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# How Informances Can be Used in Design Ethnography

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**Abstract**

In this paper we discuss how we've adapted the technique of informance design for use in design ethnography. We detail our design ethnography workflow method and describe our informances.

**Keywords**

Informance, ethnography, design, pattern language, home life, family, domestic.

**ACM Classification Keywords**

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

**Introduction**

Informance design is a combination of role-playing, improvisation, and *bodystorming* (an embodied form of brainstorming), which enables designers to generate design ideas through imagining themselves in the minds and bodies of users. In this paper we present an adapted use of informance design for the purposes of design ethnography. We discuss our use of informances and present a workflow method that incorporates the technique into a design ethnography study. We will show how we linked the informances to the development of key design patterns. Our aim is to describe our method such that other designers can understand, use, and modify it.

In our use of informance design we found that it made three key contributions to our design ethnography: 1) informances provide a phenomenological analysis that adds a first-person and embodied representation to the traditionally textual and third-person representations in ethnography; 2) Informances provide early representations of key insights into the interpretation of collected data; 3) Informances provide a shared representation that facilitate a group approach to design ethnography.

### **Background**

Informance design is the use of role-play, which enables designers to enact complex situations through imagining themselves within the minds and bodies of the users [6]. This method was seen as a performance technique for generating novel design ideas that were embodied and *in situ* [2]. Ongoing use has been documented in organizational settings and mobile communication [5]. To our knowledge, informance design has not been discussed or used as an analytical or ethnographic tool.

Recognition of the social dimension of design has increased the use of ethnographic techniques in Human-Computer Interaction (HCI). Suchman demonstrated the clear efficacy of applying ethnomethodological techniques to design [7]. Discussion has since ensued on the specifics of how to apply ethnography to technology design [3]. Recent studies have utilized design ethnography in trying to understand the home and the role ubiquitous computing might have in supporting domestic routines [4]. We note that as designers have appropriated ethnography for design, design ethnographers have in turn appropriated design techniques for the purposes of

ethnography. One such example is the use of pattern languages in design ethnography [4]. Our novel use of informance design follows in this tradition.

### **Motivation**

In the past, we have used informance design in several projects. The technique offered the advantage of wide exploration of design ideas early in the design process. The informances served as preliminary scenarios that would later be refined, scripted, videotaped and used to generate requirements. In more recent projects, team members used informances as an analytical tool to describe and share observations from fieldwork. Due to the nature of the projects, these informances were often of physical and embodied actions like individual interactions with museum displays, or physical play in playgrounds. As we were about to embark on a long-term design ethnography study, we decided it was time to formalize the use of informances as an ethnographic tool and create an appropriate workflow process.

### **Our study**

In order to provide context for the paper we briefly describe our study. The aim of the study (not the subject of this paper) was to describe everyday design in which design is a form of use. We see families as a type of everyday designer who remakes or modifies organizing systems, and who use design artifacts and actions around them as design resources [8].

Our study included three families with young children ranging in age from 5-13 years old. The parents were professionals (elementary and secondary school teachers and a legal aid worker) ranging from new to established in their careers. The study occurred over a five-month period, and included over 350 hours of

observations and interviews. We used 3 ethnographers, each assigned to one family.

### **Design ethnography workflow**

The design ethnography process involved several steps. Our process revolved around *sessions*. A session is a single visit by an ethnographer (typical sessions are 1 to 3 hours in length). Ethnographers participated in 3-4 sessions a week. Initially, sessions were scheduled in order to describe the different routines during the weekdays and weekends. Later, scheduling was based on targeting specific activities or events. Each session was documented in three steps.

The first step included documentation and summaries of the observations. Each ethnographer completed this immediately following a session. This involved consolidation of notes, selection of photographed images, videos and audio recordings, as well as further reflection on the observations. A standardized written report was sent to another team member for review to seek feedback to help clarify descriptions and aid further questioning. These comments became annotations that were recorded as part of the document. The completed written report was entered in a database.

The second step of the process was to share observations with the entire team. It was during this step that informances were utilized. The team met weekly. During these meetings each ethnographer reported findings, performed an informance, and the group discussed the significance of those findings. Each meeting (including informances) was documented and entered in the database as analyzable material.

