Empathy and Experience in HCI

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ABSTRACT

For a decade HCI researchers and practitioners have been developing methods, practices and designs ‘for the full range of human experience’. On the one hand, a variety of approaches to design, such as aesthetic, affective, and ludic that emphasize particular qualities and contexts of experience and particular approaches to intervening in interactive experience have become focal. On the other, a variety of approaches to understanding users and user experience, based on narrative, biography, and role-play have been developed and deployed. These developments can be viewed in terms of one of the seminal commitments of HCI, ‘to know the user’. Empathy has been used as a defining characteristic of designer-user relationships when design is concerned with user experience. In this article, we use ‘empathy’ to help position some emerging design and user-experience methodologies in terms of dynamically shifting relationships between designers, users, and artefacts.

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User experience, experience-centred design, empathy, design methods, qualitative methods.

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H5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

KNOWING THE USER IN EXPERIENCE-CENTRED DESIGN

It is clear from the theme of this conference that HCI continues to evolve as a discipline and expand its research remit. Ten years ago it would have been unusual to find a CHI conference addressing the “balance between art and science” in its call for papers. This ongoing evolution of HCI reflects a discipline influencing and responding to the penetration of digital technologies into every corner of our lives while, at the same time, retaining its traditional concern for usability. This resonates with Terry Winograd’s, claim in 1996 that “designing for the full range of human experience may well be the theme for the next generation of discourse about software design” [54, p.xi]. The growing interest in experience in HCI has been accompanied by a rich interdisciplinary discourse addressing topics such as the aesthetics of interaction, affective computing, ludic engagement, enchantment with technology, hedonics and so on [12, 24, 30, 32, 40, 52]. It has also resulted in a plethora of interesting new interactive devices, research methods, and design processes [16, 27, 42] as well as reflection on the scope and limits of theory and methodology within HCI [6, 9, 13, 23, 37, 55]. In this paper, we explore the implications of these developments with respect to the relationship between designer and user, and in particular what it might mean in the context of experience-centred design to ‘know the user’. We use the term ‘designer’ here and throughout this paper to represent all of those involved in the design team including those involved in researching user experience.

‘Knowing the user’, when designing for the full range of human experience, presents a significant challenge that starts with the need to develop an understanding of user experience and the epistemologies, methodologies and research practices it entails. HCI has made significant methodological and conceptual progress in response to this challenge. Methodologically, HCI has appropriated and developed a number of qualitative methods for eliciting or evoking experiences and developing descriptions of them that can be used in the design process. These include narrative and biography-based approaches such as scenarios, personae, and technology biographies [8, 11, 17, 21, 42] simulation and role-playing approaches [16], and probes [27, 36].

In terms of conceptual progress, Battarbee and Koskinen [5] identify three broad approaches to applying and interpreting user experience in HCI. They include: the measuring approach, which includes only those aspects of user experience that can be measured and only through measurement and testing understood and improved; the empathic approach, which builds on inspiration achieved from a rich understanding of people’s experiences, dreams, expectations, and life contexts and is developed through a
meaningful emotional encounter between designer and user, and the pragmatist approach that sees experience as the basis of all action and interaction and that generates frameworks for conceptualizing and working with everyday experience. Although these distinctions provide a useful starting point, our own approach [37] and the position we develop in this paper sees empathic approaches as part of the broader pragmatist approach to experience.

The pragmatist approach to experience, articulated with different emphases by Forlizzi and Ford [25], Forlizzi and Battarbee [24], and McCarthy and Wright [37], because of its methodological openness, may help frame this discussion of knowing the user in the context of experience design. Wright and McCarthy [37, 55] frame it in terms of a holistic-relational view of user experience that treats as inseparable, people’s intellectual, sensual, and emotional responses, and that conceptualizes self, artefacts, and settings as multiple centres of value interacting with each other. Underpinning the holistic and relational aspects is a commitment to the analysis of people as continuously engaged and making sense of experience in the light of their personal history of meanings and anticipated futures. This conceptualization of experience resists reduction in an attempt to address complex but potentially rich regions of human life such as the ‘boundary’ between interior and exterior that allows people develop rich descriptions of what it feels like to be enchanted by technology. It draws attention to what makes life personal, rich and meaningful and how people integrate aspects of experience into narratives that evoke a character we can live with as ‘self’.

