow to a "*hub and engine of international innovation knowledge*". SFC is a joint collaboration platform between the two universities that are seeking synergy by bringing resources together in order to 1) become world-class universities, 2) support sustainable development of their societies, and 3) foster the growth of the innovation competence in key areas. Hence, the ultimate mission of the cooperation is to build a better world to live in. *“We want to change the*

world” said both presidents: Tuula Teeri from Aalto, and PEI Gang from Tongji. (Aalto University Press Release 25.05.2010)

China is one of the fastest growing economies and markets. “Made in China” has been formed as a self-explanatory concept, but China wishes to climb the value chain and change it into “Created in China”. Both universities are committed to concrete action, which is proven by the realization of ATDF in only a few months. “*Our aims are ambitious and we are expecting both short-term and long-term benefits,*” stated President Tuula Teeri. (Aalto University Press Release 25.05.2010)

“We wanted to have a presence in Asia. China is the most important country for Finland’s future. To benefit from the tremendous development that is now going on in China is an opportunity for Finland to build a future too.” – Prof. Yrjö Sotamaa, Executive Vice Director of Sino-Finnish Centre on Monocle Magazine (2011: 124)

The memorandum of understanding to establish Sino-Finnish Centre was signed right after the opening ceremony of Aalto University on January 8th 2010. In May 25th 2010, ATDF, which is the first phase of SFC, opened its doors after a few months of hard work in creating the physical space.

“... even though it was a bit arranged, it describes Design Factory’s activities, I still need to say about our opening ceremonies, where Presidents actually grasped, rolled up their sleeves and assembled one Ikea’s table... and hopefully it will describe or communicate the message to the local people...” – Viljami “Viltsu” Lyytikäinen, General Manager of ATDF

ATDF is the first sister Design Factory of ADF, and it seeks to benchmark the best practices of ADF. Hence, the role of Aalto University, as stated in the signed agreement, is to bring know-how, management expertise, assistance, and half of the financial resources in building ATDF and managing activities of this new creative

learning environment. The cooperation agreement between Aalto and Tongji states the following in the section *V: Concrete Objectives of the Centre*:

*“1) Joint establishment of Aalto-Tongji Design Factory (ATDF)
... By 2011, the Centre and ATDF seeks to apply the experimental co-creative platform under the same principle as the Design Factory of Aalto University in Espoo, Finland. The ways of working are developed jointly by the two parties in a co-creative manner and suitable for the context of Shanghai. “*

ATDF is the physical environment of SFC, which is under SFC’s responsibility. Aalto University’s role is to seek to localize Design Factory’s concept together with Tongji University into a Chinese university environment in order to change the concept of “Made in China” into “Created in China”. Thus, ATDF can be considered as Tongji University’s tool for change, as ADF is for Aalto University.

“... The ATDF design factory will be a new spirit of high education for Tongji as well as for the reform in China as whole, as you feel the atmosphere at the opening ceremony!” – Prof. WU Siegfried Zhiqiang, Assistant President, Tongji University, Dean, School of Design & Innovation, College of Architecture and Urban Planning

1.2. Research Gap and Research Problem

Aalto Design Factory is Aalto University’s pilot project about new kind of learning environment, and it is also an instrument for Aalto University’s internationalization. Pilot means that it is an experiment, and the results of it would benefit the community that the pilot is made for. Hence, ADF is a learning process of Aalto University to test new ways of studying and working. Therefore, the activities at ADF are ahead of its time, even in Finland.

Prof. Kalevi “Eetu” Ekman, Factory Director of ADF wrote on ADF’s Annual Report 2010:

Often it is a problem that something works in theory, but not in practice. When thinking about the future development needs of Design Factory, the challenge is more or less the opposite. Many things work in practice at Design Factory. However, we are not always sure if they will also work in theory – or even what the theory should be. What are the elements of Design Factory that could be transferred and applied in another organization, place and culture, by different people? For successful knowledge transfer, some more effort will be needed for research and modeling of the whole Factory concept. The new Aalto-Tongji Design Factory (p. 26) in Shanghai has already been an extraordinary learning experience in that sense.

– Kalevi “Eetu” Ekman, Factory Director of ADF

Since Aalto Design Factory is an experimental platform, often its activities are based on intuition, which is tacit knowledge. Tacit knowledge is hard to measure and understand, because it is on the unconscious level of the mind. Consequently, it is even more difficult to explain it to others who are willing to benchmark the best practices of ADF into their own community, school, organization, and furthermore to other countries.

Quick prototyping philosophy with “fail-fast” experimental mentality is a great invention, but by alone itself, it cannot be considered as the overall philosophy for Design Factory. It works well in some phases of projects, but as the overall philosophy, it can backfire. Things will surely be done quick – but dirty. It seems that this philosophy has been or is becoming the main philosophy for ADF’s actions. This is not a beneficial when considering the overall development of Aalto Design Factory as a pilot project, and furthermore as a concept for Aalto University’s internationalization.

There is no model or guidelines for internationalizing Aalto Design Factory concept into other countries. Although ADF has, without a doubt, been very successful in achieving its goals during its existence in Finland, no one has scientifically mapped out the core elements that ADF is formed of, and either is its transferability to other

countries examined. A lot of things are in the air and just being done, quick prototyping style, without much of planning. Aalto-Tongji Design Factory in Shanghai China is the first sister Design Factory, and also an example of this kind of rather hasty action. The missing ingredient of this pilot project is scientific documentation about lessons learned in order to spread the love into other cultural contexts.

ATDF is located inside of Tongji University, Shanghai China, that is culturally and institutionally a totally different context compared to Espoo Finland. China is perhaps one of the most challenging countries to transfer Design Factory concept, which is shaped by the people from western cultures and in western context. The forces behind change resistance dates back as far as the 5000 years of history of Chinese culture.

“...we thought about it ourselves, what is the core of Design Factory, what are the factors or pieces that are universal and could be taken to... and what are the elements that does not work everywhere. The point was to study at the same time as the job proceed, but the traditional thing happened, the other things just drove over it...” – Viljami “Vilttu” Lyytikäinen, General Manager of ATDF

I had a privilege to work in ATDF right after the opening ceremonies since May 2010 until November 2011. Thus, I had a front-row-seat to witness the differences between the two factories, and also a chance to challenge the cultural resistance forces myself. As a person who has lived in the Finnish environment most of the time, and with a Chinese background, I am able to see under the surface, into the deepest levels of both Finnish and Chinese mindsets. Still, it was not an easy task for me either. Nevertheless, it was one of the most important learning experiences of my life, and I would like to share it by the form of this master’s thesis research in order to support Aalto Design Factory’s future endeavors in its internationalization to other countries.

“Experience is what you get when you didn’t get what you wanted.” – Randy Pausch

1.3. Research Objectives

Design Factory concept is Aalto University's tool for change and an instrument for internationalization. Since there was no previous theoretical construct created for this concept, it is not possible to evaluate its transferability and localization to other cultural contexts. Hence, the purpose of this research is threefold.

- 1. Seek to understand the core elements that ADF is comprised of in order to examine Design Factory concept's transferability across cultural boundaries*
- 2. Seek to understand the cultural challenges in localizing Design Factory concept into a Chinese cultural context*
- 3. Seek to provide managerial implications for ATDF's development*

1.4. Research Questions

In order complete the objectives of this master's thesis, the following research questions will be emphasized and focused on.

- 1. What are the core elements that ADF is comprised of?*
- 2. How does the Chinese cultural context affect the adaptation of ADF's core elements into ATDF?*
- 3. How can ATDF's management be improved?*

1.5. Research Process in Two Parts

Since there was no previous theoretical documentation or construct available to explain what is Design Factory, and what are the core elements that this concept is formed of, it had to be created first before answering the second and third research questions. Hence, this master's thesis was conducted in two parts.

PART I: Forming of the theoretical construct: ADF's core elements

1. Themes for the first interview round
2. Results from first round of interviews
3. Creative space, co-creation, and organizational culture
4. Analysis of the empirical findings against theoretical literature
5. Result: theoretical construct

PART II: Testing theoretical construct in Chinese context

6. Themes for the second interview round
7. Results from second round of interviews
8. Chinese cultural environment and change management
9. Analysis of the empirical findings against literature about Chinese context
10. Conclusions

PART I

The aim of the first part was to define the ADF's core elements in order to induce a theoretical construct for the study. In the first round of interviews, another master's thesis researcher, Päivi Oinonen, and I conducted together five semi-structured thematic interviews on the key informants. Päivi had a same preliminary agenda of defining the core elements in her own master's thesis, but her research objective was more about the holistic internationalization of ADF, whereas mine was about localizing ADF's core elements into Chinese environment. Since master's thesis research is an individual journey, we only did the first round interviews together. The pre-defined themes for the first round interviews were formed based on the previous nonacademic materials about ADF. After the first round interviews, I was able to build a model for ADF's core elements by analyzing interview data against academic literature.

PART II

In the second part of this study, the goal was to understand how the theoretical construct works in the Chinese cultural context. Hence, the theoretical construct, ADF's core elements, was analyzed against literature and interview data from both interview rounds. In this phase, I conducted four semi-structured thematic interviews and one open interview. The themes for the semi-structured interviews were drawn from the theoretical construct's six core elements. In the analysis and interpretation sessions for

the second phase, I took also the first round interview data into consideration because there was a lot of relevant information for this part of the study as well.

1.6. Limitations

This master's thesis seeks to understand Design Factory concept as a single and unique phenomenon. Since there was nothing written about it in previous academic literature, I chose to take a holistic approach and study it by taking a rather general perspective. Hence, this master's thesis uncovers some of the fundamental factors, but does not seek to analyze each of them deeply.

1.7. Structure of the Thesis

Chapter 1: Introduction

The introduction chapter introduces the research gap, the real-life problem, research objectives, research questions, research process, research methodology, and the structure of the thesis.

Chapter 2: Literature Review

The literature review chapter was formed abductively in two phases. Even though the literature review is presented before methodology chapter and the two findings and analysis chapters, it was created in two phases, which both were after the interview rounds. In the first part, I reviewed literature from fields such as creativity, motivation, co-creation, and organizational culture. In the second part, I reviewed literature about organizational culture in China, guanxi (Chinese concept for social relationships), face (Chinese concept for dignity), and change management.

Chapter 3: Methodology

The methodology chapter was conducted in the beginning of the research. It explains the justifications for selecting case study approach for this thesis. In addition, it also

reveals data collection process in detail, describes the analytic procedures of interpreting the data, and finally evaluates the validity and reliability of this research.

Chapter 4: Findings and Analysis PART I – Case: ADF

This chapter will present the core elements that Aalto Design Factory is comprised of. I found six core elements based on the analysis of interview data against relevant literature resulting the creation of the theoretical construct for this thesis. The six core elements are 1) physical space, 2) equipments and materials, 3) activities, 4) people, 5) leadership, and 6) philosophy.

Chapter 5: Findings and Analysis PART II – Case: ATDF

This chapter will test the theoretical construct of Design Factory concept against the Chinese cultural context. I will describe the adaptation level of the six core elements and explain how the Chinese cultural context affects their nature.

Chapter 6: Conclusions

This chapter will conclude the study by summarizing the research and answering the research questions. In addition, research limitations and suggestions for further research are also presented in this conclusion chapter.

2. Literature Review

The literature review chapter forms the theoretical base for this thesis. First, it will support the creation of the theoretical construct of ADF's core elements. Second, it will provide theoretical reference to support the second phase analysis on testing the theoretical construct in the Chinese cultural context. Third, it will support managerial implications to improve ATDF's management.

In order to holistically meet the research objectives of this thesis, I used cross-disciplinary approach to review and evaluate relevant literature. I reviewed relevant literature from fields such as creativity and innovation, motivation, co-creation, organizational culture, organizational culture in China, guanxi (Chinese concept for social relationships), face (Chinese concept for dignity), and change management.

This chapter is structured as follows:

- 2.1. Creative Spaces
- 2.2. Co-creation
- 2.3. Organization Culture
- 2.4. Chinese Cultural Context
- 2.5. Change Management

2.1. Creative Spaces

Creativity and innovation are two important words in today's rapidly changing social, technological and economic environment. Still these words are often mistakenly used as synonyms. (Amabile, 1996) Therefore, it is important to make a distinction of these interrelated words. Amabile et al. (1996: 2) differentiate creativity and innovation as follows: *“Like other researchers, we define creativity as the production of novel and useful ideas in any domain. We define innovation as the successful implementation of creative ideas within an organization”*. Creativity can be understood as individual's ability to produce work that is both new and valuable, whereas innovation would mean the process of implementing those novel ideas into something concrete. While creativity

is about cognitive thinking process in individual's mind, innovation operates much more at the group and organizational levels focusing on interrelationships, interactions, and dynamics among actors and components of the organization and its environment. (Amabile et al., 1996)

The previous literature about supporting creativity and innovation has mainly focused on the perspectives of the individual and the organizational culture, while neglecting the importance of the actual physical space (Williams, 2009; Steiner, 2006). The individual's perspective has focused on the individual creator and his or her motivation, personality, traits, abilities, experiences, and thought processes (Williams & Yang, 1999). The organizational culture's perspective has focused on the social environment that influences the level and the frequency of creative behavior (Amabile et al., 1996).

Even though there are still very little empirical evidence on how the actual physical space can foster creativity and innovation (Williams, 2009; Kristensen, 2004; Steiner, 2006), the available literature on individual's and organization's perspective can actually reflect the requirements needed from the physical space. The physical space has an influence on people's wellbeing, the channels of information, the availability of knowledge tools, and therefore they can all reciprocally transform into the requirements of creativity and innovation (Kristensen, 2004).

According to Martens (2011), the physical space can foster creativity and innovation by supporting: 1) creative processes, 2) creative interactions and sharing knowledge 3) flow, 4) creative thinking and insight, 5) personal qualities for creativity and 6) a creative environment.

Supporting Creative Processes

Creative process can refer to any sequence of thoughts and actions that leads to novel adaptive productions (Lubart, 2001). The following four-phase process model towards a new idea by Wallas (Wallas, 1926 in Vernon, 1970) gives an outline to creative processes:

1. *Preparation*, which is about gathering data and information for the problem in directions
2. *Incubation* is primarily individual, unconscious, implicit cognitive process about the problem
3. *Illumination* is where the idea appears into consciousness together with the psychological events that preceded and accompanied that appearance.
4. *Verification* is where the idea's validity is tested and the idea itself is reduced into exact form.

The phases in this model constantly overlap each other as different problems are explored. Although, the validity of this concept is debatable, it still illustrates a general outline of the creative process. (Lubart, 2001)

Supporting Creative Interactions and Sharing Knowledge

Communication and interaction are seen as a fundamental activity in creativity and innovation (Toker & Gray, 2008). It is important to recognize the importance of mixing of formal and informal interaction between the people who are working together. Proximity, visibility and mix of work and meeting spaces to promote face-to-face communication are essential for supporting creative interactions. (Martens, 2011)

Supporting Flow

According to Csikszentmihalyi (1996), a major distinguishing characteristic of creative people is the capacity to experience "flow". "*Flow is the experience of timelessness and oneness with the activity in which one is engaged*" (Martens, 2011). During the flow experience, people are happy, intrinsically motivated and fully focused on what they do that they tend to forget everything else around them, including the physical surroundings (Csikszentmihalyi, 1996). According to Florida (2002: 125), it takes typically around 20 to 30 minutes to refocus on the flow of creative work after being interrupted. Thus, this would suggest that an important role of the physical space is to allow the flow to happen without interruptions.

Supporting Creative Thinking and Insight

Creative thinking is usually unconscious, but however our brain seem unusually active and uses several areas associated with complex problem solving (Christoff et al., 2009). While cognitively and perceptually stimulating physical work environment is argued to enhance creativity according to Amabile (1996), there is still little research on the link between these two. Nevertheless, Csikszentmihalyi (1996) states that it is more likely that prepared minds would find new connections among ideas and new perspectives on issues in a beautiful setting. Csikszentmihalyi (1996: 143) considers a car to be a “thinking machine”, and explains that it is an environment where freedom, security and control are deeply experienced. Hence, it seems that any physical space that can provide these feelings to an individual would support creativity and innovation.

Supporting Personal Qualities for Creativity

Sternberg (2007) suggest that creativity is not much inherited, but more about an attitude towards life. Hence, creative behavior seems to be based on a cognitive flexibility that is created by a combination of both personal qualities and work environment. Motivation is an important factor in enabling creative worker to combine long working weeks with a passionate interest in work. (Martens, 2011) According to Haner (2005), a physical work environment that is perceived as attractive can be inspirational and motivational can symbolize innovation and signal creativity. Research shows that it seems important to recognize the social-psychological dimension or intangible benefits of space as warm, ownership, encouraging identity, the presence or absence of clear behavioral guidelines and single minded or multi-interpretative space (Martens, 2011).

Supporting a Creative Environment

A creative environment welcomes new ideas. Creativity needs a certain amount of tolerance for unusual or even subversive people and ideas (Sutton, 2001). Environmental factors that promote creativity in a creative space are: a feeling of shared, clearly specified objectives, as well as a possibility to challenge them; exchange of opinions or ideas; constructive controversies; freedom; challenges at work; trust and safety; team participation and collaborative idea flow; and open relationships between

colleagues, as well as between supervisor and subordinates (Mathisen and Einarsen, 2004).

2.2. Co-creation to Enable Innovations

While multidisciplinary teamwork and integrated product development approaches to innovating new products have been widely accepted as the standard approach for over two decades, Björklund et al. (2012), argue that they are becoming insufficient in the rapidly changing business environment. There is a need for a holistic understanding of the product and its context, and it can be only achieved through meaningful interaction with parties representing different phases and aspects of the product life cycle. (Ibid.) Thus, Björklund et al. (2012) introduces their concept of co-creation in order to fill the gap of current shortcomings and future demands for innovating new products.

This chapter will reveal the concept of co-creation. First, I will introduce the definition of co-creation along with its essential elements and typical characteristics. Second, I will explain how co-creation behavior and specifications can be fostered by: a) supporting intrinsic motivation (will), and b) supporting integration of development efforts of different stakeholders (shared will).

Previously the term co-creation has introduced by Prahalad & Ramaswamy (2004) arguing that customers would no longer be satisfied with making yes or no decision on what a company offers. The authors argue that the value will be increasingly co-created by the firm and the customer jointly, not entirely inside the firm. In addition, in their point of view, co-creation is not only about the trend of jointly creating products, but also about consumers' search for freedom of choice to interact with the firm through a range of experiences. (Prahalad & Ramaswamy, 2004) Thus, the term co-creation has previously been used only from the perspective of services research to describe how value of a service is created during the production-consumption process between the consumer and service producer (Björklund et al., 2012).

In this study, I will use Björklund et al.'s (2012) concept for co-creation, which is covering a much wider ground, because it is not defined to be limited to any specific type of collaborator or development targets. The authors define co-creation as simply as “*the process of creating something together*”, which includes three necessary basic elements: *1) collaboration, 2) dynamic development action, and the 3) resulting creation*. Next, I will describe what these elements are.

1) Collaboration

Collaboration is an element, because co-creation is based on joint contribution of two or more stakeholders, and thus terms cooperation and coordination are not enough to cover this demand. However, not all collaboration alone fulfills the requirements of co-creation. (Björklund et al., 2012)

2) Dynamic development action

This element means that all the stakeholders are active contributors in the co-creation process, and they are all perceived to have equal status in the development input. Hence, the act of co-creation is often informal by nature as compared to highly structured development approaches and tools. (Ibid.)

3) Resulting creation

The resulting output of co-creation is something being created together. It is not limited to artifacts, but can include for example services, processes, or business models. Hence, co-creation is not limited to product development, and it does not exclude any type of stakeholder or phase of development over others. (Ibid.)

