Design Documentaries: Inspiring Design Research Through Documentary Film

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ABSTRACT
This paper shows how we can take inspiration and use techniques from documentary film in pursuing user research. Documentary filmmaking has a long history of portraying everyday life in ways that leave the erratic, elusive fabric of the everyday intact. This may be valuable as interaction design currently embraces issues of engagement, expression and aesthetics. We discuss key documentary formats, and suggest that a purely observational approach may not be most valuable for design research. Three design documentaries are discussed to show how different documentary approaches can be used in practice to inform the early stages of design. We suggest that, for design research in HCI, film can be much more than a note-taking tool; we can use it as a means to explore, understand and present the everyday, and benefit from film’s capabilities to preserve ambiguities and paradoxes instead of resolving them into univocal conclusions.

Author Keywords

ACM Classification Keywords
H5.0 Information Interfaces and Presentation (e.g., HCI): General.

INTRODUCTION
There is a long history in Human Computer Interaction (HCI) of investigating users’ situations and activities to support the initial formulation of design ideas. Such studies may be couched in terms of requirements capture (e.g. [39]), work model development (e.g. [43]), informal studies of people’s work practices (e.g. [20]), or more detailed studies of people’s activities in everyday settings (e.g. [31]). Despite underlying philosophic differences, most of these methods are aimed at understanding how to build systems that will be useful and usable.

It has become increasingly clear, however, that we need to look beyond functionality and usability because these are not the only and in some situations perhaps not even the main issues that need to be addressed. Instead, issues of aesthetics, emotion, personal expressivity and cultural value all increasingly need to be considered. This expansion of the scope of user research in HCI has early roots in ethnographically inspired studies of the work place, for instance looking at the context [4] or ‘situatedness’ [37] of work and its social organisation [24]. Studies of domains such as the home and the street widened the scope further [2, 15, 17].

New methods that are not purely oriented to functionality and usability issues have started to appear. Ethnography has inspired a wide range of these methods, from informal [5, 33] approaches to more formal methods like technomethodology [9] and conversation analysis [44]. The adapted patterns framework is an example of structuring and presenting ethnographic findings in a way that avoids a more task-related problems and solutions format [12]. Personas [11] represent results of ethnographic interviews as believable characters with goals but also quirks.

New methods have also been inspired by design and the arts. Informances [8, 13], inspired by theatre, combine improvisation and brain-storming, encouraging designers to generate design ideas spontaneously while acting out the everyday situations of target users. Inspired by various art movements such as Surrealism, Cultural Probes [16, 19] focus on finding inspiration more than information, eliciting unexpected answers by setting unexpected, open-ended, and even absurd tasks. Technology Probes [25] are intended to illuminate user’s values through a process of co-designing and living with simple technological prototypes. Placebo objects [14] elicit stories from users asked to “adopt” the objects and explore the sometimes unusual values they embody.
Film and video are regularly used to support initial user research, for instance in several of the methods mentioned above [5, 8, 12, 22]. Buur and MacKay have explored and experimented with the use of video in HCI at all stages of the design process. Buur has concentrated on developing innovative uses of video in participatory design, creating concepts and prototypes with users based on observations of their work routines [10]. MacKay has used “video artifacts” of field observations, brainstorming, and prototypes to allow multidisciplinary teams to move more easily between the abstraction of design concepts and the details of user interaction [30]. When Buur and MacKay use video to investigate situations and activities of users at the early stages of a project (before concept development), they both focus on finding an easy way to make notes and share moments of particular interest. They aim to facilitate reflection in their multidisciplinary teams, including those who could not be present ‘in the field.’ Buur and MacKay have made strong contributions to the use of video in HCI methods, but they do not diverge from the mainstream view in HCI user research that sees video as a tool to record and represent situations seemingly unmediated [6]. Only few researchers (see e.g. [38]) mention for instance the choices one has to make when filming a situation. This paper suggests that it may be valuable for HCI to look beyond neutral recording, and to bring documentary film approaches and techniques into user research methods. This could support researchers who wish to expose people’s rich, idiosyncratic and elusive everyday life and understand it on its own terms. This agenda is familiar to documentary film; it has already been its aim for almost a century [e.g. 42].