From the pragmatist perspective, understanding an other or more specifically, ‘knowing the user’ in their lived and felt life involves understanding what it feels like to be that person, what their situation is like from their own perspective. In short, it involves empathy.

Social theory broadly treats empathy in one of two ways. The first emphasizes psychological processes and individual abilities, describing empathy as recognizing, perceiving and feeling the emotion of another. This is sometimes referred to as ‘walking in another’s shoes’, a notion that assumes an emotional congruence between people such that one person can identify with the feelings of another because of their shared humanity. In one of the best-known examples of this approach, Collingwood [20] characterized historical interpretation as involving the reconstruction or re-enactment of the thoughts, feelings, and problems of historical characters through vicarious experience of their situation. Although Collingwood has been criticized for the psychologism of his approach, his defenders argue that the empathic reconstruction he advocated was not dependent on some mysterious intuitive feel of the historian but rather on hard won analytically-based emotional imaginative responding [e.g. 48, 49]. In contrast with reliance on identification and re-enactment, the second approach sees empathy as an intersubjective accomplishment. Drawing on Gadamer’s historical hermeneutics [26], which sees empathy as a fusion of horizons between person and text both embedded in the history and culture that shaped them, the intersubjective or sociocultural approach highlights contextual differences between self and other and emphasizes processes of articulating the other’s context with one’s own. Whereas psychologism is the basis for critical evaluation of the re-enactment approach, the basis of Gadamer’s hermeneutics in text interpretation has been used to define the limits of the intersubjective hermeneutic approach to empathy [e.g. 49].

As with many either-or philosophical arguments of the sort described above, practice often suggests a more useful both-and alternative. The dialogical approach described below argues that in practice empathic understanding requires both a careful interpretation of the context of the other’s responding and a limited reconstruction of their feelings in responding. Supporting such a stance, Martin [35] argues that Bakhtin, Mead, and Vygotsky create this integrative alternative by imagining self as both sociocultural and individual-agentive, with a person’s sense of self and individual-agency being acquired through their participation in sociocultural practices that involve and support perspective-taking. In other words, it is in our acting with others and the perspective-taking involved in social interaction that perspectives come to constitute us as understanding and agentive selves.

**PRAGMATIST KNOWING AND EMPATHY IN HCI**

The possibility of an empathic relationship between designer and user has been explored in design and HCI [7, 34, 36, 38, 40, 50]. Suri [50], in her keynote address to the 50th anniversary ergonomics conference in which she argued for the importance of empathy in ergonomics, defined empathy as the human capability to be able to identify oneself with the feelings and ideas of another person. Mattelmäki and Battarbee [36] argued that design empathy is needed when going from designing for practical functions to designing for personal experiences and private contexts. They see design empathy as a personal connection between designer and user that facilitates seeing and understanding users from their own position and perspective and as people with feelings rather than test subjects. We [56] have tried to expand a little on what exercising this empathic skill might mean and our particular approach is informed by Bakhtin’s dialogical notion of ‘aesthetic seeing’ [4], a form of ‘creative understanding’ of the other that draws on aesthetic sensibilities [33]. For Bakhtin, aesthetic seeing is different from scientific inquiry. It involves a felt, valuational response from one’s own particular, unique value position to the other (the user) who is also seen as a separate and unique centre of value. This cannot be a neutral, indifferent contemplation of the user. On the contrary it can sometimes involve strong feelings between self and other and is certainly always more than instrumental contemplation.
Central to the dialogical approach to empathy is the importance of each person engaging from their own perspectives and appreciating the other’s perspective as other. In an empathic relationship the ‘designer’ does not relinquish his/her position to ‘become the user’, a position from which nothing new can be created, rather the designer responds to what they see as the user’s world from their own perspective as designer. By holding onto their own perspective each person is able to creatively respond to the other from their own perspective. In contrast with philosophical debates that have separated the sociocultural and agentive self when conceptualizing empathy, adopting a dialogical perspective does not diminish the importance of individual intuition and agency.