Björklund et al. (2012) furthermore suggest that while above mentioned elements are all necessary in co-creation, it typically also includes the next several attributes: *a) different people; b) experimentation, prototyping, visualizations and demonstrations; and c) physical space*.

a) Different people

Different type of stakeholders from various backgrounds can bring a wide array of perspectives and areas of expertise. This can be manifested for example in utilizing multidisciplinary teams and carry out parts of the development process jointly with customers and end-users. (Ibid.)

b) Experimentation, prototyping, visualizations and demonstrations

Experimentation and plenty of prototyping, visualizations and demonstrations can be observed as distinctive features of co-creation. In practice, it is essential to make available a wide variety of materials for prototyping and illustration. This is because not everyone can illustrate their ideas with pen and paper. Some stakeholders often need other tools and materials to express their ideas. (Ibid.)

c) Physical space

The most typical and also most fruitful situation is that the stakeholders participating in co-creation are working simultaneously in the same physical space. Hence, individuals or subgroups can have an easy access to each other and can interact spontaneously in order to get instant feedback and engage in a process of reflective framing. (Ibid.)

| Term | Status of Participants | Type of Participation | Means of Participation |
|---------------|--|-----------------------|---|
| Coordination | Participants have clear roles in respect to each other | Formal | Dividing and assigning tasks |
| Cooperation | Participants act as representatives of their organizations | Formal | Contracts and agreements |
| Collaboration | Participants act as specialists of their fields of expertise | Informal | Bringing in knowledge and expertise Creates shared meaning |
| Co-creation | Participants are active contributors and co-designers | Informal Proactive | Sharing and building knowledge Creates a shared model |

Characteristics of coordination, cooperation, collaboration, and co-creation

Source: Björklund et al. (2012)

Björklund et al. (2012) approaches functional product innovation process from the perspective of the skills needed in co-creation, instead of development process skills in general. This approach would then enable to specify the required behaviors and practices that enable co-creation. (Ibid.) Thus, the authors specify two central questions:

1. *How can the will to engage in development actions be supported?*
2. *How can the integration of the efforts of different stakeholders be supported?*

2.2.1. Supporting will – motivation

Supporting will is about establishing and maintaining motivation in order to enable co-creation. Since the connection between motivation and creativity is widely recognized (Amabile, 1996, 1998; Simonton, 1999; Runco, 2004), the motivational considerations are highly important in creating something new.

Extrinsic motivation

According to one of the most recognized pioneers in the study of human motivation, Frederick Herzberg, stated that external motivators do not cause motivation, but only movement (Hertzberg, 1968). In his article, “*One More Time: How Do You Motivate Employees?*” he explains the outcomes of motivating employees by negative and positive KITA. KITA literally means, “*kick in the pants*”, and it is defined as a “*function of fear of punishment or failure to get extrinsic rewards*” (Hertzberg, 1968). Björklund et al. (2012) further states that development motivation cannot be secured by using only rewards and sanctions. This is due to the fact that these extrinsic rewards tend to diminish intrinsic motivation, can narrow foci creating “tunnel vision” and functional fixedness, impairing creative performance (Deci et al., 1999; Glucksberg, 1962). Furthermore, research has shown that “*if-then*” types of rewards have also a negative impact on performance (Benabou & Tirole, 2003).

Intrinsic motivation

Intrinsic motivation has a positive effect on enhancing productivity, conceptual understanding, and persistency (Ryan & Deci, 2000). The behavior of intrinsically motivated person is derived from one self’s innate needs of competence, autonomy, and

relatedness, i.e. experiencing one's self as skilled, having control over one's goals and methods, and being connected with others (Ryan & Deci, 2000). Research suggest several ways to foster intrinsic motivation:

- experiencing self determination and competence (Deci, 1975),
- experienced meaningfulness, responsibility for outcomes and knowledge of actual results of the work (Hackman & Oldham, 1976),
- having a sense of impact, competence, meaningfulness and choice (Thomas & Velthouse, 1990).

According to Björklund et al. (2012) there are three elements for intrinsic motivation: 1) *perceived importance of the goal*, 2) *perceived capability to reach the goal*, and 3) *perceived progress towards the goal*. The perceived goal importance can be enhanced with support, communication and providing a context for tasks (Björklund et al., 2012).

Perceived capability to reach the goal relies on experiencing one's self as capable and as being able to influence the situation. Self-efficacy is crucial in promoting intrinsic motivation for development work. (Björklund et al., 2012) According to Bandura (1982), self-efficacy reflects the expectancy that one is able to perform a certain action effectively, and it can be increased via repeated performance success, vicarious experience, and encouragement. Other ways to promote self-efficacy are:

- co-worker trust (Parker, Williams & Turner, 2006)
- workplace communication, when providing encouragement and vicarious experience (Parker 1998)
- autonomy, which also directly influence intrinsic motivation (Parker, 1998)
- job enrichment, that is vertical expansion of work, while increasing opportunity and responsibility to make decisions (Parker, 1998)

In addition to enhancing self-efficacy, autonomy also increases perceived capability to influence the situation (Björklund et al., 2012) and thus, it also provides employees with more opportunities to acquire new skills and responsibilities (Parker, 1998). Furthermore, autonomy may make employees more receptive and feel less threatened by change (Cunningham et al., 2002).

The perception of progress towards the goal is the third ingredient of intrinsic motivation, and it can be enhanced by iterative experimentation (Björklund et al., 2012). According to Schön (1983), experimenting with sketches or prototypes is key to the process of design and problem solving. Utilization of prototypes and representations by developers conceive, describe and communicate ideas. The benefits of experimentation by different kind of prototypes and representations have been widely known in the field of design and design thinking. Design thinking literature for example stresses the necessity of experimental approach with early and continuous prototyping throughout the entire process. (Hassi & Laakso, 2011) Hence, prototypes are tools for thinking and communication that can concretize the state of the process, and thus making it easier to spot progress (Björklund et al., 2012).

According to Björklund et al. (2012) experimentation is also compatible with adopting a strategy of producing small wins. Producing small wins have many advantages. Small wins promote commitment, attract allies, deter opponents, and lower resistance to subsequent proposals (Weick, 1986). They also increase self-efficacy, confidence, and learning (Weick, 1984; Weick, 2001; Hollander, 1965). According to Reay, Golden-Biddle & Germann (2006), a series of small wins can also escalate change, collectively legitimizing it. Therefore, it is important to produce small wins by experimenting, because it would increase all of the three elements of intrinsic motivation, clarifying the goal and reassuring of capability and progress. (Björklund et al., 2012)

2.2.2. Supporting shared will – shared motivation

Motivation to collaborate with others is required in co-creation, and thus shared will must be ensured. Shared will is about successful integration of the development efforts of the different stakeholders. (Björklund et al., 2012) There are at least five cornerstones in creating a shared will for co-creation: building trust, establishing shared identity, having a holistic view, co-location, and communication with physical object. (Ibid.)

Building trust

Building trust is one of the key antecedents in creating a shared will. Trust is the basic prerequisite for successful teamwork, increasing cooperation and collaboration, knowledge sharing, and commitment. Trust can also enhance innovativeness and increasing willingness to take risks. (Brjöklund et al., 2012)

Establishing shared identity

Establishing a shared identity can allow stakeholders to voluntarily contribute to the group (Tyler & Blader, 2001). It is also connected with a variety of positive organizational outcomes. Developing shared goals can enhance shared identity, especially when true control over the share results is given to stakeholders (Wegge & Kleinbeck, 1996). Hence, both shared goals and autonomy are essential in creating a shared will. (Ibid.)

Having a holistic view

The design thinking literature highlights the importance of holistic view of the problem and solution (Brown, 2008; Dunne & Martine, 2006; Owen, 2006), and it plays a major role in enabling co-creation (Bjöklund et al., 2012). It supports better coordination of with stakeholders, and thus making co-creation more efficient by minimizing unnecessary overlapping and increase help seeking (Bjöklund et al., 2012; Allen, 2007; Jashapara, 2004).

Co-location

Bjöklund et al. (2012) recommends that in order to reduce any communication barriers, all cross-functional teams should be physically co-located. While the benefits of being physically in the same location can be seen in all levels of communication, Bjöklund et al. argue that the impact of co-location is highest for inspirational communication, which is crucial in any creative quest.

Communication with physical objects

Efficient and effective communication plays a significant role in co-creation. According to Bjöklund et al. (2012) the wide variety of stakeholders involved in co-creation tend

to use each group's own professional jargon and concepts, which can pose challenges for effective communication. Miscommunication and the amount effort needed to discuss and share ideas might be decreased with the help of a physical object. Again the role of prototyping and visualizations as tools for thinking and communication are highlighted. (Ibid.)

2.3. Organization culture

The previous literature about organizational culture is derived from many different disciplines. It has been studied for example from psychoanalytical, institutional, ethnographical and sociological perspectives. Researchers studying organization cultures tend to use the terms such as corporate culture and organizational culture. Corporate culture is not used in this study, because it refers to mainly on managerial perspective or a particular business context within a culture. Organizational culture is used in this study, because it takes into consideration also individuals, different groups and subcultures. Hence it is more suitable for the research objectives of this thesis. (Alvesson & Berg, 1992)

This chapter is structured as follows. First, I will define what organizational culture is. Second, I will reveal the categories of organizational culture from a phenomenon perspective. Third, I will present Shein's "iceberg" model (Shein, 1985) to study organization cultures. Fourth, I will explain the limitations of Shein's model, and introduce the "Culture Dynamics" model by Hatch (1993). Fifth and finally, I will introduce Hofstede's (1991) widely known "Culture Dimensions" model for studying national cultures.

2.3.1. Definition of organization culture

There are many different definitions for organization culture. For this study, I chose to use Schein's (1992) definition: "*A pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems*".

Everything that happens in an organization can be analyzed from a cultural perspective. Culture seems to exist in people's minds. The shared experiences between the individuals in a group are colored by values, beliefs, attitudes, norms and traditions. The history of shared experiences helps in solving future problems, and it also shape the culture and the assumptions of the group. (Schein 1992; Aaltio-Majosola, 1991; Hofstede, 1991; Hofstede & Hofstede, 2005)

2.3.2. Culture as a phenomenon

The field of organizational research studies many different phenomena: symbols, ideology, climate, image, entity and culture. Culture is perhaps the most used concept in studying organizations as phenomena. The concept of culture as a phenomenon can be divided into four categories: culture a collective entity, as a set of artifacts, as collective mental frameworks, or as a pattern of collective actions. (Alvesson & Berg, 1992) Next, I will describe these briefly.

Organizational culture as an entity refers to a whole, which is difficult to cut into smaller pieces. Organizational culture can be described using metaphors, such as collective, clan, or tribe (Alvesson & Berg, 1992).

Artifacts are physical elements that are made by humans. These are for example buildings, spaces, equipments and products. Technically anything that can be seen and touched. Artifacts represent something that is inside of individual's mind. (Schein, 1992) Artifacts are concrete representations of symbols in reality, and conversely, symbols give meanings to artifacts (Hatch, 1993). Furthermore, Hofstede (1991) states

that symbols have a particular meaning, which is recognized only by the people sharing the same culture. So, people from different cultures, see artifacts and symbols in a different way and also give them a different meaning.

Collective mental frameworks create social order in an organization. It is comprised of organizational legends, heroes, myths, stories, values, beliefs and norms. (Alvesson & Berg, 1992) Heroes are the individuals who have the characteristics that are highly appreciated and serve as models of behaviors in a culture (Hofstede, 1991). Values are broad tendencies to prefer certain things over others. Values are difficult to observe and discussed about by outsiders, because they are most often learned implicitly. (Hofstede, 1991) These mental frameworks show example and guide employees to do things in a way that is acceptable and wanted for the organization (Alvesson & Berg, 1992).

Pattern of collective action can be seen as acts of symbolic behavior that strengthens the collective beliefs and values of a culture. It includes rites, rituals, celebrations and ceremonies. (Alvesson & Berg, 1992; Hatch, 1993) Rituals are for example how people greet and respect each other in a culture (Hofstede, 1991).

2.3.3. Schein's Iceberg Model

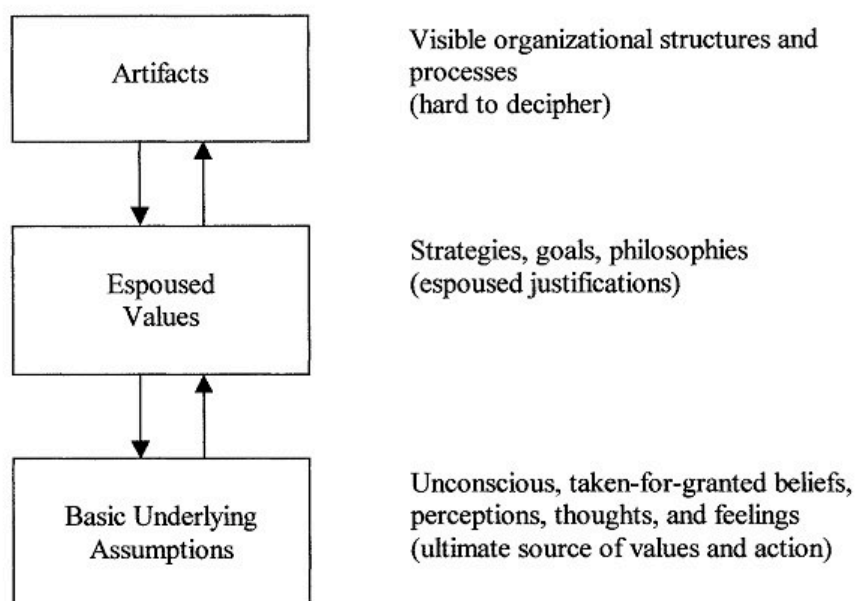
Schein (1992) presents a model, which assumes that organization culture is divided into three different principal levels: *artifacts, espoused values and basic underlying assumptions (and values)*.

Artifacts form the visible surface level elements in a culture that can be recognized by people not part of the culture. It includes anything that is visible, heard and felt. These are for example physical space, equipments and materials, technology, furniture, clothing, symbols, behavior, language, observable rituals, myths, stories etc. These are easy to observe, but hard to understand. If the deeper levels of the culture are not familiar, the artifacts cannot be interpreted or given a correct meaning. (Schein, 1992)

Espoused values are beneath the artifacts, and they are conscious strategies and goals and philosophies. These espoused values are for example written goals, slogans, guidelines, philosophies, by leaders of an organization. When these values become stronger in a culture, they become basic underlying assumptions. These espoused values sought by leaders should be supported by the some general and shared assumptions about how the organization should run or how the employee should be managed. Otherwise, they may only reflect rationalizations and aspirations. People would say different things than they actually do. (Schein, 1992)

Basic underlying assumptions lie in the bottom level of the organization culture, and are difficult to change. They reflect the shared values within the culture, and are often hard to define even for the members of the culture, because they usually exist in unconscious level. These assumptions consist of taken for granted beliefs, perceptions, thoughts and feelings. Basic underlying assumptions and espoused values are not necessarily connected, and therefore espoused values may not be rooted in the actual values of the culture. This difference can cause frustrations, lack of morale and inefficiency. (Schein, 1992)

Uncovering the Levels of Culture



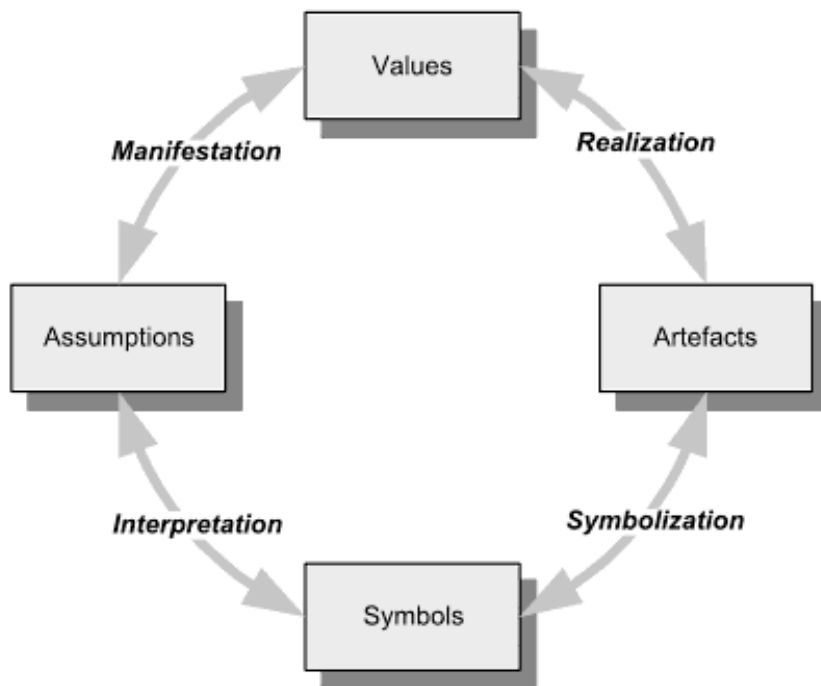
Source: Schein (1985)

Basic underlying assumptions are almost impossible to see from the surface level. They are hidden beneath the artifacts and expressed values – still they are the most important, because they shape members’ worldviews, beliefs, and norms that are guiding behavior, but yet not explicitly expressed. It is a huge challenge to change the basic underlying assumptions that cannot be observed and moreover understood, and yet still influence on people’s actions. (Schein, 1992)

Schein’s (1985) model for organizational culture offers a comprehensive tool to analyze the culture of individuals, groups, organizations, and nations. The model enables the possibility to understand cultural elements and analyze the relationship between deep-rooted assumptions and practices within an organization. Furthermore, leaders can try to change the basic underlying assumptions of a specific culture in order to improve the effectiveness of an organization. In this case, it can be seen as a *cultural change process*, where basic underlying assumptions are being sought to change and to fit the wanted espoused values and artifacts of an organization. (Schein, 1992)

2.3.4. Hatch’s Cultural Dynamics Model

An alternative model presented by Hatch (1993) to study organization culture is called “*Cultural Dynamics*”. Hatch (1993) criticize Schein’s (1985, 1992) model of organizational culture as assumptions, values, and artifacts by arguing that it leaves gaps regarding the appreciation of organizational culture as *symbols and processes*. Hence, this model is an extension of Schein’s model, which articulates the processes of manifestation, realization, symbolization, and interpretation. Furthermore, it combines Schein’s theory with ideas drawn from symbolic-interpretive perspective, and provides a framework to analyze the dynamics of organizational cultures.



Hatch's Cultural Dynamics model
 Source: Hatch, 1993: 660.

The idea behind Hatch's model is that there is a two-way interaction between the different factors that are linking and completing each other. In this model, the culture is represented as a wheel and considers organizational culture as symbols and processes that are functioning dynamically. (Hatch, 1993)

In Hatch's (1993) model, the assumptions shape values. Values are the manifestations of these assumptions. Values create artifacts and are realized in them. Thus, artifacts are representations of these values in tangible forms. On the other hand, what is interesting is that, artifacts can also shape values.

