"Can You Hear Me Now?": Revaluing Listening's Role in User Research Practice

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ABSTRACT

This paper identifies listening as a component of user experience research that has been under-explored in both scholastic and practitioner literature. By combining rhetorical frameworks with existing UX best practices, the researcher aims to revalue listening's role in the data-gathering and analysis process, particularly when the researcher and participants operate from different cultural standpoints.

CCS CONCEPTS

• **Human-centered computing → Interaction design → Interaction design processes and methods** → User centered design

KEYWORDS

Cross-cultural research, intergenerational research, listening, research methods, user experience, user studies

1 INTRODUCTION

In *The User Experience Team of One*, Leah Buley writes: "Through good UX, you are trying to reduce the friction between the task someone wants to accomplish and the tool that they are using to complete that task" (pg. 4).

To decrease this "friction," UX requires that we see users as multidimensional people, first, and not imagined personas. Hands-on, in situ research is a critical component of architecting experiences, because we must seek to understand the needs of users before we can advocate for them. How do we conduct user research? By listening to users.

In a time where user experience design is rapidly expanding, little attention has been devoted to the role of listening in user research. Searching the ACM database for "listening" reveals 1290 results published since 1951 containing the term, few of which come from HCI, and none of which come from SIGDOC. The Association of Teachers of Technical Writing (ATTW) is similarly silent on the topic, with fewer than five presentations from the last five annual ATTW conferences mentioning the term. This is particularly intriguing, given the recent resurgence in listening studies (Ratcliffe, 2005; Stenberg, 2015) in rhetoric and composition, where ATTW is situated. While we are often encouraged to "listen to users"—their experiences, their concerns, their goals—researchers rarely provide explicit tactics for how to go about doing so. Listening has become implicit, tacit, and assumed as a

component of user research, downplaying its critical importance to creating user-centered designs, interfaces, and experiences.

2 THEORETICAL FRAMEWORKS

2.1 UX Research Practices

While there seems to be a significant gap in listening practice identified in the scholarly UX literature, how-to and professionalizing books geared towards practitioners do identify some listening best practices for the field of user research. Steve Portigal's *Interviewing Users* invokes the concept of *active listening*, as he highlights asking questions, practicing open body language, and giving affirmative feedback as practices that help build rapport with research participants (Portigal, 2013, pgs. 24–26). Whitney Quesenbery and Kevin Brooks devote an entire chapter to listening in *Storytelling for User Experience*, asserting the crucial nature of listening to all stakeholders within an organization or project. These authors echo Portigal's emphasis on *active listening*, offering a taxonomy of "listening behaviors" that includes supporting, reflecting back to, and acknowledging users through providing verbal and nonverbal feedback and questioning (Quesenbery & Brooks, 2010, pgs. 31–44).

Tips, tricks, and techniques for listening such as this 10-point framework are typical of books in user experience, and in industry writ large. Feminist rhetorician Shari Stenberg (2015) notes that these types of "recipes for listening" are often "atheoretical," in that they focus on "identifying listening barriers and developing strategies to overcome them," failing to address "the interplay of cognitive and behavioral components that listening requires or explore the contextual nature of listening" (pg. 75). What these books lack is attention to listening to subtext, underlying cultural values, and other more latent elements of users' experiences with technologies. These elements which help researchers to engage "…an interpretive meaning of the symbolism underlying the physical data… the deep structural meaning conveyed by the message" (Berg, 2001, p. 242), can be incorporated through an additional theoretical layer in the assemblage: rhetorical listening.

