What Video Styles can do for User Research

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ABSTRACT

Documentary video is regularly used to support user research in user-centred design, and many researchers are familiar with this medium. There is strong research evidence that video can contribute substantially to human-computer interaction and interaction design. But the question what role the video camera actually plays in studying people and establishing design collaboration still exists.

In this paper we argue that traditional documentary film approaches like Direct Cinema and Cinéma Vérité show that a purely observational approach may not be most valuable for user research and that video material can be used in a variety of ways to explore, understand and present the everyday.

Based on a comparison of several video studies of similar activities, but shot by different researchers, we develop the concept of ‘styles’ in video studies, and define three camera styles that may be a help for researchers in organising user research: Not only in making decisions about camera techniques, but in relating how the researcher interacts with the person(s) in front of the camera to the purpose of the shooting.

1. INTRODUCTION

User studies provide knowledge about people’s contexts, their practices, needs and goals for the purpose of creating designs of products or systems that fit. In user-centred design, video has become the dominant method of study to support ethnographic participant observation, as it is well suited for capturing how people relate to products, to surroundings and to each other, and as it promises to maintain a richness of observations even from short bursts of fieldwork for later analysis (Ylirisku and Buur 2007). Although this form of video capture inexplicitly builds on long traditions of documentary films and visual anthropology, precisely how video is captured in user research, and the role of the video camera, has not been the focus of research yet.

In an interaction design project at the University of Southern Denmark, three designers set out to conduct user research on the theme of Passing the Baton – How shift workers pass on information from shift to shift. Being remotely located, they studied hospital nurses, a medicine student on call, and offset printers in each their city in Denmark and Germany, then shared the video material to make sense together online. Although all the material was rich and informative about the work practices studied, it was surprising to observe how different the ‘feel’ of the resulting material was, and this in spite of the fact that the three novice researchers had agreed up front on both the focus of the study and on which methods to use: Video shadowing and situated interviews (Sperschneider and Bagger 2003). One researcher used a very officious camera with intimate...
close ups through-out the fieldstudy, showing details of interactions. Another kept the camera at a discrete distance with good overview shots placing the actions in the environment. The third favoured aesthetically well-composed semi-close images.

Could this be attributed to the fact that the three designers were novice videographers? We borrowed field material from another project, captured by two experienced field researchers, of refrigeration technicians setting up control equipment in supermarket machine rooms in Australia and Denmark (Sitorus and Buur 2007). And we found a similar pattern: Although the researchers had clearly developed more consistent patterns of video shooting in the field, there were differences in style both between the two researchers, and also between different periods of shooting within the same tapes.

There are many choices filmmakers need to make to adequately capture people’s actions and make sure the material will be valuable later on for design work and to viewers, who haven’t been to the location themselves. Subject to how the choices are made about motif, camera angle, framing, camera movement etc. the meaning will change. A close-up view of a person may say something quite different from a wide shot of the same person within the surroundings, for instance. And the way the filmmaker works with the person observed – close up or at a distance, for instance – builds different personal relationships and influences both how the person relates to the camera, and how filmmaker and informant mutually develop the focus of the inquiry. Is it beneficial to use the term ‘style’ to discuss camera work and how the researcher relates to the people studied? And is it possible to name such video styles? This paper describes how we worked with literature and samples of video material to suggest three distinct styles of camera work which researchers may choose to employ in user-centred design.

The assumption we make, is that it is actually possible to consciously choose a particular style of videotaping when in the field, and that such styles are visible when watching the video material afterwards. There has been (and still is, maybe) a debate about whether video studies can (or even must) produce objective data. This paper takes the stance that user research videos always present a constructed image of what we see. And the literature review will show that even early film documentarists were conscious of their role in constructing ‘realities’, framed by filmmakers’ foci and decisions about the recording.

