

## Design Elements Regarding to Cultural Factors of Iranian Carpet

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### ABSTRACT

The aspect of physical and Nonphysical factors influence to the success of new product in current market. Culture factors is one of the elements need to be considered by designer during product development process. This paper examine Iranian carpet which were created based on people's beliefs and product functional needs to match with design elements. This work aimed to help designers in designing product based on cultural factors for specific users. This study involved with qualitative method where interview has been conducted to identify prior culture factors influence to product, and findings from this study can be beneficial to the designers in designing cultural product for the future.

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### 1. Introduction

A product contains combinations of the intangible and the tangible factors (Murthy, Rausand, & Osteras, 2008). Many non-physical factors during the most product development processes, has been less considered. The process of globalization is in fact imposed on users and variations remain strong in terms of national culture (Moalosi, Popovic, & Hickling-Hudson, 2008). In other words, we need to care about the differences on the needs of people (Goncu Berk & DeLong, 2013). In fact, the culture of consumers are based on the set of values, norms, behaviors and opinions. In this way, the designers must be sure that the features of a product and its benefits are adapted to the cultural values.

People are different in their cognition, perceptions, values and thinking styles in order to different cultures (Peranginangin, Chen, & Shieh, 2013) and it is important to thoroughly understand different cultural traits in designing interfaces for other users (Kim & Lee, 2005). Industrial Design has a significant role in the process of including cultural factors into the products and improving their values in the competitive global market (Rungtai Lin, 2009). Therefore, designing a product with local culture has become a critical problem in product design in order to highlight its cultural value (R. T. Lin, 2005; Wu, Hsu, & Lin, 2004). Preserving on local culture on traditional products is one of the main concern of the Iranian society. So regarding to this point, there are several examples in official high level documents that makes it as a priority of Iranian government. Such as, preserving cultural heritage of traditional products to be applied in Iranian current lifestyle which is mentioned in "Sixth overall policy of development" by supreme leader of

Islamic Republic of Iran, Ayatollah Khamenei (Khamenei, 2015).

Also the "6th Development Plan of the Islamic Republic of Iran" emphasized on strengthen the capacity of Iranian traditional products and intangible cultural heritage in the face of global exchange (Islamic Parliament of Iran, 2016). According to "Traditional Product Organization of Iran" report, there was more than 250 types of traditional products before "Industrial Revolution" (1760 -1820) that many of them do not exist (Karimian & Attarzadeh, 2014). The products should be constructed based on a dialogue between users and culture and designers. This can simplify the process of acceptance and satisfaction of products (Moalosi, 2007). However, there are insufficient investigation in this field and lack of systematic approach for its processing. For that designers should consider the cultural features in their designing (Rahman & Moalosi, 2010). In addition to market research and function analysis, product's meaning needs to be considered in designing process to satisfy user needs (Hsu, Lin, & Lin, 2011).

#### 1.1 Aim and Objective

Using a product with different culture signify some kind of respect and concern to that culture. Because of the great use of the industrial design in production and its close connection with art, the industrial design as a practical art is affected by this content. Like handicrafts, as roots of the industrial design, this influence is reflected in different nations and cultures. This study aimed to understand the cultural factors that affect on traditional products for Iranian culture. Regarding to the objective, this study has some great opportunities for the future of design. This study aims to lead designer who is interest in designing for specific community group by considering their culture including their beliefs and

elements that they inherit from their ancestors. Interpreting the cultural factors with design perspective can help us to find a new connection for our future product design.

### 1.2 Background of study

Hofstede and Minkov (2010) pointed out that the culture is the process of learning and experience that people will sustain during their lives. Culture generally refers to patterns of human activity and the symbolic structures that give such activity significance and reflect different criteria for evaluating human activity or theoretical bases for understanding by various definitions. Indeed, the culture has been described as that which deals with the result of the evolutionary process in human civilization, a process that involves language, customs, religion, arts, thought and behavior, based on sociological studies, anthropological and linguistic (RT Lin, 2007).

