Cultural Design for Globalization: Beyond Aesthetic Stereotypes

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Let me begin with very interesting story I experienced during my sabbatical leave in Institute of Design, Illinois Institute of Technology at Chicago. We bought one piece of frozen pizza and the recipe on the top of box reads for best taste, put the pizza on the second lack of oven. I took it granted for that 'second' means 'from top' but very interestingly many American colleagues thought it 'from bottom'. Ever since then, this startling difference of conceptual model led me deep dive into research of tick cultural design.

The word 'culture' has become hot buzzword as society sifts to story-driven society. Brief look-up of the word 'culture' at Google generated as many as 49,000 results. Images shown were mostly 'high arts', 'fashion', 'pop' or 'tradition' implying 'a social class' or 'high degree of taste'. We can frequently hear someone say "he is cultural celebrity." However definitions which are widely used among academic society are the 'behavioral' and 'cognitive' definitions of culture: "Culture consists in patterned ways of thinking, feeling and reacting, acquired and transmitted mainly by symbols, constituting the distinctive achievements of human groups, including their embodiments in artifacts." This definition leads to the model of culture having the depth, some keeping the number of levels as two while others adding one more producing three levels of model. Levels differ from each other in the degree of observability, concreteness and consciousness. Top layer of culture, 'Artifact' consists of the observable, objective, concrete and
tangible elements of culture such as language, food, housing, monuments, clothing, tools, arts and all artifacts human created. People can consciously and explicitly describe this phenomenal layer of culture. This layer of cultural element—Artifact is the manifested symbol of deeper layers of cultural element: "Product is frozen culture." Middle layer of cultural element 'Value' includes something people know but cannot exclusively talk and elaborate. People know clearly what they prefer or not but cannot clarify why. Finally, bottom, deepest layer of cultural elements 'Basic assumptions' consists of things in people's mind that are out of conscious awareness, taken for granted and difficult to know and elaborate.

These three levels of cultural elements are mutually reinforcing through the intertwined cycle shown in figure 1. Top level of artifacts is linked to bottom level of basic assumptions through middle level of value and norm. Artifacts are embedded in norm and value which are in turn embedded in basic assumptions. The artifacts impart meaning to behavior through the rules prescribed by norm and value, but the meaning of behavior only make sense in the context of basic assumptions that surround that behavior. This cyclic model also reveals the process of how product is evolved. At first, new product is introduced in real world as functional artifact(e.g. car for transporting), and later people gets to form their individual value of like and dislike on it (e.g. 'sexy' car). Then, next, if the value is kept long enough and shared by society it would be gradually absorbed deep into subconscious level (e.g. car as society's icon). The reverse cycle can also happen. Out of unconscious level, some value is expressed, and if the value is salient enough, it can be manufactured as artifact or expressed in some symbol.

Figure 1
Having got the very complex picture of culture, designer’ s present approach to culture seems to have many limits. Firstly, too superficial or addressing just small portion of issue. Quite often designer’ s major output from cultural design takes the form of aesthetic stereotypes such as national shape or colour preferences: for example, ‘rigor’ for German, ‘flair’ for Italian, ‘compactness and cuteness’ for Japanese, and ‘tail fins’ for American. For instance, Figure 2 shows Japanese wrist watch designs specifically customized for different European countries, United Kingdom, Germany, Italy, France, and Spain respectively. Whereas aesthetic differences among different cultures are obviously one of very important issues in cultural design, the design in culture should be extended far beyond artifact level of culture. Even if final results remain at aesthetic level, aesthetic should come from serious understanding value and basic assumptions, not from personal whims. Equally, perhaps more important issue is value and basic assumption level of culture in design such as user’ s interaction with product and deeply hidden experience. The invisibility in those levels has become more important as products like digital information appliances or website become more intangible than ever. Secondly, major design methods of cultural design were limited only in designer’ s personal intuition or survey or interview. These conventional methods cannot effectively work for identifying cultural characteristics and applying them for design. As shown above model of culture, culture is not something that people can easily and explicitly talk out.