In a work place this could be, for example, introducing a new coffee machine. This could challenge the old accepted values, and therefore it would be first resisted and denied. But over time, people see it in a different new way and accept it. The acceptance of it depends on how well the artifact can transform established values. (Hatch, 1993)

Symbols give meanings to artifacts in the dynamic model. Here, artifacts are not just physical forms but it matter how these forms are produced and used by the people in an organization. On the other hand, artifacts give symbols the form in reality. (Hatch, 1993)

Hence, the cultural assumptions are opened to the influence of new symbols. The key here is that the culture can absorb newly symbolized content into itself because of new artifacts. When interpreting assumptions, artifacts can be contextualized into symbols, because symbols give meanings to artifacts. (Hatch, 1993) However, it should be noted that people from different cultures view symbols in their own perspective while giving them meanings that is difficult for an outsider to understand. There is need for cultural understanding. (Schein, 1992; Hofstede, 1991; Hofstede & Hofstede, 2005)

2.3.5. Hofstede's Cultural Dimensions Model

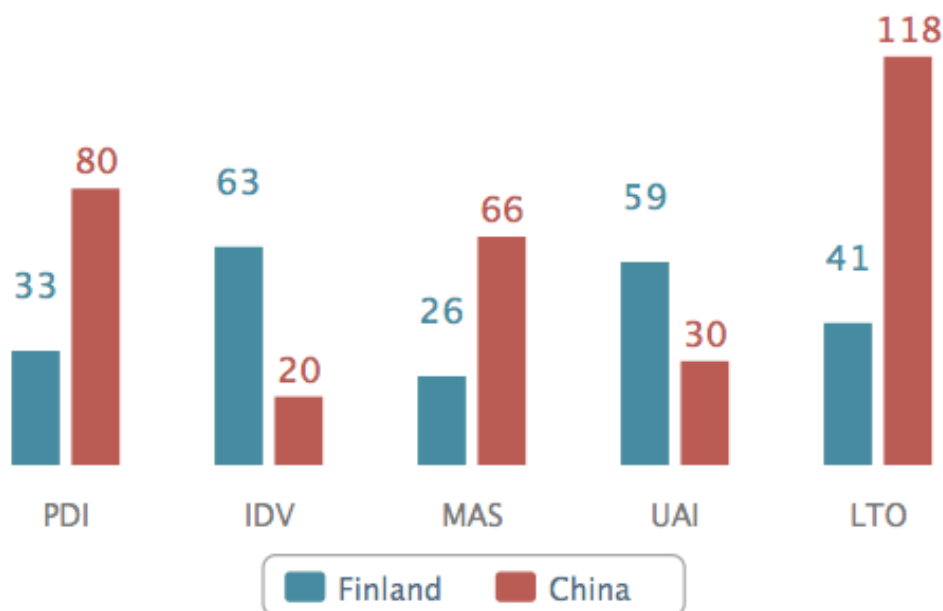
Hofstede defines culture as, "*the collective programming of the mind that distinguishes the members of one group or category of people from another*" (Hofstede and Hofstede, 2005, p. 400).

Geert Hofstede is one of the most known scholars in the field of studying national culture differences in relation to organizational cultures. Between 1967 and 1973, he started his work by executing a large survey study regarding national value differences of IBM's subsidiaries in 40 largest countries. The objective was to build a comprehensive model for screening the cultural differences between people from different nations. As a result, Hofstede proposed a systematic framework for assessing and differentiating national cultures called "*Cultural Dimensions*". (Hofstede, 1991)

Initially, the framework had four cultural dimensions: Power Distance (PDI), Individualism (IDV), Uncertainty Avoidance (UAI), and Masculinity (MAS). Later on in 1991 after the results of Michael Harris Bond's research of Chinese employees and managers, Hofstede added the fifth dimension: Long-Term Orientation (LTO), which

was initially “*Confucian Dynamism*”. Furthermore in 2010 after the results of a research conducted by Michael Minkov, Hofstede identified the sixth dimension for the framework: Indulgence v. Restraint (IVR). However, I will leave the sixth dimension IVR out from this study, because there was not enough literature available about it compared to the rest five dimensions. (Hofstede & Hofstede, 2005)

Next, I will compare Finland and China in relation to the five cultural dimensions by Hofstede. The histogram below shows the differences of the two nations.



Source: <http://geert-hofstede.com/finland.html>
Retried: May 15th 2012

1. Power Distance (PDI)

This dimension deals with the fact that people are not seen as equals in the society. It expresses the attitude of the culture towards these inequalities. Power Distance is defined as “*the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally*” (Hofstede & Hofstede, 2005: 402).

Finland (PDI=33) has a low score in this dimension, which means that it has the following characteristics: being independent, hierarchy for convenience only, equal rights, superiors accessible, coaching leader, management facilitates and empowers. In Finland, power is decentralized and employees are being trusted. Control is disliked. The working atmosphere and environment is informal, which encourages direct and participative communication across status levels. (Hofstede, 2012)

China (PDI=80) is a country with high power distance. It means that the society believes that an inequality between people is acceptable. This can manifest itself in different kind of situations, where there are people from different hierarchical level interacting with each other. For example, subordinate-superior relationships, when it is not acceptable to question the power abuse by the superior. Formal authority should be considered the truth influencing individuals. Punishments are allowed for those who are optimistic about people's capacity for leadership or taking an initiative. Thus, people should not have aspirations beyond their rank. (Hofstede, 2012)

2. Individualism (IDV)

Individualism is the opposite of collectivism and represents the “*degree of interdependence a society maintains among its members*”. It reflects individuals' self-image in terms of “I” or “We”. (Hofstede & Hofstede, 2005: 402).

Finland (IDV=63) is an individualist country, which means that people prefer to look after them selves and their immediate family only. In Finland, employer/employee relationship is based on contract and mutual advantage. (Hofstede, 2012)

China (IDV=20) is a highly collective country, where people act in the interest of the core group or extended family, and not necessarily of themselves. In China, nepotism prevails, and preferential treatment such as promotions is offered for family members and relatives. (Hofstede, 2012)

3. Uncertainty Avoidance (UAI)

Uncertainty avoidance is defined as “*the extent to which members of a culture feel threatened by ambiguous or unknown situations*” and tries to avoid future uncertainty or ambiguous situations (Hofstede & Hofstede, 2005: 403).

Finland (UAI=59) has a medium high score for avoiding uncertainty. Countries with high UAI scores tend to develop many rules for social behaviors. High UAI score countries tend to be intolerant for unorthodox behavior and ideas. In these countries, there is an emotional need for different rules: time is money, people see precision and punctuality as a norm, and thus creative thinking may be resisted. Security is an important element. High scores in UAI indicate low tolerance for ambiguity, and low scores have a high tolerance for uncertainty and ambiguity. (Hofstede, 2012)

China (UAI=30) scores low on uncertainty avoidance, which partly explains the fact that Chinese are adaptable and entrepreneurial people. The adherence to laws and rules maybe flexible to suit the situation, and people are comfortable with ambiguity. Chinese language with its idioms is full of ambiguous meanings that can be difficult for Western people to follow. (Hofstede, 2012)

4. Masculinity (MAS)

Masculinity is the opposite of femininity and it represents a society where: “... *emotional gender roles are clearly distinct: men are supposed to be assertive, tough, and focused on material success; women are supposed to be modest, tender, and concerned with the quality of life*”. Feministic societies overlap the gender roles – both men and women are expected to be modest, tender, and concerned with the quality of life. (Hofstede & Hofstede, 2005: 405)

Finland (MAS=26) is considered a feminine society. People focus on “working in order to live”. People value solidarity and quality in their working lives. Conflicts are solved with compromises and negotiation. Free time and flexibility is favored. Well-being is

emphasized and status is not shown. Effective managers are supportive and decision-making is achieved through involvement. (Hofstede, 2012)

China (MAS=66) is a success oriented masculine society, where people work hard towards better education and better life. Many Chinese will sacrifice family and leisure time in exchange to work. Men should have strong drive for materialistic success, whereas women should take care of the family. (Hofstede, 2012)

5. Long-Term Orientation (LTO)

Time orientation ranges from short-term orientation to long-term orientation. It represents the extent to which members of a culture are cognitively programmed to accept delayed gratification of material, social, and emotional needs. This dimension is closely related to the teaching of Confucius that can be understood as dealing with society's search for virtue. (Hofstede & Hofstede, 2005)

Finland (LTO=41) is a short-term oriented country. It means that Finns generally have a relatively small tendency to save, strong social pressure to keep up with competition, impatience for achieving quick results. Western societies are typically short-term oriented. (Hofstede, 2012)

China (LTO=118) is a highly long-term oriented society. Virtues such as persistence and perseverance are highly appreciated. Investments are seen from long-term perspective and relationships are built to last. Traditions can be adapted to suit new conditions. Thinking approach is on the full or no confidence, contrasting to LTO countries that think in probabilistic ways. (Hofstede, 2012)

Even though, the Hofstede's cultural dimensions framework is generally accepted and widely used to study values of different nations, it should not be used without caution. Many scholars have criticized the validity and limitations of cultural dimensions model. For example, Ailon (2008) found inconsistencies at the level of both theory and methodology, and warns about uncritical application of Hofstede's cultural dimensions model.

For this study, the cultural dimensions model is used as a general reference and its limitations are carefully considered. Furthermore, I will also review literature on concepts such as “guanxi” and “face” that are based on Confucian values of the Chinese culture. Together they will form a comprehensive point of reference for the research objectives of this study.

2.3.6. Communication Context

The concept of Low Context and High Context Communication is associated with the cultural dimensions developed by Hofstede. Low context means that information is stated directly, and it reflects a preference for hard, quantifiable details. High context reflects a preference to draw conclusions from implicit information via intuition. (Hall, 1967) According to Wilson (2012), low context cultures are logical, linear, individualistic, and action oriented, whereas high context cultures are relational, collectivist, intuitive, and contemplative. Hence, individualistic countries such as Finland (IDV=63) are considered as low context, whereas collective cultures such as China (IDV=20) are considered as high context (Hofstede, 2012).

2.4. Chinese Cultural Context

China “*Middle Kingdom*” has a history of 5000 years. It is the oldest and the only continuous ancient civilization in the world. China is the home country of four great inventions: compass, gunpowder, paper, and printing amongst many others. It is also a home country for 1,3 billion Chinese, which makes it the world’s largest in terms of population. Out of global population of 7 billion people, it can be said that one out every five people on earth is Chinese. During the five thousand years, China has experienced many ups and downs, but it has always gotten back to its feet over and over again.

The current challenge at hand is catching up with the developed countries by climbing the value chain and changing the self-explanatory concept of “Made in China” into “Created in China”. Due to the prevailing Confucian values of Chinese culture, this challenge is perhaps not so straightforward to overcome, and it also takes time.

In order to provide a theoretical foundation for the second research question: *How does the Chinese cultural context affect affect the adaptation of ADF’s core elements into ATDF?* I reviewed relevant literature about Chinese cultural context. This chapter is structured as follows. First, I will describe the typical organizational culture of state owned enterprises in China. Second, I will illustrate the different paths of western and eastern modernization. Third, I will explain the obstacles in China’s modernization. Finally, I will explain the reasons for the obstacle by introducing the concepts of guanxi and face that are based on Confucian values that are guiding Chinese people’s minds.

2.4.1. Organization Culture in China

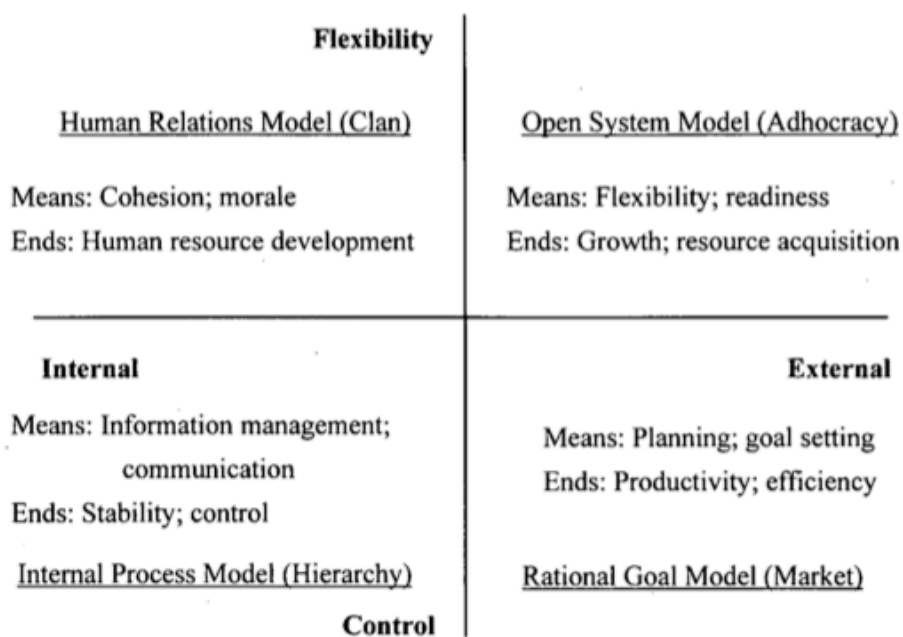
Many scholars have been studying and conceptualizing the dominant organizational culture type of Chinese state owned enterprises (SOEs) (Ralston et al., 2006; Tsui et al., 2006; Boisot & Child, 1996; Zhang & Keh, 2010; Wu & Yu, 2011). The debate between the scholars has been around the question: *“Is the dominant organizational culture type Bureaucratic Hierarchy or Feudal Hierarchy?”* These are two confusing concepts, and yet, still essential to identify, in order to describe the key obstacles in codification and modernization process of China (Yu & Wu, 2011).

Both Ralston et al. (2006) and Tsui et al. (2006) have conducted pioneering and influential empirical research on the organizational culture of enterprises in the Chinese context. The common result from both of these studies is that the dominant organizational culture of SOEs is Bureaucratic Hierarchy. However, according to the studies conducted by Boisot & Child (1996) and furthermore Wu & Yu (2011), the result is “mock bureaucracy” (Boisot & Child, 1996: 605) or Feudal Hierarchy.

Based on the above-mentioned theoretical discussions, I selected Feudal Hierarchy as the dominant organization culture of Chinese SOEs. Next I will highlight the major differences between Bureaucratic Hierarchy and Feudal Hierarchy in order to justify my decision. At the same time, it will also provide some highly relevant information about Chinese cultural environment for this study.

Bureaucratic Hierarchy is a culture type in the Competing Values Framework (CVF) developed by Quinn and Rohrbaugh, (1983). CVF is a widely recognized and extensively used model in organizational culture research. It uses two value dimensions (internal vs. external and control vs. flexibility) to distinguish four different organizational culture types: Clan, Hierarchy, Market, and Adhocracy, among which hierarchy is referred to Bureaucratic Hierarchy in this thesis. According to Quinn and Cameron (1999), there were close relationships between the CVF's culture types and stages of development in organizational life cycles. Quinn & Cameron (1999) suggested that organizational culture type would change in predictable ways along with the development of organization's life cycle. In the entrepreneurial stage, adhocracy; in the collectivity stage, clan; in the formalization stage; Bureaucratic Hierarchy and Market (Quinn & Cameron, 1999; Yu & Wu, 2009).

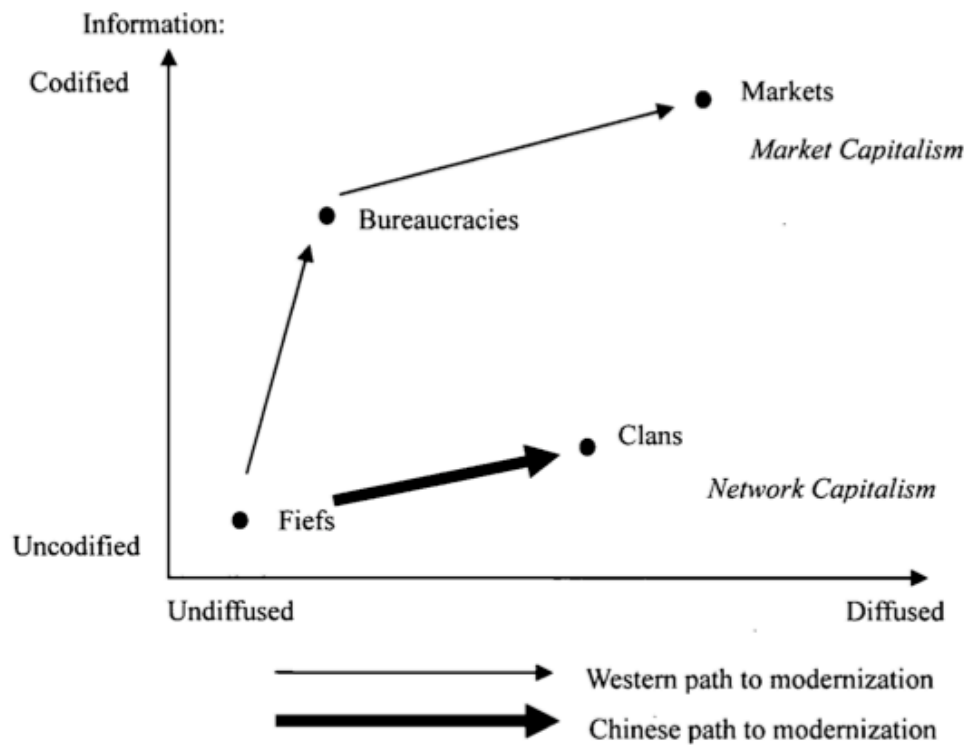
According to Yu and Wu (2011), Bureaucratic Hierarchy is a typical organizational culture of mature enterprises in western countries that are characterized by division of labor, clearly defined hierarchy, detailed rules and regulations, formal selection, career orientation, and impersonal relationships i.e. impersonality. Yu & Wu (2011) states that these characteristics are very effective in large, standardized organizations that emphasize a clear organizational structure, standardized rules and procedures, strict control, and well-defined responsibilities.



Competing Values Framework (CVF)

Source: (Quinn & Rohrbaugh, 1983: 369)

Feudal Hierarchy is a concept recognized in “culture-space model” (“C-space model”, Boisot, 1986). This model considers culture as a system of shared meanings or knowledge, and thus it describes culture in two paths: how meanings are constructed and how meanings are shared. “C-space model” has two dimensions. The vertical axis indicates the process of knowledge creation, which is labeled as codification i.e. selection and compression of data into stable structures. The horizontal axis indicates the degree of sharing and diffusing relevant information within a target population, and thus labeled diffusion. The two dimensions create four national culture types at the macro level: Bureaucracy, Market, Clan, and Fief, that are compatible to four organizational culture types in turn: Bureaucratic Hierarchy, Market, Clan, and Feudal Hierarchy. (Yu & Wu, 2011)



Chinese and Western paths to modernization (based on “C-space model”)
 Source: (Boisot & Child, 1996: 622)

In the “C-space model”, both Bureaucratic Hierarchy and Feudal Hierarchy are characterized by undiffused information, which implies centralized authority. Since centralization generates hierarchical structures, both types of culture are termed hierarchy. The difference is that Bureaucratic Hierarchy has a codified knowledge system, whereas Feudal Hierarchy does not. Hence, Bureaucratic Hierarchy is operated by impersonal, formal rules and regulations, whereas Feudal Hierarchy is governed by the leaders’ personal power and influences. (Boisot, 1986; Yu & Wu, 2011) Boisot (1986: 145) stressed that the term “hierarchy” covers two processes that must not be confused: personal and impersonal transactions. The level of impersonality (or the extent of codification) is the key difference between Bureaucratic Hierarchy and Feudal Hierarchy, which leads the west and east into different paths (Yu & Wu, 2011).

2.4.2. Western and Chinese paths to modernization

According to Boisot and Child (1996), emergent states in Europe, in the sixteenth and seventeenth centuries, were able to create strong centralized bureaucracies that codified a rational-legal approach to government administration. In the eighteenth and nineteenth centuries decentralization to market order gradually occurred. Hence, the modernization path of the west was first shifting from Feudal Hierarchy to Bureaucratic Hierarchy, and after that decentralization toward a market order, which created the institutions of modern “market capitalism”. (Ibid.)