As well as providing an integrative conceptual resolution, the pragmatist-dialogical approach to empathy is also the approach that is often used when training professionals in areas such as medicine and social work. In these contexts, empathy training involves developing self- and other-awareness and practical communication skills such as careful listening and responding. This training is explicit with respect to people’s different historical and cultural contexts, often offering cultural diversity modules, but at the same time encourages trainees to use their own interpersonal resources in trying to understand the patient and what it must be like to be that person in their particular situation. There is some evidence that this training has some benefits in terms of both process and outcome [1]. Such training programmes are evidence that empathy need not be dismissed as some form of mysterious subjective state intractable to analysis and training.

Vreeke and van der Mark [53] pull together much of the pragmatic-dialogical conceptualization in a communication model of empathy. This accepts that empathy is an affective response to other people and their needs that starts from a basic need for affiliation. However they emphasize the pragmatics of communicating and relating that allows the empathic person to respond in a meaningful way to the demands of the particular situation confronting them. Empathy evolves in the context of ongoing relationships wherein one person learns about the needs of the other by responding empathically, sometimes getting it right sometimes not, and then attuning future empathic responses. Without this communicative, relational framing of empathy, each person has only their own emotional responses upon which to base their emotional response.

Three common characteristics of empathic methods can be identified and adapted from the above discussion of empathy that will be of value in understanding experience-centred approaches in HCI:

- The designer’s orientation to the other person, and whether they are motivated to understand and help.
- Their attention to the affective and emotional in relationships as the empathic response is specifically attuned to the perceived emotions and needs of the other.
- The kind and quality of relationship between designer and user that they propose, most particularly whether it is likely to provide opportunities to attune to the needs and emotional responses of the user.

The dialogical account of empathy that accommodates people’s sociality and agency and that involves the creation of new knowledge or new artefacts provides a useful critical edge to understanding empathy in the designer-user relationship and particularly in positioning emerging practices, methods, and designs in terms of their orientations to ‘knowing the user’. Below we explore some experience-centred practices in terms of our dialogical analysis of empathy. We start with empathy as achieved through dialogue. Having identified what makes dialogue and related dialogical practices particularly empathic, we go on to explore other practices associated firstly with narrative and then with imagination. This allows us to consider whether anything is lost in terms of understanding user experience for design when it is attempted without direct engagement and dialogue with users. Clarity about the scope and limits of empathic understanding helps us to know what is missed when empathy is not part of our interpretative practices.

**Empathy through dialogue**

Understanding the other in everyday life and in user research often involves dialogue with them. HCI has employed a number of methods of creating different kinds of dialogue between designers and users, some of which are reviewed here in an attempt to understand the ways in which they involve an empathic analytic response to the other.

**Ethnography and ethnography-inspired field work**

The paradigmatic empathic relationship in social science and HCI methodology is to be found in some ethnographic approaches. Participant-observation can be seen as an attempt to build up the kind of relationship, both participant and observer, both close and separate, that allows people to understand what it is like to be the other. Dourish for example argues that “ethnography is concerned with the member’s perspective and the member’s experience ...” [22, p.3] by which he means the perspective and experience of the members of the culture being studied. As a practice originating in early 20th century anthropology, the emergence of ethnography marked a major transition from understanding what members of other cultures did to understanding, through participation in and observation of their daily life, what members of those cultures experienced through their actions. Clifford [19] argues that this particular intersubjective engagement gives ethnography an exemplary status in producing knowledge of another’s experience. He argues that for many ethnographers, understanding what members of another culture experience...
as they go about their daily activities requires embodied, intellectual participation in those activities, conversation with the members of the culture about the activities and what they mean to them, and expression of what that feels like and means in a way that has integrity for the members and communicates the experience to others. For ethnography there is a weight of responsibility and authority in this work and particularly in the relationship between fieldworker and member.

“Fieldwork was now centered on the experience of the participant-observing scholar. A sharp image, or narrative, made its appearance- that of an outsider entering a culture, undergoing a kind of initiation leading to "rapport" (minimally, acceptance and empathy, but usually implying something akin to friendship). … Experiential authority is based on a "feel" for the foreign context, a kind of accumulated savvy and sense of the style of a people or place” [19, p.128].