### 1.3 Iran Culture

The culture of Iran is a combination of two significant eras: pre-Islamic culture and Islamic culture. In pre-Islamic period, Iran's culture was the predominant culture in the region that we know it middle east now. The last name of Iran was Persia and Persian is the first civilization in the world (Saidian, 2001) and also the first empire that the Romans and Greeks later copied their method of Governing (Grosser, 1982). The Sassanid era was one of the most powerful era in Iran that India, China and Roman civilization were influenced by Iranian culture (Grosser, 1982). Furthermore, some claimed that Africa and western Europe also has been influenced by culture and art of Iran (Saidian, 2001). The brilliant period of Islamization mixed with ancient culture of Iran and made a powerful culture until now. Refers to some researches which have done about Iranian culture, we can extract some cultural features for Iran at the contemporary. It is claimed about three main effective power in current culture (AghaeiFishani, 2000). Iranian ancient cultural features, Islamic features and modern features.

### 1.4 Culture and Product Design

In the market, not only all the functions of a product are bought by consumers, but also should include the human values and self-awareness (Shuzhen & Qin, 2009). These are all designers' missions and responsibilities. In design development process, the next generation of the market will be influenced by relationship between the consumers' culture and product (Jiang & Boden, 2004; RT Lin, 2007). Designers will have ability to transfer the cultural context of users to design products. However, users' involvement into the product design process helps to capture their needs and interest suggested by Sametz and Maydoney (2003). In order to improvement of product identity and fulfillment of the experiences of consumers, cultural features should be embedded into the product (R. T. Lin, 2005).

Moalosi, Popovic, & Hickling-Hudson (2008) in their study expressed a foundation for embedding cultural factors into the process of design. The culture-oriented product design process that suggested by Moalosi et al. (2008), has three domain: User's domain. Designer's domain and Product domain. Lin et al. (2007) proposed a model to transfer the cultural factors to design elements in modern products regarding to strengthen their design value. It is stated that the process of cultural product design is shaped from reviewing cultural factors. In next step, defining the design process regarding to satisfying the customers by culture. His suggested model contains three main parts:

conceptual model, research method, and design process (Rungtai Lin et al., 2007).

Ten steps with four phase of design provided by Hsu et al. (2011) for designing a cultural product. He discussed in step 1, 3, 6 and 9 about identifying the cultural products, exploring customer needs in order to define a product regarding to cultural features concerns, generating a matrix table to recognize the original cultural factors based on cultural layers and developing the concept by figurative product semantics considering cultural meaning transformation into a rationally correct cultural product. Goncu Berk & DeLong (2013) explored the design process for designers who want to design for users from significantly different culture. Designers need to access to the users' experience and environment at the individual level. Users' roles are empowered in the design process and communication problems are reduced when research methods are combined with visual probes (Goncu Berk & DeLong, 2013).

In summary, it can be discovered that there are some fundamentals for cultural design, which involved with users' needs, designers perceptions and design process. In this case, the theoretical framework for this study can be proposed in relation between culture, user, designer and product. The parameter that effect on both user and designer in a same society is "cultural factor".

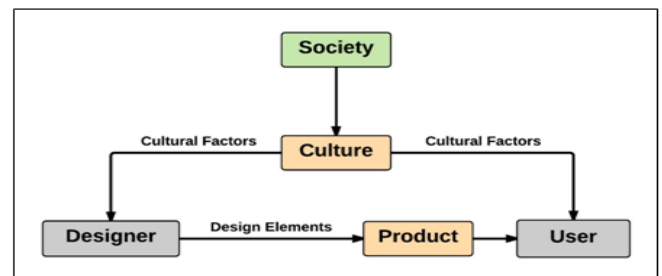


Figure i: Research Theoretical Framework

## 2. Materials and Methods

The qualitative research is mainly useful for the study of the social relations (Bryman, 2012; Ritchie & Lewis, 2003). As this methodology is developed by designers for designers, the nature of incorporating users' cultural factors into design process can be significant and relevant for this research situation.

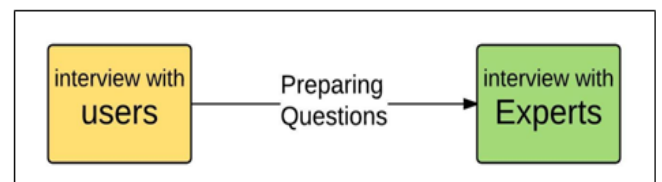


Figure ii: Research Framework

In the pilot study, the method of this research was tested. Also, it is showed in Figure ii interview with users need to be developed. In addition, the questions were improved after every single interview and the results of pilot study helped researcher to develop the questions for the main study.

The researcher identified through the pilot study, potential products that can extract some cultural factors through their usage. It also indicated how this process could be developed and applied in the main study.

