

## Deconstructing cultural values of products: implications for sustainable design

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Cultural values  
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### Abstract

In a global era where products are reaching across international boundaries, designers are increasingly challenged to design for diverse cultural context. Designers are agents of cultural change and should be cognizant of the impact their products have on local markets. The key for developing culturally appropriate products lies in understanding how cultural objects acquire and communicate cultural meanings. The goal of this paper is to deconstruct and categorize cultural meanings associated with objects and highlight the key determinants that contribute to cultural values. Cultural product images and phrases were analysed using a four-layered model for classifying cultural meanings. Participants were then engaged in a laddering interview to understand the key determinants of cultural values. The analysis reveals eight key determinants of cultural values. The determinants are mapped across four key continuums: appearance–representation, self-identity–group affiliation, personalization–shared belongingness, and stories–memories. In addition, the determinants of cultural values are compared with the key determinants of product attachment. Findings of the study reveal a strong overlap between the determinants of cultural values and product attachment. The paper also outlines a framework for achieving culturally sustainable design. The outcomes of this study have several implications for designers and educators that aim to achieve culturally sustainable design. This study believes that products that reflect cultural values have a higher emotional attachment to consumers resulting in longer life-spans and culturally sustainable consumption.

### Introduction

Multi-nationals expanding their business across international boundaries are agents of cultural change and should be cognizant of the impact their products have on local markets. Corporations developing products for the local market need to understand user-product interaction as a part of a cultural process where consumption of (or lack of) certain products or services is a reflection of deliberate cultural choices and, by extension, reflects the shared cultural values of the group. To achieve sustainable consumption, Dolan (2002) point out that people have to feel culturally aligned and connected to products. Engaging consumers in culturally appropriate consumption will ensure that those objects have higher emotional attachment, longer life-spans and end up in landfills much later than other comparable products. The key for developing culturally appropriate products lies in understanding how cultural objects acquire and communicate cultural meanings.

The goal of this paper is to understand how users describe and categorize cultural meanings associated with objects, and highlight the determinants that contribute to cultural values. In addition, this paper provides a brief overview of determinants of product attachment and compares it with the determinants of cultural values that emerged

from data. The findings of the paper highlight significant overlap between determinants of cultural values and product attachment. The strong overlap between the determinants points at the importance of decoding cultural values of objects as a way of achieving higher product attachment. Furthermore, the determinants of cultural values are discussed as a potential framework intended for designers, researchers and corporations for achieving culturally sustainable design.

### Literature Review

#### *Cultural approach to Sustainability*

The current approach to sustainability in design and product development mainly focuses on environmental issues, and to a certain extent on social and economic aspects. Unfortunately, practitioners and academicians have often ignored or are unsure of how to deal with the cultural dimensions of sustainability. Schaefer & Crane (2005, p. 85) have argued that viewing sustainability from a cultural lens is a challenging proposition but it also “opens up different, more diverse, and potentially richer ways of thinking about sustainability.” This research presents a way to examine sustainability from a cultural lens.

The discourse on sustainable consumption and sustainability can be studied from two distinct approaches (Schaefer, & Crane, 2005; Dolan 2002): an individualized choice oriented perspective and a sociological and anthropological perspective. The individualized choice oriented perspective, consider consumers as free, sovereign, rational actors and focuses on understanding their psychological and cognitive processes. The disciplines of psychology, marketing, economics have supported this view of consumption and is central to the ecological discourse on sustainability. The implicit assumption in this objectivist approach centre around the needs and wants of the rational individual and “neglect the significance of consumption practices as embodying the relations between individuals” (Dolan, 2002, p. 170).

The sociological and anthropological approach focuses more on the social and cultural construction of consumption and questions the rationale behind consumption. In this approach, the emphasis is “less on how people perceive, evaluate, and select different consumption options and more on the function that consumption has in their lives, both individually and as members of social groups” (Schaefer, & Crane, 2005, p. 83). Consumption viewed from cultural lens includes consumption for pleasure, self-identity, establishing social relationships, and communicating symbolic and cultural meaning (Schaefer, & Crane, 2005). In short, the social and cultural conceptualization of consumption acknowledges the evolving nature of consumers from rational actors to communicators (Corrigan, 1997). This paper follows the anthropological approach (McCracken, 1988) to study the role of commodities that “mark social boundaries and hierarchies within any social system, and the potential of commodities to reflect cultural principles” (Dolan, 2002, p. 178). Material artefacts represent the materialization or visual manifestation of prevailing value and symbol systems of cultural groups (Dolan, 2002, p. 178; McCracken, 1986). Following this notion, this study aims to deconstruct cultural meanings of material artefacts and highlight the determinants of cultural values. This research analyses cultural objects beyond its utilitarian purpose and highlights the role of objects in creating self-identity, establishing social relationships and communicating symbolic and cultural meanings. Understanding the determinants of cultural values situates material objects as a part of a cultural process where consumption of certain products or services is a reflection of deliberate cultural choices and, by extension, reflection of shared values of cultural groups (Dhadphale, 2017). Schaefer & Crane (2005) have argued that our understanding of sustainability can be enriched by emphasizing the social and communicative role of material artefacts and identity construction (self and group) through consumption.