Though ethnography (or at least some ethnographic approaches) claims authority based on a feel for or sense of the other, it also engages analytically when developing an account of the other. Dourish, emphasizing the analytic work of ethnography, asserts that “... ethnography makes conceptual claims; it theorizes its subjects even if the theories presented are the subjects’ own” (p.3). He is keen to establish the importance of the conceptual work that is central to writing ethnography and that is sometimes overlooked in the HCI. But there can be a tension between conceptualizing and empathizing. As E.M. Bruner [14] notes, the danger is that the conceptual apparatus used to understand field notes and other data may filter out the felt and lived experience. An empathic methodology does not stop after fieldwork and direct engagement with the participants/users. It also carries through into the genre used to give expression to member’s experience in the analysis.

In at least some forms of ethnography then, we have a methodology that involves an empathic relationship. It tries to understand what it feels like to be the other by simultaneously observing and participating in their life, writing or ‘translating’ that bodily, intellectual, and emotional response in reflexive field notes, and finally writing an analysis in a genre that gives expression to the other’s experience. In practice this can be a very time-consuming approach to ‘getting to know users’ and the resulting analysis is still one step away from design. Consequently, HCI practitioners, especially design practitioners, have developed methods and techniques that share some of the qualities of ethnography but not all. Many for example do not involve full participant observation, yet it is clear that their intention is to help the user, their orientation is affective, and they consider carefully and work assiduously to develop a relationship between designer and user [8, 9, 10, 51]. For example, in the Technology Biography method [8], participants are visited in their homes and asked to reminisce about their relationship with technology and how this has changed over their lives. Asking people to reminisce in this way evokes stories and personal experiences, which offer the designer a strong sense of what it is like to be the other. Blythe and Wright [10] describe a method developed around the game of Scruples designed to explore people’s ethical position with respect to technology issues such as illegal downloading. The game encourages one participant to imagine how the other participant might respond when presented with an ethical dilemma and thus facilitates a strongly dialogical understanding. Other rapid methods [e.g. 9, 51] that have been developed to assess people’s experiences of new technology place an emphasis on helping the designer to understand subjective issues such as what the technology says about the user’s sense of identity.

The methods described above do not involve full participation but they nevertheless maintain a strong connection to the ethnographic tradition both in terms of the way the data is collected and analyzed. Other methods [e.g. 2, 27, 29] move even further away from this tradition. The methodological question as we explore these approaches is how they manage empathy without the participant-observer position so valued in ethnography as the warrant of taking and reporting the member’s perspective.

Cultural Probes
Like ethnography, Cultural Probes [27, 29] is interested in understanding what it feels like to be the other. Unlike ethnography, the aim is generally not to participate in or observe directly the practices of the other and the analysis is geared toward design rather than conceptualizing members’ worlds. Influenced by artistic practice and with a commitment to “the artist-designer approach” [27] the empathic response of Cultural Probes is best seen, not by focusing on the probes and activity around them alone, but in terms of the lifespan of a design project from first contact with users, through probes, to users' engagement with the designed artefact in their daily lives. The purpose of the designed artefact is not necessarily to help the user in any simple functional or instrumental sense. Rather, it may be intended to help them reflect on particular issues or transform their lives in small but significant ways. The spirit of the cultural probes exercise is deliberately strange, playful, and ambiguous. Gaver argues this is to present the participant’s world as unfamiliar and to force the designers to consciously challenge their interpretations. To quote from Gaver et al. [29]:

“The Probes simultaneously make the strange familiar and the familiar strange, creating a kind of intimate distance that can be a fruitful standpoint for new design ideas. They produce a dialectic between the volunteers and ourselves. On the one hand, the returns are inescapably the products of people different from us, constantly confronting us with other physical, conceptual and emotional realities. On the other hand the returns are layered with influence, ambiguity and indirection, demanding that we see the volunteers through ourselves to make any sense. This tension creates
Cultural probes in bespoke design