**DOCUMENTARY APPROACHES**

Documentary filmmaking is no more a unitary set of approaches and techniques than user studies are. Instead, a wide range of stances towards capturing and delivering experience has been developed. In this section, we discuss a range of documentary films and approaches that may inform the use of film in user research. The films presented here demonstrate the richness of approaches and techniques available in documentary film. The descriptions also aim to offer designers a way into viewing documentary films with the eye of a design researcher who wants to ‘harvest’ documentary film approaches and techniques for his or her research. First we introduce what is perhaps the best-known approach to documentary filmmaking, but argue that it may be the least useful for design. Then we describe four other approaches that are less well known, but which we believe may be more useful.

**Neutral Observation**

Filmmakers who believe that reality can be captured through neutral observation have adopted a self-explanatory name for their genre: fly-on-the-wall documentaries. The intention of such films is to simply to observe without intervention, and thus they permit no interviews, re-enactments, film lights, narration, dissolves in the editing, etc. Fly-on-the-wall, or Direct Cinema as it is sometimes called, developed in the early 1960s in the US when for the first time it was possible to go out of the studio with a handheld camera and synchronous sound recording equipment. This sparked strong beliefs that finally everyday life could be recorded as it is lived, an old dream of documentary film [29, 42]. Filmmakers believed they could (and saw it as their task to) collapse the difference between reality and representation. For fly-on-the-wall practitioners and theorists observation and objectivity became synonymous.

Documentary theorists have criticised the claims of fly-on-the-wall filmmakers however, pointing out that shooting and editing is necessarily selective [42]. Stella Bruzzi, for instance, thinks that observational cinema “has been misdefined, and has misdefined itself” [7]. It is impossible to make a film that is entirely objective. This difficulty is reflected in design research as well, for instance by Crabtree and Rodden [12], who despite having recorded 6000 hours of video of life at home, still write that their recordings are ‘incomplete’. After much discussion this has also been admitted by fly-on-the-wall filmmakers themselves, such as Fred. Wiseman who once famously said “This whole objective subjective thing is a lot of bullshit!” [42].

**Documentary As Dialectic**

What in the end makes documentaries dynamic and interesting is, as Bruzzi [7] formulates it, the “dialectical relationship between content and unadulterated truth and representation”. Representations such as film are inherently opinionated because they are inherently incomplete; it is impossible for filmmakers to avoid making choices about what is important. At the same time, filmmakers’ biases are constrained by the material they have to film: documentaries cannot simply invent the material they use.

The dialectic between opinions and the “unadulterated truth” is inescapable within design as well as documentary film. Design teams may thoroughly research the people and situations for which they are designing, but they must also develop a perspective—a prioritised view—to direct their work. An important role for design research in HCI is to facilitate the emergence of the dialectic between user research and design perspectives. Fly-on-the-wall documentary tries to stay away from that dialectic, and thus provides little impetus or support for designers to address it. But other documentary approaches embrace this dialectic rather than opposing it, and thus may be more useful in the design process. In the following sections, we discuss four different approaches to documentary filmmaking: observation, intervention, compilation and performance, and suggest they may have valuable lessons for design research in HCI.

**From Observation To Intervention In Cinéma Vérité: Jean Rouch And Edgar Morin’s Chronique d’Un Été**

From the 1950s, the ethnographer Jean Rouch used film in his research, but he moved away from the accepted use of
film as a note-taking tool to develop a new field of anthropological cinema. A key film in his work and documentary film history is *Chronique d’un Été* (Chronicle of a Summer), which he made with sociologist Edgar Morin in 1961. In a way, the film is the reversal of then typical ethnographic research; it presents a black African researching a white Parisian ‘tribe’ of young people. The making of the film is very much part of the film itself; Rouch and Morin put themselves as filmmakers in their film. We see Morin interviewing, and at the end, after a screening, Rouch and Morin discuss the film’s truthfulness with the participants. As Winston [42] says: “*Chronique* eschews the transparency of invisible Direct Cinema filmmakers to offer us another transparency, that of Rouch and Morin in the shot.”

