6

Presenting research results

Figure 6.1 Jero Tapakan (foreground, left) and Linda Connor (foreground, right) watch a film on cremation together with other residents of Jero's hamlet. Bali, 1979. Photographer: Patsy Asch

6.1 Audiences

Perhaps the most important issue to consider when presenting research results – of any kind, not just the results of visual research – is the audience. For much of the time academics normally only have to consider two audiences in their writing and research presentations – their students and their peers. While the nature and context of the presentation may or should cause changes in how the material is presented (writing for a learned journal versus an informal 'work in progress' seminar, for example), the characteristics of the two audiences are generally well-known and presentations to them follow relatively clear and well-established conventions. In other words, while some

academics are notoriously poor communicators, in principle they should be able to master the conventions to make clear and effective presentations of their research results to their chosen audiences. Some academics and other social researchers similarly need to learn to master the conventions to present results to other audiences – public policy makers, for example – while part of a student's training should help them to communicate effectively.[1]

The presentation of visual materials introduces some additional complexities. First, there is the 'problem of images' generally, and their poor appreciation as valid research material in some parts of some academic disciplines (MacDougall 1997: 276). Secondly, the multivocality of visual images means they can address different audiences in quite different ways, creating a 'problem of audiences'. In Chapter 4.3.1 I mentioned the reader-response or reception theory literature that developed first in literary studies and was later exported to media studies and cultural studies. When these approaches finally reached anthropology the primary focus of attention was ethnographic film and its reception (for example, Crawford and Hafsteinsson 1996). Much of this literature highlights the fact that audiences, particularly student audiences, do not transparently and naturally read ethnographic films, but bring to them previously formed social and cultural understandings. David MacDougall was probably the first to bring anthropologists' attention to the fact that the 'meaning' of an ethnographic film was not inherent within either the film itself or in the intentions of its author(s), but was a negotiable property that lies within a conceptual triangle formed by the (film) subject, the filmmaker and the audience (MacDougall 1978: 422).

Following on from MacDougall's and others' insights and allying it to a body of reader-response theory, Wilton Martinez, a doctoral student at the University of Southern California, constructed a meticulously-detailed research project that evaluated undergraduate student response to a select number of ethnographic films (Martinez 1990, 1992). The films were shown to the students as part of an introductory anthropology course and Martinez observed the students watching, issued questionnaires, analysed weekly film reports and essay assignments, and even collected narratives of their dreams (Martinez 1990: 38). His findings were disturbing for those involved with ethnographic film. He concludes that certain films could generate an 'aberrant' response, that far from coming to understand or even sympathize with the film's generally exotic subjects (exotic to the students, that is) the students tended to use the subjects' actions and appearance to confirm inaccurate stereotypes they held of 'primitive' and 'tribal' peoples. Some films, specifically intended to be used in student education, were also found to

be 'dry' and 'boring' (one example is Asch and Chagnon's *The Ax Fight* [1975] discussed in Section 6.5.1 below). Even where their attention was engaged by a film, typically because it contained a strong central character and clear narrative drive, such as Nairn's 1974 television film *The Kawelka: Ongka's Big Moka*, their enjoyment could be patronizing and confirm stereotypes of the simple-minded 'natives' (Martinez 1990: 43–4).

Taking a further cue from Umberto Eco and notions of 'open' and 'closed' texts, Martinez also concludes that the more didactic a film is, the more clearly it attempts to establish a clear authorial voice through heavy narration, diagrams and so forth, the more likely a film is to be the subject of an aberrant reading. In contrast, semiotically 'open' films, ones that allow or indeed enforce on the viewer a greater interpretative effort, met with more elaborated and reflexive responses from the students (Martinez 1992: 135–6). In such 'open' films, the space in MacDougall's triangle between subject, author and reader is self-consciously presented as an interpretative space.

Martinez's solution to the problem of aberrant readings is thus two-fold. First, certain kinds of films are more likely to promote more critical and self-aware responses from viewers;[2] secondly, those presenting films to students should help students to develop visual literacy skills, to approach ethnographic films not simply as transparently-represented ethnographic knowledge, but as a particular genre of filmmaking that has a history, a changing set of representational conventions, and a changing set of differentially-placed authors (Martinez 1990: 46; 1992: 152–6). In other words and in my terms, to alert viewers to the external narratives surrounding the films, rather than assuming an unproblematic and automatic transmission of the internal narrative or content.

