

BOOK REVIEW

Cross-Cultural Technology Design: Creating Culture-Sensitive Technology for Local Users

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*Cross-Cultural Technology Design: Creating
Culture-Sensitive Technology for Local Users*
Huatong Sun

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In *Cross-Cultural Technology Design: Creating Culture-Sensitive Technology for Local Users* (2012), Huatong Sun offers a new approach to cross-cultural technology design in the form of “the design philosophy and model of Culturally Localized User experience (CLUE)” (p. xv). CLUE developed from Sun’s identification of the advantages and limitations of the current, dominant theories in cross-cultural technology design. Sun points to limitations such as a tendency to focus on usability as a means to an end, which often leads to consideration of a product’s usability only at the end of a project,

rather than incorporating usability studies early and continuing to consider user experience after the project has reached its users. Conversely, Sun’s CLUE approach calls for a dialogical approach that incorporates both action and meaning in order to effectively reach local users.

Sun divides the text into three sections: Grounding, Experiences, and Implications. Through these sections, Sun guides us through the theoretical grounding and background of the theories that dominate the field of usability and develops and demonstrates the CLUE philosophy and model through a series of five case studies pulled from her larger project; and, finally, Sun considers the implications and future directions of a move to a philosophy and model based on dialogics, action, and meaning. Sun grounds CLUE within traditional theories, but her discussions remain accessible to practitioners or those who may be new to the field of cross-cultural technology design.

In chapter one, *"Approaching Culture in Cross-Cultural Technology Design"*, Sun begins with a question of "how to approach culture for cross-cultural technology design in a technological culture" (p. 27). Here, Sun grounds the current state of local design, as contrasted by global design, by tackling the complexity of the concept of culture. Using the iceberg metaphor, Sun writes that designers often incorporate local design at the site of development, while only later adding localization to the design. This process ignores design elements past those on the "surface level." Sun's attention to the complex and varied meanings of "culture" are one of the book's strengths as these considerations begin to move designer's thinking away from a list of "Do's and Don'ts," for example, incorporating specific colors for specific cultures, and, instead, guide designers into a deeper consideration of the much more complex picture hidden under the tip of the iceberg. To demonstrate how current theories are limiting, Sun turns to a discussion of three methods typically used for local design: experiential knowledge, models of value-oriented cultural dimensions, and fieldwork dimensions. To address some of the limitations of traditional methods, Sun calls for the establishment of "a dialogic view of culture that connects action and meaning in cross-cultural design practices" that allow designers to "discuss how narrow representations of local culture result in poor user experienced of localized technologies" (p. 4). Sun's argument is strengthened by careful review of how these common approaches attempt to achieve useful, local design (an admittedly complicated goal), but they lack "a full inquiry into the role that culture plays in the process" (p. 24). Her analysis of these methods is astute and thorough, while her writing style allows the theory to remain accessible for both academics and practitioners.

Chapters two and three continue to build on the theory presented in chapter one. In chapter two, *"User Experiences in Global Context,"* Sun moves the discussion to the theory of user experience. Drawing from her grounding of the typical approaches to local design, Sun argues

usability research "tends to regard usability as an isolated quality; it ignores the socialcultural context surrounding the artifact, and technology is often decontextualized" (p. 29). Sun argues that while the dominant engineering approach to usability remains influential, such an approach often ignores "the socialcultural context surrounding the product" (p. 33). In chapter three, *"Integrating Action and Meaning into Cross-Cultural Design,"* Sun moves the discussion into an "integrated vision that takes user experience as both situated action and constructed meaning" (p. 55). To do this, Sun begins to integrate activity theory, British Cultural Studies, and genre theory into the discussion of designing cross-cultural technology with the model and design philosophy of CLUE, which together "highlight the praxis of use, i.e. user localizations that make a usable technology meaningful to an individual" (p. 55). Sun first looks to activity theory to "help us see how a technology is interpreted as an object that is used by people to perform activities in context" (p. 57). Thus, activity theory offers designers the part of mediated action. But, she argues, activity theory fails to "attend to subjectivity or broader sociocultural factors" (p. 61). As such, Sun turns to British Cultural Studies to address the "mediation of meaning in technology use" (p. 62). In addition to her previous considerations of cultural studies, British Cultural Studies add articulation theory, which "can help us see that the design practice is a process of articulation, disarticulation, and re-articulation" (p. 65). For Sun, genre theory then connects the "mediation of action" from activity theory with the "mediation of meaning" from British Cultural Studies. She writes, "the notion of genre can help us better understand technological artifacts in a social and historical context" (p. 67). She then discusses "how action and meaning are interconnected in technology use by inspecting technology affordances" [emphasis hers] (p. 72). Affordances are a "term [which] helps designers to describe the features and functionalities of the artifacts on which they are working and to examine the implicit and explicit interaction cues their designs provide

to uses with artifacts” (p. 73). This approach leads to consideration of “*what an integrated approach looks like in cross-cultural design*” [emphasis hers] (p. 81). Sun demonstrates this through CLUE, which is meant “to craft appropriately localized IT products to meet the cultural expectations of local users as well as support the complex activities in concrete contexts” (p. 81).

In chapter four, Sun defines her study as “a cross-cultural study of mobile messaging uses in American and Chinese contexts, to exemplify and expand upon the CLUE approach in a dialogic interaction between theory and practice, and between a framework for analysis and design and a concrete problem” (p. 87). Her study design represents a clear strength of the text, as Sun accesses participants from two different cultures, both of whom adopted the technology differently. Sun focuses on mobile-text messaging as it represents a case where a hard-to-use technology was adopted for purposes other than originally intended, demonstrating a “gap in design and use” (p. 88), reminiscent of Feenberg’s work on user hacking. The differences found in the case studies raise questions of the effectiveness of traditional methods of localizing user experience. Sun’s approach and evaluation of her case study data demonstrate the effectiveness of dialog with users after implementation, which can produce more effective localized user experiences and products.

Finally, in her Implication section, Sun leaves the reader with possibilities for incorporating local elements into cross-cultural technology design, seeing CLUE as the start of a conversation that may “develop an integrated, balanced perspective in order to better design

a mindful, ethical, and responsible relationship between us and our surrounding nature, which consists mostly of mediated technologies nowadays” (p. 263). Sun, of course, leaves us without neat and tidy answers to very complex cross-cultural design, but she provides us with expansive dialogic and participatory design methods. As Sun writes, we need to focus on dialogism in the future “because the design model itself and its broader implications for future research and practice should also be evaluated first in terms of local appropriateness or, more accurately, should expect a dialogue or an interaction between the local and the global” (p. 268).

In this text, Sun builds on the existing literature to demonstrate its limitations, while providing methods of cross-cultural design that result in more usable and meaningful local design. The text provides a good introduction to usability and user experience for those new to the field, but also provides scholars and practitioners solid examples and methods for identifying the failures and limitations of their designs early in the design process, rather than at the end. CLUE’s strengths come from a focus on dialog and user participation as a move away from a narrow conception of local culture. As Sun writes, “if the prescribed meaning is not right from the beginning, and designers do not watch or respond to trial users’ interactions on the cultural circuit, the social circulation of knowledge will not be able to proceed smoothly” (p. 252). For academics, Sun’s development of the theory behind CLUE provides a beginning for scholars to move toward deeper rhetorical approaches. For practitioners, Sun’s case studies demonstrate the effectiveness of engaging in ongoing conversations with their users.

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