Situated Cultural Differences: A Tool for Analyzing Cross-Cultural Co-Creation

Tejas Dhadphale
Iowa State University, tejas@iastate.edu

Follow this and additional works at: http://lib.dr.iastate.edu/industrialdesign_pubs

Part of the Critical and Cultural Studies Commons, Industrial and Product Design Commons, Interdisciplinary Arts and Media Commons, and the Other Languages, Societies, and Cultures Commons

The complete bibliographic information for this item can be found at http://lib.dr.iastate.edu/industrialdesign_pubs/9. For information on how to cite this item, please visit http://lib.dr.iastate.edu/howtocite.html.
Situated Cultural Differences: A Tool for Analyzing Cross-Cultural Co-Creation

Abstract
Designers in the global era are increasingly challenged to design for diverse cultural context. Both ethnographic and participatory design research methods are integral for conducting cultural inquiries. Co-creation offers an interactive setting for researcher to gain meaningful insights into the tacit and latent aspects of culture. The analysis framework for this study is based on the theoretical construct of situated cultural differences. In the process of co-creation, situated cultural differences become a diagnostic tool used by researchers to categories participants’ everyday experiences into meaningful cultural categories. This paper work focused on identifying the different situated differences used by participants during the co-creation sessions and creating a typology of differences. The analysis was focused on how the research team interpreted the situated differences to establish the underlying cultural values. Four categories of situated cultural differences emerged from the data: material-observable, material-ideological, behavioral-observable and behavioral ideological. The analysis shows that participants preferred the material and behavioral-ideological type of situated differences. This study provides a methodological approach for analyzing cultural differences and integrating diverse cultural aspects into a systematic framework. The theoretical framework of cultural situated differences and the typology of differences provides a framework for designer, design researchers and corporations to identify, categorize and design for cultural differences.

Keywords
Co-Creation, Situated Cultural Difference, Cultural Insights, Cultural Values, User Experience.

Disciplines
Critical and Cultural Studies | Industrial and Product Design | Interdisciplinary Arts and Media | Other Languages, Societies, and Cultures

Comments

This book chapter is available at Iowa State University Digital Repository: http://lib.dr.iastate.edu/industrialdesign_pubs/9
Abstract: Designers in the global era are increasingly challenged to design for diverse cultural context. Both ethnographic and participatory design research methods are integral for conducting cultural inquiries. Co-creation offers an interactive setting for researcher to gain meaningful insights into the tacit and latent aspects of culture.

The analysis framework for this study is based on the theoretical construct of situated cultural differences. In the process of co-creation, situated cultural differences become a diagnostic tool used by researchers to categories participants’ everyday experiences into meaningful cultural categories. This paper work focused on identifying the different situated differences used by participants during the co-creation sessions and creating a typology of differences. The analysis was focused on how the research team interpreted the situated differences to establish the underlying cultural values. Four categories of situated cultural differences emerged from the data: material-observable, material-ideological, behavioral-observable and behavioral ideological. The analysis shows that participants preferred the material and behavioral-ideological type of situated differences.

This study provides a methodological approach for analyzing cultural differences and integrating diverse cultural aspects into a systematic framework. The theoretical framework of cultural situated differences and the typology of differences provides a framework for designer, design researchers and corporations to identify, categorize and design for cultural differences.

Keywords: Co-Creation, Situated Cultural Difference, Cultural Insights, Cultural Values, User Experience.

1. Introduction

With increasing globalization, new emerging markets, technological advancement and worldwide competition, global corporations are trying to expand their market across the world. Products initially designed to serve only the local market are now reaching across international boundaries. As a consequence, there is an emerging interest in the impact of cultural dimensions on the interaction between people and products, both from a professional and an academic point of view (Christensen et al., 2006). Designers and design researchers developing products for new local market need to study user needs, behaviors, practices, rituals, ideologies, and values within a cultural context.

Global corporations expanding business across different local markets have identified cultural insensitivity to be a potent barrier for growth. The degree of acceptance by local consumer cultures has become an integral part of the success and failure of their operations. With the fading influence of cultural imperialism, Americanization or Westernization, local cultures are
rejecting homogenized products and services and are demanding culturally relevant and suitable products (Pieterse, 2006, Ritzer, 2006, and Tomlinson, 1999). According to Shaw and Clarke (1998), organizations need to understand the degree to which standardized products can be offered unchanged or whether they need to be adapted to local markets. As a consequence, corporations are conducting cultural “deep dive” research to gain meaningful insights into local cultures.