While Martinez is one of the few to have examined the pedagogic value of ethnographic film empirically (indeed, as far as I know he is the only one to have done so), he is not alone in seeking criteria by which the communicative power of visual materials can be assessed. To conclude this section I want briefly to refer to two such assessment models which, while very different in their underlying aims and objectives, have a superficial similarity. Karl Heider's 1976 book on ethnographic film, while now quite elderly, was for a long time influential simply because no other comparative text existed. Like many subsequent authors, Heider deals at length with the problem of defining 'ethnographic film' (1976: 3 ff.). He settles finally on a multi-faceted property of 'ethnographic-ness' – the degree to which a film successfully conveys an ethnographic understanding of the people and activities represented. This he subsequently formalizes into what he calls an 'attribute dimension grid' – a graphic rendering by which fourteen properties or facets can be charted

(1976: 97–117). These range from technical and production aspects of the finished film itself (basic technical competence, goodness of fit between narration and image), to its relation with external written sources such as study guides and related ethnography. A film which scores highly on all or many of the fourteen analogue scales is overall a 'more' ethnographic film than one which gains low scores for many of the attributes (see Figure 6.2). Heider is well aware of the dangers of over-specifying in this way and indeed the whole model is open to criticism. Nonetheless, his approach has the virtue of defining clearly (if subjectively) what it is he thinks is important about a visual ethnographic presentation, and then using that model to assess specific examples. In this he rather surprisingly shares ground with a very different approach towards evaluating

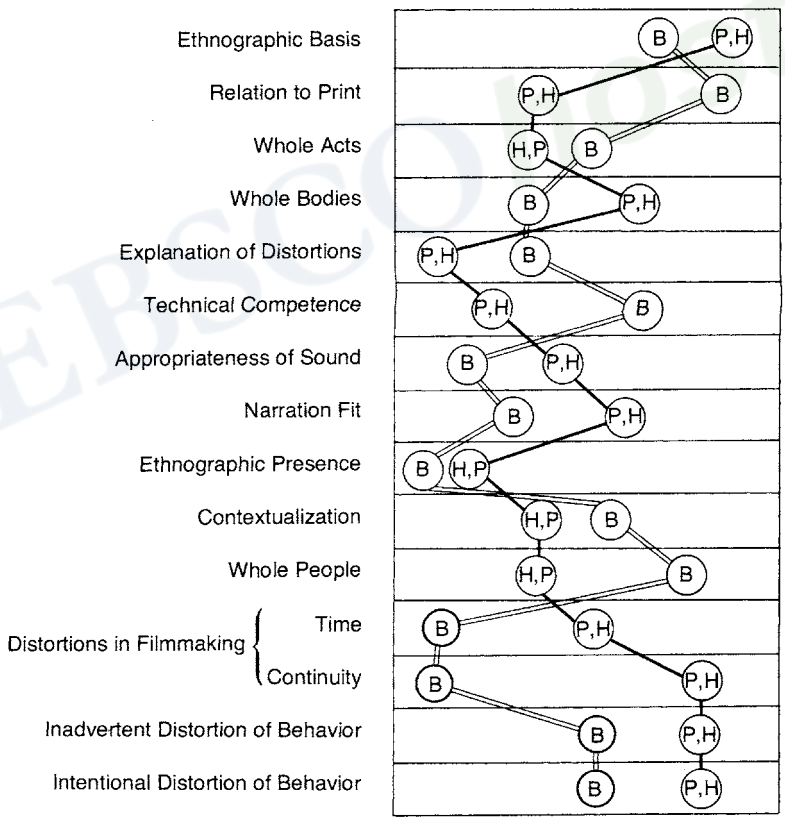

Figure 6.2 Karl Heider's attribute dimension grid, used to plot attributes of three ethnographic films (identified as 'B', 'H' and 'P') (from Heider 1976: 115, Diagram 3)

films. The ChildCare Action Project (CAP) is an American Christian organization that has a declared objective to 'scientifically prove a symbiosis between the entertainment media preferences of youth and the relationship of youth with fair authority' (CAP Website: index.htm). In other words, to demonstrate that (morally) 'unacceptable material' has an impact on the observer (CAP Website: method.htm).

So far, CAP has developed a methodology to evaluate the moral content of mainstream feature films according to seven criteria ('wanton violence/crime', 'impunity/hate', 'sex/homosexuality', and so on). Each criterion is assigned a notional 100 points, which are then deducted, one to three at a time, for each instance of the named behaviour in the film, and represented diagrammatically by a series of seven thermometers (see Figure 6.3). Like Heider, the CAP group has a clear starting point – a vision of morality appropriate to American youth derived from a particular Christian perspective – which is used to create a model by which specific visual narratives can be assessed.