The reflexivity of *Chronique d’un Été* was informed by the filmmakers’ background in sociology and anthropology. Rouch [16] believes that to get access to what is happening in real life you need to participate in it, and thus he prefers to co-operate with the people he films. He normally recruits someone of the group he films as an assistant and sound recordist, and looks at the material he has shot with the people he films [27]. The co-operation, he says, makes people participate in the film differently; they are more involved. Building on participation and co-operation, Rouch pushed the boundaries of cinema and anthropology resulting in what he calls ‘ethno-fiction’, fusing description and imagination in anthropology, and realism and fantasy in film [21]. *Chronique d’un Été* contains several scenes where a protagonist is role-playing and being herself at the same time. The point is not whether she is acting or being herself. The point is that it is not relevant one way or the other: in everyday life, “role-playing” and “being oneself” co-exist, and the relationship between them is more important than either one of them.

Most interesting for design research in HCI is that Rouch and Morin, to understand everyday life as ethnographers and sociologists, argue they need to move beyond neutral, objective observation. They acknowledge the complexity of the everyday by participating in it, co-operating with the people they film and showing the viewers how the film was made. These are not just filmmaking techniques, for as Morin wrote: “*Chronique* is research. … This research concerns real life.” [42].

### Intervention Through Re-enactment: Robert Flaherty’s *Nanook Of The North*

Jean Rouch and Edgar Morin did not invent role-playing in documentary. It was in fact common practice in documentary right from the beginning. The first feature-length documentary film, Robert Flaherty’s *Nanook of the North* (1922), is a dramatisation. In fact, Flaherty had already scripted his film in New York before he left for the Arctic because he had gotten bored, and thought his American Geographical Society audience was bored too, by the unstructured collection of observational shots he made on a previous trip to the Arctic [32]. His new technique came to be called ‘intervention’ or ‘reconstruction’; people would re-enact their own everyday life based on a script. For instance, one of the scenes in *Nanook of the North* shows us how the family wakes up in the morning. To shoot that scene Flaherty had to cut away half of their igloo to get enough light to film, effectively turning it into a stage set.

Although originally prompted by unsophisticated film technology, intervening in the everyday through re-enactment is still popular today. It remains a key element of documentary because filmmakers have learned that people are very good at re-enacting their own everyday life [42] and it is often the only way to show something that already happened before the film crew arrived [26]. It is also not always possible to follow activities of people step by step, as they happen. To represent them on film in a compelling way, they often need to be cut up in shots and recorded bit by bit, asking people to repeat their activities. Re-enactment allows filmmakers to shoot an everyday situation several times, from different angles, and reconstruct these situations through editing as a compelling story. User research in HCI also uses re-enactment, for instance in artifact walkthroughs [35] or scenarios in video artifacts [30]. Nonetheless, the techniques used in documentary film to record re-enacted situations in a compelling way tend not to be used in early phases of user research.

### Compilation: Michael Moore’s *Fahrenheit 911*

Another approach to fashioning a documentary is to construct a compilation film. Weiner [41] describes the production process of such a film as “radical scavenging”, meaning “revisiting existing footage to construct out of it an alternative and maybe even directly oppositional narrative from that which it inherently possesses”. He was thinking of the films of Emile de Antonio who himself calls it “a kind of collage junk idea I got from my painter friends” [36], but this description also fits Michael Moore’s film *Fahrenheit 911* (2004). Footage that originally was meant to be neutral or favourable to George Bush turns against him through the rhetoric that Moore builds with his narration and juxtapositioning of images. Waugh [40] calls this recontextualisation “democratic didacticism” because it allows the viewer to read the film on at least two levels: the intended meaning of the footage and the perspective added by reconstituting the material. A dialectic between these two levels emerges and forces viewers to develop their own opinions (c.f. [18]). Compiling research material like this is useful for design research too, if it is supposed to fuel discussion rather than present user requirements.

### Self-Performance: Morgan Spurlock’s *Supersize Me*

A very personal way of making a documentary is to make it about yourself. The classic documentary follows the formulation ‘I speak about them to you’, but these films use the formula ‘I speak about me to you’ [34]. The format is often called video-diary, or video-letter, reflecting its popularity since the video camera became available to the general public. It has spread through art (e.g. Sadie Benning...
(23]), television (e.g. Video Nation on the BBC [1]) and also user studies (e.g. [3]) where it is sometimes called auto-ethnography. With self-performance people choose themselves what they record, there is no script made by the filmmaker as there is in re-enactment. Here the performer is also the director. The key issue here is of course how genuine these films are; there is no director to guarantee the authenticity of the situation that is being performed. It is clear that the people making these films perform themselves and their everyday. They are constantly aware that they are on camera. But this does not make their stories less genuine. Performing is a very normal thing to do in the everyday; we perform ourselves in different roles (like mother, teacher, partner, friend, etc.) all the time, as for instance Brenda Laurel notes [28].