Design research methods and techniques (both traditional and participatory) have been integral for conducting in-depth cultural inquiries. Traditional methods like surveys, interviews and passive observations are largely focused on what people say, think and do (Sanders, 2002), resulting in insights based on explicit (think and say) and observable (actions) aspects of human experience. In contrast, participatory research methods like co-creation can provide insights into the tacit and latent (values) aspects of human experience. In the process of participatory co-creation, participants express their thoughts into visual and tangible materials, and also provide the rationale behind their choices. Co-creation sessions provide an interactive medium for users to express and share their feelings, emotions and values with researchers and designers. The goal of analysis is to explore the process of how the design team uncovered the underlying cultural values of co-creation workshop participants’. This study aims to identify the different local, significant and embodied aspects (explicit and observable) of culture and the underlying cultural values (implicit and latent).

This paper describes the different types of situated differences utilized by participants in the co-creation sessions (RQ1), illustrate the different categories that emerged from data and report instances (excerpts from transcripts) that highlights the core values uncovered by the research team (RQ2). Situated cultural differences are particular practices, rituals, beliefs, ideologies, artifacts, or activities utilized by groups that highlight the core values of groups, and in the process mobilize group identity. Post-it notes from co-creation sessions (v08; additional materials), transcripts from debriefing (v07, v08) and insights clustering (v09, v10, v11) sessions [DTRS data set; Christensen and Abildgaard, this volume] were analyzed. Participants were engaged in two different co-creation sessions. Each co-creation session was facilitated by two researchers fluent in the participants’ native language. After the first co-creation session, researchers from the two teams shared their insights (v08; debriefing sessions) with all team members. This was followed by insights clustering session (v09, v10, v11) were the research team focused on uncovering the underlying meanings and values.

Initial coding was guided by typological analysis; reducing and categorizing data based on pre-existing typologies (Hatch, 2002). The analysis framework for this study was guided by cultural layer models developed by eminent scholars like Hall (1976), Trompenaars and Hampden-Turner (1997), Hofstede (2001), Spencer-Oatey (2000), Schwartz (1994) and others. Based on the synthesis of existing models, situated differences were categorized into three layers: material, behavioral and ideological. The pre-existing layers (or typologies as suggested by Hatch, 2002) guided the early data analysis. Instances (excerpts from transcripts) representing all three layers were identified. After comparing instances (excerpts) from each layer we discovered a strong overlap between the codes. Early data analysis started with pre-existing layers but new categories emerged from the data. The data analysis started with a typology based analysis and ended with data-driven categories (see Figure 2). For example, participants discussed using products (like cars, home appliances) both from purely consumption stand-point and also from ideological stand-point. Data was then re-coded to reflect the connections between the layers. New hybrid
codes were created to reflect the overlap between two layers. Following this, for each instance, the type of situated differences and the underlying cultural values of the group were established.

2. Background

2.1 Theoretical Stance: Culturally Situated Differences

Culture is one of the two or three most complicated words in English language (Williams, 1976). During the end of nineteenth century the term culture was associated with a people or nations with particular distinction; an aspect I will highlight later in this section. Culture then meant ‘a way of life’ for particular individuals, groups or nations. This definition laid the ground work for the contemporary understanding of culture. As defined by Williams (1976), culture is a “description of a particular way of life which expresses certain meanings and values not only in art and learning but also in institutions and ordinary behavior.” The two key elements of this definition are the interpretation of culture as ‘a way of life’ and the ‘production and circulation of meanings’ through ordinary behavior. It is the clarification of meanings and values implicit and explicit in particular way of life that makes a particular “culture” (Williams, 1976, p. 57).

The work by earlier anthropologists and sociologists focused on the noun form of culture positioning it at the center of every inquiry. For example, describing culture as an evolving entity, the classical cultural evolutionist proposed a grand unilinear theory for evolution of cultures through different stages of savagery, barbarism, and civilization. Following the historical particularists perspective, Kroeber extended the noun usage of the term by defining culture as ‘superorganic,’ an overarching, autonomous identity that controls individuals and their behaviors. Kroeber defined culture as: “a realm sui generis, or unto itself, separate from psychology and “above” biology” (Erickson & Murphy, Readings for a History of Anthropological Theory, 2006). By defining culture as an autonomous control over individual heredity, psychology and society, Kroeber to an extent reified culture. It wasn’t until the rise of psychological and symbolic anthropology that culture was one of the subjective dimension that mediated human experience and behavior rather than the only factor explaining a phenomenon.

As a guiding principle for conducting cultural studies, Appadurai (1996), McCracken (1986), Miller (2005), Ritzer (2003), Bocock (1993) and others have advocated the adjective usage of culture; cultural. The noun form of culture seems to “carry associations with some sort of substance in ways that appear to conceal more than they reveal,” but the adjectival usage of culture becomes a force to understand cultural differences, or comparisons (Appadurai, 1996, p. 12). Appadurai (1996, p. 13) advocates “stressing the dimensionality of culture rather than its substantiality permits our thinking of culture less as a property of individuals and groups and more as a heuristic device that we can use to talk about difference.” The methodology for this study also emphasizes the adjective usage of culture; cultural. The analysis framework for this study is based on the theoretical construct of culturally situated differences.