2. HISTORY OF DOCUMENTARY FILM

“Nanook of the north”, directed and produced by Robert Joseph Flaherty in 1922, was one of the first great documentaries, and it was John Grierson, a Scottish filmmaker, who coined the term “documentary” in 1926. Grierson saw the documentary as a tool to promote social cohesion and insight and used filmmaking to address the problem how to manage social conflicts in a democratic industrial society (Aufderheide 2007). His idea of documentary was that real people and real scenes are better models for observing life than actors. Since the Nineties the documentary has seen a renaissance in the broader audience with films like “Fahrenheit 9/11” showing commercial box office success and receiving international awards (Fragerl 2007). But what does a documentary actually show? Aufderheide gives a simple answer: Its a movie about real life. At the same time she underlines that this in itself the dilemma – documentaries are about real life, but they are not real life. Documentaries are portraits of real life, constructed by filmmakers who had to make countless decisions about what story to tell to whom, for what purpose and how (Aufderheide 2007). Real life is in a sense regarded as ‘raw material’, while film techniques and styles influence the meaning of what the material shows the viewers. Or in Grierson’s words: A documentary is “The creative treatment of actuality”. The concept of “style” comes from the Latin word “stilus” and means stylus – writing pen or signature. But the concept has a broader meaning: Modality, form, manner or mode. Style can characterize persons (individual style), groups (group style), cultures (style of culture), epochs (style of epochs) or genres (style of genres). Style is about the modality of an expression, a demonstration or an action related to its content. It is about the mode of how people say something and how they act. Style is applied to linguistic expressions, to works of art, to dramatic and musical performances and increasingly to acts in general (Paech 2006). The concept of style has also been applied in interaction design to distinguish various expressions in user interfaces (Oritsland and Buur 2003). There are various interpretations of the concept of ‘style’. We favour the understanding that a style rather than a static label on a particular expression is a ‘network of norms’, i.e. a dynamic concept defined within a social group (Ylimaula 1992). So, in a sense, it is the discussion about what style may mean in a particular situation and community (of designers) that is important, rather than the one-and-for-all classification.
2.1 STYLES IN DOCUMENTARY FILMMAKING

Once 16-mm film equipment was developed to perfection around 1960, two particular film styles within documentary film emerged: The Uncontrolled Cinema or Direct Cinema in North America and Cinéma Vérité in France. Direct Cinema focused on the directness of the pictures. The main goal was to build an illusion that the viewer is directly present by using new recording technology (hand-held cameras with zoom, directional microphones, light-sensitive material), rather than strive for perfect compositions and artificially well-lit scenes. The filmmaker does not act as a director giving instructions, but as an observer. The action of real persons within real settings is recorded as unobtrusively as possible (Grözinger and Henning 2005). Camera and filmmaker take a back seat as a “fly on the wall” to avoid influencing the scene or person being recorded and in this way to show ‘reality’. The French film producer Louis Malle explained: “What I call cinéma direct is a kind of documentary where you completely improvise, you work with a minimal crew, you don’t try to organize reality, you just try to find where your interest or your curiosity takes you, you try to film what you find interesting or surprising, and later try to make sense of it in the cutting room. It’s a cinema of instinct, of improvisation, a cinema very much of the present. As something happens, you try to catch it. Then you examine what you have and why you shot it that way. That’s my personal definition.” (French 1993).

Taking this understanding into user-centred design would support a view that user research to an extent is directed by the social, political, ethical etc. conditions that the user researcher is submitted to – ‘as something happens, you try to catch it’. In contrast, Cinéma Vérité used the new technology in a provoking form. Jean Rouch, ethnographic filmmaker, anthropologist and pioneer of this style turned the camera into a noticeable subject-matter and consciously intervened with his filmmaking. The confrontation with the camera was used consciously to provoke the interviewee and to get honest answers (Grözinger and Henning 2005). The direct interaction between filmmaker and filmed subject was one of the chief differences between Cinéma Vérité and Direct Cinema.