A recent documentary that uses self-presentation is Supersize Me (2004) by Morgan Spurlock, who kept a video-diary of his 30-day MacDonald’s-only diet. He tells an at times comic story of how his body and mind are changed by the diet. He clearly performs, but he performs himself—as a filmmaker, MacDonald’s addict, lover, patient, guinea pig, etc.—giving us a good insight not only into his eating habits, but those of a complete culture.

Video-diaries are useful for user studies because they can give access to people’s everyday life on a very intimate level. The dialectic between the maker and the situations s/he talks about still exists in video diaries, however. Makers of video-diaries in fact perform that dialectic in front of the camera when they reflect on things they did or situations they encountered, since they choose what to present and may overlook taken-for-granted details of their lives. The video-diary is a good way to learn what people think; it may complement methods such as ethnographic observation that can reveal what people do.

A Simple Taxonomy

The documentary approaches we have described here are ordered according to the explicit involvement of the filmmaker. Fly-on-the-wall observation represents the attempt to maintain neutrality in service of objectivity, while other films illustrate different forms of intervention, compilation and finally performance as alternative ways to uncover insights about situations and people of interest.

Note that these documentary approaches did not develop chronologically. In documentary theory the different approaches co-exist (however uneasily), and filmmakers choose from them depending on what they film or what fits them as a filmmaker personally. Of course many more ways of using these four techniques could be taken up in this simple taxonomy of approaches1. Nonetheless, the examples described here demonstrate a rich set of possibilities for using film to understand everyday life and take inspiration from it for design research in HCI. In the next section we describe how we appropriated some of these approaches and techniques to make three films used in a design project of Philips Medical Systems North America.

DEVELOPING DESIGN DOCUMENTARIES: THREE CASE-STUDIES

Philips Medical Systems, a division of Royal Philips Electronics, designs, produces and markets medical equipment for professional and personal use. To support its design processes, Philips often conducts design research, applying a range of methods. For the last few years, personas [11] have been used in several projects. A persona is an archetypal user constructed out of information, stories and often also photo material harvested from interviews with (prospective) users. Typically results are shared with a design team via written text or a poster that is hung on the wall of the design studio.

For a project concerning medical monitoring equipment for people to use at home after hospital treatment for heart problems, Philips conducted some 30 interviews with heart patients in their homes in the San Diego area of the US. They created three personas, “Fred”, “Kent” and “Debra”, based on their analysis of the materials they collected, including photos and questionnaires filled out by the interviewees. These personas were presented on posters in the design studio.

Unfortunately, the team found that the posters did a good job in conveying information but were not effective at offering inspiration to the team—an experience they had had in previous projects. According to the design team, the combination of text about the personas and (mostly stock) photography did not really present believable people with a credible everyday life. Thus we tried to use documentary film to present the persona material through the everyday life of actual heart patients. In constructing the films, explored the approaches and techniques described above: compilation, observation, intervention and performance. We present the films as case studies of the use of documentary approaches and techniques in design research.

Compilation Film: Fred

The first film aimed to make maximum use of the material that was gathered by the interviewers. We wanted the film to convey as much information from the poster as possible. Although the research had not originally been pursued with the idea of making films, a wide range of material was available: interview tapes, photos taken by the heart patients and by the researchers, story boards made to inform the interviews, and ‘homework’ by the heart patients such as questionnaires, drawings and collages. The poster itself was also available, of course, with its stories and (mainly stock) photography. The poster served as a basis for the script of the film and the photos of the heart patients and

1 A larger collection of documentary approaches and techniques compiled by the first author is available on http://www.designdocumentaries.com/.
researchers as the main material for the image. The script for the film was based on the text on the poster, and we used fragments of the interview tapes rather than an actor to convey the story in an authentic voice. For the same reason, it was decided not to use any professional stock photography. However, we created some of our own background material because the amount of available photos was not sufficient to make the film. To contrast with the photos of the heart patients, the extra material was shot on video, creating long, static shots (‘moving photos’) of situations that comment on Fred’s activities.