2.2 Rhetorical Listening

This paper aims to recover the role of listening in user research—not only as a methodological practice, but also as a theoretical construction and an interpretive framework. Applying the work of rhetorician Krista Ratcliffe (2005), this project defines listening as a tactic designed to facilitate cross-cultural understanding, specifically between researcher(s) and participant(s). Ratcliffe identifies four components to rhetorical listening:

1. Promoting an understanding of self and other
2. Proceeding within an accountability logic
3. Locating identifications across commonalities and differences
4. Analyzing claims as well as the cultural logics within which these claims function (Ratcliffe, 2005, p. 26)

Particularly important for user experience research—and noticeably absent from existing UX literature aimed at both scholars and practitioners—is the fourth of Ratcliffe's tenets. Attending to cultural values and logics can help to illuminate user interactions in interfaces that are grounded in their identities, values, and/or contexts of use—interactions that would be more difficult to understand through existing "active listening" frameworks. I use "cultural values and logics" here to encompass many different factors that shape the choices users might make in their interactions with a website or device: age, gender, race/ethnicity, nationality, socioeconomic status, etc. Rather than seeking to "overcome" or "transcend" culture (as Laurie Gelb writes in a 2014 issue of *UXPA* magazine), this type of listening can be used to understand how particular cultural logics shape and mediate user activity. In turn, designers can listen to the interplay of these cultural logics when understanding users' cultural contexts of use (see Sun, 2012), and seeking to localize information or interaction design for particular populations of users.

While Ratcliffe's work applies listening to written and spoken communication, her tactics can also apply to communication design, specifically when designers are creating interfaces or experiences for populations of users that differ significantly from themselves. Listening that seeks to understand cultural logics can begin to close this gap by identifying and accounting for the facets of identity, standpoint, and background that shape user *and* researcher behavior. This practice not only incorporates an ethic of care to seek to understand a user's intentions and the cultural logics that guide those intentions, but also to better comprehend our own situated positions as listeners and as scholar/practitioners.

3 METHOD

3.1 Metonymic Listening Tactics for Understanding Latent Elements of User Experience

Ratcliffe (2005) provides a specific tactic for listening to public debates or other communicative situations that result in what she refers to as "unproductive silences:" metonymic listening. The literary practice of metonymy involves the substitution of an element or quality of a thing to represent that thing as a whole—for example, saying "The White House" to represent the executive branch of the United States government, or the adage "friends, Romans, countrymen, lend me your ears." To rhetorically apply metonymic practice to listening, Ratcliffe explains, involves inviting "…listeners to assume that a text or a person is associated with—but not necessarily representative of—an entire cultural group" (pg. 78). In this way, metonymic listening asks listeners to lean into cultural identifications (rather than away from them) when seeking to understand a communicative situation, and the deeper logics and values that underlie and shape it.

Engaging metonymically with technology users begins with gathering demographic information on research participants, as well as structuring interview questions and observation methods to yield insights that extend beyond the functional aspects of user experience—participant responses and data that connect with their identities, values, emotions, and self-concepts. Observation methods that can facilitate metonymic listening include think-aloud protocols, which can be scaffolded to yield insights on affective dimensions of user experience such as emotions and underlying values (Preece et al., 2011, pgs. 335–338); and card-sorting, which helps visualize users' mental models (Spencer, 2004) or emotional reactions and connections to particular images that connect to some sort of affective resonance (Portigal, 2013, pgs. 61–62).

Questionnaire or survey methods are less likely to be conducive to metonymic listening practice because they yield only written data, which lack the complex contextual and situational cues of an in-person interview, observation, or focus group. Verbal dimensions of users' responses (such as vocalics, intonation, breathing cues, diction and timing, laughter, etc.) and nonverbal cues (body language, gesture, positioning, etc.) provide researchers with additional elements to listen *to* and *with*, providing a more complete and nuanced picture of user behavior "in the wild."

Metonymic listening becomes especially important in contexts where there is a fundamental cultural divide between designer/researcher and users. Steve Portigal provides a telling example of this type of scenario in *Interviewing Users* (2013), where he highlights a story told by his colleague, Lynn Shade, who worked for Apple in Japan. Shade explains that she initially experienced a disconnect in understanding responses from Japanese research participants, when compared to American research participants, because the two cultural communities deployed silence very differently. Japanese users engaged conversational silence in three ways: to set the stage for conversation, to "make an effort to help the cause along" and encourage thought development, or to "indicate resistance and silence indicating confusion" (pgs. 88–89). These deployments of silence as representative of a broader Japanese cultural value of emptiness as an *enriching* space (rather than a space of lack, that seeks to be immediately filled). Recognizing the deep value placed on silence—and different types of silences—in Japanese culture helped Shade to develop different categories of silence in the UX research context, which in turn helped her to better understand the responses and experiences of her research participants as grounded within a particular set of cultural values and traditions.