In a user-centred design context, Cinéma Vérité would translate into the position that there is something to study precisely because the user researcher intervenes and in a sense asks questions with the video camera. In their own ways both Cinéma Vérité and Direct Cinema strove for authenticity in the films. Both are characterized by the attempt to give the portrayed people their own voice and to document daily routines of people and their situations rather than to interpret social problems. And Cinéma Vérité as well as Direct Cinema used portable and less obtrusive equipment, engaged real people as opposed to trained actors, and abstained from voice-over – a style true to the documentary film of the Grierson tradition.

2.2 ETHNOGRAPHIC FILM AS DOCUMENTARY

Moving on from 16 mm equipment to video technology, Winston describes the advantage of the medium video in the context of Direct Cinema: “Video aids the essentially intrusive nature of direct cinema in two main ways. First, tape, compared with film, is so cheap that the limitation on shooting becomes the time available in post-production to process footage rather than the cost of such footage in terms of raw stock and negative processing. The flies can stay on the wall far longer than they could when they had film camera. Second, they can also see in the dark more easily.” (Winston 1995).

The beginning of the ethnographic film is closely connected with the beginning of the cinematography itself. Social scientists, such as the early anthropologists Margaret Mead and Gregory Bateson, used film to record data, for example in their 1936 research on Bali with focus on character building. The Goettingen Institute for Scientific Films1 in Germany has been offering ethnographic videos for years. The institute was founded in 1956 and the original task was to produce, document and distribute media for purposes of research and teaching in the public interest. Considerable archives of scientific material exist internationally today. Nevertheless, ethnographic film – and visual anthropology as the corresponding field of research – has struggled with fundamental questions similar to the ones raised by the Direct Cinema vs. Cinéma Vérité dichotomy: To what extent are situations influenced or created by the presence of a filmmaker? What role does the camera play in building rapport with the people studied?

For user-centred designers this poses a challenge not only of making decisions on which camera technique to use, but also in how to position oneself in the social relationship with users.

1 Today IWF Wissen und Medien GmbH, www.iwf.de/iwf/default_en.htm
2.3 DOCUMENTARY FILM IN DESIGN

In earlier work Buur, Binder and Brandt argued that there is an opportunity to regard video as ‘rich design material’ rather than hard data in a design process. In this understanding, the camera isn’t an objective observer of life as it unfolds, but a tool for co-authoring a record with the users on site already in the recording phase (Buur, Binder and Brandt 2000). They claim – much in line with Cinéma Vérité – that the presence of the camera itself helps to clarify the direction of the inquiry.

Raijmakers developed three documentary case studies in 2004 to challenge documentary styles and objectivity in user research. He applied the approaches compilation film (as used for instance by Michael Moore in “Fahrenheit 9/11”), observation and intervention (a method Jean Rouch used in his research) and performance film (where people choose themselves as motif and create a kind of video-diary) (Raijmakers, Gaver and Bishay 2006). They discussed the use of the film approaches in the design process during a workshop. Viewers recognized the value of the films in capturing personal stories and were eager to get access to more of these kinds of details. Raijmakers reports on the expressed need to know how these very normal events they recorded really play out in the user’s daily life. The films stimulated workshop participants to bring up their own stories and to develop their own perspectives (Raijmakers, Gaver and Bishay 2006).

In the following we will report on our research into video styles based on two sets of user research material, where several researchers videotaped comparable events: Two experienced researchers on refrigeration technicians and three novices on hand-over events in the context of shift work.

3. VIDEO STYLES IN USER RESEARCH

To investigate, if video styles are visible in field study video, we invited a group of experienced user researchers to view and characterize the video material. The participants were asked to focus on three aspects while watching and analysing sixteen selected video segments – camera settings, the interaction between filmmaker and user, and the context feeling that the clips provide. These characterizations helped to find clusters of video clips.

