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Visual Interaction Design

Design as a Cultural Activity

Introduction

Academics and practitioners in the field of computer-human interaction are active champions of products (computer-based and otherwise) that can be effectively used by humanity at large. But is usability enough? Does a usable product necessarily make a desirable product? Or a successful product? Of course not.

A well-designed product must perform in several dimensions:

- appropriate functionality – the product solves the right problem, communicates a rational purpose, and does the work that needs to be done
- ergonomic – appropriate physical fit, feel, shape and size
- cognitive fit – the product provides affordance of functionality, feedback, support for learning, and accessible understanding.

This will equate to a usable product. Certainly function, ergonomics, and cognitive fit are well understood, and can be applied and tested. The missing ingredient is cultural fit. A product that fits culturally will:

- connect with emotions of users
- link to the producing brand
- link to the expectations of the customers
- provide an organizing vision of what the product is about have an increased likelihood of achieving market success

Cultural fit is critical to a product's success. It is the starting point, not the end point of development, and should be the foundation for functionality, ergonomics, and cognitive fit.

Why Culture?

Culture is the way a group of people give meaning to the world around them, how they solve problems and how they do work. The word "culture" is used colloquially to refer to artistic activities such as opera or ballet; here we refer to culture as the organizing behavior and shared beliefs that define a group. For example, anthropologists Dorothy and David Counts spent six years studying RVing seniors-retirees[1] who spend all or most of the year traveling and camping in a mobile home. They found a distinct culture with its own customs, rituals and language [2]. The culture of RVing seniors defines their realities, and structures the ways in which they think and act. It follows that there are similar cultures to be found among fireman, midwives, new parents, receptionists, diabetics, and so on, and that products for those users must take into account the specific needs of that culture in order to be successful.

While many corporations and institutions are exploring the uses of anthropology and cultural studies, tools to determine cultural fit are poorly understood, hard to evaluate and often hit-or-miss. Our approach is to combine a package of tools into a process which consists of four key steps:

- Discovery of cultural alignment
- Synthesis of cultural understanding into design concepts
- Implementation of design concepts
- Contextual evaluation of design concepts by users.

Here we will limit our discussion to discovery and synthesis, for this is where the connection to culture is found.

[1] "RVing": travelling in a Recreational Vehicle such as a caravan (editor's note)

Discovery

Discovery is an activity that unveils the qualitative aspects of customer behavior (in contrast to the quantitative focus of traditional market research), an approach that is absolutely required in order to understand the customers or users in a new way. Both the problem and the solution must remain open at this stage – we don't go looking for answers, we look for the questions to be asked.

This involves more than simply being aware of users' stated wants and needs. There are levels of meaning that users cannot respond directly to; the answer to "Would you like to be able to access feature X" is almost always "yes", while "How much do you expect a product like that to cost?" is not likely to produce a meaningful answer. We strive to uncover hidden and emerging layers of meaning among consumers and their culture. These meanings are often outside the realm of our own experience. For example, while China has only 73 McDonald's restaurants, the chain has become a place where Chinese go to experience America. Harvard cultural anthropologist James Watson says that motivations for eating at McDonald's in China are quite different than in the West: "Most Chinese don't even like the food, but what they are buying is culture. They are buying connectedness to the world system. The idea is that if these kids can connect with McDonald's, they are going to end up at Harvard Law School." [3] Clearly this kind of cultural insight can not be derived from personal experience or direct questioning. We must find "not only the emotion-laden anecdotes, but also unspoken impulses" [4].

The method of ethnography, an approach central to anthropology, focuses on understanding people in context, looking at what is done, listening to what is said about the doing, and exploring the contradictions of what

doesn't make sense. The formerly naive researcher is changed by the experience; being moved by what they see and hear. The result is a set of compelling stories that help us understand that culture and its organizing frames of meaning. Indeed, culture is communicated, maintained and changed through stories.

We refer to our discovery and synthesis process as applied ethnography, a form of qualitative cultural analysis that involves deep conversations, observations, interviews, and analysis. The ethnographic interview is informal and conversational, but with an implicit research agenda. The ethnographer wants to gain a holistic understanding of customers' viewpoints by eliciting the compelling stories which surround the experiences of activities and product use. Stories outside the sphere of usability are pursued by ethnographers because they can reveal important nuances of the customers' culture.