Metonymic listening practice can seek to understand users' motivations and activities in the light of a number of different intersectional facets of their identities, including but not limited to: nationality, race/ethnicity, gender identity, sexuality, age, class, educational background, local community, profession, (dis)ability, subcultural identification, etc. Beyond these demographic categories, though, incorporating this type of listening in UX bridges an additional cultural divide. Metonymic practice ensures that we are designing *for users*, and not *for ourselves*: it closes the gap between the "ideal users" (typically the researcher or designer themselves) and the actual users of a product or interface.

Because of this necessity, whatever aspects of users' identities (and in turn, users' goals, values, and attachments) are foregrounded

through this type of listening, it is crucial that the researcher recognize that their interpretations of user actions and responses are grounded in and framed by the user's own self-representation. A fundamental element of interviewing and observation methods is the recognition that the designer does not actually hold the subject matter expertise in the research process: the user does. By turning authority over to the user—adopting their worldview while seeking to enter their mindset and context of use, and actively and critically *listening* to their responses—the researcher can actively embrace their wants and needs. Listening begins with recognizing, affirming, and so legitimizing the expertise of the speaker—in the case of UX, the users that we design for and with. Metonymic listening in UX research affirms the situated expertise of users, based not only in their experiences interacting with technology, but also the intersecting social and cultural facets of their identities that mediate those experiences.

Below, I offer a continuum of data that can be gleaned from UX research—interviews, observations, or otherwise. I know that the representation here is a pyramid, but I don't wish to present these different insights as hierarchical: all are important to creating a usable interface, but current listening tactics in UX enable and privilege the gathering of certain types of data over others. It's easier to record what's literally, physically going on in a user research situation—manifest or explicit content, things that are quantifiable, the literal words said by a participant. It's more difficult to track affective or emotional elements, or to account for underlying values or cultural logics that shape a situation.
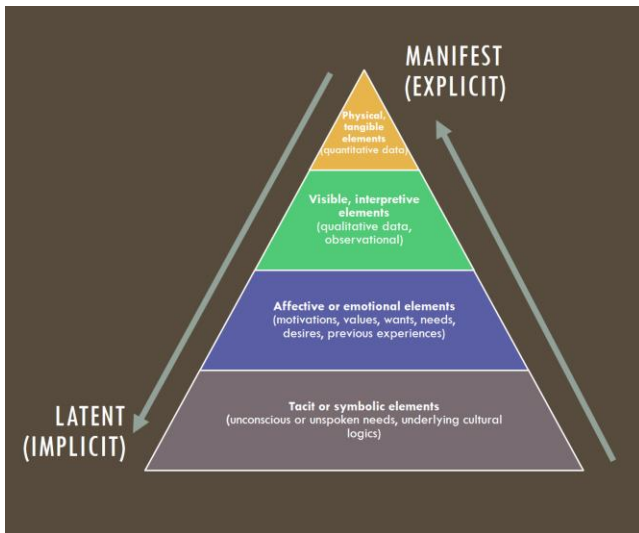
Figure 1: Visualizing the different types of manifest and latent, explicit and implicit data that can be gathered through a research practice grounded in rhetorical listening

Understanding the latent or symbolic elements at play within a user experience—how gender mediates interactions in an online forum, how generational differences cause younger adults to embrace an app while older adults reject it—the listening skills needed to uncover these insights are not easily distilled into a list of best practices. But they are no less critical to understanding *how* and *why* users interact with technology than the "easier" insights of "how many clicks does it take a user to find this information on our

app?" or "what does the survey data say about what users consider to be the most important page on our website?"