The following section discusses the notion of cultural principles (McCracken, 1986) or situated cultural differences (Appadurai, 1996) as a methodological tool to categorize cultural meanings. Furthermore, a four-layered model for classifying cultural meanings is discussed. The

key assumption is that cultural values of the group are manifested in distinctive (culturally situated differences or cultural principles) materiality, practices, symbolic meanings and ideology that mobilize group identity.

### *Classification of Cultural Meanings*

Appadurai (1996) argued that material artefacts can open themselves up to many forms of investigation in pursuit of an understanding of their cultural meanings. According to McCracken (1986, p. 71), culture constitutes the phenomenal world in two ways. Culture is both the ‘lens’ through which we see the world and the ‘blueprint’ of how individuals shape the world (McCracken, 1986, p. 72). Material artefacts significantly contribute to the culturally constituted world as they are “vital, tangible record of cultural meaning that is otherwise intangible” (McCracken, 1986, p. 73). Material artefacts (McCracken, 1986, p. 71) “carry and communicate cultural meanings” in the phenomenal world we operate in.

McCracken (1986) categories cultural meanings into two key aspects: cultural categories and cultural principles. Cultural categories determine “how this world will be segmented into discrete, intelligible parcels and how these parcels will be organized into a larger coherent system” (McCracken, 1986, p. 73). In simple terms, cultural categories represent the segmentation of the phenomenal world. Cultural principles are the organizing ideas by which the segmentation is performed (McCracken, 1986, p. 73). Similar to cultural principles (McCracken, 1986), Appadurai (1996) presents the notion of situated cultural differences as a way to categorize the phenomenal world. There are two key aspects to situated cultural differences. First, culturally 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). Situated differences could be local, embodied and significant material artefacts, practices, ideologies, rituals that mobilize group identities by highlighting the shared values of the cultural group. For example, Harley-Davidson enthusiasts are a distinctive group with shared values that are manifested in different aspects of everyday life.

This paper utilizes the notion of cultural principles (McCracken, 1986) and situated cultural differences (Appadurai, 1996) as a way to categorize cultural meanings. The key assumption is that cultural values of the group are manifested in distinctive materiality, practices, symbolic meanings and ideology (culturally situated differences or cultural principles) that mobilize group identity. To deconstruct cultural values (that mobilize group identity), it was critical to develop an applicable coding scheme to categorize cultural meanings. Classification of cultural meanings into layers is guided by the work of prominent scholars like Trompenaars and

Hampden-Turner (1997), Hofstede (2001), Hall (1976), Spencer-Oatey (2000) and others. Trompenaars and Hampden-Turner (1997) outline three layers of culture; the outer layer that includes the material artefacts and products; the middle layer representing norms and values and the core that represents the fundamental assumption about human existence. Hofstede (2001) provides five layered classification of culture that includes practices; rituals; heroes; symbols and the core represented by cultural values. Spencer-Oatey (2000) also identified four layers of culture; the outer layer that includes artefacts, products, rituals and behaviours; the mid-layers that includes systems and institutions; beliefs, attitudes and conventions and the core representing basic assumptions and values.

Based on the approach suggested by Trompenaars and Hampden-Turner (1997), Hofstede (2001), Hall (1976), Spencer-Oatey (2000), a four-layered classification model (M-I-S-V) was developed (Figure 1). The four-layered model classifies cultural meanings into 1) materiality (M; materials, processes, product aesthetics and semantics), 2) interactions (I; rituals, practices, and interactions), 3) symbolic meanings of interactions and products (S; self-identity and social status, group identity, product personality and brand identity) and 4) cultural values (V). Similar to the other models described above, this model assumes that both the tangible (materiality and behavioural/interaction) and intangible (symbolic meanings; group and self-identity) aspects lead to shared cultural values.