However, China had not created a stable codified bureaucratic order in the history (Yu & Wu, 2011). The economic reform of China in 1978 was a process of delegation or decentralization. The tools used in the economic reform were based on control of direct administrative authorities of local governments. Thus, Chinese path to modernization since 1978 involved decentralization in the lower reaches of the “C-space model”. Decentralization in China did not lead to markets but to clans with personalized institutional order, “network capitalism” based on guanxi. Thus, China experienced rapid economic growth at a low level of codification. (Boisot & Child, 1996: Yu & Wu, 2011)

In the context of network capitalism, there are formal rules and regulations, but they are not strictly implemented. Hence, opportunism prevails in organizations. Furthermore, formal rules and regulations are much less comprehensive than those of mature enterprises in the west. The bonding mechanisms in SOEs are not rules and regulations, but leaders’ personal charisma and influences. (Yu & Wu, 2011)

2.4.3. Obstacles in China’s modernization

Feudal Hierarchy as organizational culture in Chinese SOEs poses two tremendous forces against codification and modernization process of China: the shortage of intellectual support and the shortage of political support (Yu & Wu, 2011).

Weber (1964) states that China is limited by the absence of “formal rationality” when comparing to the West. The core of formal rationality in the West was “calculable terms” (Weber, 1964: 185; Huang, 1997; Child, 2009), and China on the other hand relies on the governance mode of “substantive rationality” which concerned people’s spirituality and values (Weber, 1964: 185-186; Child, 2009: 60). China’s traditional bureaucratic systems are filled with numerous rites and rituals based on Confucian orthodoxy and formal perfection instead of actual conditions or effects (Boisot & Child, 1996: 604; Child, 2009: 60; Huang, 1997: 14). According to the authors, the reason why traditional Chinese bureaucrats focus on rites and rituals is because they never attempt to utilize “calculable terms”, but rely on Confucian way to govern people. Thus, while western societies are concerned with more material issues, i.e. “formal rationality”, China focuses on spiritual issues i.e. “substantive rationality”. According to Yu and Wu (2011), China has not yet grasped the “calculable terms” at a comparable level with western developed countries. Hence, the Chinese cultural tradition leads to shortage on government administration capacity to modernize China (Yu & Wu, 2011).

Opportunism prevails within the ruling class of China, due to low level of codification in Chinese society. The traditional desire of Chinese leaders is to maintain their personal authority, and thus they are prepared to counter moves against a rational-legal bureaucracy that might limit their power. (Sheh, 2002; Boisot & Child, 1988: 513; Yu & Wu, 2011) The absence of rational-legal institutional framework in China results in a wider system of bureaucratic or market transacting based on personal power, commitment, and trust. In this kind of highly personalized social order, people would seek to develop and strengthen their social network continuously. (Boisot & Child, 1996) Hence, the process is self-reinforcing. Boisot and Child (1996) describe this as “iron law of fiefs”. Yu and Wu (2011) consider “iron law of fiefs” as an explanation for the “middle-income trap” of China. Yu and Wu (2011) furthermore state that it is the struggle by vested interest groups to protect and promote their interests that hinders China from breaking through the “network capitalism”.

2.4.4. Guanxi

There are many definitions available for guanxi. According to Yang (1994) guanxi means relationships between people and can be applied to husband-wife, kinship and friendship relations. Jacobs (1982) describes guanxi as a direct particularistic tie between two or more individuals, excluding connection through a third party. For Lo (2004), guanxi literally means relationships that stand for any type of relationships. The various definitions for guanxi in the literature are manifestations of its growing importance in business related performance particularly in the context of China.

Guanxi has an important role in Chinese culture in mainland China and also amongst ethnic overseas Chinese, and it has mainly been studied from two perspectives. The first one considers guanxi as an elementary and particularistic part of Chinese culture that has its roots in Confucian philosophy, which is affecting Chinese minds (Whitley, 1994; Tsui et al., 2000; Redding, 2002). The other perspective considers guanxi as a response to the prevailing institutional conditions that currently exist in China (Boisot & Child, 1996). Nevertheless, in business studies both perspectives are usually being utilized (Gutherie, 1998).

Park and Luo (2001: 546) approaches guanxi practices in the cultural perspective and describe it as “*deeply embedded in China’s culture ... with history of more than 5000 years.*” Many business scholars agree that the malfunctioning of legal and market structures in China are because of guanxi, which has its historical dependency with Confucian values dating back to the sixth century B.C. (Tsui et al., 2000; Redding, 2002) The institutional perspective of guanxi considers it to be embedded to the institutional development of China. From this perspective, guanxi is not solely a Chinese phenomenon, but rather an outcome of creating the structures of Chinese command economy’s institutional system. (Boisot & Child, 1996) Boisot and Child (1996) argue that guanxi is the reason for the different modernization of China compared to the west i.e. the development of Network Capitalism.

There are various literature available proposing that the guanxi is an imperative tool for successful business performance in China (Luo, 1997; Boisot & Child, 1996). Boisot and Child (1996:625) states that Chinese network capitalism works through “*the implicit and fluid dynamic of relationships*”. Furthermore, Luo (1997:51) argues that foreign companies “*can gain an edge over their competitors in the Chinese market by building and maintaining their own guanxi network in the country where guanxi constitutes the most effective (market growth) and efficient (low cost) marketing tool.*” In addition, Gold et al. (2002) argue that Guanxi is an essential element to successfully complete any task in all spheres of social life in China. On the other hand, guanxi has also its dark side as the scholars suggest that guanxi practices allow corruption, crony capitalism, nepotism, ‘ersatz capitalists’ (Bun & Kui, 2000; Wu, 2000).

2.4.5. The Concept of Face

The concept of “face”, or “lian” in Chinese, is deep rooted in the Confucian values, and its one of the cornerstones of Chinese culture affecting Chinese life for thousands of years (Chang & Holt, 1994; Cheng, 1986; Ho, 1976). The study of the face concept is growing especially in the communications related fields, because it is highly related to building guanxi and doing business in China.

There are many definitions and various meanings for face in the literature. Coggin and Coggin (2001) defines face as a mixture of individual’s self-respect and confidence. Ho (1976: 883) defines the concept of face as “*the respectability and/or deference that a person can claim for him/herself from others, by virtue of the relative position he occupies in the social network and the degree to which he is judged to have functioned adequately in the position as well as acceptably in his social conduct*”.

The concept of face is deeply rooted in the Confucian values that focus on social harmony, stability and hierarchy. According to Chang and Holt (1994), hierarchy is deeply embedded in the Chinese concept of face, which is exercised according to the relational hierarchy within the family, and the hierarchy in the society. According to Hu

(1944), “lian” is the primary carrier of moral codes, and defines the fear of losing face as an effort to keep one constantly conscious of moral boundaries and to hold up to the moral values that are historically transmitted and traditionally accepted.

The most important characteristic of face seems to be its reciprocal nature. According to Chen (1986), face is based on human feelings as an appeal to promote a harmonious relationship. Saving one’s own face and giving face to the other is a good way to promote guanxi between the parties. Saving face and losing face are considered very serious amongst Chinese people. Thus, giving face to others is greatly exercised and the giver also tends to expect reciprocity from the receiver. The concept of face can actually explain many misunderstanding between the people from western cultures and the Chinese, in business and as well as in politics. The reciprocal characteristic of the concept is important to understand in order to have good relations with Chinese people. Furthermore, based on the belief that human nature is inherently good, the concept of face can substitute the strict legislations regarding duties, rights and obligations among men. (Chen, 1986; Hu, 1944)

According to Hu (1944:47), face is “public censure” or a communal check against any deviation from or violation against the well-rounded norms or traditions of the homogeneous community. Hence, the fear of losing face (diu lian) reflects the awareness of societal punishment. Since face is constituted communally, losing face would not only affect the loser but also the community. For example Chinese parents would often tell their children, when they are very young, not to lose their family face. Furthermore, a company would lose face if their employee has done something wrong to damage the reputation of the company. On the other hand, an individual’s achievement would not only be considered as individual’s achievement, but the whole family, or the whole community, or even a country. While business people from individualistic countries tend to ignore the importance of face, the Chinese counterparts have made a lot of work in making them look and feel good (Beamer and Varner 2001).

2.5. Change Management

The theoretical discussion around organizational change and change management has been the interest of various scholars from different disciplines for decades. In addition to the literature on organizational development and other organizational theories, researchers have used concepts from other fields such as psychology and biology. The extensiveness of research in this area evidently proposes that this is a complex phenomenon to study and moreover to manage. (Van de Ven & Poole, 1995)

Organizational changes are complicated and challenging to manage, because they seem to affect many different areas: structure, positions, systems, programs, people, equipment, culture, vision (Mintzberg & Westley, 1992). The complex nature of organizational change demands the management to look at various areas in an organization. The success depends also on the type of change and the type of organization in question.

The previous literature on organizational change has focused mainly on organizational change *content* of what actually changes and what are the targets of change (Amernakis & Bedeian, 1999). Another also extensively studied area is organizational change *process*, which focuses on the evolution of change that is how change takes place and what are the change motors (Van de Ven & Poole, 1995; Kotter, 1995). In addition, there is also literature focusing on organizational change *outcome* and organizational change *context* (Amernakis & Bedeian, 1999). Furthermore, the research in organizational change area explains the events “*such as transitions in jobs and career, group formation and development, organizational innovation, growth, reorganization, and decline*” (Van de Ven & Poole, 1995: 510).

For this study, the particular interest is in the organizational change context. The context is comprised of different elements, forces and conditions that are shaping the organization’s internal and external environment. The internal and external environment is usually considered as the triggers for organizational change. I will look at the role of

external environment more as a condition that is an affecting factor to the change process, especially for the second research question: “*How does the Chinese cultural context affect the adaptation of ADF’s core elements into ATDF?*”

2.5.1. Organizational Change process

Change process is a series of overlapping phases, not an event and it takes place all the time (Williams & Williams 2007; Price & Chahal, 2006). According to Lewin (1951), organizational changes proceed linearly through three broad phases: unfreezing, moving and refreezing. Change management allows an organization to proceed throughout the phases one by one ensuring that all the processes are executed. Bullock & Batten (1985) further divides these phases in their model by presenting change management as a longitudinal process with four partly overlapping phases. It offers a more clear illustration of change management program, and helps to indentify the measures done to implement the change. These phases are: 1) Exploration, 2) Planning, 3) Action and 4) Integration. This model is commonly recognized, and it reminds of a general project life-cycle (Khang & Tung, 2008:79). This paper focuses on the action phase, because it is where the change is implemented and evaluated in the case organizations.

2.5.2. Change Resistance

Organizational change is a long process, which does not happen overnight. It needs careful planning, motivation and professional execution (Kotter, 1995). This is quite obvious if we think about an organization as a cultural phenomenon with its deep-rooted basic assumptions, values, artifacts and symbols (Schein, 1992; Hatch, 1993; Hofstede, 1991)

People will always respond to change negatively if they feel that their jobs are threatened (Burns, 2008) or they do not understand its purpose and consequences (Williams & Williams, 2007). Jermias (2001) claims that the major reason why people resist change is because they perceive themselves as intelligent people, and the information that argues with this image is being ignored. People also seem to pay

attention only to the information that is in line with the conclusion they wanted to make, and ignore the rest. Resistance is less likely to occur when people are actively involved in the change process starting from the early stages. This would make people feel that they are valued and that their opinion matter and thus making them committed to the change. (Jermias, 2001)

Anonymous (2005) suggest that the reaction to change can be divided into four psychological phases: 1) *shock*, where people feel unsafe while decreasing work productivity, 2) *defensive retreat*, where people get angry and try to hold on to the old, 3) *acknowledgement*, where people are eventually letting go the past, 4) *acceptance and adaptation*, where people internalize and move on. Jermias (2001) suggest that understanding people's motivation is important in trying to reduce their inertia.

2.5.3. Managing Change Tools

While there is abundance amount of literature on change management, little is written about the practical steps and tools for it. Hughes (2007) and Tung (2008) amongst other scholars avoid providing precise set of tools, and argue that one set of tools is not likely to fit all situations or environments, since national culture is not entirely homogeneous either. However, I see it as beneficial to have a look at what kind of tools are suggested in order to have an idea of how to adapt and apply these tools for answering the third research question: *How can ATDF's management be improved?*

Gotsill & Meryl (2007) recommends three critical steps that should be followed when implementing change in the workplace. Firstly, and the most important step is to focus on people and their motivation. The human element must be considered in the very start of the process. People need to be actively involved in the project in its early stages making them feel that they are being valued, which would enhance their commitment to the change. Secondly, continuous communication has a major role in change management. People need to know why changes are taken place, what are the reasons for change. Thirdly, training is important for the overall change process. It helps people to understand what the change is about in practice and how it will affect their work in

the future. When second step answers the “why” – question, training answers to the “how” – question (Gotsill & Meryl, 2007)

2.5.4. Project Champion

The importance of leadership commitment seems to be essential in conveying a project’s vision successfully. There are many definitions available for a high rank person who has passion, motivation, character and resources to push through a project from a start to the end. While there is a debate amongst scholars on which term to describe this person, (project champion, the project manager or project sponsor), for the purposes of this study, I will use project champion. (Esteves & Pastor, 2002)

2.5.5. Importance of change context

Literature on change management practices is usually based on Anglo-American context while ignoring the local institutional and organizational contexts of other countries. Kostova (1999) proposes that there are *country level effects* that affect the success of transnational transfer of strategic organizational practices, with some countries providing more favorable environments than others.

According to institutional theory, there is a trend for organizations to become alike with the institutionalized structures and processes within their environment (Roth & Kostova, 2003). It is unquestionable that the institutional and organizational environments shape the activities of an organization affecting its nature. Therefore, the significance of the context differences should be emphasized and the use of homogeneous models of change management questioned especially for this case study.

3. Methodology

This methodology chapter is structured as follows. First, I will explain why I chose case study method as a research approach. Second, I will describe the research design, which is the roadmap for this study. Third, the data collection process is described in detail. Fourth, I will explain the analytic procedures of interpreting the data. Fifth, I will evaluate the validity and reliability of this research.

3.1. Research Approach

The main objective of this thesis is to describe and explore the challenges of adapting ADF's core elements into ATDF, and to provide managerial implications for ATDF's development. This, however, cannot be done before knowing what these core elements are. The unit of analysis has to be defined first (Yin, 2009). Thus, the first research question: "*What are the core elements that ADF is comprised of?*" needs to be answered first.

I found case study research method to be the best fit for studying this unique phenomenon. Since the birth of ADF in November 2008, there have been abundance materials written and reported about ADF. Furthermore, ATDF has also gotten a lot of attention from media since its birth in May 2010. Although, there are a lot of academic literature, written separately, about the core elements, but there is nothing about ADF as a single, novel and unique phenomenon. In order to holistically understand ADF as a contemporary phenomenon within a real-life context, and the potential societal influence it has, it is well justified to select Yin's (2009) case study approach. (Yin, 2009; Eriksson&Kovalainen, 2008; Eisenhardt, 1989)

The aim of this thesis is threefold: first, to build a theoretical construct for modeling ADF; second, to utilize it in answering the second research question: "*How does the Chinese cultural context affect the adaptation of ADF's core elements into ATDF?*" and third, to provide managerial suggestions for ATDF's development. Hence, the aim of

thesis is therefore to generate theory in the first part, and in the second part, utilize it in understanding how the case works in another context, while providing managerial implications (Eisenhardt, 1989)

3.2. Research Design

I chose to have an abductive approach for this case study process, which is a more inductive oriented strategy of case material analysis. (Dubois&Gadde, 2002) It means that the case researcher is interested in the themes, categories, activities and patterns that they find out from the empirical data, not from a pre-given theoretical framework or a set of pre-formulated propositions. This also means that during the research process, I had to refine and refocus my research questions. (Eriksson&Kovalainen, 2008)

Eriksson and Kovalainen (2008) states that it is advantageous if the research design is flexible enough to allow refocusing of the case itself, collection of materials and their analysis, and the guiding research questions. Dubois and Gadde (2002:3) calls this type of case study research process ‘*systematic combining*’, which includes an interplay between ”*what is going on in reality, available theories, the case that gradually evolves, and the analytical framework*”.

3.2.1. Research Process in Two Parts

PART I: Forming of the theoretical construct: ADF’s core elements

1. Themes for the first interview round
2. Results from first round of interviews
3. Creative space, co-creation, and organizational culture
4. Analysis of the empirical findings against theoretical literature
5. Result: theoretical construct

PART II: Testing theoretical construct in Chinese context

6. Themes for the second interview round
7. Results from second round of interviews
8. Chinese cultural environment and change management
9. Analysis of the empirical findings against literature about Chinese context
10. Conclusions

The aim of the first part was to define the ADF's core elements in order to induce a theoretical construct for the study. In the first round of interviews, another master's thesis researcher, Päivi Oinonen and I conducted together five semi-structured thematic interviews on key informants. The pre-defined themes for the first round interviews were formed based on the previous nonacademic materials about ADF. I was able to build a model for ADF's core elements by analyzing interview data against academic literature.

In the second part of this study, the goal was to understand how the theoretical construct works in the Chinese cultural context. Hence, the theoretical construct, ADF's core elements, was analyzed against literature and interview data from both interview rounds. In this phase, I conducted four semi-structured thematic interviews and one open interview. The themes for the semi-structured interviews were drawn from the theoretical construct. In the analysis and interpretation sessions for the second phase, I took also the first round interview data into consideration because there was a lot of relevant information for this part of the study as well.

3.3. Data Collection

According to Eriksson & Kovalainen (2008), case studies are usually considered more accurate, convincing, diverse and rich if they are based on several sources of empirical data. Alasuutari (2000) uses the metaphor of puzzle solving to describe the case study approach, because it uses various sources for finding the solution. According to Yin (2009: 114), an essential tactic for conducting case studies is to use triangulation, which

is using multiple sources of evidence. A good case study uses as many sources as possible, because it gives a more holistic picture of the case (Suoranta, 1998; Yin, 2009: 101). In order to foster the big picture of this study, I created a case database to store the various data from different sources that I have found relevant for this study (Yin, 2009).

The case database that I have created and stored in a cloud service is very comprehensive. It includes both primary data from my own empirical research, as well as secondary data from already existing empirical data. Silverman (2001) calls secondary data also as "*naturally occurring materials*", because they exist irrespective of the researcher's actions and intentions. This case database is divided into big categories such as Academic Literature, Design Factory Research Team, Other Materials, Interview Round 1, and Interview Round 2.

The main sources of empirical data for this study were withdrawn from two rounds of interviews. The first round was conducted jointly with another master's thesis researcher, Päivi Oinonen. She is a staff member of ADF, who shares the same preliminary agenda of defining ADF's core elements first in her own master's thesis. Her research objective was more about the holistic internationalization of ADF, whereas mine was about localizing ADF's core elements into Chinese environment. Since master's thesis research is an individual journey, we only did the first round interviews together. The next subchapter will describe the interviews in greater detail.

3.3.1. Interviews

There were two rounds of interviews that took place: first one in spring 2011 and then second one in spring 2012. In the first round, Päivi Oinonen and I conducted five semi-structured thematic interviews. In the second round, I conducted four semi-structured thematic interviews and one open interview.