The third step of the process focused on a summative analysis of the gathered data. One of our analysis approaches was the use of a pattern language<sup>1</sup> [1]. The pattern language formed a distillation of repeatable observations and significant attributes of activities.

### **Weekly Cycle**

The weekly meetings discussed in the previous section were organized into three activities: 1) oral report, 2) informance, and 3) discussion.

Oral reports are when an individual ethnographer summarizes the sessions that he or she participated in during the previous week. The report includes an explanation of significant observations and insights. The ethnographer will also present related images, sound or video that they have captured.

Informances complete the report. Each ethnographer re-enacts a specific moment from one of the week's sessions. An ethnographer will assume the character of one (or more) of the participants (informant or actor in the study<sup>2</sup>), other researchers sometimes acted as secondary participants in order to provide a social context for the informance. While the goal of informances is to describe observations, they provide additional value:

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<sup>1</sup> A pattern language is a structured method of describing good design practices in different domains such as architecture, urban planning, computer science, human-computer interaction, and interaction design.

<sup>2</sup> The terms *informant* and *actor* are common ethnographic terms. An *informant* is the person who is relaying an event to the ethnographer or someone who provides key information. An *actor* is a person involved in the action of an observation.



Figure 1 Leah performing *Call Home* informance

- The performance provides the ethnographer a rich opportunity for reflecting further on the situation and people observed. The degree of empathy required gave the ethnographers a chance to *get into the body and mind* of the informant(s) or actor(s).
- Acting provides the team the opportunity to imagine being with the ethnographer when he or she was observing. This creates a rich impression and leads to members asking more relevant questions and having a clearer understanding of the participants in the study.
- For team members who do not participate in any fieldwork, informances provide an opportunity for them to become aware of what is actually happening in the field. These team members can provide fresh insights on an observation.

Ethnographers were asked to explain why a particular observation was chosen for an informance. Predominantly, observations were chosen because they were particularly noteworthy or the actions were primarily physical and an informance was the best way to describe the observation.

*Discussions* follow reports. Discussions involve the whole team. Typically questions are asked seeking clarification and team members probe recollections for further details and relationships.

### **Informances**

Below are two examples of informances (the names of actors and informants have been fictionalized).

#### *Call Home Informance*

In figure 1, one of the ethnographers, Leah, is enacting an observation of an informant, Kevin. Kevin is trying to use the voice recognition feature of his new mobile phone. Leah is in fact relaying how Kevin wanted to show her this feature. In the informance, Leah plays the role of Kevin and uses an eyeglasses case as a prop for the mobile phone. Another researcher plays the role of Leah.

The informance starts with Leah acting as *Kevin* asking *Leah* if she wants to see how the voice recognition works: "This is my mobile phone and this is Bluetooth..." *Kevin* puts the headset around his ear. "It works best for me because I like to talk on the phone while I drive. I'd like to show you how it works." "Sure" replies *Leah*. After punching keys on the mobile phone, *Kevin* holds onto the Bluetooth headset and says, "Call home." Nothing happens – Leah steps out of character to make some mobile phone sounds. Back in character he mutters to himself, "Ok, it doesn't work," then he says to *Leah*, "sometimes it doesn't recognize certain syllables...let's try again." Again Leah steps out of character to make phone sounds. She resumes her role, holds the headset again and says, "Call home." Again nothing happens. Furious punching of keys follow and then with some resignation *Kevin* admits, "there are too many things on this mobile phone..." *Kevin* continues to push buttons. "See, you know, certain words it works. I call *CleanTech* – here, I'll call *CleanTech*. *CleanTech!*" Triumphantly *Kevin* shows the display of the phone around the room. "See it's connecting...it's connecting. So why won't it call home?" The informance ends as *Kevin* continues to push buttons. The informance lasted less than a minute.



Figure 3 Corey performing *Preparing a Salmon Filet* informance

In Leah’s observations, *Kevin* never gave up on the voice recognition feature. The informance showed the balance between frustration, satisfaction and perseverance with using a new feature when a need is identified as *Kevin* remarked about the use of his mobile phone while he drives.