About 25 from a total of almost 70 photos made by heart patients and Philips researchers were used in the film. Heart patients made these photos to show their everyday life to the researchers, in response to requests like ‘take a picture of your house’ or ‘ask someone to take a picture of you on your favourite spot’. In the film, however, the photos needed to illustrate the story of the persona. To make this possible we recontextualised them, for instance using the photographed houses to illustrate the activities of Fred’s building company and the portraits of the heart patients as pictures of his poker friends. Title cards at the beginning and end of the film indicate that the film is constructed with the original photos of seven different heart patients, making sure that the origin of the photos does not go unnoticed. This repurposing of images was inspired by De Antonio’s “radical scavenging” [41], and Michael Moore’s use of archive images and film. But the recontextualisation in Fred goes a bit further than De Antonio and Moore do. The photos are not used to show another side of the person in the picture; they are used to create a portrait of one fictional character out of several people’s photos. This appropriation moves the film beyond documentary per se but appears appropriate and useful for design research.

The original photos and audio are mixed with custom-made video. The video shots comment on the authentic material, adding new meaning. We created this mix to present different perspectives to the design team, and not force one hermetic story upon them, in the spirit of Waugh’s “democratic didacticism” [40]. Fred can be read on at least three levels: the perspective of the heart patients as shown in the photos they took, the perspective of the researchers as expressed in the persona poster that determined the script, and the perspective of us filmmakers as expressed in the video shots. This approach was used to tell Fred’s story in a more compelling and personal way than the poster did, on the one hand, while retaining the richness and authenticity of the original materials.

Observation And Intervention Film: Kent
The second film breaks further away from the material that was gathered during the interviews. We wanted to show a heart patient in his or her everyday situation. He used only key elements of the poster, as a sort of very simple script that ideally would be acted out by a heart patient who would recognise the issues that had arisen from the interviews and were described on the poster. The script contained no more than nine headlines like ‘I’m learning to accept help from those who care about me.’ Via the British Heart Foundation we found a heart patient, David, who wanted to co-operate in making the film. He had started a self-help group of heart patients after his heart attack. Participating in self-help groups was a crucial part of the persona Kent too. Parts of the text on the Kent poster were used as a voice over, spoken by three different people (two women and a man) as a way to show that Kent is not a film about one person but a personal story based on many heart patient’s experiences. A title card at the end of the film relates these voice-overs to nine interviews with American heart patients, similar to the title card in Fred. Because of the use of video and the strong personality of David, Kent is much more a portrait of someone’s everyday life than Fred. The idiosyncrasies of the everyday are a natural part of the film and help to make complex, emotional issues accessible for people who don’t have heart problems themselves.

The script was discussed with the heart patient, following Rouch’s idea of collaborating with the people in the film. It immediately became clear that it was easy for David to
identify with most of the headlines in the script. He found it easy to select scenes from his own everyday life that fitted the issues mentioned in the script; David appropriated the script and considered it to be about him from the beginning. From this resulted a co-written script that still contained the perspective of the filmmaker, based on the previous research. To shoot the film different documentary techniques and approaches were used. Several scenes from the heart patient’s life were observed, like how he organises and chairs a gathering of his heart patient community. But we also intervened, as Rouch and Morin do, by having informal conversations with the heart patient, for instance during his usual Sunday morning walk with a friend. We used his perspective and that of the previous research to elicit stories about the heart patient’s reality, for instance to find out what ‘cleaning up my lifestyle’ meant for him. The dialectic between these two perspectives is still present in the final edit through the juxtaposition of what David says and the voice-overs with the perspectives of the researchers as expressed through the poster.

During the filming the heart patient was aware that there was a script that we wanted to follow. The paradox he had embarked on (showing his everyday life in combination with the issues that were important for Kent) was never confusing for him. The heart patient was role-playing and being himself at the same time, like some of Rouch’s protagonists, and like Nanook who re-enacted parts of his everyday life on Flaherty’s request. In the park the heart patient was on the one hand enjoying his normal Sunday morning walk, chatting with his friend, but also at times directly speaking to the audience behind the camera. Both happened at the same time and mixed naturally for him. This for instance was illustrated through a generalising ‘you’ that the heart patient uses often in his stories, talking about himself and other heart patients at the same time. The role-playing of David goes beyond what normally happens in documentary. He not only re-enacts his own life, his performance also expresses issues of other heart patient’s lives, the people who were interviewed to construct Kent. David embodies Kent in the film.