In thematic interviews, the topics and themes are pre-defined. Unlike in structured interviews, there is no precise order or scope for the interview questions. The interviewer makes sure that the pre-defined themes will be gone through as the

interview progresses. The interviewer has a support list of all the issues he or she wants to discuss, but no pre-defined questions. (Eskola&Suoranta, 1998)

In open interviews, the situation reminds the most about a normal conversation. The interviewer and the interviewee discuss about some topics, there is no need to go through all the themes. This type of interviewing is particularly useful for exploring a topic intensively and broadly and from the participant's point of view. The advantage of this type of interview is that it is likely to produce insights that a researcher could not have anticipated. (Eskola&Suoranta, 1998)

First Interview Round

In spring 2011, we did five semi-structured interviews on the key people of Aalto Design Factory. These key people were the following:

Kalevi Ekman, Factory Director of ADF

Viljami Lyytikäinen, General Manager of ATDF

Esa Santamäki, Chief of Spatial Design of ADF

Pekka Kumpula, Creative Director of Seos Design

Anonymous Researcher

In the first round, the goal was to define what the core elements that form ADF are. Therefore, it is well justified to select these key informants for the interviews because they are the most familiar with the topic. It was also very easy for me, and Päivi Oinonen to approach these people since we were also staff members of Aalto Design Factory and Aalto-Tongji Design Factory.

Aalto Design Factory's Research Team (DFRT) has interviewed students and other community members about ADF in their own report. DFRT was very helpful by sharing the part of the raw data from their interviews that was close to our research. Although it was not directly about our topic, we were able to withdraw the pre-defined themes and create a support lists into our semi-structured interviews.

The first round interviews were all conducted in informants' native language: Finnish. This is a natural way to provide a more relaxed and informal interaction between researchers and the informants. The fact that we both researchers knew these informants adds to the informality and relaxation, which again enhances the quality, validity and reliability of the data. The informants were very relaxed and open to their own thoughts and feelings in the interview situations. A customized theme list for each interviewee were created and taken to the interviews.

Videoconferencing tool: Life-Size was utilized in all five interviews. This was due to the fact that I was in ATDF in China and Päivi was in ADF in Finland. Furthermore, three informants were in Finland and two were in China. Videoconferencing enabled us to conduct the interviews face-to-face and face to video window simultaneously.

All of the interviews were recorded and transcribed into word documents by an external service provider: Tutkimustie Oy. The length of all the interviews was around 77-85 minutes.

Second Interview Round

In the second round of interviews, I did four semi-structured interviews and one open interview. I selected the following people for the second round interview:

Semi-structured interview

- Alex WU Yuanqi, Project Manager of Sino-Finnish Centre
- Sam SHI Yin, Teacher of Tongji University
- LU Zhou, IDBM exchange student of Tongji University
- SUN Huangyin, IDBM exchange student of Tongji University

Open interview:

- Matti M. Hämäläinen, Director of Operations of ATDF

In order to find out how the core elements of ADF can be transferred to ATDF, I chose to interview four Chinese who are very familiar with ATDF. The first one is my colleague Alex WU Yuanqi. He has been working at ATDF since fall 2010. The second interviewee is Sam SHI Yin, who is a teacher of Design and Innovation College in

Tongji University. He has been involved in ATDF's creation and extension projects. Sam's contribution was to work together with Esa Santamäki, Chief of Spatial Design of ADF, in designing and the implementation in both projects. I also chose two Chinese exchange students from Tongji University: LU Zhou and SUN Huangyin for the interviews in order to shed light from the students perspective.

The first interview round's findings: ADF's core elements, were utilized and transformed into themes in this interview round sessions. The discussions around these themes were a fruitful experience for me, and the objective of this thesis.

Videoconferencing tool Skype was utilized for the interviews with Alex WU Yuanqi and Sam SHI Yin, because they were in China and I was in Finland. Face-to-face interviews were conducted with LU Zhou and SUN Huangyin and Matti Hämäläinen.

In order to pull out the most reliable and valid information out of the interviews, I conducted all the interviews, except one, in the native language of the informants. I used Chinese with Alex, Sam and LU Zhou, and Finnish with Matti. Unlike others, SUN Huangyin chose to use English as the interview language and not her native language.

The interaction with the Chinese informants was an interesting experience. Although I tried to create a relaxed and informal atmosphere into the interviews, I felt that the Chinese informants took the interviews more formally compared to the first round interviews with the Finns, except LU Zhou. The reason why I felt this way is the fact that I knew them very well from my previous work at ATDF. Also, perhaps the Skype as an interview tool is not as reliable as face-to-face interviews.

The open interview as the last interview gave me valuable knowledge about the latest development of ATDF. Matti M. Hämäläinen, has been assigned as the Director of Operations of ATDF since fall 2011. He has been involved in Aalto Design Factory and seen its development from its birth. His professional agenda is also aligning with the topic of my thesis. This enabled me to withdraw some highly relevant insights to this study.

All of the interviews were recorded and transcript into word documents by me. The length of the four semi-structured interviews was 70-75 minutes, and the length of the open interview was as long as 124 minutes. For the interviews in Chinese, I translated and transcript the recordings into English. Due to the subjectivity factor in translating Chinese to English, the validity and reliability of this data should be considered.

3.4. Analysis and Interpretation

There are at least two main strategies of analysis. The first one is based on pre-formulated theoretical propositions and respective coding system. The second one is based on development of case description, which would then form the basis for emerging research questions and a framework for organizing the case study. (Yin, 2009; Eskol & Suoranta 1998)

I chose the latter strategy to analysis for this case study, because the main point of the interviews was to inductively withdraw relevant information from the interviewees, to give voice to them. Another reason for choosing this strategy was also the fact that there was no direct theoretical base about this unique phenomenon.

According to Eriksson and Kovalainen (2008), every attempt to recode, organize and label your empirical data includes some kind of interpretation, which can be more or less systematic. Coding means that the features, instances, issues and themes in empirical data are classified and given a specific label, a code.

PART I

For the first part of this study, I went through the interview data a couple of times before making any markings, underlines or codes. After reviewing all the five interview transcriptions, I started open coding manually on hard-copy printouts, which is a preferred way for first-timers (Saldana, 2009). I was able to generate initial codes and

other relevant information from the interview data with the help of interview theme list and other available non-technical literature. The initial codes were then further fostered by linking, comparing, questioning against each other. This resulted as new themes, categories and subcategories. (Corbin&Strauss, 1998) Based on these empirical findings, I reviewed relevant theoretical literature. Finally, I was able to define the core elements of Aalto Design Factory, and thus to create the theoretical construct for this study (Eisenhardt, 1989).

PART II

In the second part of this study, I was focusing on the second research question: “*How does the Chinese cultural context affect the transfer of ADF’s core elements into ATDF?*” The first round interview data was utilized in this second part too, because there were many data points that were also relevant for this second research question. In the second analysis part, I found new relevant themes and categories from both interview round’s data that enlightened this study even more. Finally, based on the reorganization and analysis of the data against theory plus other naturally occurring materials, I was able to answer the second research question, and furthermore conclude this case study by answering to the third research question: “*How can ATDF’s management be improved?*”

3.5. Validity and reliability evaluation

Validity means that the research is measuring the issues that it is supposed to measure. Hirsjärvi and Hurme (1995) state that there are four factors affecting the validity of interviews: selection of the interviewees, concept validity, content validity and transcription accuracy. Since the key informants and the researcher were all strongly linked to ADF and ATDF, the validity for strong in this regard.

It should be noted here that the accuracy, validity and reliability of the naturally occurring materials can be somewhat taken into consideration also when evaluating this

thesis. Since, there were no direct theoretical literature available about the case problem, these naturally occurring materials were essential for conducting this case study. (Silverman, 2001)

Furthermore, according to Eskola and Suoranta (1998), the basis of a qualitative research is the researcher's open subjectivity, and the acknowledgement that the researcher himself acts as an instrument of the research. Therefore, in qualitative research, the most important criteria of reliability derive from the researcher himself. This is also the reason why the evaluation of reliability has to be considered for the whole research process. This makes research reports generally more personal, researchers own reflection intensive, than quantitative research. (ibid.) In the next section, I will describe myself as the instrument of this qualitative research.

3.5.1. Researcher as an instrument:

I will reveal my own identity and background in this section, in contrast to quantitative studies, because it demonstrates the firm belief that the researcher act as an instrument in data collection and analysis of this qualitative research (Corbin & Strauss, 1990; Eskola & Suoranta, 1998). Also, my writing style in form 'I' is also justified here. (Sword, 2009)

This is a qualitative research about a topic that is very close to my study and work background. This is due to the fact that I studied at Aalto Design Factory's environment in Finland, and then later worked at Aalto-Tongji Design Factory in China. Therefore, I am familiar with both organizations and the key people. Glesne (1999) calls this as "*backyard research*". This is considered a legitimate alternative in business research context, because it improves researcher's chances to develop detailed contextual knowledge, which is a key point in qualitative studies. (Corbin & Strauss, 1990; Saunders et al., 2007; Eriksson & Kovalainen, 2008)

Researcher's Background

I am 28-year-old Finnish-Chinese, born in China and moved to Finland with my parents when I was seven years old. I have gone through all my education in Finland, from primary school until my university degree. After my bachelors degree in International Business from Helsinki School of Economics, it was clear to me that I wanted to contribute into Sino-Finnish business arena by bringing my culture knowledge and language skills of the two countries.

During my International Business masters degree at Aalto University School of Economics (former Helsinki School of Economics), I completed the International Design Business Management (IDBM) program and also the Product Development Project (PDP) course. In the fall 2008, Aalto Design Factory (ADF) opened its doors and I was very fortunate to be one of the first users of the space. The IDBM program and the Design Factory environment not only inspired me to be more creative, but also widened my worldview.

In the summer of 2010, I got a job offer from Kalevi Ekman (Factory Director of ADF) and Viljami Lyytikäinen (General Manager of ATDF) to work in the ATDF team. This seemed to be a great way for me to utilize my strengths and experience of Aalto Design Factory and to do something concrete that has an impact on China and Finland. I took this opportunity with an open heart and will to make a difference; little did I know about the challenges ahead.

My observations and understandings are drawn mostly from this case study research that I have conducted in Finnish, English and Chinese, and also my previous experiences of Aalto Design Factory as a user from academic semester of 2008-2009, and then as a staff member at Aalto-Tongji Design Factory from summer 2010 until November 2011. I am fluent in English and Finnish, both spoken and written. However, in Chinese, which is my second native language, my written skill is very limited. This restricted me to collect written data in Chinese. On the bright side, I was able to conduct interviews with Chinese interviewees in their own native language, which adds to the validity and reliability of this study.

4. Findings & Analysis: PART I – CASE 1: ADF

The aim of this chapter is to answer the first research question: “*What are the core elements that ADF is comprised of?*” In order to holistically understand what is ADF as a phenomenon, five semi-structured thematic interviews on key informants were conducted providing rich in-depth insights. After careful analysis and interpretation of the findings against theoretical literature, I was able to create a theoretical construct for ADF’s core elements.

This chapter is structured as follows:

4.1. Aalto Design Factory’s Core elements

4.1.1. Hardware – Physical Space

4.1.2. Hardware – Equipments & Materials

4.1.3. Software – Activities

4.1.4. Software – People

4.1.5. Software – Leadership

4.1.6. Software – Philosophy

4.2. Theoretical Construct: Design Factory Concept

4.1. Aalto Design Factory’s Core Elements

Based on a careful analysis and interpretation of the themes, categories and patterns found from the interview data, I reviewed available relevant theoretical literature. First, I identified the six core elements that form ADF. Then, I adapted Schein’s (1985) iceberg model, for studying organizational culture, in order to build a theoretical model for ADF’s core elements. The core elements of ADF are: 1) Physical Space, 2) Equipments & Materials, 3) Activities, 4) People, 5) Leadership, and 6) Philosophy. I further classify these core elements into *Hardware* and *Software* core elements. In the next sub chapters I will describe these core elements in detail.

4.1.1. Hardware – Physical Space

This core element is comprised of the physical space, which belongs to the artifact's category (Schein, 1992; Hatch, 1993; Hofstede, 1991). According to Schein (1992), artifacts can be anything that is visible, heard, and felt. Hence, the physical space of ADF is categorized as a visible hardware core element.



Photo by George Gatanassov May 22, 2011

Aalto Design Factory is can be considered as a creative environment. According to Martens (2011), the physical space can foster creativity and innovation by supporting: 1) creative processes, 2) creative interactions and sharing knowledge 3) flow, 4) creative thinking and insight, 5) personal qualities for creativity and 6) a creative environment. All of these requirements are manifested by this hardware core element of Aalto Design Factory. In addition, I will add one more requirement to this list: 7) *support unfinished factor*.

“...who wasn't an architect, could do this so well, and a natural unfinished feeling was left here... When the student comes here, and this environment is unfinished, it allows the student to be unfinished as well. And when the student

feels that it is ok to be unfinished, then the student can be herself or himself, and to grow in the environment. But if you come to a sterile, a perfect environment that has Artek's furniture, then your own unfinished factor is in huge contrast against the sterile and perfect environment, which would paralyze thoughts, and you'll become, you'll be under the terms of that environment, because you are afraid to lift your foot on the chair, since it is Aalto's design stool or something. But then if it's an Ikea-thing, you are able to be whatever you like, and when a person can be however he or she wants in the physical space with others, then they are be able to think freely... you wont need to think yourself that am I, are my thoughts valuable enough to be shared in this fancy environment. This is the way I see the meaning of the physical space. That there was left a soft of student-kind-of-feeling, kind of unfinished feeling that is one of the factors to enable creativity, that we are not ready, and we don't pretend to be ready. And when the environment doesn't do that, it allows more freedom in people's coexistence, and I'm sure that it liberates thinking" – Researcher



Photo by George Gatanassov April 15th 2010

ADF has around 4000 square meters of multifunctional spatial solutions enabling its community and other stakeholders flexible set ups for various activities and events. The spaces of ADF can be described with adjectives such as fun, playful, inspiring, stimulating, cozy, comfortable, colorful, accessible and unfinished. It is designed to

create an informal environment that encourages open interaction, taking initiative, hands-on prototyping, and spontaneous encounters. ADF's spatial solutions enable a smooth and seamless shift from formal situations to informal interaction. There is a large multifunctional room, called *Stage*, offering room for example lectures, seminars and workshops. There are meeting rooms, individual work rooms, staff wing area, research project rooms, open office, storage rooms, printing room, prototyping facilities: electronics shop and mechanical shop, kitchen & café (*Kafis*), cinema, sauna, and other relaxation & recreation areas. There are concrete results from student projects, but as well as game consoles, toys and other fun gadgets to blur even more the traditional concept of academic world and education.



Photo by Aalto Design Factory August 30 2011

4.1.2. Hardware –Equipments & Materials

This core element is comprised of the various equipments and materials to support various levels of hands-on prototyping. Since these are all artifacts (Schein, 1985), I categorized it as a visible hardware core element of ADF (Schein, 1992; Hatch, 1993; Hofstede, 1991).

Aalto Design Factory seems to strongly support concrete realization from an idea into a prototype by easy access to a) simple paper-and-tape model materials; and b) legos, meccanos, play doh modeling materials; to c) heavy prototyping facilities, equipments, machinery and tools. Thus, all the various phases and levels of prototyping are supported from legos and CAD to CNC-milling, painting, as well as electronics, and woodwork that all can be done at ADF's electronics shop and mechanical shop with the helpful and competent staff.

“... we need to use and implement a lot of prototypes, and that, we have the machines and the staff there, who can help us in doing these, it is a undisputed advantage.” – Pekka Kumpula, Creative Director, Seos Design



Photo by Aalto Design Factory April 26 2012

4.1.3. Software – Activities

This core element is comprised of activities within Aalto Design Factory. The rituals, myths, and stories are all artifacts, because they are visible, and can be heard and felt (Schein, 1992; Hatch, 1993; Hofstede, 1991). In order to have a holistic understanding

of ADF's activities, I chose to divide them into three different categories: formal, informal, and semi-formal. Next, I will explain them separately.

The formal activities have a pre-planned written script, and thus they are explicitly controlled. These are for example lectures, seminars and speeches. These remind more like traditional teaching and lecturing sessions, where the teacher has a prewritten script in order to guide and control the situation.

Informal activities do not have a pre-planned written script and they are not explicitly controlled. What is tricky here is the fact that the informal activities at ADF are actually guided by the staff's "*unwritten secret agenda*". The script is formed by natural improvisation during the situation with or without others. These activities are easy to observe, but hard to understand even for the staff of ADF. If the deeper levels of the culture are not familiar, these activities cannot be interpreted or given a correct meaning. Thus, they are implicitly controlled activities. (Schein, 1992; Hatch, 1993; Hofstede, 1991) These are for example coffee breaks, breakfasts, soup lunches, playing console games, silly experiments, sofa breaks, high fives, group hugs, having a sauna, and drinking a couple of beers with professors. Furthermore, the "*planned coincidences*" and "*random encounters*" are the result of the "*unwritten secret agenda*" of the Design Factory core personnel.

"... undefined group of people whose unwritten secret rule is to maintain some culture, that has not been written to any paper what it is." – Esa "Esmi" Santamäki, Chief of Spatial Design, ADF

Semi-formal activities are between the formal and informal. This is where the magic happens. It is about co-creation and experiencing something new together with passionate stakeholders from various backgrounds at Design Factory (Björklund et al., 2012). These activities are for example workshops, brainstorming sessions, interdisciplinary industry projects such as of IDBM, PDP and ME310. Because of the interdisciplinary and real-life problem solving approach in these programs and projects,

these activities form the concrete results of Aalto Design Factory in the form of new creation (Björklund et al., 2012).

“...innovations are created in the cross-borders between different scientific disciplines and companies when they are collided together.” – Pekka Kumpula, Creative Director, Seos Design

4.1.4. Software – People

This core element is comprised of various stakeholders inside the physical space of Aalto Design Factory. Since people are visible, this software element will be categorized as visible software core element of ADF (Schein, 1992; Hatch, 1993; Hofstede, 1991).

The stakeholder pool at ADF is very heterogeneous that is comprised of people from various backgrounds representing different academic disciplines, nationalities, companies, government organizations and society. In order to describe holistically ADF’s user pool, I chose to categorize this core element into three layers: *staff*, *community*, and *visitors*.

Staff layer is comprised of the core personnel, who work for ADF at ADF on daily basis. These are the key people who know the place the best, because they are the ones who have created this environment, and who are constantly developing it. Without them and their *unwritten secret agenda*, ADF would not exist.

“It is important to have an agenda in those. A secret agenda.” – Esa “Esmi” Santamäki, Chief of Spatial Design, ADF

However, the core personnel of ADF do not necessarily understand themselves what the *unwritten secret agenda* is, because it is guided by the basic underlying assumptions within the organization culture. Since these shared values are often unconscious, taken

for granted beliefs, perceptions, thoughts and feelings, they are difficult to define. (Schein, 1992) I will reveal the unwritten secret agenda in the philosophy chapter.

Community layer of ADF refers to the various stakeholders who actively utilize the space for studies, teaching, research, and work. These are students and teachers who are for example involved in the IDBM program, PDP course, and ME310; company people whose firm is resided in ADF's premises for example start-ups such as Seos Design. Staff layer, the core personnel of ADF, is naturally one important group of people of the community as well.

The community together with staff creates the spirit and culture of Aalto Design Factory. These are passionate people who have shared experiences that are colored by values, beliefs, attitudes norms and traditions. The experiences help in solving future problems while shaping the culture of ADF. (Schein 1992; Aaltio-Majosola, 1991; Hofstede, 1991)

“...physical coexistence creates the spirit, and I think it's very important, I think that in Espoo's Factory, it was successfully created, it takes time... spirit cannot be created with money, and it cannot be created by external forces. It is derived from the people's desire to be together, they want to do things together, they share experiences, mutual positive and negative experiences...” – Pekka Kumpula, Creative Director, Seos Design

Visitors layer is comprised of all the “tourists” interested in and curious about Aalto Design Factory's activities, and who may or may not possess potential of becoming ADF's partners for cooperation, collaboration, and co-creation. This layer is technically anyone who steps their foot inside of ADF generating an enormous network for ADF. This huge stream of different visitors from different backgrounds is a vast asset for ADF's community because it can be translated into a huge stream of information.