### Methodology

This paper address three key research questions: 1) How do users categorize cultural meanings associated with objects; 2) What are the key determinants that contribute to cultural values and 3) How do the determinants of cultural value compare to the determinants of product attachment?

To answer the following questions, empirical study was conducted in two phases. In the first phase, using a survey questionnaire, 27 participants were asked to provide 5 images of cultural products and 5 images of non-cultural products. For every product, participants were asked to

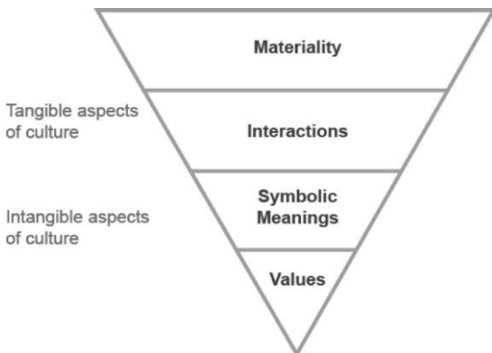


Figure 1. Layered classification of cultural meanings.

provide a short rationale (1-2 sentences) for selecting product images that were cultural and non-cultural. Content analysis was conducted to analyse and categories (RQ1) key words and phrases used to describe cultural objects. The content analysis was guided by typological analysis framework suggested by Hatch (2002). Typological analysis begins with the process of reducing and categorizing data based on existing typologies (Hatch, 2002). In this case, the four-layered classification model (M-I-S-V) was used to reduce and categorize data. The text provided with each image was coded and categorized into four layers (M-I-S-V): material, interactions, symbolic meanings and values. For example, participants mentioned 'samurai sword' as a cultural object primarily based on its form, texture and semantics. This object was then categorized into the material (M) layer. Products were categorized into multiple layers based on description provided by participants. For example, 'wedding rings' and 'wedding dresses' were considered cultural because of its materiality (the expensive diamond and wedding gown; (M)) and what the objects signify (symbolic meanings; (S)). Next, 15 images of cultural objects were selected based on the cultural specificity continuum outlined by Athavankar (2004). According to Athavankar (2004) objects can be categorized on a continuum from culturally shielded objects to culturally liberate objects. Culturally shielded objects were (also called traditional objects) objects such as wedding dresses, wedding rings, Chinese traditional clothing, Japanese samurai sword, traditional paintings, and others that have a history and special significance in respective cultures. Culturally liberate objects (although no object is culturally free) are modern mass-produced objects such as iPhone, Converse All-Star shoes, Solo party cups, McDonalds burgers, Chopsticks, NFL football, Hello Kitty, BMW cars and others. The selection of 15 cultural products and categorization of key phrases into the M-I-S-V model laid the foundation for the next phase of data collection.

In the second phase, 23 participants were interviewed using laddering interview technique to understand the determinants that lead to cultural values. Participants were asked to pick 10 images from a pool of 15 preselected cultural products. For each image, participants reflected on the connection between materiality (M), interactions (I), symbolic meanings of objects (self and group identities) and the resulting cultural values (V). Laddering interview technique based on means-end theory (Gutman, 1982, Woodruff, 1997) was used to understand cultural values. Means-end theory assumes that consumers logically link product attributes (A), consequences (C) that results in the abstract desired-end state (DES). Similarly, for this study, the laddering interview assumes that participants can logically connect different aspects of cultural meanings (M-I-S-V; materiality, interactions and symbolic meanings) and in the process, highlight the determinants that express cultural values. Interviews were analysed to identify key determinants. The structured approach of laddering technique was helpful to limit interview time and ensure positive engagement. The cultural values

(DES) uncovered during the interviews is not the main focus of this study. The determinants that lead to cultural values is the central piece of this study.

## Findings

### Determinants of Cultural Values

The analysis of interviews revealed 8 key determinants of cultural values. Each determinant was primarily discussed in relation to another complimentary determinant resulting in 4 pairs of determinants. The determinants were mapped across four continuums: 1) Appearance–representation, 2) self-identity–group affiliation, 3) personalization–shared belongingness, and 4) stories–memories. The following section briefly summarizes the determinants with examples. Due to the broad nature of data collected, each continuum of determinants is presented with limited examples. The continuums presented should not be considered discrete. Data analysis shows strong interrelationships between all determinants.