There are two key aspects to situated cultural differences. First, situated differences are “differences in relation to something local, embodied, and significant” (Appadurai, 1996, p. 12). These are differences a cultural group would utilize as local and distinctive differences that are significant to the group. Second, situated differences are differences that “either express, or set
the groundwork for, the mobilization of group identities” (Appadurai, 1996, p. 13). This goes back to the early definition of culture; people, groups or nations with particular distinction. Culture then acts as a force that decides the boundaries among different groups. In simple terms, situated cultural differences become a frame of references for emphasizing local, embodied differences that mobilize group identity. Situated differences are aspects of everyday life that mobilize group identities and represent core values of the group. A group of individuals buying a particular brand of motorcycle (situated difference) creates a homogenous group with distinctive practices, products and ideology. For example, Harley-Davidson owners are a distinctive group (group identity) with shared values that are manifested in different aspects of everyday life. The values of the group are manifested in distinctive practices, products or ideology by different group members.

Analysis of the DTRS data set [Christensen and Abildgaard, this volume] shows that the research team invited individuals for co-creation sessions that represented affluent Asian car owners associated with elite and well known corporations. The goal of the co-creation sessions was to uncover the underlying values of this affluent automotive cultural group. For example, this group of individuals identify themselves as “environmentally friendly”; a value that the group projects as a major distinctions from other individuals or groups. This particular group of shoppers buy products made out of recyclable materials (situated difference) as a way to imply the core value of “environmental friendliness.” In this case, the act of buying from recyclable source (ideology), the act of buying (the practice) and the artifact itself are all situated differences utilized by the group to project the core value of “environmentally friendliness.”

2.2 Layers of situated cultural differences

As described above, situated cultural differences could be local, embodied practices, artefacts, ideologies that mobilizes group identity and expresses group values. To develop an applicable coding scheme, it was essential to categorize situated cultural differences. This classification of culture into layers (cultural layers) is guided by the work of eminent scholars like Hall (1976), Trompenaars and Hampden-Turner (1997), Hofstede (2001), Spencer-Oatey (2000), Schwartz (1994) and others. The classification of culture into layers reduces the complexity of the term and provides a diagnostic tool for researchers to investigate different aspects of cultures in a systematic manner.

According to Trompenaars and Hampden-Turner (1997) and Hofstede (2001), culture can be classified into layers, like an onion. For Hofstede (2001), culture can be classified into four layers; rituals, heroes, symbols and values. Hofstede (2001) considers system of values as the core of any culture. In addition, he considers cultural practices as the fifth layer of culture that connects the layers of rituals, heroes, symbols and values. Similarly, Trompenaars and Hampden-Turner (1997) identified three layers of culture; the outer layer that includes artifacts and products; the middle layer representing norms and values and the core that represents the fundamental assumption about human existence. Spencer-Oatey (2000) also identified four layers of culture; the outer layer that includes artifacts, products, rituals and behaviors; systems and institutions; beliefs, attitudes and conventions and the core representing basic assumptions and values. Rose (2004) categorized culture into two categories; cultural mentalities and cultural environments. According to Rose (2004), cultural environment (the physical surrounds and
Both Hofstede (2005) and Trompenaars and Hampden-Turner (1997) reference the observable and symbolic attributes of the outer layer of culture. For Hofstede (2005), Trompenaars and Hampden-Turner (1997) and Spencer-Oatey (2000), artifacts, products, art, images, words are not only visible aspects (tools to mediate everyday activities) of culture but act as symbols that carry particular meanings that could be decoded by individuals from particular culture. The key idea of interpreting the outer layer of culture as both observable and symbolic (interpretive) was incorporated into the four layered analysis model developed for this paper.

Classifying culture (that complex whole) into manageable layers has encouraged inclusion of cultural aspects into the design discourse. The studies by Hsu, Lin, & Lin (2011), Lin, Sun, Chang, Hsieh & Huang (2007), Lee (2004), and others have proposed a framework to translate cultural insights into product design. The following table summarizes the different layers of culture suggested by scholars. The levels of culture are listed from the outermost layer to the inner core.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1</td>
<td>Symbols</td>
<td>Artifacts and products</td>
<td>Artifacts, products, rituals and behaviors</td>
<td>Cultural environment (the physical surrounds and structure)</td>
<td>Artifact</td>
<td>Tangible (material, artifacts)</td>
</tr>
<tr>
<td>(Outermost)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 2</td>
<td>Heroes</td>
<td>Norms and values</td>
<td>systems and institutions</td>
<td>Values</td>
<td>Behavioral (practices, rituals, activities)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 3</td>
<td>Rituals (Practices connect all layers)</td>
<td>Beliefs, attitudes and conventions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 4</td>
<td>Values</td>
<td>Assumption about human existence</td>
<td>Basic assumptions and values</td>
<td>Cultural mentalities (thoughts and behaviors)</td>
<td>Basic assumptions</td>
<td>Intangible (values)</td>
</tr>
<tr>
<td>(Inner core)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based on the layered approach (see Table 1) suggested by Hall (1976), Trompenaars and Hampden-Turner (1997), Hofstede (2001), Spencer-Oatey (2000), Schwartz (1994), Rose (2004), Lee (2004) and Leong and Clark (2003), culturally situated differences were classified into four layers (Figure 1). This four layered approach was then used as a reference point to identify and classify situated cultural differences from the data set (see research questions). This four layered classification is based on Hall’s (1976) ‘iceberg model’ of culture. The iceberg
model suggests that the visible aspects of culture only represent the tip of the iceberg. The invisible, under the water, aspect of culture forms the foundation. The intangible aspects of culture are manifested in visible forms. The following paragraphs provide a brief description of each layer.