Performance Film: Debra
The third film takes another step away from the persona posters. We asked another heart patient from London, Joan, to respond to the persona Debra in a personal way, comparing stories of her own everyday life to those of Debra. As a starting point we wrote a letter to Joan. The letter was supposedly written by Debra, based on the poster, but was of course fictitious. We explained to Joan that Debra was not a real person but a fictional character based on interviews with nine US heart patients. Joan was asked to respond to Debra’s written letter with a video-letter. The locations in Joan’s house where the video-letter would be recorded were also discussed. Joan then recorded these stories in our presence, all on one day, as a direct response to Debra’s letter that she read in front of the camera. We also shot some additional images of Joan’s everyday life to illustrate some of the stories she tells.

The choice for the video-letter format was inspired by video-diaries like Supersize Me where filmmaker Morgan Spurlock talks about how his everyday eating habits influence his health. In Debra however, filmmaker and protagonist are not the same person. For Debra they cooperated. Together we created a script by cutting up the letter from “Debra” in eight pieces and discussing what Joan could answer to each of these paragraphs of the letter. The issues Joan wanted to raise in response to each of the paragraphs of Debra’s letter were bullet pointed, thus creating the script for Joan. In Debra the format presents a clear dialogue between the perspectives of Debra and Joan. We coached Joan while she recorded the video. This kind of coaching is common practice when filmmakers ask their protagonists to keep video-diaries. The whole process is again a clear example of the kind of co-operation that Rouch has with his protagonists. The most important change we made to the video-diary format by the filmmaker is the introduction of the fictitious Debra.

Joan understood very well that she was not going to respond to a real person. The result is clearly a performance. Joan addresses the camera directly and tells a story created by her for that specific occasion. But at the same time it is clear that what we she tells us is genuine and part of her everyday life. Joan’s performance and everyday reality sit together happily in this film. This is typical for the video-diary and video-letter approach in documentary. The film Debra confirms that performance in the everyday can be genuine and give valuable information about people’s lives.

USING THE FILMS IN THE DESIGN PROCESS
The films were shown and discussed in a workshop with the designers and engineers of Philips Medical Systems. They had already seen the posters of the personas, and were
familiar with different kinds of user research such as focus groups and questionnaires. The primary goal of this workshop was to use the films to develop more engaged intuitions about the people for whom the team was designing at-home medical products. Each film was shown separately, followed by a free-ranging discussion of the particular characters depicted, more general points about similar patients, speculations about design implications, and reflections about the effectiveness of the films themselves.

**Focusing On People, Not Just Their Needs**

The team recognised and appreciated that the films focused on the patients as people, and not just representatives of a set of needs and requirements. The team valued access to incidental details that might or might not be important for design—the patients’ activities, homes, aesthetic tastes, ways of expression, etc.—since these things made the personas “come alive” for them as characters who might use future products. It was important, however, to explain that this was the intention of the films at the outset, so that team members were not frustrated that more focused conclusions were not offered. The characters in the films were believable enough as real people to function as references for the team in later discussions.

**Providing Solid Ground For Speculation**

The films stimulated team members to speculate concretely about how their work might affect the individual patients. For instance, Fred was mentioned as someone who might try to analyse his own ECG, given an appropriate device, because he is so fanatical about knowing everything about his heart condition. However, the team saw a clear danger in this possibility because Fred is not skilled in reading ECGs. In general, the films made it possible to envision how people might use something, what the dangers of that use might be and how these could be avoided.

**Hungry For Everyday Details**

Some workshop participants said the persona posters were more informative, but the films gave a much better feeling for who the people are. They were not sure if that was because the films contained more information or whether other factors were important. In fact, the films contained only about half the number of words as the posters. Seeing and hearing the context of patients’ lives, however, provides new information, as does hearing how they express themselves (e.g. their intonation). Nonetheless, the team thought that the films could delve a bit deeper into the everyday lives of heart patients, showing, for instance, what it is like to not feel entirely right after dinner and how frightening that is. The team expressed a need to know how these very ‘normal’ events really play out in a heart patient’s daily life. They recognised the value of film in capturing personal stories and were eager to get access to more of these kinds of details.