### 2.1 Participants

In qualitative research, a limited number of respondents should be cooperated for research purposes to gain in depth understanding of the subject.

It is essential, as McCracken (1988) highlighted, the target of the qualitative interviews is not to discover how many, and what kind of people but rather to gain access to how one culture constructs the world. This research requires to select the participants purposefully who can share sufficient data about the cultural factors. In this case, the following criteria were found for users to affect the data content, which collected;

1. Experience of using traditional products in Iran
2. Strong cultural influence on traditional products
3. Having knowledge about Iranian traditional products
4. The openness to contribute to this research and agreement with recording their property

The interview was conducted with ten users. During more than 25 interviews with Iranian participants, it is experienced that usually only participants with traditional family and age older than 35 years was qualified for interview in this research.

### 2.2 Interview with users

All the interviews with users were conducted face to face and in Persian language and were recorded digitally with permission of the respondents. The aim of interview with users was to identify which traditional products have been influenced by the culture in Iran society and to identify the cultural factors that effected to the use of the traditional product in Iran society. Questions that were used for interview with users including to find out about cultural factors that influence to the usage of the products and why it is still use in current practice.

### 2.3 Interviews with Experts

The aim of interview with experts was: To explore the design elements presenting specific cultural factors that understood in interviewing with users. For that a presentation was prepared (in Microsoft Power Point format) for experts to understand users' opinion about the cultural factors that were effected in each traditional products. These cultural factors were achieved from coding of interview transcripts and categorizing them to the main themes. Through the interview with experts, the main themes were asked to explain about how these cultural factors can be represented with the design elements. **Error! Reference source not found.**

### 2.4 Cultural Factors and Design Elements (Themes, Keywords)

The raw data in a form of text interview, transferred and linked into different categories, coding and themes. In this case, any of the categories was given a conceptual name or coding group. For instance, the concept associated with 'gathering' and 'respect to family' relate to the higher order notion or coding of 'Family Orientation', which in turn is grouped with other concepts to comprise the theme cultural factors.

In this study, the researcher used multiple strategies to assess the reliability and validity of the study such as peer reviewing, spending a long time in investigating, audit trail and checking the finding with participants (Creswell, 2014). In this research, content analysis software Nvivo10 assisted the author to plotting the data internal relationships, references and sources.

## 3. Result and Discussion

### 3.1. Cultural Factors

The cultural factors that were extracted through the interview with users were listed as: Aestheticism, Hygiene and Health, Hospitality, Multiple uses, Comfort and

pleasantness, Family orientation, Show respect for elders, Tendency to simplicity, Memorability, Habits and Customs and Upbringing and training. As it is shown in Table Error! No text of specified style in document..1. **Frequency of Cultural Factors in each Traditional Products**, some of the cultural factors are more common in carpet and some of them were found to be less common.

**Table Error! No text of specified style in document..1. Frequency of Cultural Factors in each Traditional Products.**

	Cultural Factors	Carpet
1	Aestheticism	14
2	Hygiene and Health	2
3	Hospitality	2
4	Multiple uses	5
5	Comfort and pleasantness	5
6	Family orientation	4
7	Show respect for elders	2
8	Tendency to simplicity	1
9	Memorability	4
10	Habits and Customs	4
11	Upbringing and training	1

### 3.2. Design elements

Through the interviews with experts it is found that the design elements have relations with the cultural factors that represent Iranian's talent in reinforcing the culture of society with products. There are priorities of design elements for carpet and they were listed as Motifs, Function, Color, Production, Material, Arrangement, Ergonomics, Form, Harmony and Dimensions (Table Error! No text of specified style in document..2).

**Table Error! No text of specified style in document..2. Design Elements with the number of references.**

No.	Design Elements	References
1	Motifs	60
2	Function	57
3	Color	45
4	Production	40
5	Material	35
6	Arrangement	30
7	Ergonomics	26
8	Form	26
9	Harmony	26
10	Dimensions	19