As a concrete tool we used the “video wall” technique (Sitorus, Donovan and Jensen 2007). This is a computer application that allows the simultaneous viewing of multiple video loops running on the same screen. Like post-its, the video clips can be moved across the screen and labeled. The “video wall” technique takes inspiration from Mackay’s Video Mosaic (Mackay and Pagani 1994) and the Video Card Game (Buur and Søndergaard 2000). It was original used to understand and discuss quality of actions by comparing interaction movements (Buur, Jensen and Djajadiningrat 2004). The technique allowed the workshop participants to group and regroup the clips and to create clusters that emphasize differences and similarities (Figure 1).

![Figure 1. Video wall workshop. The participants compare and cluster the video clips.](image)

The invited participants worked in different ways: While one group of participants worked to find metaphors in order to name and map styles of video studies, another group analysed the roles of camera and audience. Figure 2 shows this arrangement of video clips. The workshop participants described each of the clusters by the specific mode of recording people. The text fields below the clip images describe how the researchers operated with the camera; the text fields above what the viewers of the film material, in this case the workshop participants, can gather from it.
Based on various arrangements and on the comments of the workshop participants we worked further to define three camera styles: The Surveying Camera, The Composing Camera, and The Engaging Camera. As a first assumption, one may simply distinguish the three styles by how distant the filmmaker places her/himself from the action: Far, semi-close, or close. Or, one may distinguish if the filmmaker seems to orient towards the setting, the person, or the activity at hand. But the more we worked, the clearer it became that the styles help to pinpoint a complex relationship between the purpose of the shooting, the relation of the filmmaker to the person(s) in front of the camera, and the camera technique employed.

3.1 THE SURVEYING CAMERA

Like a nosy stranger, the camera scans the space and provides an overview of environment and people in it. It may follow people, but only at a respectful distance. One of the novice researchers recorded the subject of interest, an offset printer doing his daily work, at a respectful distance. In this way the camera scans the room and provides the spectator with a feeling for the surrounding and the context. It is looking at the space and acting like a nosy guest, interested in the environment the printer is moving in. There is no direct interaction, no communication visible between filmmaker and informant while recording, the filmmaker a respectful distance in an attempt not to interrupt the normal workflow. The camera follows the printer unobtrusively and observes him in his daily routine (Figure 3).

In terms of the Direct Cinema style, camera and filmmaker are operating as a “fly on the wall” in order to avoid influencing the scene and in this way to provide a realistic documentation.
3.2 THE COMPOSING CAMERA

The camera paints considerate, well-composed pictures of how people move and act in context. It also is a talented listener, but does not mix interviews with action.

A second mode of using the camera and arranging a video study that became visible while comparing the material is to paint well-composed, aesthetically pleasing pictures. The camera is watching closely how people move and how they act. Experienced researchers as well as novices used this technique to provide a context feeling on the one hand and to show consideration towards people by keeping their distance on the other hand. At the same time the composing camera can be a communicative listener, but it concentrates on asking and listening, and doesn’t interfere by mixing interviews with action, such as pointing and moving with the operator. Camera functions, such as zooming in and out, are used in order to gather as much information as possible and to offer the audience a variety of pictures and angles (Figure 4).

![Image 4](image4.jpg)

Figure 4. The Composing Camera.

3.3 THE ENGAGING CAMERA

This camera takes on a role of its own. Like an eager partner it moves close to understand, to become part of the atmosphere. It likes to see other people’s perspectives and join the conversations. People even address it and invite it to come closer.

While watching and analysing the video material we observed that one of the experienced researchers has developed a method of using one hand to point and gesture, while holding the camera with the other. In this way the camera seems to become a person by itself, almost like a conjoined twin to the person being shadowed. It is interested in hearing the stories, getting feedbacks and trying to understand. It is right where the action is and the person being recorded draws the camera into his doing. There is a direct interaction between video camera and informant that makes it possible to follow where he/she looks and to see his/her perspective. By operating in that way the camera is recording the hidden details and gathering detailed information (Figure 5).

This style is similar to the provoking form of Cinéma Vérité using the camera to get honest answers and to give a realistic picture by a direct interaction between filmmaker and filmed subject.

![Image 5](image5.jpg)

Figure 5. The Engaging Camera.