1. **Appearance–Representation:** Participants discussed materiality (appearance; form, colour, texture, graphic markings, and specific materials) as a key determinant of cultural values. Participants considered the ‘samurai sword’, ‘Chinese clothing’, ‘chopsticks’, and ‘wedding rings’ as cultural objects primarily based on the appearance of the product. For example, participant #2 highlighted, “the unique curved handle, the grip, the length of the sword, and the leather” all reflect the values of “disciplined, traditional and strength.” Symbolic meanings were discussed in relation to the appearance of products. For example, wedding rings were considered cultural objects (Participant #3) as they symbolize “commitment, wealth, power and status in the society.” All participants constantly interlinked the character of the product and the symbolic meaning associated with it.
2. **Self-identity–Group affiliation:** According to participants, products that supported formation of self-identity were considered cultural products. For example, Converse All-Star shoes were discussed as a product that helps form self-identity. According to one participant, “the classic, timelessness, simple, look of Converse, lets you create your own identity with it, but also makes you a part of this youthful, stylish, practical and trendy group.” Participants discussed the ability to personalize Converse shoes to communicate self-identity but at the same time also relate to the share values of the group. On the one hand, participants used Converse shoes to communicate self-identity, but on the other hand were proud to share group values and stabilize group identity. Similarly, more contemporary products like iPhone, luxury cars were considered suitable to expressing self-identity at the same time projecting group affiliation. The constant negotiation between self-identity and group affiliation was the key determinant of cultural values.
3. **Personalization–Shared Belongingness:** Personalization was discussed as a process for achieving self-identity and was considered a key determinant of cultural values. Individual values are partly a product of shared culture and partly a product of unique individual experiences (Schwartz, 1994). This reference from Schwartz, (1994) was seen in the interviews as participants discussed personalization (similar to the possession and grooming rituals discussed by McCracken (1986)) for cultural products. Participants discussed the ability to personalize (and in the process, create unique individual meanings) contemporary products like iPhone, Converse All-Star shoes, Hello Kitty, NFL, wedding rings and luxury car brands. According to one participant, “IPhones are mass produced but I know mine is different than others. The apps, the case, data, photos all make it my own.” The longer the process of personalization, participants felt that the product reflected their personal values and at the same time the shared group values. Associating oneself to a particular product reflected shared belongingness (the iPhone or Converse loyalist) and cultural values.
4. **Stories–Memories:** Participant strongly felt that cultural products facilitate the creation of unique stories. Participant #14 talked about how every young teenager has a unique story associated with their first pair of Converse All-Star shoes. As one participant shared, “having the same pair of Converse that my mom had 30 years ago creates this bond between us. She remembers her first pair and now I have the same.” Products were considered cultural if they facilitated creation of personal stories or memories. Participant #12 shared a memory related to burgers: “I remember my mom and dad flipping burgers for us when the weather was nice. Even today, eating McDonalds reminds me of my childhood and the time with my parents.” She considered McDonalds burger as a cultural icon because it reflects the ritual of barbecuing on long weekends; a ritual shared by many families in the United States.

### Comparing Determinants of Product Attachment and Cultural Values

How do the determinants of cultural value compare to the determinants of product attachment? This section briefly reviews literature on determinants of product attachment and then discusses the similarities and overlaps with the determinants of cultural value that emerged from the data. Schifferstein & Zwartkruis-Pelgrim (2008, p. 2) define product attachment as the “strength of the emotional bond a consumer experiences with a durable product.” Mugge, et. al (2008) outlined four key determinants of product attachment: pleasure (Jordan, 2002, Norman, 2004), self-expression, group affiliation and memories. Schifferstein & Zwartkruis-Pelgrim (2008) discuss the interrelationship between irrepleaceability, indispensability, self-extension

and product attachment. Schifferstein & Zwartkruis-Pelgrim (2008) outline seven key determinants of product attachment: enjoyment, individual autonomy, life vision, memories, utility, reliability and market value. Adding to the list of determinants, Chapman (2005) and Oulasvirta & Blom (2008) specifically discuss the role of product character and personalization as determinants of attachment. Although this paper does not directly address product attachment, the findings reveals an interesting overlap between determinants of cultural values and product attachment. Table 1 compares the determinants of product attachment and cultural value.

Product appearance evokes feelings of pleasure that result in stronger attachment with products. In comparison, uniqueness of appearance (specific materials or textures) and semantic associations were considered key elements for revealing cultural values. Pleasure, utility and reliability of products was not considered key for expressing cultural values. The most promising overlap between the determinants was the 'personalization ritual that expresses self-identity and in the process builds unique associations (stories and memories) with products. Shared belongingness and group identity is a way to establish shared cultural values that act as boundaries that distinguishes one group from another.