“Contacts to academic world, but also company world and then governmental parties... where the stream of people, amount of visitors is huge...” – Pekka Kumpula, Creative Director, Seos Design

4.1.5. Software – Leadership

Leadership seems to be a strong and vital core element of ADF, and it is based mainly on one person, Prof. Kalevi “Eetu” Ekman, Factory Director and Janitor of ADF. According to theoretical literature, this person is the project champion (Esteves & Pastor, 2002).

Prof. Ekman is the beloved father character of Aalto Design Factory. His high position in Aalto University, character, motivation and commitment are of core essence in the birth and success of Aalto Design Factory. This core element is both above and under the waterline of Shein’s (1985) Iceberg model, due to the fact that it is comprised of one person.

“... there is a person who leads and who has sense of these pedagogical issues, and the ideas are, even though he cannot explicitly pedagogically explain, but they are very consistent with each other... perhaps Eetu’s character, the kind of like conception of man, that there is potential in everyone...there was a whole page story about PDP in Helsingin Sanomat, and in it Eetu said that he loves mediocrity, and I think it’s very brave in a way. Because there is the philosophy that... modern learning research precisely states that the tops are not tops because of their natural talent, it says that the tops could be mediocre, but in good circumstances, a mediocre could become a top. Eetu believes that there is something in everyone.” – Researcher

Despite the high rank of Prof. Ekman in Aalto University, he is very humble and down to earth giving support to students, and caring about not only on students’ studies but also in other areas in life.

“... it’s relying so much about one person how this place was born, how the previous place was born, how actually we have this opportunity to do it like this. We all, it is because of Eetu, who has created a world like this, where it has flatten the bureaucracy that has been inside Aalto otherwise, or HUT... status and motivation, but more importantly motivation... to break and show example. It’s always that the leaders shows example, was it door less office or the way to emptying dish washing machine, it’s about small examples.” – Esa “Esmi” Santamäki, Chief of Spatial Design, ADF

Empowerment of young people is an important element of the leadership at Design Factory. It is about giving freedom and responsibility to young people. They are being trusted. Even though the dreams and the ideas of are over their skills and comfort zone, they are not being shot down, but supported. It is based on the trust that a person would grow during the process, and about planting a seed of not being afraid of failing.

“... there’s no specific agenda for my work, sometimes it’s frustrating, but it’s also positive, because then I can always come up with new things to do that I wouldn’t be doing otherwise.” – Esa “Esmi” Santamäki, Chief of Spatial Design, ADF

4.1.6. Software – Philosophy

This core element is beneath the Artifacts, and both above and under the waterline of the Schein’s (1985) Iceberg model, because it is comprised of the visible Espoused Values and the hidden Basic Underlying Assumptions.

Espoused values are for example written goals, slogans, guidelines, and philosophies by leaders of an organization. When these values become stronger in a culture, they become basic underlying assumptions. Basic underlying assumptions lie in the bottom level of the organization culture, and are difficult to change. They reflect the shared

values within the culture, and are often hard to define even for the members of the culture, because they usually exist in unconscious level. These assumptions consist of taken for granted beliefs, perceptions, thoughts and feelings. (Schein, 1992)

The philosophies behind ADF's activities seem to be based on strong and solid pedagogical-philosophical grounds.

“... I can see that things are being done here, and what is done here is extremely interesting, and can be said as future stuff... I think that Design Factory answers precisely to the future competence needs, and the rest 99% of Aalto is not. ... The activities can sometimes be seen just random but there are actual solid pedagogical-philosophical sentiments behind them.” – Researcher

Based on the interviews and theoretical literature, I identified four philosophies for Aalto Design Factory. Due to their visibility, I categorized three of them into visible Espoused Values: 1) *passion-based*, 2) *co-creation*, 3) *quick prototyping*; and one into invisible Basic Underlying Assumptions: 4) *unwritten secret agenda*.

1. Passion-based

Passion-based is a strong element of ADF, which appears on ADF's slogan: *Experimental Passion-based Co-creation Platform*. It suggests that all the activities in Aalto Design Factory should be based on people's inner passion and drive. Thus, ADF seems to support intrinsic motivation (Hertzberg, 1968), which in turn enables creativity and innovation (Amabile, 1996, 1998; Simonton, 1999; Runco, 2004).

The passion-based atmosphere of ADF is informal, which enables collaboration, knowledge sharing and experience exchange across hierarchical, professional, and disciplinary boundaries. Hence, ADF's environment supports creativity by enabling informal, direct, and horizontal communication and interaction between different stakeholders. In addition, ADF's low-hierarchy and proactive climate promotes creativity by empowering young passionate people by giving them both freedom and

control in a cozy environment. (Toker & Gray, 2008; Martens,2011; Ryan & Deci, 2000; Björklund et al., 2012 ; Bandura, 1982; Parker, Williams & Turner, 2006; Parker, 1998)

“And then giving responsibility to young people, I think it is also a pedagogical wisdom, that teacher give up their control... that young people are being trusted. This is an absolute strength.” – Researcher

2. Co-creation

Co-creation is an essential element of ADF, which also appears on ADF’s slogan: *Experimental Passion-based Co-creation Platform*. Björklund et al. (2012) defines co-creation as “*the process of creating something together*”, which includes three necessary basic elements: 1) *collaboration*, 2) *dynamic development action*, and the 3) *resulting creation*. While the above-mentioned are all necessary in co-creation, it typically also includes the following characteristics: a) different people, b) experimentation, prototyping and demonstrations, c) physical space. (Ibid.)

In order to enable co-creation, both will and integration of the development efforts of the different stakeholders should be supported. Supporting will is about fostering people’s intrinsic motivation by offering individuals an environment to unleash their inner passion and drive to realize their dreams. (Ibid) Hence, there is a need to focus on the three elements of intrinsic motivation: 1) *perceived importance of the goal i.e.* enhance support and communication and provide a context for tasks, and find solutions to real-life problems; 2) *perceived capability to reach the goal i.e.* promote self-efficacy by co-worker trust, autonomy, empowerment; and 3) *perceived progress towards the goal i.e.* promote experiments by hands-on prototyping to produce small wins.

In order to support integration of development efforts of different stakeholders, motivation to collaborate with others needs to be ensured. This can be done by building trust, establishing a shared identity, having a holistic view of the problem and solution, co-locating stakeholders, and communicating with physical objects i.e. prototyping. (Björklund et al., 2012)

Aalto Design Factory's semi-formal activities are the manifestation of successfully applied co-creation action, and thus all of the requirements and characteristics of this philosophy are fulfilled. This is one of the most important philosophies of Aalto Design Factory, and it is manifested in different interdisciplinary and real-life problem solving workshops, brainstorming sessions, industry programs and projects such as IDBM, PDP and ME310.

“... if you think about learning research, that expertise is formed in the community by doing together. Expertise is not about something that is inside of an individual's head, but it is formed in the group. And this is the basis for the activities here.” – Researcher

3. Quick Prototyping

Quick prototyping seems to be one of the most identified philosophies of ADF. It is also one of the cornerstones of co-creation. Quick prototyping is widely recognized in various fields for example product development, design, design thinking and problem solving. It enhances creativity and innovation by supporting intrinsic motivation while producing small wins, increasing self-efficacy, and improving communication. (Björklund et al., 2012; Ryan & Deci, 2000; Bandura, 1982; Schön, 1983; Drexler, 1986; Boland & Collopy, 2004; Stacey & Lauche, 2005; Hassi & Laakso, 2011; Weick, 2001; Reay, Golden-Biddle & Germann, 2006)

ADF supports quick prototyping philosophy by providing easy access to available prototyping facilities, equipments, tools and machinery at electronics and mechanics shops, as well as paper-and-tape model materials, in addition to legos, meccanos, and play doh modeling materials.

“... in order to be more time efficient, understanding better... not think to build but build to think –philosophies, and that understanding better and quicker complex issues, in order to create better results.” – Kalevi “Eetu” Ekman, Factory Director of ADF

4. *Unwritten Secret Agenda*

The “*unwritten secret agenda*” of ADF is perhaps the most difficult to reveal comprehensively, because it is underneath the visible Artifacts and Espoused Values, and hidden at the bottom of the Schein’s (1985) iceberg. According to Schein (1992) the basic underlying assumptions consist of taken for granted beliefs, perceptions, thoughts and feelings. Thus, they cannot be observed and moreover understood. Still they are the most important part of the organization culture of ADF, because they shape members’ worldviews, beliefs, and norms that are guiding people’s behavior, but yet not explicitly expressed. Since the “*unwritten secret agenda*” is at the deepest level of ADF’s organization culture, it is difficult to define even for the staff members of ADF, because it usually exists in the unconscious level. (Schein, 1992)

ADF’s “*unwritten secret agenda*” seems to implicitly guide ADF’s core element: Software – Activities, and especially the *informal* activities. To recap, informal activities are activities that do not have a pre-planned written script and they are not explicitly controlled. The script is formed by natural improvisation during the situation with or without others. Thus, they are implicitly controlled by the “*unwritten secret agenda*”, which mostly exist on the unconscious level of ADF’s core personnel. These informal activities at ADF are for example coffee breaks, breakfasts, soup lunches, playing console games, silly experiments, sofa breaks, high fives, group hugs, having a sauna, and drinking a couple of beers with professors.

Revealing the Agenda of the Unwritten Secret Agenda

The idea behind the *unwritten secret agenda*, and hence the informal activities of ADF, seems to be at least the following: a) *enable “planned coincidences” and “random encounters”*; b) *blur the boundary of work and leisure*; c) *detach from the “normal” ravine*.

ADF seems to support social interaction by enabling “*planned coincidences*” and “*random encounters*”. This is manifested, for example, as coffee breaks. The idea behind the principle of having only one coffee machine at ADF is that it would “force”

people to interact with each other in an informal setting. The informal activities at ADF promote low-hierarchy, informal face-to-face communication (Toker & Grady, 2008; Martens, 2011) that enables creativity and innovation.

“... where people meet each other and ask what do you do here, and through that it will lead to being brave enough to ask help and advices.” ” – Esa “Esmi” Santamäki, Chief of Spatial Design, ADF

ADF seems to enable a smooth and seamless shift from formal to informal by blurring the boundary of work and leisure. ADF’s environment supports the various overlapping phases of creative processes that requires different kind of physical and mental environments. In the preparation phase, data and information can be gathered for example in a lecture. During the incubation phase, which is primarily individual, unconscious, implicit cognitive process, the person could take a nap in the caravan or take a shower. (Lubart, 2001; Csikszentmihalyi, 1996; Amabile, 1996)

“... and one of our goals was to blur the boundary between work and leisure. It’s quite visible here that it is seriously been blurred, because not that many know when they are on their leisure time. (Laughter)... if we want to create something new, to talk about issues more openly, it usually happens during spare time, or in the transitional phase or other strange encounters. Many come ups with an idea during a shower or walking somewhere, it rarely happens at the work desk. Therefore, we wanted to offer an environment at work, where you can spend also spare time and have a break that feels just like at home. Now that we are in an information society, the significance of breaks is totally different than it was before. ” – Esa “Esmi” Santamäki, Chief of Spatial Design, ADF

The key behind detaching from the “normal” ravine is to support creativity by allowing unusual or even subversive activities, people and ideas (Sutton, 2001). This is manifested at ADF by doing things that are considered “not normal” in an academic environment. These observable informal activities are for example playing console

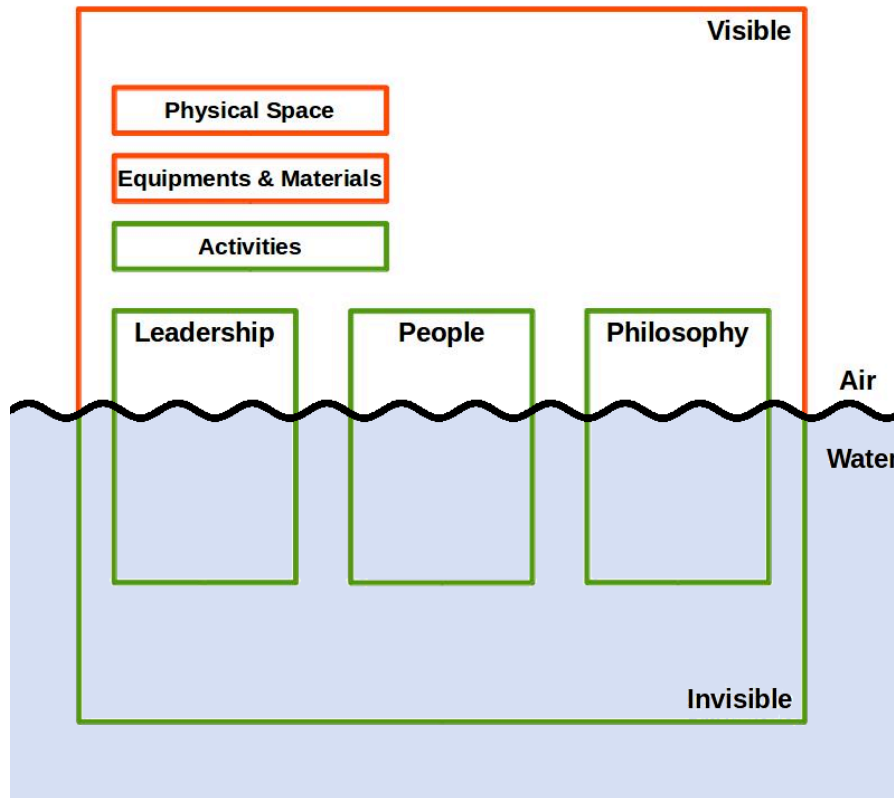
games, silly experiments, laying on the sofa, high fives, group hugs, having a sauna, and drinking a couple of beers with professors. Detaching from the traditional academic ravine by these collective activities suggest that ADF has a certain level of tolerance to unusual or even subversive people and ideas.

“...but there is an idea and philosophy about doing something together that is something absolutely crazy, and it would follow a kind of sense of belonging to a community, and discussion, and then possibly something else...to organize bit silly situations that doesn't traditionally belong to the academic community, to detach people from the academic ravine with something like this. – Researcher

4.2. Theoretical Construct of Design Factory Concept

In order to create a model for Design Factory concept, I adapted Schein's (1985) iceberg model to study the six core elements of ADF. I also reviewed literature from other relevant fields in order to holistically understand the academic theories behind the Design Factory phenomenon. The resulting theoretical framework, from the first part findings of this thesis, allows critical assessment of Design Factory concept's transferability and adaptation into different cultural contexts such as communities, companies, organizations, and different countries.

The theoretical construct is comprised of six core elements: Physical Space, Equipments & Materials, Activities, People, Leadership, and Philosophy. I further categorized these core elements into hardware (orange) and software (green) due to their nature.



Theoretical Construct of Design Factory Concept

1. Hardware – Physical Space

This core element is the physical space that supports creativity and innovation. The physical space should foster creativity and innovation by supporting 1) creative processes, 2) creative interactions and sharing knowledge, 3) flow, 4) creative thinking and insight, 5) personal qualities for creativity, 6) creative environment, and 7) unfinished factor.

2. Hardware – Equipments & Materials

This core element is comprised of the various equipments and materials to support various levels of hands-on prototyping. This hardware core element should support concrete realization from an idea into a prototype by easy access to a) simple paper-and-

tape model materials; and b) legos, meccanos, play doh modeling materials; to c) heavy prototyping facilities, equipments, machinery and tools.

3. Software – Activities

This core element is comprised of activities within Design Factory: formal activities, informal activities and semi-formal activities. Formal activities are explicitly controlled, for example, lectures and seminars. Informal activities are implicitly controlled that are guided by the “*unwritten secret agenda*”, which enables “*planned coincidences*” and “*random encounters*”, in addition to “unusual” and subversive activities. Semi-formal activities are between the formal and informal. These are about co-creation action and creating something new together with different stakeholders.

4. Software – People

This core element is comprised of various stakeholders inside the physical space of Design Factory: *staff*, *community* and *visitors*. Staff layer is comprised of the core personnel of Design Factory. Community layer is comprised of staff layer and various stakeholders who actively utilize the space for studies, teaching, research and work. These are students, teachers, and start-up company people. Visitors layer is comprised of all the “tourists” interested in and curious about Design Factory’s activities, and who may or may not possess the potential of becoming Design Factory’s partners for cooperation, collaboration and co-creation.

5. Software – Leadership

This core element is comprised of the leader, the project champion, who has high position, character, motivation and commitment to run Design Factory concept, and as well as to carry the responsibility.

6. Software – Philosophy

This core element is comprised of the philosophies of Design Factory. These are visible Espoused Values: 1) *passion-based*, 2) *co-creation*, 3) *quick prototyping*; and invisible Basic Underlying Assumptions: 4) *unwritten secret agenda*. The unwritten secret agenda is comprised of these following agendas: a) enable “planned coincidences” and

“random encounters”, b) blur the boundary of work and leisure and c) detach from the “normal” ravine.

ESPOUSED VALUES (visible)

1. *Passion-based*

- Intrinsic motivation based on passion
- Low-hierarchy: horizontal communication and interaction
- Empowerment of young people: freedom and responsibility

2. *Co-creation*

- Creating something new together: finding solutions to real-life problems
- Prototyping: hands-on doing to foster understanding while producing small wins
- Open innovation: helping each other

3. *Quick Prototyping*

- Fail-fast, fail early in order to succeed earlier
- Experimental mindset: curiosity and enthusiasm
- Learn by doing – do to learn, not learn to do
- Do it first and apologize later

BASIC UNDERLYING ASSUMPTIONS (invisible)

4. *Unwritten Secret Agenda*

- a) Enable “planned coincidences” and “random encounters”
- b) Blur the boundary of work and leisure
- c) Detach from the “normal” ravine

The six core elements are all necessary building blocks for Aalto Design Factory’s success. Since Design Factory concept is also an instrument for Aalto University’s internationalization, it is essential to understand the concept based on scientific research. This would then allow critical assessment of Design Factory concept’s transferability and localization across national boundaries and cultures.

5. Findings & Analysis PART II – CASE 2: ATDF

The aim of this chapter is to answer the second research question: *How does the Chinese cultural context affect the adaptation of ADF's core elements into ATDF?* In order to holistically understand the contradictions of landing ADF's core elements in to Chinese cultural context, I conducted four semi-structured interviews and one open interview. After careful analysis and interpretation of the interview data from both interview rounds against theoretical literature about Chinese cultural context, I was able to answer this research question.

Furthermore, while analyzing the findings for the second research question, I was also able to draw managerial suggestions that answer to the third research question: *How can ATDF's management be improved?* However, I will answer the third research question in the next chapter: 6. Conclusions.

In other words, in this chapter, I will test the theoretical construct of ADF's core elements in the Chinese cultural context. I will describe the adaptation level of six core elements and explain how the Chinese cultural context affect their nature by examining them on one by one basis. Thus, the next subchapters will naturally be titled in the following way:

- 5.1. Hardware – Physical Space
- 5.2. Hardware – Equipments & Materials
- 5.3. Software – Activities
- 5.4. Software – People
- 5.5. Software – Leadership
- 5.6. Software – Philosophy

5.1. Hardware – Physical Space

This core element is comprised of the physical space to enable creativity and innovation by supporting: 1) creative processes, 2) creative interactions and sharing knowledge 3) flow, 4) creative thinking and insight, 5) personal qualities for creativity 6) a creative environment (Martens, 2011) and 7) unfinished factor.