Other researchers have adapted the cultural probes technique as a resource for more direct dialogue with participants [2, 36, 41]. Jayne Wallace’s work is perhaps the clearest example of this trend [40]. Wallace is a contemporary jeweller with whom we have worked. Wallace describes her work as a craft practice in which empathy is central. She engages directly with individual clients to get insight into and inspirational fragments from their life experiences. These take the form of narratives about interactions, relationships, places, events and memories of significance and value. In an approach that draws on Cultural Probes, Wallace invites individuals to respond to a set of object-based stimuli that involve action, play, reflection and imagination in order to answer questions, tell stories, and create images. A key feature of Wallace’s approach, perhaps in contrast with Gaver’s, is that the objects are used as resources for co-situated conversations between her and the participants. She describes this as a dialogical process in which she catches a glimpse of someone else’s perspective, values and selfhood. Through this empathic engagement she gains a sense of the felt life of that person; their personal meaning making, aesthetic values, and the material fragments and objects that have come to be of importance to them.

When making digital jewellery for these clients Wallace picks out pieces from the thoughts, feelings and ideas that were revealed through the probe exercise and conversations. She focuses on those that resonate with her on some emotional level. These are rarely aesthetic things in the first stage, more often they are stories and experiences. The process, not unlike phases of qualitative data analysis [e.g. 18], is one of immersion in the materials and attention to the less obvious things as well as the more striking. Through this immersive process of reading and looking over and over again Wallace groups materials into themes. She engages with the participant’s experiences personally, finding threads that resonate with her own experiences. In this way she builds her own feelings toward them. Just as important as the relationship between maker and participant for Wallace the relationship between maker and the emerging artefact. Through a developing ‘feel’ or sensibility for the expressive potential of the materials (both digital and physical) the emerging artefact becomes for her, a medium of expression for the developing idea. Wallace begins to give the ideas a form both in terms of the physical and interaction aspects to the piece. Intellectually this is a process of learning and responding rather than a process of representing. During this process Wallace talks to the participants in a general way about her intention for the piece, but often they will not see it until it is finished. At that point they are invited to live with the piece for a while. How the participant interprets the object(s) and how they wear it, interact with it, and appropriate it is not controlled by Wallace. During this stage the participant is asked to reflect on their interpretations and feelings towards the piece, using a range of techniques including taking photographs and diary keeping. After a while Wallace discusses these reflections with the individual to explore further the details of their experiences and feelings towards the piece.

Here we can see empathic responding running through the artist-designer engagement with the participants, which uses probes as a first attempt to understand the other, keeps the other in mind during the making, and returns for a kind of closing conversation once they have appropriated the jewellery into their lives. This approach is clearly about designing and making but equally, it is about understanding what it feels like to be the one for whom the piece is being made and also in some sense what it feels like to be the designer and maker. This process not only depends on an empathic relationship, it clearly entails a dialogue in which both parties, by making utterances, put themselves out there.

In addition to methods centred on dialogue, HCI has created a number of approaches based on narrative. These provide an interesting contrast with the dialogue-based approaches reviewed above because, although they make claims that have an empathic sensibility, they involve little or no direct engagement between designer and participant. These allow us to explore whether an empathic encounter is possible without direct contact and indeed whether that matters to interaction design.

Empathy through narrative

In Wright and McCarthy [56] we argue that certain genres of the novel can be seen as cultural tools for understanding the experience of others. This is not a new claim of course, literary theorists such as Bakhtin [3, 4] and psychologists and cognitive scientists interested in narrative such as J. M.
Bruner [15] and Oatley [43] have drawn attention to the dialogue, sympathy, identification and empathy involved in writing and reading. Bakhtin [3] suggests that the novel is primarily a site of dialogue between characters, between readers and characters, and between readers and author. The novel owes its experiential richness to these complex dialogues in which readers engage with the emotions of characters by simulating or playing through their plans, expectations, and responses to that which unfolds. While acknowledging that any work of literature reaches only a small number of readers, Oatley argues that “when a real meeting occurs of reader with a book, or reader with an author (via a book), it can be profound” (p.439). In considering whether narrative approaches in HCI can evoke an empathic encounter we are not necessarily looking for a profound meeting between designers and participants but we are looking for a meeting marked by understanding what it feels like to be the other.