### 3.3. Cultural Factors and Design Elements

In Carpet were found eleven cultural factors that were mentioned by users. During interview with experts, different design elements were declared in related to each cultural factors. For example experts described that the following design elements can represent the "Aestheticism" in Carpet based on their frequency in which they mentioned: Motifs, Color, Production, Harmony, Material, Arrangement, Form, Function, Ergonomics and Dimensions. According to frequency of design elements, "Motifs" is the most important elements in designing a Carpet in order to represent the "Aestheticism" in Iranian users (Figure Error! No text of specified style in document..4). Also "Aestheticism" is the most frequently cultural factor that mentioned by users for Carpet. It means that "Aestheticism" is most important for users than other cultural factors in order to the usage of Carpet. Therefore, designers who want to redesign Carpet for current market should know that "Aestheticism" is the main cultural factor that can be represented by some design elements like: Motifs, Color, Production, Harmony, etc. "Comfort and Pleasantness" is in the second place of cultural

factors of Carpet. Designers who want to redesign Carpet for current market should know about the design elements which can make the feeling of “Comfort and Pleasantness” in Carpet. Comparing between two groups of design elements regarding to “Aestheticism” and “Comfort and Pleasantness” shows some points to designers (Figure Error! No text of specified style in document.-3). Knowing the ranking of cultural factors and design elements in carpet could be critical for designers in redesigning these products for current market. Because if designers do not know about the cultural factors that exactly affected on carpet, they will not target true design elements. For example, insisting on “Dimensions” instead of “Motifs” to meet “Aestheticism” in redesigning the Carpet can mislead designers in cultural design process. Designers can compare all the cultural factors that involved in Carpet in order to design elements (Figure Error! No text of specified style in document..4).

<b>Aestheticism</b>	Motifs	<b>Comfort and pleasantness</b>	Ergonomics
	Color		Material
	Production		Function
	Harmony		Color
	Material		Motifs
	Arrangement		Production
	Form		Arrangement
	Function		Harmony
	Ergonomics		Dimensions
	Dimensions		Form

Figure Error! No text of specified style in document.-3. Comparing between Design Elements of "Aestheticism" and "Comfort and Pleasantness" in Carpet

Therefore, designers in redesigning Carpet can consider this comparison in priority of cultural factors. Designers can consider the priority of cultural factors base on users' cultural needs. The following diagram show the relationship between every cultural factors and design elements in carpet (Figure Error! No text of specified style in document..4).

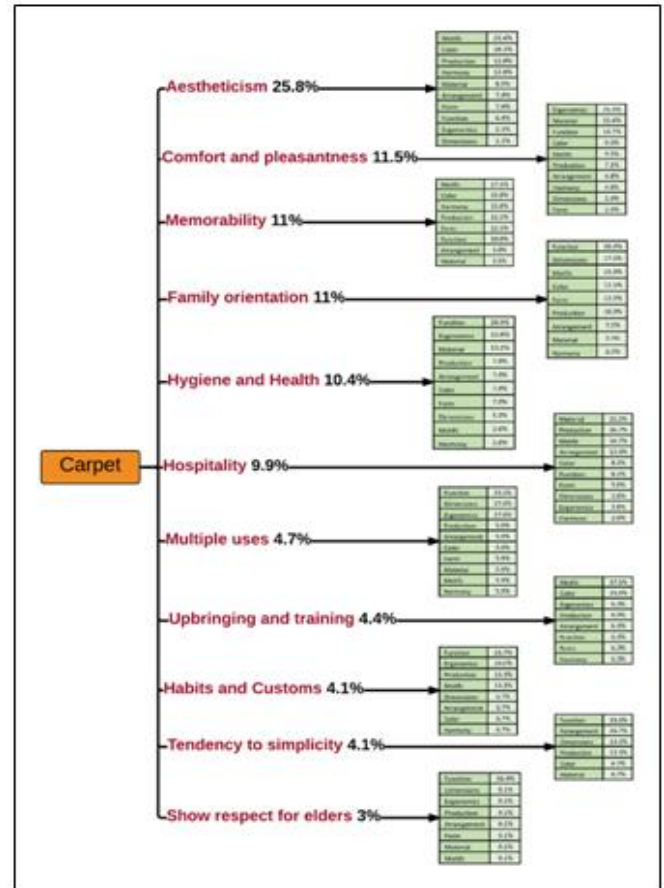


Figure Error! No text of specified style in document..4. Cultural Factors and Design Elements for Carpet.

4. Conclusion

This research has developed a framework to guide designers in redesigning a product particularly a carpet for Iranian culture. It explained how designers can understand the culture through the traditional products and develop the design elements that were employed to represent those cultural factors which can be benefit to future design planning. Redesigning the traditional product could be possible only by exploring their cultural factors and understanding of how these culture factors embodied in those products.

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