The outermost ‘material’ layer: This layer includes tangible aspects of cultural differences including material objects, products, services, materials and processes (Figure 1). The studies cited earlier (Hsu, Lin, & Lin (2011), Lin, Sun, Chang, Hsieh & Huang (2007) and Lee (2004)) have explored this ‘material’ layer of culture. Material culture scholars and archaeologist have repeatedly highlighted the manifestation of culture into material form. According to McCracken (1986, p. 73), objects are “vital, tangible record of cultural meaning that is otherwise intangible.” Material objects, products, materials, manufacturing processes embedded in different cultures carry implicit cultural meanings. Incorporating insights from the models proposed by Hofstede (2005), Trompenaars and Hampden-Turner (1997), the outermost ‘material’ layer includes both the observable and the symbolic meanings of objects, products, materials and processes within a cultural group.

The mid ‘behavioral’ level: This layer includes practices, rituals and interactions with material objects and other individuals. Cultural meanings are created through day-to-day interactions between the products and people (Grant & Fox, 1992). Researcher like Victor Margolin (1989), Jules Prown (1993) and Appadurai (1986) have strongly stated that meanings are a result of our social interactions and practices. Meaning is constructed –given, produced – through cultural practices; it is not simply found in objects (du Gay et. al 1997, p14). Rituals are collective practices shared by a cultural group that have significant meaning within the group and highlight cultural differences when compared to other cultural groups.

The inner ‘intangible level: This layer includes beliefs, attitudes and ideology (a network of ideas) of individuals as part of a group and also the shared group values. This level includes individual and shared beliefs and attitudes. Ideology is a shared system of meanings abstracted from collectively held beliefs and attitudes of individuals within a group.

![Icerberg model of cultural differences](image-url)
The core ‘value’ level: The innermost layer refers to the system of values (borrowed from Hofstede (2001)) that represent a cultural group. Shared cultural values for a group are constantly negotiated by individuals within a group. Individual values are partly a product of shared culture and partly a product of unique individual experiences (Schwartz, 1994). The goal of this study is to apply situated cultural differences as a diagnostic tool to uncover the core values (of the group) manifested in beliefs, attitudes, ideologies, and everyday practices, rituals, interaction and material objects.

3. Research Questions, Methodology and Analysis Framework

From the DTRS data set [Christensen and Abildgaard, this volume], this paper specifically focused on the co-creation sessions (v08), debriefing (v07, v08 and insights clustering sessions (v09, v10, v11). These sessions were particularly selected from a large data set provided by the DTRS organizers [Christensen and Abildgaard, this volume]. Data analysis was guided by the following research questions:

1. What are the different types of situated cultural differences used by participants during the co-creation sessions and how can they be categorized?
2. How does interpretation of situated differences used to uncover the core cultural values of the group?

The analysis framework for this study is based on the theoretical construct of situated cultural differences. During the analysis process, situated cultural differences were identified based on two key aspects: 1) the differences that were local, embodied and significant to the group and 2) the differences that represented group values (i.e., mobilized group identity). To identify and categorize the different types of situated cultural differences, the co-creation (v08) and debriefing sessions (v09, v10, v11) [Christensen and Abildgaard, this volume] were analyzed using the typological analysis framework. The following steps were followed in typological analysis (adapted from Hatch, 2002, p. 153):

1. Identify typologies to be used for analysis.
2. Categorize the data by marking entries related to typologies.
3. Look for patterns, relationships within typologies.
4. Identify instances or part of data to support the typologies.
5. Identify relationship (if any) between different instances and typologies.
6. Select instances (data excerpts) to support each typology.

Typological analysis begins with the process of reducing and categorizing data based on existing typologies (Hatch, 2002). To guide the early analysis, the three layered classification (material, behavioral and ideology) of situated cultural differences was used. Situated differences classified
into layers are different ways to project cultural values of groups (the innermost fourth layer). The process started with two coders separately categorizing parts of data using the following three layers of situated differences: the outer material, the mid behavioral, the inner ideological. The innermost core values of a group are manifested in everyday material, behavioral and ideological forms. The goal was to study the manifested forms of situated differences and reveal the underlying core values of the group. In this paper, typologies refer to the three layers (used as codes) of situated differences: material, behavioral and ideological.