One of the narrative methods employed in HCI is the ethnographic vignette, used as a way of distilling the results of ethnographic fieldwork of the sort described above. Narrative vignettes are short pen pictures of people in a setting have been used to capture the felt experience of working in a particular place or setting. For example Julian Orr’s [44] description of the work of photocopier repairers includes vignettes in the style of short stories describing the day-to-day activities of workers going about the business of fixing machines. These rich descriptions include what Orr calls ‘war stories’ recounted by the repairers to each other as a form of identity celebration as well as learning. Such vignettes give expression to member’s experiences in the analysis. Read in full, Orr’s vignette’s draw the reader into the practical, intellectual, emotional world of the Xerox workers, perhaps by showing them as fully rounded people and perhaps also by making them particular unique individuals rather than abstract representations. As such they aim to draw out of the reader an empathic response, giving a sense of what it feels like to be one of those repairers.

Scenario-based design also tries to capture users and their activities in stories with which designers and users can envision possible design innovations. According to Carroll [17] good scenarios describe a setting, the agents or actors, their goals and purposes, and the things they do. It is clear from Bakhtin and Oatley mentioned earlier that this is not enough for empathic understanding and dialogue. A richer polyvocal world that has emotion as well as agency, character as well as plot, has to be created for readers to engage empathically with characters and author.

In an attempt to generate narrative resources that are like scenarios but also have some empathic resonance Nielsen [42] proposed character-driven scenarios. She points out that while typical scenario descriptions provide a rich account of what happens and what ‘the user’ is trying to do, they tend not to describe users’ motivations, personality traits, values, and attitudes. Nielsen argues that this limits the value of design scenarios. If the designer-reader cannot engage with the characters and cannot understand their background, personality, intentions, and motives, how can they explore how that person might respond to new situations and new technologies? Nielsen contrasts the plot-driven approach of scenario-based design with the character-driven approach of film script writing. To quote from Nielsen:

“The character includes both personal (inner) and interpersonal (social, public, professional) elements. All characters have inner needs and goals as well as interpersonal desires and professional ambitions that help characterize them and impose their own requirements, restrictions and privileges. When character, circumstance and chance cross there is a possibility for many voices to speak” [42, p. 103].

Nielsen’s position is echoed in Cooper’s [21] proposal for design based on ‘personae’ rather than ‘users’. In Cooper’s approach more than Nielsen’s, there is a striving to get behind abstractions down to unique characters with individual histories, thoughts and feelings. While character- and persona-based design pushes towards empathic relations, the characters and personae generated can be somewhat two-dimensional and lacking in depth. To understand what it is like to be that person in the scenario, the narrative has to provide the resources that allow readers to identify with and maybe even for moments in our imaginations become that person. It is only through this imaginative identification that we can understand what it is to have their goals and to have them thwarted by fate. Literary techniques such as point of view and first person perspective where the author takes us into the mind and emotions of the protagonist can help but a rich narrative structure of complex relationships between events and discourse is also needed [43]. Without this level of skill and sensitivity scenarios will simply not work at the experiential level.

One recent approach that uses literary techniques quite directly in experience-centred design is Pastiche Scenarios [11]. In this approach, existing well-known characters drawn from novels, movies and plays, are used as the protagonists in scenarios involving new technology in novel contexts. In one study for example, Agatha Christie’s Miss Marple, Orwell’s Winston from 1984, and Burgess’ Alex from A Clockwork Orange were used to develop scenarios which explored how wearable cameras could be used as an aid to crime prevention. When working with this form of scenario, our familiarity with these well-known and richly-drawn characters allows for the kind of imaginative identification achieved in the novel.