Ethnographers listen for native language, words, terms, and descriptions to fully understand the world of the customer (i.e., "does everyone who works here call it the Batcave?"). Grand tour questions, where the informant takes the ethnographer – physically and descriptively – through the environment being studied, unveil important details about the customer's world. Artifacts of this environment will reveal unspoken particulars of the lives being led.

Synthesis

Ethnography in product development means discovering new cultural understandings and synthesizing these understandings into the design of products, services and communications. Synthesis is the search for categories and the organizing principles that give them meaning (i.e., categories – young and old, principles – young is good, old is bad). This activity takes place in parallel with discovery. Again, ethnography is more than a data collection methodology; fieldwork and synthesis take place simultaneously, each affecting and changing the other during the process. Discovery and synthesis in parallel allows iteration-in-place-the solution changes as the problem changes, and the problem changes as the solution

changes. Keeping both sides of the problem open ensures that the end result resonates with the consumer's culture rather than the producer's culture.

The new understandings are captured in symbolic models – short abstractions of complex stories that describe relationships between people, products and their technological producers. The end product of synthesis is a set of symbolic models.

Symbolic models are concise and memorable, and act as the stepping stones to new ideas. An example of a symbolic model is the Macintosh Finder's desktop – the symbolic model is "using the computer is like using things on the desk in an office." These symbolic models can be embodied in a variety of ways, such as phrases, three-dimensional forms, mock ads, metaphors or principles. In the example of the Macintosh Finder, the desktop metaphor is an embodiment of the underlying symbolic model.

Looking for patterns and telling stories requires experience, insight, creativity and intuition. It may be best as a collaborative process between those who are skilled in understanding people and behavior (social scientists) and those who are skilled at interpreting understanding as artifacts (designers). Some individuals don't fall into this paradigm, of course, and may make excellent synthesists regardless of background.

This approach requires us to wrap a story around what seems to be an incoherent, discontinuous set of intellectual abstractions. The stories in these synthesis sessions may be silly or amusing, but that does not mean there is a lack of focus. In fact, humor can be a sign that we are succeeding in looking at the ordinary in an unusual way-that we are leaving our own cultural frame and entering the frame of a user. The humor occurs at the transition point.

Phrases heard during synthesis may include:

- "I think computer networks are like nightlights"
- "This is going to sound totally ridiculous, but..."

- "What if it's not really a camera at all, but a facilitator for touching each other?"
- "This is just like that sketch on Saturday Night Live where they..."
- "Well, I think computer networks are like aquariums".

Synthesis activities may be:

- Messy-Post-It Notes, white boards, photographs, magazines
- Collaborative
- Loud-laughter, shouting, arguments
- An exploration of ranges and continuums
- Mapping the physical environment
- Challenging to established beliefs
- Unstructured to an observer, yet structured to a participant.

Indeed, this lack of structure to an observer suggests that this paper is not the best medium to communicate synthesis in detail – it is about experience more than methodology. Building skills in this area takes practice; one may need to establish apprentice relationships with experienced synthesists.[2]

The symbolic models are the tangible bits and pieces of cultural frames that inform and inspire a range of product concepts that can be implemented and then evaluated with users in order to ensure a cultural fit. The iteration with and between these phases is essential. Symbolic models will inevitably evolve over time as more data is collected, more stories are told and retold, and more reflection takes place.

Conclusion

The discovery and synthesis tools found in a method such as applied ethnography are effective in understanding the culture of our users; an understanding that is essential if we are to build products that provide meaning to those users. As cultural historian W. Bernard Carlson writes, "Successful products are more than just a bunch of technical solutions. They are also bundles of cul-

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[2] To help create opportunities for these relationships, GVO is sponsoring *Discovery,* an email discussion group about understanding users and their culture. To participate, send email to majordomo@bolis.com with the message *subscribe discovery.*

tural solutions. Successful products, unlike inventions, succeed because they understand the values, institutional arrangements, and economic notions of that culture." [1]

References

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4. Lieber, R. "Storytelling: A New Way to Get Close to Your Customer," Fortune, Feb. 3. 1997, pp. 102-108

About the Author

Steve Portigal is a consultant with GVO, a product development firm that designs products and services based on cultural insights. At GVO, Steve discovers new customer understandings and synthesizes them into words, pictures, and symbolic models. His clients include IBM, SGI, Canon, Thomson Consumer Electronics, Unilever, HP, Sharp, and Intel. Steve also edits *Turn Signals*, GVO's newsletter of cultural phenomena (for more information, contact the author).

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