The post-it notes and the resulting categories (created during co-creation sessions) generated during the co-creation sessions were transcribed and analyzed. The post-it notes were categorized into the three layers. In addition, the transcripts from debriefing and insights clustering session were also analyzed using the same three layered typology. The analysis based on pre-existing typologies was effective in reducing the data, identifying instances to support each typology and to identify inter-relationship between the layers. Instances are parts of the transcript (excerpts) that are representative of each layer. Multiple instances were selected for each layer. With the three layered typology in mind, each coder assigned codes (material, behavioral and ideological) to the transcripts and then copy the instances (excerpts) into a separate excel sheet. After the analysis, the two coders compared the instances (excerpts) and discussed examples (instances) that represent each layer (typologies). The post-its categorized into three layers were also compared to the excerpts (instances) from the transcripts. This part of analysis answered the first two research questions: what are the different types of situated cultural differences and how can we categorize them?

The second part of analysis focused on how the research team interpreted situated differences to establish the core values of the group (RQ2). This refers to the second key aspect of situated differences: differences that represent group values (i.e., mobilized group identity). For each layer, we consolidated different instances (excerpts from transcripts). For example, we consolidated data excerpts from different sessions that represented the mid-behavioral level. In this case, all excerpts related to practices, rituals and interactions were consolidated under the mid behavioral level. We then compared the different levels to identify potential overlap between the instances (excerpts). For example, we identified parts of data that support both behavioral and ideological levels. We then created a separate hybrid code (behavioral-ideological) and highlighted supporting instances (excerpt from transcript). At the end, we selected instances for each layer that show how the team identified the core values for the group. These instances are discussed in detail in the finding section.

4. Findings

Data analysis revealed four key categories of culturally situated differences. The four types of situated differences are mapped on the following biaxial map (see Figure 2). The horizontal axis represents the continuum from material to behavioral manifestations of situated differences. The vertical axis represents the continuum from observable or concrete aspects to the abstract or ideological aspects of participants’ everyday experiences. The following paragraphs summarize the four categories of situated cultural differences.
1. Material-Observable: This type of situated differences included reference to material objects, products, services and materials significant to the participants’ culture, where the situated differences was manifested in material form. For example, participants discussed (v08, additional materials) products like cars, yachts, purifiers, health supplements, health monitoring bands, security robots, luxury products, and smart phones as the material-observable aspects of their culture.

2. Behavioral-Observable: This type included practices, rituals and activities that are specific to the participants’ culture. For example, participants discussed the act of buying safe food or sorting trash, saving electricity, exercising with friends and monitoring health as situated differences that project their core values of environmental sustainability or health and wellness. In this case, the behavioral aspect becomes the situated difference that mobilizes the group identity and acts as a tool that differentiates the participants from other groups or cultures.

3. Behavioral-Ideological: This type included the everyday behavioral aspects (practices, rituals and activities) and the underlying ideology (system of ideas or beliefs). In this case, participants discussed the deep-rooted ideological aspects of their everyday behaviors. This explained the motivation behind participants’ everyday behavior. Understanding the system of beliefs or ideas that motivate practices is useful to contextualize behavior specific to particular cultures.

4. Material-Ideological: This category included the symbolic meaning of interactions of participants with material objects, products and services. Participants discussed the abstract ideological meanings assigned to products and services as a situated difference that mobilized group identity. The abstract meaning behind material objects were highlighted in this category. For example, participants discussed the use of cars as a safe haven, cocoon or a place to break free from responsibilities. The following biaxial map illustrates the four types of situated differences identified.

Figure 2. Biaxial map of situated cultural differences (includes quotes from the dataset).

*DTRS11: Design Thinking Research Symposium 2016 – Copenhagen Business School*
4.1 Types of culturally situated differences

The following section reports instances (excerpts from transcripts) that highlight the core values uncovered by the research team (RQ2). It must be noted that the values representing the group were manifested in different forms. For example, the core value of \textit{environmental sustainability} was reflected in all four categories: material-observable, material-ideological, behavioral-observable and behavioral-ideological. The following section presents instances from all four categories (Figure 2) and highlight the core value discovered by the research team.

\textit{Material-Observable}

In this type, the participants shared examples of material objects, products and services that are used as situated differences that emphasize group identity by reflecting the core values.

For example, in the excerpt below (v09, 21), the research team is discussing (v09; insights clustering session) \cite{Christensen and Abildgaard, this volume} the role of luxury car brand. The act of buying a particular luxury brand mobilizes group identity and reflects the core value of \textit{safety/security} and \textit{environmental sustainability}. The researcher elaborates how the entire car (from a particular brand) is a reflection of values (like security, sustainability) and the act of buying the car is the only action required to project the values. In simple terms, if you buy the car then you acquire all values associated with the car.