Like the novel, film is also well understood to be capable of drawing out an empathetic response from its viewers. Filmmaking has been exploited by Gaver [31] and Raijmakers, Gaver and Bishay [45] as a way of engaging the designer with participants. In his approach to
technology evaluations, Gaver uses people he refers to as cultural commentators, such as screenwriters and filmmakers, to document through video film, people’s experiences of living with prototypes [31]. Screenwriters and filmmakers work outside of HCI and are not part of that discourse community. But they are used to thinking and talking about aesthetic, emotional and cultural issues. In the context of design evaluation or assessment, cultural commentators are used as resources for multi-layered, polyphonic assessment of designs for everyday life. They become part of a rich, ongoing dialogue of many voices – designers, users, cultural commentators – making sense of a design and how it is experienced [28, 47]. Raijmakers’ design documentaries aim to bring the everyday lives of people to designers through artistically made film documentaries [45]. So, for example, Raijmakers, will create a provocative documentary on the lives of migrant strawberry pickers in Kent to highlight what it feels like to be away from one’s own country and loved ones. This will then be shown in a design workshop to provoke design dialogue.

Both cultural commentaries and design documentaries have been used as resources for dialogue in design workshops and meetings, in an attempt to allow viewers (in this case designers) to identify and understand in empathic ways the situations of the protagonists in the film. oatley argues that it is more difficult for film to evoke empathic responding in part because the viewer is in more passive a position than the reader thereby making the dialogue between filmmaker and viewer a little more one-sided. However these cultural commentaries and design documentaries share with cultural probes a form of artistic ambiguity and open-endedness, which the developers argue (as with cultural probes) is essential if the designer/viewer is to see the worlds of the film through their own eyes.

As with dialogue, there is no guarantee that narrative will evoke an empathic response. One useful criterion may be the extent to which they represent or respond to the user, where representation involves a distancing and reification and response is always more personal and particular. Much of the narrative work we see in HCI emphasizes representing experience to designers in durable ways that can be used as a resource for design. In contrast, the character-centred approaches and much of the ethnographic impulse in vignettes seem to argue for a significant degree of feeling for the other and responding to their needs even if they have not quite yet made it.

Attending in this section to the kind of imagination it takes to make a piece of writing work empathically raises one final development in experience-centred design that bears some consideration in terms of empathy, that is designing through the imagined other.

**Empathy through the imagined other**

Role-play and experience prototypes have been employed as ways of engaging with imaginary users or imaginary user experiences [16]. In role-play designers act out how it might feel to be someone with specific characteristics, for example, what it might feel like to be disabled using props such as wheelchairs or suits designed to restrict movement. Experience prototypes are methods and techniques of simulating experience with a product, space or system in order to understand what it might feel like to engage with it. For example, in order to understand what it is like to be a user of a defibrillating pacemaker, team members were given pagers. The activation of the pager represented a defibrillating shock. Participants were paged at random times and asked to record their feelings and circumstances at the time the pager was activated. Buchenau and Suri report that members of a diverse team were able to translate their experience (e.g. anxiety about holding their child when the pager/shock signaled) into patient needs quite quickly. They argue that when information becomes vivid and engaging and resonates with personal experience, it is easier for designers to grasp the issues, understand users’ needs and “feel greater empathy with both the people who will be affected by their decisions, and the experiences users may face” [16, p.425].

As an empathic methodology in HCI, experience prototyping can be seen as a way of giving designers insight into what it feels like to be a user. This has face validity at least with respect to more traditional methods of prototyping. However there have been epistemologically and methodologically more radical moves that might at first sight seem heretical from a traditional HCI perspective.

For example, Sengers [46] has proposed what she refers to as autobiographical design. She argues that rather than try to obtain objective knowledge about other people’s experience, designers can design using their own personal experience as a means of gaining access to a rich interior world of felt life. They can then embed this subjectivity into the system. Sengers makes parallels with techniques used in cultural theory that draw on rigorous self-examination as source of knowledge about the human condition. She also uses analogies with literature where authors draw upon their own experiences and present themselves in ways that they hope will be of interest to the reader. One interpretation of this approach is that it could not in principle be an empathic method since it involves no consideration of the other. But this is not Sengers’ intention:

“ In the sense I intend, autobiographical design requires designers to carefully reflect on what aspects of their personal, idiosyncratic experiences they would like to propagate and how their personal use may or may not relate to other users” [46, p2].

There is a clear sense of other-orientation in this quote, an orientation that presumes an empathic understanding of the other. It could be argued though that it relies too much on Collingwood’s [20] “shared humanity”. Sengers is aware of the risks involved in this approach. She argues that it is not
a replacement for user-centred design but rather an extension of it.