## Conclusions

### Implication for culturally sustainable design

The outcomes of this study have several implications for designers and educators that aim to achieve culturally sustainable design. This paper follows the anthropological approach to sustainability that emphasizing the social and communicative role of material artefacts in creating self-identity, establishing social relationships and communicating symbolic and cultural meanings. Products aligned with cultural values are not merely utilitarian objects but are social and cultural expressions that mark social boundaries, establish group identity and communicate symbolic and cultural meanings. The determinants of cultural values are discussed as a potential framework intended for designers, researchers and corporations for achieving culturally sustainable design.

Attachment Determinants (based on review of literature)	Cultural Value Determinants (themes emerged from data)
Appearance / Character	Appearance-Representation
Pleasure	Self-identity-Group affiliation
Personalization	Personalization-Shared belongingness
Utility	Stories-Memories
Memories	
Self-expression & extension	
Group affiliation	
Reliability/Longevity	

Table 1. Comparison of product attachment and cultural value determinants.

How can we define cultural sustainability? And how can designer develop culturally sustainable products? Following the early definition of sustainability provided by 'The World Commission on Environment and Development' (1987) and the Oslo Symposium on Sustainable Consumption (1994), and the review of current literature in sustainability, consumption and culture (Dolan, 2002; McCracken, 1988; Appadurai, 1996; Giddens, 1990; Schaefer & Crane, 2005; Corrigan, 1997) culturally sustainability can be defined as: the acquisition and use of goods and services that involves the materialization and embodiment of cultural modes of thinking and behaviour at an individual and societal level sustaining and enriching a particular way of life (culture) while creating social and cultural identity for individuals and groups, accounting for cultural change, and minimizing environmental impact through cultural appropriateness, so as not to jeopardize the social, cultural, economic and environmental existence of future generations.

This definition of cultural sustainability embraces the social and communicative role of products for creating self-identity, establishing social relationships and communicating symbolic and cultural meanings. It is not only limited to only understanding the environmental needs of future generation but also includes social and cultural practices that are equally important for better life standards for future generations. The determinants of cultural values illustrated in this paper can be a starting point for designers to achieve culturally sustainable design. Designers can consider the following four dimensions (and determinants) when developing culturally specific products: sense of identity, sense of self, character of product and product associations. In order to achieve culturally sustainable design, designers need to combine and carefully balance the four dimensions. Certain determinants like sense of identity and product associations cannot be controlled by the designers and consequently are hard to implement. However, the four dimensions (and determinants) can provide a valuable framework (Figure 2) to guide culturally sustainable design.

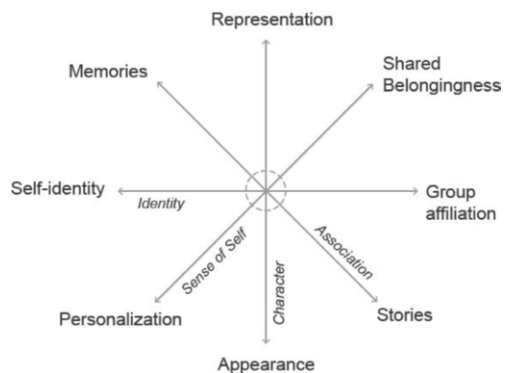


Figure 2. Framework for culturally sustainable design.

The first dimension (character of product) involves materialization and embodiment of implicit and symbolic cultural meanings through form, materials and manufacturing processes that are expressed in design attributes. One end of this continuum refers to utilizing local material finishes, aesthetics, styling, manufacturing processes, and other design attributes that contain implicit cultural meaning. On the other end represents the symbolic meaning associated with products. Culturally sustainable design should promote a *sense of self* and a *sense of identity*. On one hand, products should encourage personalization that expresses self-identity. On the other hand, products should facilitate and strengthen the connection with other individuals; shared belongingness and group affiliation. The fourth dimension deals with product association. Stories or memories associated with products express the individuals' past, present and future position in relation to other people and cultural context. Designers cannot

directly influence formation of stories or memories. However, it is critical for designers to acknowledge the role personal narratives play in establishing self-identity and group associations. The framework presented in not exhaustive and should be considered as a starting point for designers to implement culturally sustainable design strategies. This paper believes that products aligned with cultural values are likely to demonstrate higher emotional attachment, longer life-spans and end up in landfills much later than other comparable products. The overlap between the determinants of cultural values and product attachment can lead to interesting future investigations.

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