While this hardware physical space core element seems to be quite straightforward just to copy into another location, the Chinese cultural context does have an influence on how well it will be adapted. This core element is comprised of artifacts that are visible and thus observable symbols that represent different meanings to people from different cultures (Schein, 1992; Hatch, 1993; Hofstede, 1991). Hofstede (1991) states that symbols have a particular meaning, which is recognized only by the people sharing the same culture. So, people from different cultures, see artifacts and symbols in a different way, and also give them different meanings.

The physical space of ATDF was co-designed by Esa “Esmi” Santamäki, ADF’s Chief of Spatial Design together with SHI “Sam” Yin, Interior Design Teacher from Design and Innovation College, Tongji University. Hence, the design process of ATDF was already a cultural crash.

“... we took some time in defining what is Design Factory, that what is the cultural factor that would be taken to China, how to adapt it to China. I pretty fast gave my opinion that perhaps it shouldn’t be modified to the culture, because it already works in Finland to different cultures, and then why it should be adapted there to the Chinese culture, the standard approach to activities.” – Esa “Esmi” Santamäki, Chief of Spatial Design, ADF

“ To be honest, I don’t completely understand what is ADF. If I had a chance, I should come to see. Cultures are different. It may affect on activities and how people behave. But maybe this doesn’t necessary mean that which way is the

most right one. Or Aalto's way is the right one. Because when it comes to an environment like China, and if the top priority is the partner's users, who are Chinese, then it should adapt to the culture in order to convey the best result. Now, this would then be the best and logical.” – SHI “Sam” Yin, Interior Design Teacher, Design and Innovation College, Tongji University

Because of the cultural differences between Finland and China (Hofstede, 2012), the physical space and the artifacts represent different meanings to Finnish and Chinese people (Schein, 1992; Hatch, 1993; Hofstede, 1991). It is sure possible to just copy directly the artifacts and the physical space, but it is challenging to understand how they are being interpreted and what meaning do they represent in the minds of people from different cultures (Hofstede, 1991). Direct copy of the artifacts and physical space is an easy approach, but highly dangerous, because it may potentially have negative impact on creativity and innovation (Moutrie et al. 2007). Chinese people might get confused instead of inspired.

However, according to Hatch's (1993) “cultural dynamics” model, artifacts can shape values, because of two-way interaction between the four dynamic factors of a culture: assumptions, values, artifacts and symbols. This would suggest that the Chinese culture could absorb newly symbolized content into itself because of new artifacts. Thus, the acceptance of the physical space depends on how well it can transform established values of Chinese culture. Therefore, it is possible that the physical space of ATDF would stimulate people's minds and support creativity and innovation.

“I always think that Chinese students, because of their background, home/family background, and the whole country and culture background are different. That's why during their University time, they need more stimulation to let them be more open, to let their minds be more energetic. Otherwise they would listen and observe more, and not easily passionately participate in a discussion. This perhaps also needs environments grooming and stimulation. That's why I think at China's factory, and maybe this is also different from Finland's factory. When I was collaborating with Esmi, I would concentrate more on environments

playfulness. I'm not sure, maybe it's pretty playful also at Aalto DF, but in China's factory, I hope it to be very playful.” – SHI “Sam” Yin, Interior Design Teacher, Design and Innovation College, Tongji University

“... the color is not so popular, that people want to go there. The color is not colorful. It's too cold I think. I prefer to stay in here in Design Factory here. It is very nice and relaxed. Sometimes I think ATDF is little serious, and official. It's like that.” – SUN Huangyin, IDBM exchange student of Tongji University

ATDF's physical space seeks to support creativity and innovation. Creative thinking requires an environment where freedom, security and control are deeply experienced (Chistoff et al., 2009; Csikszentmihalyi, 1996; Amabile, 1996). Furthermore, creativity should have a certain amount of tolerance for unusual or even subversive people and ideas (Sutton, 2001). ATDF's physical space has actually many characteristics that seem to support requirements for creativity and innovation. However, due to the Chinese cultural context, it seems that this core element is not comprehensively adapted at ATDF. Even though ATDF seeks to support the necessary requirements for creativity and innovation, it seems to have its own set of Chinese rules and regulations to prevent these qualifications.

“Best things about design factory in Shanghai... it's also about having a new philosophy, no matter how well this is expressed. Maybe it doesn't have that much as Eetu has once wanted. Because our environment is different and policy is different. A lot of things, you can't just do and mess around. It's not like if you want to do something and you just then do it. It's like what Matti said that he wanted to have a Christmas tree and then he was told that no way. It's like you have this idea, but then you can't do this. He said he wanted to have a Christmas tree and they told him that in China this is impossible. There are a lot of different kinds of restrictions. For example from school, or other policies. It's not so free like it is over here. Here, students are the bosses. They can do whatever they want, if they have an idea. However, overall freedom and self-service kind of idea have been brought to China. For me, I have been there for a

long time and then I've been also here. So, that's why I can see the contrasts so well. But the students in Shanghai are quite satisfied I think. Many people think that it is very interesting, because they don't have something to compare to. - LU Zhou, IDBM exchange student of Tongji University

5.2. Hardware – Equipments & Materials

This core element is comprised of easy access to facilities, equipments, tools and materials in order to support various levels of hands-on prototyping. It is comprised of a) simple paper-and-tape model materials; b) legos, meccanos, play doh modeling materials; and c) heavy prototyping facilities, equipments, machinery and tools.

While this hardware core element seems to be the most straightforward to copy and transfer across cultures, it is not fully landed into ATDF. There is missing the third component of heavy prototyping facilities and thus along with the opportunity to support all the prototyping phases and levels. The absence of it seems to suggest resource limitations such as space and funding. In addition, the strategic intent of ATDF may also be a reason affecting the nature of this core element. Nevertheless, the simple prototyping levels are covered at ATDF, which communicates the idea of supporting creativity and innovations.

5.3. Software – Activities

This core element is comprised of visible activities within Design Factory categorized as *formal activities*, *informal activities* and *semi-formal activities*.

Since the activities are artifacts, it seems that they can be easily copied into ATDF. However, the Chinese cultural context does have an influence on how these artifacts are being interpreted by the Chinese people. Artifacts represent different meanings to

people from different cultures. (Schein, 1992; Hatch, 1993; Hofstede, 1991) For example, while an informal activity such as hugging could mean just friendship for western people, in a Chinese context it may often represent deep intimacy between a man and a woman. However, it may be possible that these activities could transform the established values of Chinese culture, and thus become accepted by the Chinese people (Hatch, 1993). Thus, it seems possible that the different “silly” activities at ATDF would stimulate Chinese people’s minds and support creativity and innovation.

Most of the activities at ATDF seem to lie on the formal activities category. These are for example lectures, seminars and speeches that are all explicitly controlled formal situations, where lecturers have a preplanned script to guide and control the sessions. This is quite straightforward category, and therefore the Chinese cultural context does not affect much of its localization.

The transfer of ADF’s informal activities such as coffee breaks, breakfast, soup lunches, playing console games, silly experiments, sofa breaks, high fives, group hugs, having a sauna, and drinking a couple of beers with professors, can be highly challenging, because these artifacts are based on Finnish culture, and moreover ADF’s own culture, and they may not translate correctly in a positive way in the Chinese context (Schein, 1992; Hatch, 1993; Hofstede, 1991). Furthermore, ADF as an experimental platform is ahead of its time in Finland and transferring these informal activities can be difficult even within Aalto University!

“...with those who were here, we tried by our own behavior and example to communicate of doing things differently, to give group hugs, and throw ties away during presentations, and try to be like inspirational, a bit different, throwing high fives and other things.” – Viljami “Viltsu” Lyytikäinen, General Manager of ATDF

“... I’m not so clear about for example how well the group hug suits for the Finnish people. For Chinese people it’s a bit awkward. I feel that most of the time the people who are hugging are foreigner-Chinese or foreigner-foreigner,

rarely it's Chinese-Chinese at hugging point.” - WU “Alex” Yuanqi, Project Manager of Sino-Finnish Centre

Semi-formal activities are about introducing the concept of co-creation and experiencing something new together. At ATDF, these are manifested by for example pedagogical workshops, brainstorming sessions, interdisciplinary industry projects such as of IDBM. However, the concept of co-creation with its requirements such as intrinsic motivation and hands-on prototyping, seem to be difficult to localize into ATDF. In addition, it seems that the concept of start-ups is not promoted in China, which also hinders the landing of co-creation concept.

“Chinese students hands-on capabilities are lower than Finnish or western students. This is perhaps because at home, Chinese parents don't let to let them wash clothes, playing with mud, breaking down stuff. So, hands-on skills are not so good. There is not much of hands-on possibilities at school.” – Sam SHI Yin, Teacher of Tongji University

“I have learned that as a matter of a fact, in China, China is against the idea of establishing start-up companies. Like it is fool to establish start-ups, because start-ups are basically a bottom-up-thing. It is about experimenting from something small and maybe it will get on. For that reason, it is an unplanned, and uncontrolled from the top. In China, things are done in the opposite way.” – Matti M. Hämäläinen, Director of Operations of ATDF

5.4. Software – People

This core element is comprised of various stakeholders inside of the physical space of ATDF. This core element is further divided into three layers: *staff*, *community* and *visitors*. This is a software core element is comprised of people, and it is obviously not about transferring the people from ADF to China, but rather transferring the knowledge,

philosophy and ways of working that seems to be successful at Aalto Design Factory in Finland.

Design Factory concept is a tool for Change. Since change happens in the minds of people, it is rarely an easy task and it takes time (Schein, 1992; Kotter, 1995). People will always resist change consciously or unconsciously if they feel that their jobs are threatened (Burns, 2008) or they do not understand the purpose and consequences (Williams & Williams, 2007). People seem to pay attention only to the information that is in line with the conclusion they want to make, and ignore the rest (Jermias, 2001).

3DS and the Spanish workshop were very similar. They both are challenging the Chinese system's limits. They both carry risks with them. They are risky especially for Sino-Finnish Centre. However, the success or, nothing bad happened during these events, they ended up very good in terms of results and also in terms of promotion. But then again, you know, China is very sensitive when it comes with foreigners. If something, related to security and political issues, even though small, it would be very critical and big for SFC. SFC is very open. This openness brings risks associated along the way, because it challenges China's educational systems. And not only education system, but also.... Do you know that schools in China are part of the governmental system? They are not separate. Thus, this is why there are some political risks involved. However, I feel that Tongji University compared to other universities, is much more open. And we organize these events and nothing bad has happened, and no one has noticed any "bad" results. But I constantly worry that if something bad happens, and even though it's school that is open, but the governmental policies are behind it, and there is no way to challenge this. – WU "Alex" Yuanqi, Project Manager of Sino-Finnish Centre

Now, that it is about changing the culture of Chinese people that has influenced Chinese minds for over 5 000 years (Luo 2001), it may take even more effort because of the cultural and institutional differences between Finland and China (Kostova, 1999; Hofstede, 2012). Furthermore, according to institutional theory, there is a trend for

organizations to become alike with the institutionalized structures and processes within their environment (Roth & Kostova, 2003). Thus it seems unquestionable that the institutional and organizational environment of China is shaping the activities of ATDF, and thus affecting its nature.

“Design Factory in Finland is in ahead of its time in a way. So, It is a huge change process for the way of working, and culture in Finland. And then I can say that the Finnish average way of working is a lot ahead of Tongji’s normal way of working. The problem or the challenge that we have encountered is that we cannot take two steps at a time. But there has been a lot of positive change visible. It’s just my own expectations has been very high and sort of dropped quite fiercely on the ground... – Matti M. Hämäläinen, Director of Operations of ATDF

The staff layer at ATDF is comprised of a small cross-cultural team of Finnish and Chinese people, that is rather small compared to ADF in Finland, only a few people. Out of them, there seems to be only one person who actually knows the philosophies behind Aalto Design Factory, and hence who has an idea of how it works in Finland. This person, at the moment, is Matti M. Hämäläinen, “Factory Director”, and Director of Operations of ATDF. Since ATDF should be managed jointly with Chinese counterparts, the Factory Director has actually quite little negotiation leverage on the activities that happens at ATDF.

“...Let’s say that compared to my expectations, the situation where I am is very different, and the situation is not easy. I have a lot of challenges personally, about understanding the Chinese way of doing things and also getting in balanced with it. I feel that I’ve wasted a lot of time and energy on things that I shouldn’t have done. And in my point of view, we have been lied to in many things. But the other point of view for this is perhaps because of misunderstandings about something, which might be a more truthful answer. “ – Matti M. Hämäläinen, Director of Operations of ATDF

There seems to be many difficulties in the management level of this layer due to cultural and communication differences between Finland and China (Hall, 1967; Hofstede, 2012; Wilson, 2012). Furthermore, it seems that the espoused values of ATDF are not connected with the basic underlying assumptions of the people at ATDF, which partly explains the frustration, lack of moral and inefficiency. (Schein, 1992)

“I’m not sure am I right. Sometimes I can feel, for example Matti could have double criteria. He could sometimes tell me that “hey Chinese students like to hide themselves to work in meeting rooms”, but I think after seen that a couple of times, he would make a conclusion like that. I’ve noticed that sometimes also Finnish students or other international students do the same. Maybe how you see and how we see things differs, and the result is different. Because there are much more Chinese students at ATDF/SFC and thus the possibility of these kind of students who hide themselves into meeting rooms is much bigger. Therefore, I think he could have double criteria.” – WU “Alex” Yuanqi, Project Manager of Sino-Finnish Centre

The community layer at ATDF is rather small, and there are no start-up companies involved. It is also rather discrete that does not spend much time together, which generates an obstacle in creating ATDF’s own spirit and community culture. Spirit and culture are created by shared experiences by the people who spend time together, which help in solving future problems while shaping the culture and the basic underlying assumptions. (Schein 1992; Aaltio-Majosola, 1991; Hofstede, 1991) Nevertheless, it seems that this is cannot be observed at ATDF.

“The most relevant factor I think is that there was PDP and IDBM along somehow, there was the critical mass involved, and that’s how we got it working, and got more interested people involved, but here (ATDF) it was done in the opposite way. You can notice here that the inspiring physical space alone does not bring the people or users here. – Viljami “Viltsu” Lyytikäinen, General Manager of ATDF

The visitor layer is comprised of all the “tourists” interested in and curious about Aalto-Tongji Design Factory’s activities, and who may or may not possess potential of becoming ATDF’s partners for cooperation, collaboration, and co-creation.

There has been a great interest towards ATDF in China, and therefore a large amount of people from all around the world has been visiting ATDF. However, due to the small community and a few staff members at ATDF, it seems that there are not many who actually can benefit from this vast asset of people and information stream at ATDF.

“... it would be also a great thing at ATDF, if there would be someone who could benefit from the stream of visitors, ministers, but then it is possible to show empty spaces, or the cat or Tsingi or Viltsu. There missing the people who would benefit the stream of visitors at ATDF” – Esa “Esmi” Santamäki, Chief of Spatial Design, ADF

5.4. Software – Leadership

This core element is comprised of one person –the leader, the project champion (Esteves & Pastor, 2002) who has high rank, character, motivation and commitment to break the old and introduce the new by showing example to others, while also carrying the responsibility of the Design Factory concept.

Since, we are talking about a person now, it is impossible to copy Prof. Ekman from ADF to ATDF. Thus, it is more about finding a local project champion in China. While there seems to be a person in China who is supposed to be doing the same job as Prof. Ekman is in Finland, his actions look totally different. This person in China has the high rank and also the abilities to make impossible things possible –but in the Chinese way, which is still the old traditional way of doing things based on Confucian values and guanxi (Sheh, 2002; Park & Luo, 2001; Luo, 1997; Boisot & Child, 1996; Gold et al., 2002; Bun & Kui, 2000; Wu, 2000). Although his actions seem to be highly efficient

to make things happen in China, they are not aligning with the philosophies of Design Factory concept. Thus, the adaptation of this core element seems to be rather impossible.

“I think LOU if you want to think it like that. I think it can’t be just like Eetu. Sometimes I feel that LOU is very much like Eetu... For example, many times, although LOU doesn’t spend that much time at SFC, every time he comes, I can see him chatting with students and discussing something stuff... because he is very busy and for a teacher, withdrawing every minute or a short time is already very difficult.” – Alex WU Yuanqi, Project Manager of Sino-Finnish Centre

“...in many ways sort of equivalent to Eetu. In the sense, that he is the person, who is well connected and involved in many organizations, and gets things done in his own way. It should be respected that he can arrange big events. And I’ve tried to follow and learn the log... Chinese way of doing things, to build likes these kinds of seminars. There are very big names around the world to give speech... The Chinese way of doing things is just very different.” – Matti M. Hämäläinen, Director of Operations of ATDF

“I think in ATDF, I don’t think it’s not necessary, because people are always changed. That is not so stable. Because of the policies in China are changing always. Today the teacher is in this position, next day he or she is changed to another one. It is very normal. So, would people like Eetu, I think, should be the spirit of the design factory. But if it was changed always, I cannot see that.” – SUN Huangyin, IDBM exchange student of Tongji University

“There is no one in China’s factory that could take this responsibility. Everybody takes it as a place where they just work for a while and then leave. Then who would replace him? There is no soul/spirit (linghun). After the tasks of that period is done, then leave. That’s how I feel. I’m not sure, I haven’t worked there.” - LU Zhou, IDBM exchange student of Tongji University

5.6. Software – Philosophy

This software core element is comprised of the both visible Espoused Values and invisible Basic Underlying Assumptions, and thus making it perhaps the most challenging core element to transfer successfully into Chinese cultural context.

While espoused values are visible and conscious, they should be supported by some general and shared assumptions. Otherwise, they may only reflect rationalizations and aspirations making people to say different things than they actually do. It is extremely difficult to manipulate the basic underlying assumptions, because it lies on the unconscious level of people's mind, that shape worldviews, beliefs, and norms that are yet guiding people's behavior. When espoused values are not connected with basic underlying assumptions, it can cause frustrations, lack of morale and inefficiency (Schein, 1992) Due to the Chinese cultural context factor, all of the four philosophies seem to be poorly manifested at ATDF.

1. Passion-based

Passion-based philosophy is a huge question mark at ATDF. It seems that this is not manifested at ATDF in any forms. Furthermore, it seems that this would suggest that there is low level of support for intrinsic motivation; high-hierarchy between people; strict control, and vertical communication. These are all opposite dimensions compared to the ideal Design Factory model.

“People say that we are all on the same level, but then you can notice some people, that still behaves like, how to say this correctly, exploiting their own authority. And there are also examples from our Aalto's side too perhaps, that a lot has been said, but on random small issues, it's just exposed... that the command is given and then somebody runs... I don't know how to make changes happen in this. Perhaps this could be same in Finland too in some places, but here somehow there is a longing for a local Eetu or a person, who has enough wrinkles or medals on neck, who could then bring different activities

concretely by showing own example.” – Viljami “Viltsu” Lyytikäinen, General Manager of ATDF

The Chinese government strictly administers Tongji University, and thus the organizational culture of it seems to be Feudal Hierarchy. This kind of organizational culture is governed by, not on “formal rationality” (Weber, 1964; Huang, 1997; Child, 2009), but rather on “substantive rationality” which concerns people’s spirituality and values (Weber, 1964: 185-186; Child, 2009: 60). Hence, China’s traditional bureaucratic systems that are filled with numerous rites and rituals that are based on Confucian values (Boisot & Child, 1996; Child, 2009; Huang, 1997).

Since Confucian values prevail in the minds of Chinese people, it seems highly challenging to manipulate these basic underlying assumptions that guide people’s behavior. While this philosophy might be conscious and an espoused value at ATDF, it might not be rooted in the bottom of Chinese peoples’ minds. On the other hand, it seems also that this philosophy might not be rooted in all of the Finnish people’s minds either. This kind of disconnection between espoused values and the actual rooted values would make people say different things than they actually do.