Most qualitative social researchers would be unhappy with the use of formalist assessment criteria such as these, but like all formal models they can serve to clarify an otherwise loose and formless discussion. Martinez's work, and the two models above, all seek to assess the textual encounter between reader-viewer, author and subject, that is, the three points of MacDougall's triangle; in doing so such approaches can be

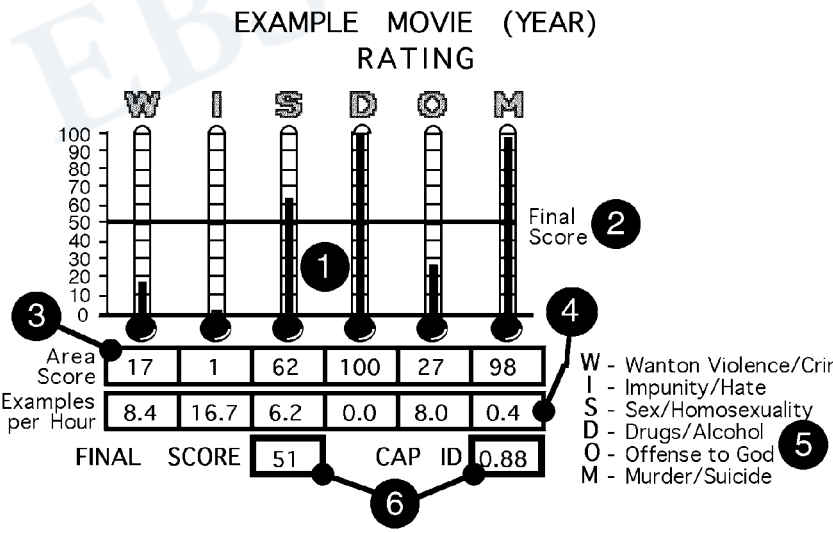

Figure 6.3 ChildCare Action Project (CAP) Graphic Data Display (for *Armageddon*, 1988). Image creator: Thomas Carder

useful in helping a social researcher consider why she is using visual media, what she hopes to achieve by doing so, and whether in fact she has achieved it.

6.2 Presenting photographs

As mentioned above, the multivocality of photographs renders their use in social research problematic. For this reason, away from highly self-conscious uses of photographs such as the visual essay form discussed below (Section 6.2.1), there is a tendency in some academic publications to constrain the multiple voices, allowing only one weakly to remain. The one allowed to speak is normally the voice of 'mere illustration', a largely redundant visual representation of something already described in the text. A variant on this is what in film would be known as an establishing shot – a general overview of the location or the people, not intended to be illustrative of anything in particular except a confirmation of presence (cf. Marcus and Fischer 1986: 55). This appeal to an empiricist truth-claim ('I was there, I heard and saw these things, you can trust my account') has a relatively long genealogy in the descriptive reporting of social research. The silencing of the photographic multivocality is usually accomplished through text, particularly the constraining caption which allows a channel for only one voice to emerge clearly. But over time or in other contexts, the constraints may become looser, as contextual shifts destabilize the original narrative that framed the photograph. Lombroso's mugshots of criminal types (1887; see Chapter 5.6) now look like ordinary men or women: whatever their criminal acts, their faces reveal nothing of them.[3] In a similar vein one reviewer of a 1974 ethnographic film on an Andean peasant group (Harris 1975 on Pasini 1974) pointed out that the number of imported objects present in the footage, plus of course the depth of contact since Columbus, belied the film's narrative insistence on the group's isolation and remoteness (cited in Loizos 1980: 580–1). A quarter of a century later, with an intellectual stress in the social sciences on transnationalism, globalism and cultural hybridity, the sight of 'imported' artefacts would not be taken as mournful tokens of a lost innocence, but celebrated as cultural appropriations.

Photographs, when used in an academic publication, term paper, dissertation or seminar presentation should not, therefore, be taken lightly, included as an afterthought, or thought to be self-evident – communicating their internal narrative transparently and naturally. Conventionally in academic publications, photographs are tied to the main body

of text in two ways – through captions and through in-text references. Thinking carefully about the image and the text, and the work that each is doing individually and in tandem to advance the argument, should encourage the author to think about the best way – if at all – to use captions and in-text references. In this book many of the photographs are used as visual quotations from the work of others and I decided that both captions and in-text references were appropriate, but elsewhere I have tried to experiment with other forms. In a monograph on Jain social organization in India and England (Banks 1992), I used no in-text references at all for the 20 photographs included and I also separated the captions from the photographs: the photographs were simply numbered and a separate page of captions was keyed to the numbers. The captions varied from the simply descriptive ('street scene') to brief personal memories and were intended to allow the images some autonomy, to work with the text in presenting a more experiential view of Jain social life. The photographs were placed in the text at what I considered to be a suitable juncture, rather than gathered together as a free standing section of 'Plates', but there was intended to be a narrative relationship between them – for example, the first photograph is of a group of men negotiating, opening discussions, while the last is of a ceremony concluding, wrapping up.[4]