A: [Yeah but I guess it's] almost the opposite, because if we just give them (.) give: them, they need to buy the car of course, (laughter) but if we give them the car with all the ehm: recycled eh: whatever, then: (.) they don't need to do anything, I mean, then they-

E: They did-, they already did it, they bought the car.

AM: I think it's the:-- it's like the BMW story, in our group, like they believed that even the:, the metal or the whatever material, or the screw used in the car already reflected that value. Remember?

A: Yeah, yeah, that everything was eh: recycled and so on, but I'm just thinking that (. ) that is the only action they need to do. I mean eh:, it's- it's just very very very easy.

In addition, in the co-creation session (v08), participants discussed the role of technology, health supplements, luxury consumer products, health monitoring bands, and smart security alarm systems as observable manifestations for creating group identity. In this case, buying and/or using the above mentioned products was a situated difference that was local, significant and embodied in the culture. By the act of buying or using the products, participants could distinguish themselves into different groups. In both, the co-creation session (v08; additional materials) and the insights clustering session (v09) \cite{Christensen and Abildgaard, this volume}, material-observable differences were the least discussed. Both participants and researchers did not emphasize the material-observable differences.

\textit{Material-Ideological}

\textit{DTRS11: Design Thinking Research Symposium 2016 – Copenhagen Business School}
This category included the symbolic meaning of interactions of participants with material objects, products and services. In this type, the symbolic meaning of product or service was discussed.

In the chapter, Cracking Open Co-Creation: Stories, Values, Categorizations, [Lloyd & Oak, this volume], highlight the importance of stories as a way of decoding cultural values held by both the participants and researchers during co-creation. [Lloyd & Oak, this volume] conduct conversational analysis using the ‘small story’ approach to combine the material and ideological aspects of participants’ culture. The quote (v09, 38-58 & 110-122) below demonstrates how the research team creates a story of ‘sexy commitment’ to combining the tangible aspect of car and how the car facilitates the value of me-time and family-time (v09, 58, 110-119).

For example, in the excerpt below (v09, 38) [Christensen and Abildgaard, this volume], illustrates an example of material-ideological type of situated differences. The excerpts below also demonstrate the effectiveness of narratives [Lloyd & Oak, this volume] as a way of communicating complex symbolic meanings within a cultural group.

AM ((v09, 38)): Like, the car becomes this safe place for me to let go, and away from all this burden and >"da-da-da-da"<, but it is still about me, it's just that I'm not performing: what I was expected to do, in a sense.

E (v09, 46): Eh: is it that way you think?

AM (v09, 47): I'm just thinking of another analogy. It's like, you go to a café, because you want that social aspect, you want to be surrounded, that's why you're not at home in your study-room, right?

E (v09, 57): So you want the comfort of the other people around you, but you wanna have your space there.

AM (v09, 58): Yeah, you go there not nece'-, yes, you- the space itself is a good: platform for you to meet other, to see other:, a meeting place, but it's also good enough for my own, my needs. So it's that kind of tension that I think the opportunity lies. So maybe: going back to the tangible car, it could be "the car itself is catering for me and my family. When I'm driving, I'm not necessarily the superhero", it's more like The Incredibles where different family have different role in the car, but a different mood from that, is when it is night time, "everyone is all asleep, I need to rest, this is where- this is my cocoon as well".

In this excerpt the research team, discusses the core values of balancing me-time vs family time, and catering to my family. The car discussed in this paragraph goes beyond its utility and symbolizes the balance between me-time and time for family. The car provides a safe place for the driver to relax and at the same provides an engaging place for all family members.

**Behavioral-Observable and Behavioral Ideological**

The observable aspects included practices, rituals and activities of participants that reflected group values and mobilized group identity. The behavioral-ideological aspect focused on
understanding the motivation behind participants’ everyday behavior. Understanding the underlying system of ideas or beliefs provided cultural context to participants’ actions.

For example, in the excerpt below (v08, 38) [Christensen and Abildgaard, this volume], illustrates an example of both behavioral observable and behavioral ideological type of situated differences. In the following excerpt the research team is discussing the different manifestations of the core value: health and wellness. First, the observable aspects of health and wellness like exercise, relaxation of the mind and the body, massage, de-stressing, going for drive are discussed. The second part discusses the ideological position of participants regarding the role of Chinese medicine in their culture. It is emphasized that in Chinese culture, the role of medicine is to prevent illness. In comparison, Western medicine is to cure a sick person. Also, from a cultural standpoint, health and wellness includes both mind and body.