2. Co-creation

There seems to be difficulties in adapting co-creation concept as well at ATDF. Since co-creation requires intrinsic motivation, self-efficacy, autonomy, empowerment, hands-on approach, ATDF scores very low on enabling co-creation. *“Flat matrix organizations are perhaps not yet suitable for China” (Tero Kosonen, MPS China at Finnish Young Professionals Event in Shanghai June 9th 2011).*

“Here it is pretty much based on giving a lot of freedom and responsibility to students. And then when there is a student culture, where students do not have it, and suddenly they are being given freedom and responsibility, it wouldn’t work in a same way. If it were done in China or somewhere else that has more hierarchical relationships, the core idea would work by giving a bit more responsibility to students. Because if the same amount is given like here, there

could be results that no one would understand and control, and the students would be lost, because they are not trained for it.” – Researcher

It seems that autonomy and empowering young people is perhaps not yet suitable approaches in Chinese cultural context where Confucian values prevail. People might get confused instead of becoming intrinsically motivated. An example of empowering Chinese students is the Tongji on Tracks (ToT) project, where students were given a lot of freedom and responsibility to organize a train trip from Shanghai to Helsinki. ToT was inspired by Aalto on Tracks (AoT) project in 2010, which was wholly organized by proactive Finnish students. Although ToT can be considered somewhat successful, the whole process seemed to quite confusing to the students.

“Chinese students are not as self-motivated/proactive as Finnish students. At that time, you gave so many tasks and responsibilities to the students. It was a very risky thing to do. And I thought that this project could fail because of this. I had this feeling many times.” – LU Zhou, IDBM exchange student of Tongji University

3. Quick prototyping

Quick prototyping philosophy seems also to be very difficult to adapt to ATDF, because Chinese are greatly afraid of failing. In Chinese culture, it seems that failing is not acceptable at all. In addition, the education in China is still relying on the old tradition for teaching students: “guan shu”, which is directly translated as “pouring from the book”. Furthermore, students seem to be very submissive in proactive activities suggesting low experimental mindset, which also hinders the adaptability of this philosophy.

“Before experimenting, we would give up. But people here would first try, because this is a country that allows you to fail. Do you agree? If you fail here, there wont be people to have bad thoughts about you. And also you would have many more opportunities. There are always new opportunities. Fail fast does not work in China. When you are 25 years old, and if you are still experimenting

new jobs, you don't have a stable job, you are not being a good son or daughter.
– LU Zhou, IDBM exchange student of Tongji University

The reason why Chinese are afraid of failing so much is because of the concept of face, which is deeply rooted in the Confucian values. The concept of face focuses on social harmony, stability and hierarchy. (Chang & Holt, 1994; Ho, 1976) According to Hu (1944), “lian” is the primary carrier of moral codes, and defines the fear of losing face as an effort to keep ones constantly conscious of moral boundaries and to hold up to the moral values that are historically transmitted and traditionally accepted. Because of the communal nature of this face concept, losing face would not only harm the individual, but also the immediate family, and the community. Hence, Chinese would often avoid conflicts in many situations in order to save face. (Chen, 1986; Beamer & Varner, 2001)

“... I'm not sure why. Maybe this is about the traditional culture. It's a habit to teach from older generation to the next how you should live. Of course, I'm trying to change myself to educate and guide my son in more open way. But I think that most of the families and schools are unable to do this. It's more about education and “guan shu” (puling from the book). That is to educate, which is telling what is right and what is wrong. After about twenty years of home and education environment like this, they are very likely to have a certain way of doing or thinking. They would think are they saying or doing the right thing in front of others, and what would others think is it right or wrong. So, it's not most important thing to express own thoughts.” – Sam SHI Yin, Teacher of Tongji University

The reciprocal nature of “saving face” explains a lot of misunderstandings between Finnish and Chinese people. While individualist Finnish people from a low communication context culture PDI=33, IDV=63 seek to find the rational answers for problems, collective Chinese people, from high communication context culture PDI=80, IDV=20, would seek to save their own face and “give face” to the counterparts, and avoid the problem. (Hofstede, 2012; Wilson, 2012; Chen, 1986; Beamer & Varner, 2001) Hence, it seems important to understand the reciprocal nature of this concept in

order to promote guanxi i.e. the harmonious relationship with Chinese (Chen, 1986). However, would not this mean the adaptation of the old Chinese traditional way by the Finnish “change agents”, instead of promoting the concept of Design Factory?

“... I have seen it myself very closely, that it works. It is a very efficient, functional, fast, and in many sense very good. A lot like more predictable or how to say it. It is like more clear and controllable way than this our way of doing. But these approaches are difficult to combine together. In a way, there is always a need to choose which approach to take. And then, if they want change from us, then it is not possible to convey change by doing things in the Chinese way. Then, it has to be done in our way.... How to do this? Aaarghh ” – Matti M. Hämäläinen, Director of Operations of ATDF

4. Unwritten secret agenda

The idea behind the unwritten secret agenda is to 1) enable “*planned coincidences*” and “*random encounters*” to support social interaction , 2) blur the boundary of work and leisure to foster creative processes, and 3) detach from the “normal” ravine by allowing unusual or even subversive activities, people and ideas. There seems to be huge challenges in executing these items at ATDF. Due to the fact that these are basic underlying assumptions, adaptation of these items needs cultural understanding of the Chinese Confucian value system.

Since at the moment, there is only one person who knows Design Factory’s philosophies at ATDF, and who yet has only very limited leverage on influencing on the activities, it is not surprising that his “own unwritten secret agenda” seems trivial in the minds of Chinese colleagues. The Chinese might perceive this guy as just a crazy man, instead of inspiring, motivating, and an exceptional leader.

“...There is a lot of principles that works in Finland, but doesn’t necessarily work, for example, in China. For example the principle of coffee machine, if we copy it to China it doesn’t work, because people don’t drink coffee... or the people who drink coffee are more or less westernized, and most of the people

would be somewhere else doing something else. In a way, we would need to think about it even in a deeper level, if we want to understand the point of wanting people to come to the same place to meet and talk with each other. So, the bottom level would need to be thought about to the Chinese environment. What are the factors that would attract Chinese or other nationalities to come to the same place once or twice or three times a day? And to the same physical place, and to meet each other, not just physically but also mentally. – Matti M. Hämäläinen, Director of Operations of ATDF

6. Conclusions

The purpose of this study was threefold. First, to understand what are the core elements that Aalto Design Factory is comprised of in order to examine Design Factory concept's transferability across cultural boundaries. Second, to explain the cultural challenges in localizing Design Factory concept into a Chinese cultural context. Third, provide managerial suggestions to improve the management of Aalto-Tongji Design Factory. Hence, the following research questions were formed for this study: *1. What are the core elements that ADF is comprised of? 2. How does the Chinese cultural context affect the adaptation of ADF's core elements into ATDF? 3. How can ATDF's management be improved?*

Yin's (2009) case study approach was selected for this qualitative master's thesis. The research process was conducted in two phases by using an abductive approach (Dubois & Gadde, 2002). Primary empirical data is derived from nine semi-structured thematic interviews and one open interview. Theoretical literature reference of this study is based on fields such as creativity, motivation, co-creation, organizational culture, organizational culture in China, guanxi, lian, and change management.

This chapter is structured as follows. First, the research gap and research purposes are presented. Second, the theoretical construct of the Design Factory concept will be illustrated. Third, the challenges of localizing Design Factory concept into Chinese cultural context are explained. Fifth, managerial implications are suggested. Sixth, research limitations and suggestions for further research are stated.

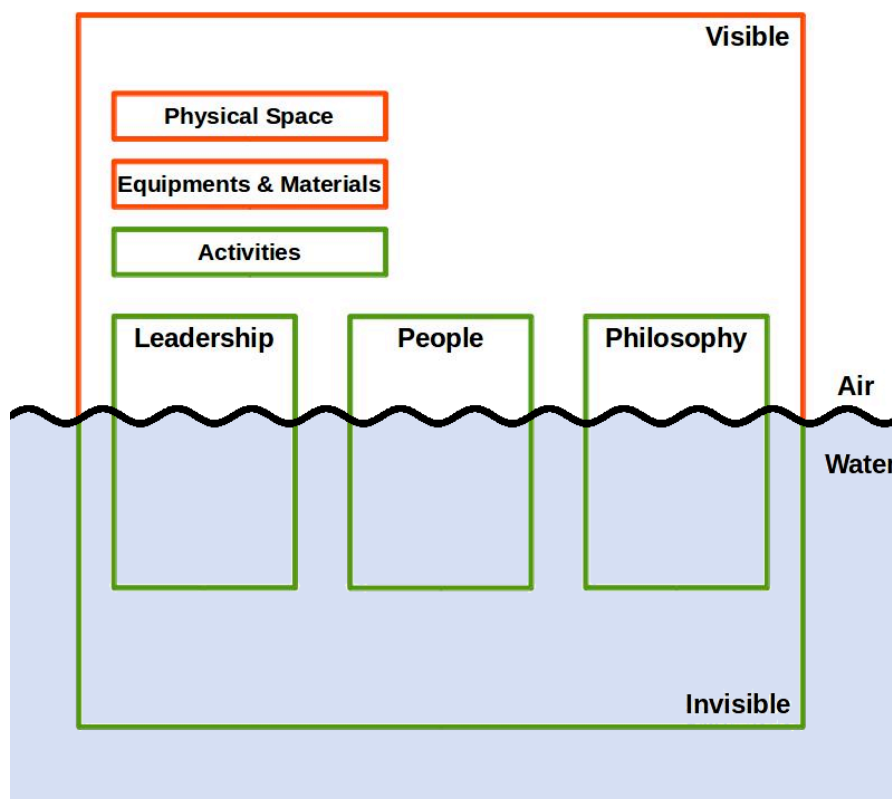
6.1. Theoretical Contribution and Main Findings

Since there was no previous theoretical construct created for Aalto Design Factory, it is not possible to evaluate its transferability and localization to other cultural contexts. In

order to holistically capture the Design Factory concept, I have created a theoretical construct that is formed of six core elements. This theoretical construct can be utilized as a critical evaluation instrument in assessing Design Factory concept's transferability and adaptation to other cultural contexts such as communities, companies, organizations, and different countries.

6.1.1. Theoretical Construct of Design Factory Concept

Schein's (1985) iceberg model for studying organizational cultures was adopted in order to create a theoretical construct for the Design factory concept. The theoretical construct is comprised of six core elements: 1) Physical Space, 2) Equipments & Materials, 3) Activities, 4) People, 5) Leadership, and 6) Philosophy. I further divided then into Hardware (orange) and Software (green) elements.



Theoretical Construct of Design Factory Concept

1. Hardware – Physical Space

This core element is the physical space that supports creativity and innovation. The physical space should foster creativity and innovation by supporting 1) creative processes, 2) creative interactions and sharing knowledge, 3) flow, 4) creative thinking and insight, 5) personal qualities for creativity, 6) creative environment, and 7) unfinished factor.

2. Hardware – Equipments & Materials

This core element is comprised of the various equipments and materials to support various levels of hands-on prototyping. This hardware core element should support concrete realization from an idea into a prototype by easy access to a) simple paper-and-tape model materials; and b) legos, meccanos, play doh modeling materials; to c) heavy prototyping facilities, equipments, machinery and tools.

3. Software – Activities

This core element is comprised of activities within Design Factory: formal activities, informal activities and semi-formal activities. Formal activities are explicitly controlled, for example, lectures and seminars. Informal activities are implicitly controlled that are guided by the “*unwritten secret agenda*”, which enables “*planned coincidences*” and “*random encounters*”, in addition to “unusual” and subversive activities. Semi-formal activities are between the formal and informal. These are about co-creation action and creating something new together with different stakeholders.

4. Software – People

This core element is comprised of various stakeholders inside the physical space of Design Factory: 1) staff, 2) community and 3) visitors. 1) Staff layer is comprised of the core personnel of Design Factory. 2) Community layer is comprised of staff layer and various stakeholders who actively utilize the space for studies, teaching, research and work. These are students, teachers, and start-up company people. 3) Visitors layer is comprised of all the “tourists” interested in and curious about Design Factory’s activities, and who may or may not possess the potential of becoming Design Factory’s partners for cooperation, collaboration and co-creation.

5. Software – Leadership

This core element is comprised of the leader, the project champion, who has high position, character, motivation and commitment to run Design Factory concept, and as well as to carry the responsibility.

6. Software – Philosophy

This core element is comprised of the philosophies of Design Factory. These are visible Espoused Values: 1) *passion-based*, 2) *co-creation*, 3) *quick prototyping*; and invisible Basic Underlying Assumptions: 4) *unwritten secret agenda*. The unwritten secret agenda is comprised of these following agendas: a) enable “planned coincidences” and “random encounters”, b) blur the boundary of work and leisure and c) detach from the “normal” ravine.

6.1.2. Design Factory vs. Confucian values

While all the six core elements are necessary building blocks for the Design Factory concept, this master’s thesis shows that it seems highly challenging to adapt them into ATDF, because of the complexities of the cultural context and the current fragmented society of China.

According to Sun (2002), China is like a modern pluralist society on the surface, but in reality China has been fragmented into numerous realities that constitutes of sets of values, realities and material condition which belong to different time eras. These are time eras such as socialist plan economy, countryside re-emerging feudalist practices, modern western consumption mania, East-Asian emerging consumption and fashion trends, Taiwanese and Hong Kongese soap operas exist simultaneously, shoulder to shoulder with communist egalitarian and capitalist hedonist ideals. Most importantly, these realities have challenges in communicating with each other in a constructive manner without *guanxi* to over bridge the gaps between them. (Sun, 2002) The explanation for the challenges dates back all the way to the 5000 years history of China, and the cultural and institutional differences between Finland and China. It seems that

the traditional Confucian values still prevail, especially in the ruling class, even inside of the Tongji University's College of Design and Innovation.

While some of the core elements may seem to be more straightforward to adapt into ATDF such as the hardware core elements: physical space and equipments & materials, and the software core element: activities, it might not be that simple. These are artifacts and symbols. People from different cultures may see artifacts and symbols in a different way, while giving them different meanings. Direct copy of the artifacts can be highly dangerous, because it may potentially have a negative impact on creativity and innovation. Chinese people might get confused instead of inspired. However, artifacts can shape people's values, but then again it depends on how well they can transform established values of Chinese culture, and it might also take a long time.

The software core element: philosophy is perhaps the most important core element of the Design Factory concept, but also likely the most challenging one to adapt into ATDF. Due to the fact that Confucian values still prevail in the minds of the key people inside of Tongji University, it seems to be quite difficult to break the traditional way of thinking and doing, by introducing new principles such as: low-hierarchy; intrinsic motivation; empowerment of young people by giving freedom and responsibility; fail-fast; and allowing unusual or even subversive activities, people and ideas.

Although, there seems to be some positive outcomes during the existence of ATDF, it is very much likely that the espoused values and philosophies promoted at ATDF are still not being rooted to the basic underlying assumptions, even within the staff layer. This would partly explain the challenges of adapting the core elements of Design Factory concept in China, which causes frustration, lack of moral and inefficiency, especially in the management level of ATDF. It seems that the essential software core element: leadership is rather opposite in ATDF compared to the ADF. While ATDF's leadership style can be considered highly efficient in China, it is however not aligning with the ideal Design Factory concept's philosophies.

The Chinese concepts such as “guanxi” and “lian” based on the traditional Confucian value system seem to create a tremendous brick wall for the localization efforts of the Design Factory concept, as the way it is, into China. Therefore, there seems to be some major adjustments needs in order to reach the objective of ATDF, which is changing the concept of “Made in China” into “Created in China”. However, this would then suggest the adaptation of some level of the Chinese way of doing things at ATDF.

6.2. Managerial Implications

The findings of this master’s thesis indicate that it seems rather unfeasible to localize the Finnish Design Factory concept into China as the way it is in Finland. Change is never an easy thing to do, even for a person. Now that it is about changing Chinese minds, it is a huge challenge as this cross-cultural case demonstrates. There is a need for mutual cultural understanding. Due to the strong prevailing Confucian values and the complexities of the current fragmented society of China, there seems to be some major adjustments needed in order to achieve the objectives of ATDF in China.

The Design Factory concept appears to be revolutionary even in Finland, and thus it is very likely to be a huge leap in localizing it into China. There appears to be some changes in the air at ATDF, but the existence of Design Factory’s experience seems to be missing at Sino-Finnish Centre’s Aalto-Tongji Design Factory. Nevertheless, the challenges should be seen from a long-term perspective, and therefore there is a need for careful planning and professional execution. Based on the findings of this study, I would suggest the following managerial implications:

1. Seek for governmental support

Governmental support is vital in order to make things happen in China. Therefore, ATDF should seek for a sovereign position from the Chinese governmental level. Since bottom up approach seems not to work in the Chinese context, strong governmental support is essential for ATDF to achieve its objectives. The government of China

should have a sense of control of the activities that happens at ATDF, but in a way that it does not show explicitly. The government should provide special rights for ATDF to experiment new ways of teaching.

2. Emphasize on the importance of leadership

There is a need for emphasizing the role of the leadership at ATDF. This passionate person should be a local high rank Chinese leader who has the charisma, motivation, commitment, but also understanding of the core idea behind the Design Factory concept. The leader should be able to show example to others of doing things differently while achieving the objectives of ATDF.

3. Focus on the management team

Stress the importance of employees' wellbeing. These are the people who are in core essence of making things happen. The staff creates the atmosphere and the spirit of ATDF together with the community. The management team should understand the strategic goals of ATDF and also the importance of their work. Since ATDF is an international platform, the management team should have a mutual understanding of the cultural differences in order to generate synergy.

4. Combine communication and training

Highlight the value of ongoing pedagogical trainings between Aalto University and Tongji University. The teachers taking part in these trainings are naturally in key positions in transforming China's education into the next level through their learning from the pedagogical workshops while applying them in their own teaching. Therefore, they should be fully supported by Tongji University and the Chinese government.

5. Demonstrate the leaning outcomes

Demonstrating the learning outcomes about ATDF's activities is essential in order to spread the message to other universities and educational systems in China. There is a need for demonstrating the possibility of doing things in a new way together with both foreign and Chinese partners.

6.3. Limitations and Suggestions for Further Research

This master's thesis seeks to understand the Design Factory concept as a single and unique phenomenon, and its transferability into the Chinese cultural context. Since there was nothing written about it in the previous academic literature, a holistic approach was selected to study this phenomenon. While this study uncovers the fundamental factors behind Aalto Design Factory and Aalto-Tongji Design Factory, it does not provide a deeper analysis of the core elements.

Furthermore, this master's thesis is purely a qualitative case study based on the two unique cases. While the validity can be considered fairly strong, the reliability should be acknowledged. Because of the resource constraints, this study is limited to the small number of interviews and the inexperienced researcher's subjectivity factor. However, due to the fact that this master's thesis can be considered as "backyard research", it therefore considerably improves the quality of this qualitative research. (Glesne, 1999; Corbin & Strauss, 1990; Saunders et al., 2007; Eriksson & Kovalainen, 2008)

In addition, this study was based on two unique cases within university context, which might suggest that it is not be suitable for generalizing the results to other organizations and industries. However, since change happens in the minds of people, this study could actually benefit other Finnish or Western organizations that are seeking to enhance their creativity and innovation, and as well as transferring their best practices into the Chinese cultural context. This study also provides a theoretical framework to enable critical evaluation of the Design Factory concept in order to assess the transferability of it into different cultural contexts.

Because of the limitations of this study, I would suggest the following further research:

- survey study about Chinese students
- survey study about Chinese teachers
- qualitative study of Tongji's leaders
- qualitative study with Chinese government leaders

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