6.2.1 The photographic essay

While a handful of images in a published text must inevitably play something of a supporting role to the main argument, some social researchers have experimented with making the images dominant in conveying the argument or analysis, reducing the written text to an introductory statement and a number of captions. Drawing in part on film as a model, the photographic essay is normally driven by a strong narrative which links one image to the next in sequence, either in a more or less strict chronological fashion or through a more abstract association of ideas. The narrative derives from but transcends the internal narrative of the individual images.

Photographic essays originated as a form of journalism, and though perhaps less common today they can still be found occasionally in the Sunday supplements; thought to be a more direct way of addressing a readership than a dry textual account, there is a particular bias towards matters of social policy and social concern. From the 1960s the art critic/social critic John Berger and photographer Jean Mohr collaborated on a series of projects that effectively transcended the boundaries between serious journalism, social criticism and sociology (1967 – on the British

middle classes; 1975 – on migrants in Europe; 1982 – on European peasants), thus perhaps rendering the form more acceptable to an academic readership. For a period of around five years (1985–1990) the journal *Critique of Anthropology* featured a photographic essay in each issue, often on a topic of social concern or allied to an explicitly political stance within the discipline.

Critique was the only non-specialist journal in the social sciences to publish photo essays, as far as I am aware but, by the late 1980s, journals such as *Visual Anthropology* and *Visual Sociology* were regularly printing substantial pieces of visual analysis and narrative. In the debut issue of *Visual Anthropology* Douglas Harper, the author of a number of primarily visual sociological texts (for example Harper 1982, 1987b), outlines four typologies or categories by which photographs can be used in sociological enterprises, two of which are presentational and rest on a working relationship between images in a sequence: the phenomenological mode and the narrative mode (Harper 1987a).[5] In the phenomenological mode, an attempt is made to present the subjective experience of some social phenomenon from both researcher's and insiders' perspectives. Harper does not devote much discussion to this mode, though it would seem evident that the parallels with ethnographic film (which he associates with his final, narrative mode) are strong, and that in part the functioning of the mode must depend upon sequences of images organized by some guiding principle.

The narrative mode, for which he identifies a large number of photographic essays and ethnographic films, is more concerned with telling a story, a story in which the researcher may have participated, but which nonetheless is primarily the story of the research subjects. Another visual sociologist, John Grady, is well aware that some (non-visual) sociologists will immediately counter that the job of empirical sociology is not to tell stories but, for example, to employ survey and other methods to demonstrate that social differences and patterns of organization are not merely a matter of chance; once the research work has been conducted – data collected and analysed – it needs to be written up in the most straightforward fashion, not presented photographically (Grady 1991). Grady's counter argument rests on two premises: first, that objective quantitative sociological approaches do not completely master all they survey (the problem of residual indeterminacy – the figures that don't fit after all the rest have been neatly categorized) and, secondly, that all textual accounts of research are inevitably narrativized anyway (1991: 29, 34). Add in an argument in favour of qualitative ethnographic approaches towards at least some social research topics, and there seems little reason why a narrativized visual essay (in photographic or filmic form) should not be

as valid as a purely written account. Certainly such visual essays have the potential to be more appealing to students and to a wider, lay audience.[6]

Good academic writing is a skill – a craft skill in fact – that can be developed and honed, almost independently of the ideas conveyed. The same is true of good visual presentation. For filmmakers, the process of editing and the skills necessary are a familiar part of their work, and audiences appreciate them when displayed well. The sequencing of still photographs into a satisfying narrative demands perhaps fewer technical skills, but a similar depth of judgement and imagination, allied for the social researcher with a clearly developed analytical perspective. A greater degree of presentational control is also required of the researcher – publishers may not understand what is required or may be unable to format image size, text placement and so on in the desired way. This is why researcher-authored films (and multimedia products – see Section 6.5 below) can hold truer to authorial intention and why, on occasion, a live 'performance' of a photographic narrative can be superior to a published version.

For example, the architect and art-historian Sunil Prasad has used a sequence of photographs and spoken text to present two contrasting narratives or journeys: one through the houses and narrow streets of old Delhi, the other through a modern suburb of the same city. Through the images, and in a way that language alone could not accomplish, Prasad was able to demonstrate subtle gradations in the social use of space in the old city. Platforms, steps, stepped doorways, canopies and other features allow for an unfolding and retracting of domestic space for example. The published version of this presentation (Prasad 1998) includes fewer images and obviously cannot key them to specific moments in the text to achieve a simultaneity of word and image. While still communicating something of the original argument, a dynamism and sense of discovery has been lost (at least in my opinion).

