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| Volume 7 Issue 1 | Past Issues | A-Z List |

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Metaphors and Website Design: A Cross-Cultural Case Study of the Tide.com Stain Detective

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Summary: This study investigated the generalization of a home metaphor used in the Tide.com Stain Detective (Nelson & Hibner, 2003) to middle-class Indian females. The stain detective was developed with American women based on a card sorting activity. A similar card sorting activity was conducted with six Indian females. Results showed that the Indian participants grouped the stains by the amount of work that was required to remove it, rather than by the location where it occurred.

INTRODUCTION

Tide, a product of Proctor and Gamble (P & G), is a well-known laundry product. In India, Tide and Ariel (both P & G products) control 11% of the domestic detergent market (P & G, 2004). In March of 2004, P & G launched a campaign to gain more control in India by reducing the price of detergent by 20-50% resulting in a 200-gram pack of Tide selling for about $0.22 (P & G, 2004). An increase in the market share is likely to result in an increased number of Indian users logging on to the Tide website. Tide.com features a stain detective to provide users with advice on removing stains while doing laundry. The Tide.com stain detective was developed based on a card sorting activity in which clusters "mapped to rooms in a house where the stain would occur" (Nelson & Hibner, 2003, p. 1323). As a result of this, the stain detective uses the metaphor of a prototypical American house to facilitate users' search for a particular stain type (Figure 1).

Figure 1. The Tide.com Stain Detective
(http://www.tide.com/staindetective/selectStain.jhtml)

Interface designs that rely on metaphors should taking into account cultural diversity of targeted users (Marcus & West-Gould, 2000). Interfaces need to reflect "the values, ethics, and morals of the target users" (Ford & Gelderblom, 2003, p.220). According to Marcus (1998), metaphors provide a visual meaning of concepts through words and images. Duncker (2002) emphasizes that metaphors have to match the target user's mental model of physical objects. When users feel a sense of representation they are able to benefit from and feel comfortable using metaphors.

The question arises as to whether the house metaphor applies to other cultures. The typical Indian house and living arrangements are structured very differently than the average American home. The house metaphor presented on Tide.com is not consistent with a typical urban Indian house. In addition to bedrooms, the Tide.com house has a playroom, nursery, bathroom, office/den, kitchen/dining, garage/shop, and laundry/basement. Urban Indian families often live in patrilineal joint families (men are related) consisting of 4-8 family members. The typical higher-middle class Mumbai house has a 1-3 bedrooms, a kitchen, a combined living/dining area, and 1-2 bathrooms.

The main objective of this study was to compare the categorization of stains by Indian middle class females to American females to determine if the Tide.com Stain Detective (Nelson & Hibner, 2003) is a valid metaphor generalizable to India.

METHOD

Participants

Six Indian females ranging in age from 26 to 46 (M=34.67) were recruited to participate in a card sorting activity of 92 common household stains. All participants labeled themselves as middle class ($300-500 USD/month) or above based on income. All participants indicated they were fluent in English and had at least the equivalent of a Bachelor's degree.

Procedure

The card sorting activity was carried out at a private residence in Mumbai, Maharashtra, India.

Participants were compensated with a small gift. All participants completed a background questionnaire before completing the card sort and a post-session questionnaire asking how familiar they were with the stains presented and asking them to list stains that were present in Indian life but not represented on the cards. After completion of the study, participants were interviewed regarding the perceived usefulness of a house metaphor for this task.

RESULTS

The results of the card sort revealed an inherent metaphor that differed from that used by the American participants. The clusters created by the Indian participants did not rely on the location of stain occurrence within the house. The majority of participants created clusters based on the amount of work necessary to remove the stain. These groups were often assigned names such as (1) easy to remove, (2) more challenging to remove, (3) leave for the servant, and (4) requires professional laundry service.

In the post-experiment interview, participants were asked if they could group the stains based on location of occurrence in the house. None of the participants felt comfortable using a house metaphor. Due to the size of the Indian homes, the rooms are used for a variety of purposes with the living room often serving as a bedroom at night and the bedroom often serving as playroom and office during the day.

A cluster analysis using EZCalc™ revealed clusters with some similarities to those found on the Tide.com website. Participants were also able to list a variety of stains commonly encountered in India that were not presented (e.g., mango, tumeric, henna).

CONCLUSION

The results of this case study clearly show that care must be taken in website design when metaphors are used as the primary means of interaction. The major question raised by the results is to what degree the lack of congruity between the house metaphor and the removal-difficulty metaphor would interfere with the actual use of the stain detective. A usability test of the Tide.com stain detector with this population would reveal specific cultural difficulties with the metaphor. According to Duckner (2002) users need to feel a sense of representation in order to comfortably use metaphors; usability testing would indicate whether the Indian users have this sense of representation which would enable them to fully benefit from the house metaphor.

Note: For additional information,, please see the proceedings of HCI-International 2005 in July. For more information see http://www.hci-international.org/.

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Tide Stain Detective
http://www.tide.com/staindetective/selectStain.jhtml