W: Okay good life ehm: I think we- we focused on: the top three, ehm: that they have kind of voted on. So: one would be the health b'- min'-, a healthy body and mind, so: capturing things from ah, the most- the most obvious being things like the more things called, like exercise, ah: of course all the way down to relaxation of the mind and the body, and the relaxation there are two parts of course, the body and the mind, so body could be things like massage, ah: mind could be things like de-stressing, you know go for a drive and so on. Ah: traditional Chinese medicine is quite eh: a big thing, there is more for maintenance as opposed to: chronically eh: illness and then what you go for, so it's a little bit different from how: we think- or how they: will think of like western medicine, and we just- when you actually have a: big problem.

E: That's actually a very smart way of looking at it. Western medicine is after: you get sick, you get fixed up, here it's like "drink this tea:, do this thing and you won't: get sick".

W: It's to pull you back in balance or ensure that you are so'- in some form of balance.

In addition, the following activities (v08, transcribed post-its and discussion between researchers) positive attitude, health monitoring, travel, deep breathing (mediation), to go out at away time, go out together (social dining), picnic, jogging, travel, exercise with friends, going on road trips, swimming were discussed as ways to achieve the core value of health and wellness.

The analysis of data shows that core values were manifested in different material, behavioral and ideological forms. For example, environmental sustainability (as a value) was manifested in use of different products and services (material layer) and the rationale for selecting products that project the individual’s commitment to environmental sustainability. Participants’ also discussed practices like recycling, responsible consumption, buying products that are sustainable and choosing brands that reflect a sustainable vision as ways to project the value of environmental sustainability. The material and behavioral manifestations were embedded in participants’ ideology regarding environmental sustainability. Participants’ ideological stance is projected in the following examples: duty of commitment to family and environment, low carbon footprint, non-polluting renewable energy sources, global awareness, and commitment to sustainability. Researchers interpreted that the commitment to environmental sustainability was a key distinguishing value for the group; i.e. mobilized group identity. Using the same example of environmental sustainability (as a value), [Dalya, McKilligan, Murphy & Ostrowski, this
volume], demonstrate the contrasting views of participants’ and the research team. From the participants’ perspective (the Asian perspective), environmental sustainability was viewed holistically that included natural, political and social elements and their interrelationships. The research team (Western perspective) projected environmental sustainability as individual acts of consumption of products. This example highlights the challenges of understanding and translating participants’ views during a co-creation session. Using situated cultural difference can provide a methodological approach of systematically translating user insights during co-creation.

The analysis also indicated that the material and behavioral-ideological types of differences were heavily discussed by the research team. The research team heavily focused on understanding the system of ideas or beliefs (the rationale) that motivated participants’ behavioral and material choices. The analysis of post-its (v08) from co-creation sessions [Christensen and Abildgaard, this volume] and the discussion during insights clustering sessions shows more number of instances (excerpts from transcripts) for the material and behavioral-ideological aspects. Figure 2 includes some selected quotes from transcripts as examples of each type. As the figure indicates, greater number of quotes were categorized in the material and behavioral-ideological quadrants. The preference for ideological type of differences (both material and behavioral) indicates that co-creation was an effective medium for participants to express their inner beliefs and system of values with the research team. Co-creation analysis not only included the observable (both material and behavioral) aspects of cultural differences but also focused on the tacit and latent aspects.

5. Discussion and Implication

Comparing the iceberg model with the participatory design model (Figure 3) by Sanders (2002) reveals interesting insights. The iceberg model (Hall, 1976) illustrates that the observable aspects of culture only represent the tip of the iceberg. To study the tangible aspects of culture, there are abundant anthropological methods (indicated by the breadth of the inverted triangle in Sanders model (2002)) in design research. Traditional methods like observation, contextual inquiries, focus groups, and interviews are limited to studying the explicit and observable aspects of cultures. The intangible aspects such as ideologies, values and assumptions form the broad foundation of the cultural iceberg. To gain meaningful cultural insights, it is critical for design researchers to uncover the core values and assumptions associated with cultures. The theoretical construct of situated cultural differences discussed in this paper provides the connection between the two models (Figure 3 adapted from Hall, 1976 and Sanders, 2002). Situated differences are particular artifacts, materials, practices, rituals, and activities (the explicit and observable aspects) that highlight the core values of groups and in the process mobilize group identity. Situated differences is a way to theoretically and methodologically connect the explicit (material and behavioral) aspects to the implicit (ideological and values) aspects of culture. The data collected from both traditional and participatory design research methods can be synthesized using the framework of culturally situated differences.
Analysis of the DTRS data set [Christensen and Abildgaard, this volume] also reiterate the importance of designing products and services that reflect core cultural values and assumption. For example, following are the broad research questions (v18, picture 02) listed by the design research team. These questions guided the research and ideation phase for the team. To maintain anonymity, the name of the corporation is replaced by the word “brand” in the quotes.

“This brand is for me because its value confirms mine”

“How can our brand help me broadcast my values?”

“Does the brand align with my values?”