“It [autobiographical design] is another tool for understanding what a system will feel like to target users, but it will only do so effectively if designers maintain an active eye not only on the potential commonalities between their experiences and those of their target users but also on the differences between them” [46, p. 2].

For autobiographical design to work effectively in Sengers’ terms then, the designer has to have an empathetic understanding of which aspect of their experience will be of interest to the target audience and how it will be taken up by them. For the purpose of this paper, a key point of autobiographical design and related approaches is that, to a greater or lesser degree, they rely for their dialogical effectiveness on the ability of the designers to empathize with imaginary users. Empathy then is not the outcome of the process but a pre-requisite for it.

**DISCUSSION: EMPATHY AND CONTEMPORARY HCI**

HCI is concerned with understanding the influence technology has on how people think, value, feel, and relate and using this understanding to inform technology design. Ontologically, HCI is now concerned with the experience, felt life, emotion, desire, fulfillment as well as the more familiar ontology of activities, practices and tasks. In this context empathy has emerged as an important concept with practical consequences for HCI.

We are not the first to recognise the role that empathy can play in HCI. As we noted above, Suri [50] has argued that Ergonomics needs to embrace empathy in order to meet future challenges and take future opportunities. Koskinen, Mattelmäki, and Battarbee [34] have explored empathic design with respect to the design of interactive technologies and have developed useful approaches and designs to exemplify their work. Others have referred to empathy as a concern in their work even if it has not been central [e.g. 16, 41] and of course it is a central concern in ethnographic approaches to research. This article contributes to this trend by using empathy to understand the relationship between user and designer and to reflect on experience-centred design methods with a view to understanding how they mediate that relationship. In addition we hope our dialogical or relational account of empathy offers a foundation for methodological development.

By their tight focus on a functional use of empathy, for example to design attractive systems, early attempts to introduce empathy into HCI often seem somewhat paradoxically to have maintained a third-person perspective on users. In contrast we have emphasized the dialogical character of empathy, empathy as communicative performance built on responsivity to others. As we have noted in earlier writing [37, 40], Bakhtin characterised this responsivity as aesthetic seeing. He described it as a creative understanding that emerges from seeing each person as a separate unique centre of value and then responding to them from the special value position that is one’s own. This kind of affective response cannot come from a third person perspective as it involves aesthetic seeing, not scientific knowing.

In the review of emerging interpretative approaches above we noted an affective disposition and perhaps an empathic spirit in most of them. However we also noted that their practices, including those related to responding to the other, were often quite different from each other. Ethnography involves dialogical engagement with living and breathing others and an empathic rendering of that encounter. Cultural Probes, when set in the context of the full design process including polyvocal accounts of the appropriation of the designed artefacts into people’s lives [47], can also be seen to have a similar engagement. The tighter focus on design practice and the artist-inspired approach to design as putting aspects of oneself out there with the artefact encountering the other makes the emerging Cultural Probes design process (if that is a fair ascription) a highly mediated encounter that requires further examination.

In conclusion it is important to note that in this paper we have not been advocating an empathic approach as ‘the one best way’ for design. Rather, our aim was to note an emerging trend toward what might be called empathic design in user experience projects and begin to evaluate and classify them with respect to each other and their uses in HCI. The methodological point is that if experience and interpretation are central to designer-user relationships in HCI, then empathic methods become important and they have to be understood and used in an appropriate way. As Gaver has argued for example [29], there are ways of using cultural probes that do not engage with users in a rich dialogical way. But then, the results will not be an empathic understanding of user experience.

As HCI practitioners begin to employ experiential and cultural approaches, there is also another danger. The danger is that empathy will be regarded as something vague, mysterious, unwarrantable, undocumentable and unusable. But HCI need not fall into this trap for two reasons. First, as we have seen in the above review, many methods do not require extended, deep, direct contact with the other. Using these methods in the spirit of enquiry and responsive understanding in which they were intended to be used may be sufficient to provide empathic understanding. Second, there is now a body of methodological work in the social sciences on interpretation, identification, and understanding which makes any attachment to mystery and subjective feelings redundant. The challenge for HCI practitioners is to know the methodological context of the methods and techniques they use.

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