![Figure 2](image)

Yet cultural design by no means reaches deadlock and we still have some means available to overcome difficulties. Among them, ethnography has been recognized as very useful tool to understand user’ s tacit needs through
observing user's behavior in the contextual situation. Certainly action speaks louder than words. Key issue here is how user can be observed without interruption, avoiding hawthorn effect. Figure 3 is one culture-conscious mobile phone design prepared for Islamic culture. This mobile phone has the function of compass toward Mecca so that Islamic people can easily engage in religious ritual. This type of design is possible through careful understanding of user's behavior. Figure 4 shows some tool developed in author's lab for ethno graphic study of mobile user. Tiny micro medical camera was imbedded inside of frame of spectacles so that what user sees is automatically recorded without interruption in normal situation. It is extremely useful to record very fine interaction like one with mobile phone. In addition, software was developed for annotating video clip and identifying user's behavioral pattern. As shown in figure 5, software allows design researcher to view different aspects of user behavior from detailed interaction with display and general physical gesture to very macroscopic movement path. GPS technology was used to get user's moving path data.
Another valuable and cost-efficient tool is internet for conducting researches on culture in far remote locations. Using internet for cultural study saves tremendous time, cost, and effort. Figure 6 shows a sample screen of web-based remote tool for catching user-interaction behavior. Specially programmed browser is downloaded in remote user's computer and user interacts with computer-simulated product sitting comfortably in his own environment. All interaction data like what buttons clicked, how long taken, what error made and so forth are automatically transmitted to designer's server. Once data is collected, software analyzes user's behavior both statistically and qualitatively: user's interaction behavior is replayed for further in-depth analysis as shown in figure 6. Author effectively used this tool for comparing Korean and Japanese interaction behavior with microwave oven. One interesting finding was that Japanese housewives read user's manual before trial while as Korean housewives used learning-by-doing strategy: each culture adopts different learning strategy. Figure 7 shows another example of web-based cultural research for understanding whether user perceives thing contextually or independently.
Last but not least useful tool for cultural design is 'cultural dimension' as means to profile cultural characteristics, compare them with other culture sand explain why part of cultural characteristics. Cultural dimension refers to some consistent bases for making comparisons across cultures within a universalistic framework. Some known
representative cultural dimensions include 'Conception of nature (subjugate vs. control)', 'temporal perception (past, present vs. future)', 'relationship with human (individualism vs. collectivism)', 'authority conception (equal vs. hierarchical)', 'expression of emotion (neutral vs. affective)', 'message contexting (high context vs. low context)', and 'adherence to rules (universalism vs. particularism)', and 'task handling (polychronic vs. monochronic). From the comparative project between Korean and American mobile phones, some interesting differences were found and explained by cultural dimension. For example, American phones have interface structure with relatively more steps and less alternatives because of monochronic culture (do one thing at a time rather than do many things at a time). Or degree to keep the interface guideline in American phone is very strict while Korean one is more generous to exceptions from guideline (universalism vs. particularism). This type of systematic analysis offers much richer insights than conventional skin-deep analysis like average percentage of user's preference.

With all these seemingly workable remedies for cultural design, there are still various factors to consider. Recently, author was one of leaders of cross-cultural design project of 'Chopstick'. The 'Chopstick' was 10 months-long project with the aim of understanding people/users of different cultures in their daily habits and behaviors in food preparation and consumption at home. Participating members include KAIST (Korea), Hong Kong Polytechnic University (Hong Kong), Tsinghua University (China), and University of Tsukuba (Japan). It was very successful and lesson-full project. Even within same Asian culture, there were many differences and similarities. Basically, we applied all the approaches mentioned above, serious ethno graphic observation, web-based collaboration, in-depth analysis and so on. However I found out that there are still some issues to be worked out. At first, room to apply specific design approach is also highly depending on the culture. For instance, ethno graphic observation and home visiting were hardly feasible in Japan where people tend to extremely hesitate to accept visitors in their home. Japanese team could not help relying on indirect methods like self-camera, user's diary and questionnaire. Another interesting finding was that design solutions were
also heavily depending on culture. Basically all participating members listed up similar level of user needs and problems on which design solutions were supposed to be generated. Among similar level of needs and problems, each participating member put different emphases on specific needs and they selected motives, situations, resources and technologies specifically available to their own culture. For example, Chinese team came out with the solutions like kitchen furniture or ventilating fan (figure 8) while as Korean or Japanese team generated solutions like bowl and spoon with sensor for measuring nutritive value, ubiquitous computing-based shopping appliances, (figure 9) or participatory electronic cooker. There were even differences in group dynamics! Some cultures were rather hierarchical and students were more obedient to professor keeping deadline and guideline or very generating very coherent solutions while in other cultures students seem to be more open to challenge professor and to come out with less cohesive solutions. Designer, ultimate 'freezer of culture into product', should be able to take opportunities culture-centered society will bring. Increasingly there are many new disciplines coming out, which no existing disciplines can claim theirs. Certainly cultural design is one of them. Designer should actively engage in creating culture with sound knowledge, methods and system. Otherwise, designer will loose again their pies and remain as after-take-care.
Figure 8-a

Figure 9