These quotes reflect the thinking of global corporations across the world that are interested in developing products and services that resonate with the core cultural values. Corporations are conducting cross cultural studies that are increasingly focusing on the tacit and latent aspects of culture; ideologies, values and assumptions. These cross-cultural studies conducted on consumer behavior pave the way for corporations around the world to acknowledge the importance of cultural sensitivity towards developing and marketing products for different cultures but often leaves wanting for a consistent framework for implementation.

The DTRS dataset and results from this study indicate that co-creation sessions are valuable for studying the tacit and latent aspects of culture. Cultural co-creation session offer an interactive platform for participants to share their needs, wants, aspirations, emotions, dreams, ideologies, values and assumptions with researchers. From a researcher’s perspective, co-creation sessions offer insights into both the tangible and intangible aspects of participants’ culture. The step-by-step analysis of co-creation, debriefing and insights clustering sessions, presented in this paper, will provide direction for design researchers to methodically analyze cultural co-creation. Culturally situated differences can provide ethnographic practitioners and design researchers a methodological framework for examining the culture of products, understanding culturally
embedded rituals and gauging their impact on consumer behavior. The categorization of situated cultural differences into material, behavioral and ideological layers reduces the seemingly overwhelming task of studying culture into manageable layers. The layered approach should not be misunderstood as an over-simplistic approach for studying cultural aspects. As indicated in the findings section, the cultural layers cannot be studied in isolation. But it is important to recognize the importance of utilizing a layered methodological model that can guide cultural inquiries.

The theoretical framework of cultural situated differences utilizes culture as a dimension (adjective usage; cultural) that mediates our everyday experiences. Situated cultural differences then become a heuristic device for designers, researchers and corporations to discover core cultural values. The methodological framework suggested in this study can provide a yardstick for designers to measure the impacts of their designs on local cultures and to offer culturally appropriate designs. This study provides a methodological approach to analyze cultural differences and integrating diverse cultural aspects into a systematic framework.

This paper identified the different types of situated differences and report instances that highlight the core values discovered by the research team. This study only analyzed the co-creation and insights clustering sessions. Future work should conduct an in-depth analysis of the ideation and product development phases. Does the ideation and form development reflect culture values? How do the cultural values influence the design development? Answers to these questions can provide valuable direction for designers to design products and services that resonate with cultural values. Future work should also consider the researchers’ cultural background and the potential impact on co-creation. Specifically, how does the researcher’s cultural bias impact the co-creation session? Research in this area can provide new ways for investigators to acknowledge their cultural predisposition and how it impacts the co-creation process.

The initial analysis of this study was guided by typological analysis. Applying a pre-existing analysis model (pre-existing typologies as referred by Hatch, 2002) had certain positive implications. First, the three layered approach was helpful to navigate through overwhelming amount of data and to reduce and identify data most relevant to the study. Second, the situated cultural differences framework provided a systematic way to investigate and categorize data into meaningful chunks. Starting analysis with a pre-existing framework considerable reduced time for analysis. Using a 3 layered pre-existing analysis model also posed certain challenges. As researchers, it was challenging to look for new and emerging themes (Hatch, 2002 and LeCompete and Schensul, 1999) when the mind was guided by the three layered classification framework. Researchers conducted line by line coding and compared interview excerpts to look for potential overlaps between layers and any additional themes.

6. Conclusion

Global corporations expanding business across cultural boundaries are conducting cross-cultural research to gain meaningful insights into local cultures. Corporations are increasingly hiring anthropologist, sociologist, social studies and cross-cultural communication experts for conducting cross-cultural inquiries. As a consequence, rapid ethnography and other
anthropological methods are widely utilized for studying social interaction and practices within a culture.

Participatory co-creation provides a unique platform for researchers to gain insights into the tacit and latent aspects of culture; ideologies, values and assumptions. Cultural values are manifested in explicit and observable aspects like material objects, practices, rituals, and interactions. In this paper, the framework of situated cultural differences provides a methodological direction for researchers and designers to discover cultural values. Situated cultural differences were categorized and mapped into four key categories. The biaxial map of culturally situated differences was based on two axes. The horizontal axis represents material to behavioral manifestation of cultural differences. The vertical axis represents the spectrum of observable to abstract aspects of cultural differences. Four categories of situated cultural difference were discovered: material-observable, behavioral-observable, behavioral-ideological and material-ideological. The framework illustrated in this paper can help researchers to effectively analyze cross-cultural co-creation. This paper can help researchers utilize cultural differences as a diagnostic tool for studying diverse cultural aspects and categorize insights into a systematic framework.

References


[Christensen and Abildgaard, this volume]
http://scholar.google.com/scholar?q=disruptive+innovation+for+social+change&hl=en&lr=

[Dalya, McKilligan, Murphy & Ostrowski, this volume]


DTRS11: Design Thinking Research Symposium 2016 – Copenhagen Business School


[Lloyd & Oak, this volume]