**Who Is Speaking?**

Hearing several voices speak in Kent and seeing several people’s pictures with one voice in Fred was sometimes distracting or confusing for the team. Our reasoning behind these forms of presentation was that Kent and Fred were actually group portraits, even though they show only one person. But people sometimes wondered who was talking. “Too many faces one voice,” one team member said about Fred, “I was probably thinking it was one persons life all the time but again I realise too it is a collage of many people’s lives.” To some degree, this effect is one we had hoped to achieve by creating films that were superficially about individuals but also clearly based on wider research with more people. We hoped this dual reading would integrate the breadth and authority of general research with engagement and identification with a single character. For some viewers, however, this tension might have become merely confusing. The format of Debra was considered much clearer: “a simple question and answer” as one engineer said. The link to the group of people behind the information given was not made as easily here, but instead depended on an understanding of the situation that was not conveyed directly by the film. Combining several sources in a single character seems to have potential to allow several forms of engagement with a film, but needs to be handled carefully if it is not to be opaque or frustrating.

**Stimulating Team Involvement**

Perhaps the most striking result from the workshop was that the films encouraged team members to tell stories about similar experiences of their friends or relatives. This suggests that the films were able to communicate believable experiences and create an atmosphere that was safe and personal enough for team members to come forward and contribute their own stories. The team reported that reading a poster or a marketing manager’s trip report rarely triggers this sort of discussion. Focus groups where the team ‘meets’ heart patients behind one-way glass did not have the same effect either. None of these methods allows the team to see the everyday world that surrounds the people for whom they are designing. And it is exactly from details like the objects that people use that designers and engineers take a lot of information and inspiration. The films allow this level of the everyday to enter the design process in a very personal way that stimulates team members to get involved, even on a personal level by contributing their own stories. The films did not give clear requirements to the team; rather they provided the team with a context of stories, objects, situations and above all people that supported them with inspiration and information during the design process.

The response of the design team at Philips on the three films supported our conjectures about the potential value of using documentary techniques and approaches in design research. Getting in touch so closely with the daily life of the people for whom they were designing was clearly appreciated by the team and raised their appetite for more
details of the everyday. But the films did not overwhelm the team; instead they stimulated team members to come up with their own stories and speculations and to develop their own perspectives.

**DISCUSSION**

We have discussed a range of approaches and techniques from documentary film that we suggest could be valuable in design research in HCI. In addition, we have described how we used some of these approaches and techniques in three films for a design project at Philips Medical Systems. We did not take a traditional approach to the evaluation of our new ways of using video in design research, but our study was systematic: we crafted three documentaries, presented them to a design team in a real-world project, led the team in a discussion of the films, and organised their comments to reveal issues that were provoked by the films. This reflects a practice-based approach that values insights from a situated experience as an alternative to controlled experimental studies. Our approach gives less control over the situation but it has the advantage that the films are tested in a real-world design process. In this trade-off we chose ecological validity over control. The outcomes support our initial intuition that user research might benefit from a wider range of film styles and approaches than those commonly used in HCI.

We refer to our films as **design documentaries** to explicitly recognise that they are not really documentary films per se. At this point, the distinction between traditional documentaries and design documentaries reflects differences in their intended uses rather than any strong notions about differences in appropriate approaches or techniques. Design documentaries are meant to inform and inspire design; documentaries are not necessarily intended to serve an external purpose apart from sometimes hoping to act as a catalyst for change in society. This is bound to have implications on the success criteria for each, and probably on the most valuable techniques as well. Understanding how design documentaries differ from traditional documentaries in practice will become clearer with more experience. However, from our first experiences with design documentaries we have started to understand what possible success criteria for this new way of using video in design research are. In the following sections, we discuss these crucial features of design documentaries as a novel approach to understanding people and situations.

**Design Documentaries Create Their Own Dialectic**

Like documentary films, design documentaries embody a dialectic between the perspective of a researcher/filmmaker and the rich reality that is filmed. This dialectic originates in the process of researching, collecting, and editing the film. It extends into the design team when the finished film is used to support discussions about how designs might intervene in the everyday that is represented in the film.

To create this dialectic in our three films, we used several documentary techniques and approaches:

- In the compilation film *Fred* we created a dialectic between the authentic, found materials that give the viewer relatively unmediated access to the world of heart patients, and the video segments which comment on that world from the perspective of the researcher.
- David, the protagonist in *Kent*, selected events from his own everyday life to be filmed as observed situations in response to the minimal script written by the design researchers; the perspective of the researcher became a probe eliciting the reality of the heart patient.
- In *Debra*, one real person, Joan, answers a “letter” from a persona based on interviews with nine US heart patients. The exchange creates a dialectic between the perspective of the researcher, embodied in a semi-fictional narrative, and the reality of a heart patient.