The three described video style-concepts have in common that they aim for authenticity. They attempt to give the portrayed people their own voices and to document daily routines, the people themselves and their situations as in Direct Cinema and Cinéma Vérité. However, each style has its own characteristics, they suggest different ways of engaging in the field, and different ways of thinking about the outcome. Also, some settings and projects may allow one style, but not another.

3.4 ARE VIDEO STYLES RECOGNISABLE?

We extended our research to see how spectators react to video material recorded in each of the styles without knowing about them in detail. In an Interaction Analysis Lab session with graduate design students we asked the participants to watch and compare three videos on people working in shifts, each edited corresponding to one of the styles. When asked to verbalise their impressions we noted quotes that were in fair agreement with the style concepts, but that also helped expand the notions.

For the Surveying Camera material they said: “The camera is keeping a larger distance – it is being in the space.” – “The camera is recording the usual workflow, there is no interruption.” – “Like a detective the filmmaker follows the people while they move.” The Composing Camera sections were described as: “There is no interruption of work.” – “The camera is looking at the space.” – “Face-to-face interaction between camera and informant happens, the filmmaker is listening.”
In comparison the Engaging Camera work was described as: “The distance between camera and technician being observed is short, in this way details are shown.” – “The cameraman is showing things while explaining and talking with the technician. There is an obvious interaction between both.”

Even from this short evaluation we find indications that the concept of video styles is sufficiently clear to enrich the discussion of how to organize user research.

4. CONCLUSION

It is unquestioned that there are different ways of working with the camera in user research, of interacting with users while recording, and of arranging video studies. A review of documentary and ethnographic film history shows that user-centred designers are struggling with issues that have been debated in other forums years ago.

Approaches like Direct Cinema and Cinéma Vérité from the 60s indicate that a purely observational approach may not be most valuable for user research and that video material can be used in a variety of ways to explore, understand and present the everyday.

Our research has shown that these different modes of working with the video camera can be described metaphorically and articulated as video styles. We claim that the knowledge about video styles can raise an awareness of how to act in the field and to utilize the different options consciously. A situation recorded based on a well-defined set of video styles is likely to result in more valuable field material than recordings made with all decisions of video technique made at the spur of the moment.

But how does this matter to design? Firstly, in our mind the gathering of ethnographic video material is an integrate part of the design process itself, rather than a phase that comes before design. Thus, the video recording becomes an engaging artifact in itself. Video styles can help establish a discourse within the user-centred design community of the role of user research in the design process.

Secondly, a video style in particular describes a specific mode of gathering information with the camera. Our experiments help understand how well the different video styles fit the objective of a user-centred design project. Thirdly, a conscious choice of video styles is likely to contribute to better quality of ethnographic material for the editing and design activities. Our experience tells us that inexperienced researchers rather quickly learn the techniques of video shadowing and video interviewing, but may be uncertain about how to bring the camera into a good relationship with the people studied. The video styles help clarify the connections between technique and human relations.

Which camera style then, should a novice user researcher choose?

This will be highly context dependent, but often the surveying camera that follows people at a respectful distance – “fly on the wall” – does not align with the close user collaboration opted for in user-centred design (or participatory design in particular). The combination of two styles – the composing camera that shows how people move and act and the engaging camera that moves close and invites direct interaction – seems to provide better field material for good user-centred design.

Methods-wise our research is an initial stab at using the concept of ‘style’ in user research. The validity of our findings is limited by the fact that it is a post-hoc study of selected video recordings. We have used graduate design students to show that video styles are indeed visible, but we yet need to prove that the concept of video styles actually makes a difference when conducting user research; that video styles can indeed be consciously chosen when in the field. But the documentary film history makes us confident that this is the case.

Could there be more than three video styles in user research? It may be possible to define styles differently, but in our use of the term style, it is the discussion around the shared understanding of what styles can do, rather than the consistent definition of style labels that is of importance.

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6. REFERENCES