3.2 Actor-Network Mapping as a Way to Visualize UX Listening

One way to set the stage for this kind of listening, and to visualize the complex cultural logics undergirding contexts of use, is to engage in a kind of modified actor-network theory (ANT) practice. Actor-network theory, as created by Bruno Latour (2005), recognizes and seeks to theorize the roles of objects previously thought of as "non-social," incorporating them into social theory. In this way, ANT is a natural fit for this type of symbolic and cultural turn in UX research that I propose, which recognizes and seeks to theorize the roles of aspects of user experience previously thought of as tangential or even irrelevant, incorporating these aspects into user research and design.

Actor-network diagrams provide an opportunity to ground user experience research in critical-cultural rhetorical theory, like Ratcliffe's (2005). ANT is typically used to demonstrate the relationships between different "actors"—people, organizations, communities, technologies, networks, events, exigencies—in a complex system, where individuals or groups are interacting with technology. As Potts (2009; 2013) explains, ANT illustrates these assemblages that form "…an entire landscape of active participant, human or technological, that come together to create, share, and validate information as they push it across… networks" (Potts, 2009, p. 286). Both ANT and rhetorical listening ascribe agency to *all* actors in a system—both human and nonhuman—and then weighs the relationships between them to visualize the relationships in an ecosystem, as well as the needs of people within that system. Both theories value rhetorical and discursive agency as fluid and shifting forces within a greater ecology.

Incorporating rhetorical listening into existing ANT frameworks means accounting for the effects of cultural logics, as well as other latent elements, interacting within this agentic ecology. When making ANT diagrams, researchers have to select icons or shapes that are representative of the actors at play in a system—a silhouette for a person, a calendar page for an event, a wireframe for an online message board, etc. Usually these diagrams are used to the roles of and relationships between participants in a network of technologies, but I think that, when applied to more abstract or intangible concepts (things like race or gender or history or cultural logics), they can also illustrate the different cultural patterns at play that cause dysfunctional silence or opposition. To illustrate these interactions at play, I present a case study from my own research.

4 APPLICATION: A CASE STUDY OF LISTENING ACROSS THE "AGE GAP"

My current research project involves working with communities of older adults—Americans aged 70+—to understand this population's motivations, goals, and desires when it comes to computers and the internet. I've been conducting interviews and observations with folks in a Florida retirement community to map older adults' purposes for adopting digital technologies, as well as the barriers that they face when attempting to realize their technological goals.

The following is a common space of dysfunction that I observe in my work. Older adult research participants in my study sample often voice their deep discomfort with the way and frequency that young people use their cell phones. Take, for example, this response, excerpted from an interview with a 73-year-old man in March 2016:

AWS: Yeah. That's very helpful. Is there anything else you'd like to tell me about your experiences with technology?

B: The only other thing that is of concern to me is that, um... when... I'll just give you an example. A couple years ago we went out for an evening meal. Eight young people, about your age actually, um, came to sit down by a nearby table. It happened to be a circular table. Eight of them, sitting around the table. And within, I would say, two or three minutes, everyone was sitting there with their phone, maybe talking—you know, conversing with each other, and maybe not—but that... I don't think... is a good thing for personal relationships. That's about all that I can say about it.