#### *Preparing a Salmon Filet Informance*

In figure 2, an ethnographer, *Corey*, enacts the preparation of a salmon filet for cooking by one of the participants, *Andrew*. As *Corey* is acting out the informance he explains the lengthy procedure that *Andrew* goes through in order to prepare fish for cooking on the barbecue. While he is acting out all the tedious details of the process, *Corey* notes *Andrew*’s humor about the event as well as *Andrew*’s meticulous attention to detail throughout the whole procedure. *Andrew* used needle-nose pliers as a tool for preparing food. The actual event took nearly an hour and involved only preparation (i.e. no cooking).

*Corey* used paper as a prop for wrapping the salmon and an imagined pair of needle-nose pliers. The majority of the informance was devoted to *Corey* enacting how *Andrew* would feel along the top of the fish for bones and then slowly and surgically remove each bone with the pliers. This action was repeated several times. The informance also enacted the methodical process of wrapping the fish in foil. In addition, *Corey* described the arrangement and proximity of the sink, garbage and other kitchen utensils. He used chairs in the room to reproduce the kitchen configuration. The informance was slightly longer than two minutes. *Corey*’s observation captured in this informance showed the precise action of removing the fish bones and the need for a specific

tool, the needle-nose pliers. Needle-nose pliers are not common in the kitchen and furthermore are here used in an unusual but appropriate way.

#### **Patterns and other representations**

As discussed in the section, “Design Ethnography Workflow,” the third step in our process was to analyze the data. In our case, we used pattern languages as a method for describing commonalities and key activities across our observations. The informances provided formative representations of key activities and patterns before this step. For example, the *Call Home* informance described above, presaged and informed the pattern named *Training the Mobile Phone* (figure 3). The observation in the *Preparing a Salmon Filet* informance was formalized in a pattern named *Using Needle-Nosed Pliers for Pulling out Fish Bones* (figure 4). These patterns were significant patterns from our pattern language of over fifty patterns.

#### **Discussion**

In our use of informances we found some key benefits. The informances such as *Preparing a Salmon Filet*, provide a phenomenological account of an embodied action. There was no dialogue in this observation, and the insight of the effectiveness of the use of pliers could only be demonstrated as a precise physical action. We feel a traditional written account of this would miss key aspects of this observation. In addition, informances provide early representations of key insights into the interpretation of collected data. While we used patterns in our summative analysis, other studies may represent their observations in traditional *vignettes* (ethnographic stories), scenarios, video documentary or other forms of representation of data analysis. Informances as we’ve described provide key insights to later refine with

### Training the Mobile Phone



**Significance:** People will invest time and effort in integrating a new artifact if they see a long-term benefit that outweighs the short-term investment of trial and error.

**Description:** Changing our routines, or taking the time to train others or learn new systems in order to incorporate a new artifact or system.

**Example:** K made repeated attempts to train his mobile phone voice recognition because he knew it would save him time in the future.

Figure 3 *Training the Mobile Phone* pattern

### Using Needle-Nose Pliers for Pulling out Fish Bones



**Significance:** Unusual but appropriate use of a tool.

**Description:** Using a tool that was not designed for the activity but is a perfect match for the task at hand.

**Example:** A used needle-nose pliers to remove fish bones.

Figure 4 *Using Needle-Nose Pliers for Pulling out Fish Bones* pattern

more detailed representations. Furthermore, informances will inform these representations from a phenomenological viewpoint that may be complementary. Lastly, our informances provided shared representations that facilitated our group approach to design ethnography. This allowed all members of the team into the process providing for considered and informed discussions of the observations.

Informances can pose challenges as well. Some individuals may not be comfortable performing. Informances, like participant observation is a learned skill. Teams may need to devote time to practice and learning in preparation for a study. Finally, some may question the validity of the data from informances when used as an analytic tool. In many respects, informances used ethnographically assume the validity position of ethnography, which relies on reflexivity. Reflexivity is a conscious self-understanding of the research process and the use of explicit methods to guide the process. This does not satisfy validity and reliability measures of experimental design, yet it is the in-depth interpretations of informants and ethnographers together that provide the rich contextual understanding resulting from ethnography.

### Conclusion

Based on our experiences, informances serve as an embodied technique for formative analysis that can guide the ethnographic process as it evolves, can provide early analysis of significant activities, and provides a rich and embodied communication of observed experiences to all members of the team. The contribution of our paper is that we adapted the informance design technique to be an ethnographic

tool. We leveraged the analytical strengths of informance design and demonstrated that the technique is as valuable in performing actual events as it is at generating imagined actions.

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