The dialectic of design documentaries is similar to what Bruzzi [7] sees as the most interesting aspect of documentary film. By problematising the relationship between the perspective of the filmmaker and the realities being filmed, design documentaries invite the designers viewing them to accept, deny, question, or offer alternatives to the perspectives explicitly on offer. Moreover, design documentaries offer the additional possibility that this discussion will feed into the transformation of the reality represented on film through design. Where the dialectic in documentaries can only call for change, the dialectic in design documentaries is the first step of designing interventions that will bring change.

**Design Documentaries Allow Opposites To Co-exist**

In working on the films for Philips, we periodically found ourselves in situations in which it seemed necessary to choose between possibilities that appeared mutually exclusive—for instance, using authentic photographs or taking our own. Rather than forcing ourselves to choose one or the other, however, we found ways to allow these opposites to co-exist within the films, and found that doing this seemed to add value to the results. An important quality of design documentaries, we concluded, is that they are able to combine seemingly opposing qualities, just like everyday life itself does. This helps to preserve the ambiguous and paradoxical qualities of everyday life to survive in presentations of design research in HCI. In this way, the idiosyncratic, inconsistent behaviour of people in everyday life can find its way into design processes.

Several documentary techniques and approaches helped us to work with the spaces between opposites in our three films:

- In *Fred* we recontextualised the photos taken by seven different heart patients, for instance by presenting other patients as Fred’s friends. The photos are authentic because the patients took them, but their use makes them partly counterfeit because the people they depict are not
in fact Fred’s poker partners. Thus we could fit them in our narrative flow, while retaining the unplanned, incidental qualities that lend them “authenticity”.

- In Kent, London heart patient David embodies the persona Kent who is created from nine US heart patients. David is role-playing and being himself at the same time. In the film David speaks with a generalising ‘you’ (e.g. “you always monitor yourself”), indicating he speaks about himself and other people at the same time.

- Making a video-letter involves performing a role addressing the camera directly, looking into the lens. As a performer in Debra, Joan aims to make a genuine recording that expresses accurately what she wants to say and who she is. At the same time, she does this in response to a constructed “letter” from a persona who is in reality a fiction.

We created these spaces between opposites in our production process of the films as a way to acknowledge and appreciate the paradoxes and ambiguities of the everyday as a source of inspiration for design. Positioning the viewers of design documentaries in this space helps them to acknowledge and work with the co-existence of opposites in the design process.

CONCLUSIONS
Design documentaries aim to get access to the elusive, inconsistent fabric of everyday life and understand it on its own terms. This allows the complexity of the everyday to be appreciated and simplifications to be avoided. A number of strategies may be used to achieve this; we have discussed two that were particularly salient for the design documentaries we made. The first is to construct a dialectic between the perspective of the filmmaker and the rich reality of the situations and people shown in the film. The second approach is to accommodate the opposites, paradoxes and ambiguities that are part of everyday life and to explore them rather then to resolve them.

Design documentaries serve as a source of both information and inspiration. They inspire through the direct connection with the rich fabric of the everyday; they inform through the vast amounts of high level and detailed information that film can bring across. Most importantly, by drawing on the rich tradition of documentary filmmaking, they can avoid drawing fixed conclusions, and thus open possibilities for exploration later in the design process rather than closing them down.

ACKNOWLEDGEMENTS
This research is funded by the Equator IRC (EPSRC GR/N15986/01, www.equator.ac.uk) and STBY (www.stby.nl). We thank Jeroen Raijmakers at Philips Design in Eindhoven, The Netherlands for his suggestion to make the films about the heart patients. Design researchers Monica Bueno, Lucille Rameckers and Lorna Goulden at Philips Design provided valuable feedback during the production of the films. The team at Philips Medical Systems in Seattle, WA, conducted the original interviews for the personas with Monica Bueno and used the final films in their design process, providing invaluable material, experience and comments. We thank Fred Clayton, David Jones, Joan Impleton and the British Heart Foundation for their enthusiasm, limitless support and major contributions to the films. We are grateful to “Fred”, “Kent” and “Debra”—or rather, the visible and behind-the-scenes volunteers who made up their stories—for their participation in this research.

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