Bill's response is not atypical. I can recall several other occasions when older adults related similar stories to me, typically centered around watching "a group of kids having a meal and all sitting around the table typing with their thumbs, and not actually speaking to each other." His story represents a kind of cultural narrative told, in different iterations and situations, by many of my research participants, so it makes a good case study to unpack through the use of symbolic listening. To begin, I offer a simple ANT diagram (Figure 2), representing the different actors involved. The human actors are represented by icons portraying older adults and younger adults, and the nonhuman actors are designated by symbols representing a smartphone and a restaurant, respectively.
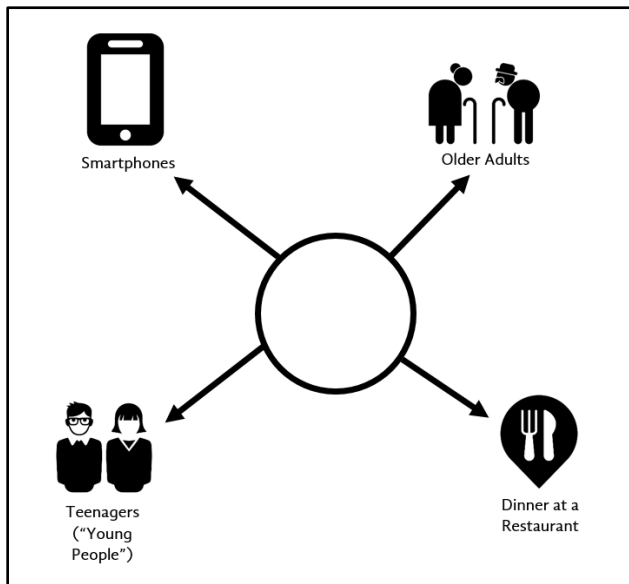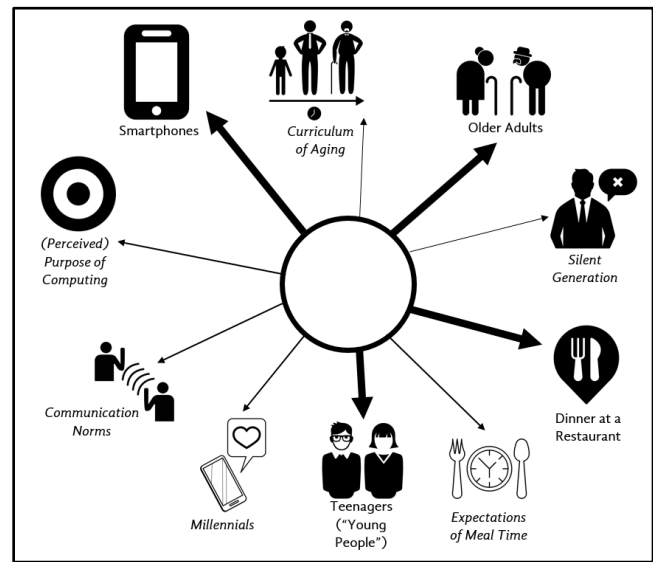

Figure 2: Unweighted actor-network diagram of older adult's user experience with smartphones at dinner time

This diagram gives us a basic sense of the systems in which this recurring narrative take place. It represents the different physical

beings and objects involved in this exchange: technologies, bodies, and situations. However, it fails to reflect the equally crucial contextual elements that shape these moments of technological disruption and dislocation, particularly the underlying values and cultural logics that ground user behavior and activity, on both sides of the so-called "digital divide." This is, as Ratcliffe (2005) would say, moment of "dysfunctional silence" between two different, competing cultural logics: those of older adults (the participants in this research and tellers of the stories, aged 70+) and younger adults and teenagers (not only the subjects of the stories told by these participants, but also myself, a teacher-researcher who belongs to the millennial generation of "young people" that Bill spoke of). For me—as a researcher, as an enthusiastic and adept user of a variety of digital technologies, and as a teacher of students from the generation that these older adult users are often quick to critique—this story often gives me pause. It is important to note that UX researchers and designers must use listening practice to seek to understand their own preconceived notions and biases. Listening is not merely a tool for individual or corporate gain, but a means to engage in cross-cultural conduct and seek to understand a greater range of user perspectives.

A more nuanced and illustrative ANT map includes different line weights to visualize the different strengths of relationships between actors and the communicative event. Potts (2013) notes that these connectors can signify the "information flows" and relationships between actors in the social web. I extend this notion to represent the more obvious or apparent relationships (literal links in the network) with thick lines; and the less tangible, and more symbolic or unconscious associations with thinner lines.

Figure 3: Weighted actor-network diagram of older adult's user experience with smartphones at dinner time, including manifest and latent actors

I have also modified Potts' actor-network diagram practice to incorporate rhetorical listening practice by adding intangible, symbolic "actors" among the human and nonhuman nodes in the network (see Figure 3). In addition to icons used to represent the physically and visibly present actors in the situation (the older

adults and teenagers, the cell phones and the restaurant), I include metonymic representations of the identities of the two different communities of technology users present, as well as symbols of the social norms embedded in the narrative. A cell phone with a heart stands in for the millennial generation represented by the teenagers at the table, symbolizing how they have naturalized and normalized technologically-mediated discourse, even when physically present with each other. They stand distinctly separate from the silent generation of the older adult onlookers. Norms that dictate the sense of appropriate behavior in the local situational and temporal context are encapsulated through three different icons: a clock with a set of cutlery, demonstrating the distinct expectations of meal time in American culture (particularly for older generations, who place a strong value on meal time as quality family time, disconnected from technologies like television screens and mobile phones); a pair of figures talking to each other, symbolizing communicative etiquette that values face-to-face verbal engagement over digital conversation, which is seen as more shallow and impersonal; and a target, standing for the differing goals and purposes of computing between the two different cultural groups represented in this interaction. The final underlying symbolic actor mediating this recurring narrative, which is represented by an icon showing a male figure's continuum of growth over time, is the "curriculum of aging." Age and literacy scholar Bowen (2012) describes the curriculum of aging as a set of assumptions and cultural values associated with what it means to be old or growing old in Western society. This curriculum, Bowen states, encompasses "…an assemblage of rhetorics that define and promote cultural ideologies about old age…. Wrapped up in such age-based rhetorics of literacy are assumptions about older adults' inability or unwillingness to take up newer literacies associated with younger people." (pgs. 438–439)

Indicating the presence of an underlying curriculum of aging (as well as the other symbolic actors) in this diagram can help user researchers to better understand the problematics of the "technologically illiterate old person" stereotype. These exchanges illustrate a distinct generational divide indicated by the gap in smartphone use between the old and the young. It is well-documented that there is a steep drop-off in smartphone use after age 50 (Poushter, 2017), but the reasons behind this gap have not been extensively explored. It's easy, but reductive, to attribute this refusal to ignorance or old-fashioned luddism—these elders are just "behind the times!"—but what if designers and developers were to listen more closely to the troubled cultural identifications and logics at play? Recognizing the different cultural expectations embedded in this situation helps to shed light on *why* this population rejects smartphone use, particularly in this often-cited mealtime context. If we only look at the manifest content of their stories, we miss many elements that could help to inform UX design for them and the populations that they represent.

As a millennial researcher doing work with older adults separated from me by multiple generations, this type of listening is important for me to hear and seek to understand across a generational and cultural divide. Instead of bristling at what can often feel like yet another technophobic rant about "kids these days and their smartphones," listening to the cultural logics at play in older adults' assessment of the role of technology can help yield insights into troubled identifications—both theirs and mine—that then shape the way they see themselves as users. Instead of conceptualizing a

binary opposition of me vs. them (technologically savvy vs. technologically ignorant), cross-cultural listening offers another "model for [us]… to communicate across differences" (Ratcliffe, 2005, p. 99). This type of listening enables researchers and designers to better understand the cultural matrices that shape our understandings, as well as the ways that users make decisions about adopting, adapting, or rejecting particular technologies. This is just one example of the application of rhetorical listening to a cross-cultural user research situation.

Acknowledging, visualizing, and seeking to understand the many different intersecting cultural factors that ground user experience can help us to create a more complete picture of the localized populations and communities that we design for. I speak particularly of interview methodologies here, but this type of symbolic mapping could also apply to participant observations, fieldwork, or other commonly deployed user research methods. The key here is seeking to understand the similarities and differences between designer and participant, to seek to close the gap between an idealized user and the real populations that we create interfaces for—in their situated contexts, and with their own desires, motivations, and idiosyncrasies.

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