6.3 Presenting ethnographic and other films

The French anthropologist and celebrated ethnographic filmmaker Jean Rouch once said that he made films first of all for himself, secondly for the people who participated in the films, and finally for 'the greatest number of people, for everyone' (Eaton 1979: 44–6). The answer is not as glib, or as touch-all-bases as it might seem. Many of Rouch's West African films (for example, *Moi, un Noir* 1957, *Jaguar* 1967) contain fictionalized sequences, improvised by the characters, and in due course

Rouch formed a film production company with some of his regular film participants (MacDougall 1998a: 57, n. 16). In *Chronique d'un Été* (Rouch and Morin 1960), filmed on the streets of Paris, the film participants become their own audience when they settle down to watch the penultimate cut of the film in a screening room. Rouch is fully aware of the space formed between the author, the reader and the (film) text, and exploits it to allow the film subjects to adopt a variety of positions (including authorship and readership), which are in turn communicated to what one might call the secondary audience.

While some ethnographic and other documentary films of sociological interest are made with a specific audience in mind, however, many are not. Although many amateur or independent filmmakers express a hope that their films may one day be screened on television, many also tend to have a rather vague conception of the audience for their films, claiming in treatments and the like that there will be something for everyone in what they plan to make. While this is probably true up to a point, a loose scatter-gun approach to the audience runs the risk of making a film that is ultimately satisfying to no one. Unfortunately, targeting a film too specifically to a particular audience runs the risk of shortening a film's screening life. The Asch and Chagnon films on the Yanomamö, for example, were tailored specifically to be used in teaching anthropology to North American college students of the day. Whatever their reception then, a later generation found them 'boring and repetitious' and 'didn't understand what was happening' (Martinez 1990: 41). I remember being shown Robert Flaherty's 1922 *Nanook of the North* as a student in the 1970s, not as an example of early documentary film style, or even to raise issues of other-cultural representation, but as an apparently unmediated window into native Alaskan culture. In that context I was not Flaherty's intended audience (the film was given a commercial movie house release originally) and it is no surprise that I found it inaccessible.

On the other hand, films made with a specific television audience in mind, while they can be well-received and enjoyed by students (Martinez 1990: 45), can also be castigated by professional researchers for their superficiality and oversimplification of complex social processes (Loizos 1980: 588–9; see also Houtman 1988). At the opposite extreme, research footage created in the field by a researcher for her own consumption, while valuable for her own analysis, can be extremely dull or uninformative for most general viewers, whether academics or not (see Chapter 5.3).[7]

Once completed, most independent documentary productions – if properly advertised and distributed (see Barbash and Taylor 1997: Chapter 9) – are destined for use in the classroom but can also be self-promoted at

the large number of documentary and ethnographic film festivals that take place around the world. Both the classroom and the film festival give a contextual shape to the external narrative that surrounds these films, leading to questions of what additional information should also be injected into that narrative.

6.3.1 *Study guides and other contextualization*

Some contemporary visual artists are unable or unwilling to elaborate on the 'meaning' of an art work when questioned by critics or other viewers, on the grounds that the art work needs no additional interpretation: it stands for itself. Some documentary filmmakers adopt a similar line – what is the point of spending months if not years carefully shooting and thoughtfully editing a film if it needs to be supported by something external to itself?[8]

Yet some writers on ethnographic film in particular argue that study guides are a necessity (for example, Asch 1992: 203; Heider 1976: 127 and passim). The most commonly cited reason is that for many viewers the sheer unfamiliarity with non-Euro-American social forms means that a great deal of basic explanation and description is necessary to appreciate the significance of what is depicted in the film, and that this is better kept out of the film itself to prevent it turning into an illustrated lecture. In some ways, this is back to Geertz's eye-twitch versus wink distinction (Chapter 5.3). While a British viewer of a British television docu-soap may be presumed to utilize a high degree of passive cultural familiarity to make sense of what she is seeing (though in fact such docu-soaps often contain a great deal of additional voice-over narration), the same viewer – this time as a student in a classroom – is unlikely to know a great deal about non-market spheres of exchange in the New Guinea highlands and will need help to understand that, for example, a bundle of currency notes given as part of an agonistic *moka* exchange is not 'payment' for some commodity (see Nairn 1974; also Wason 1990). For a television film, issuing a study guide to several million viewers is not a viable option, but for a film intended for classroom use it might be.[9]

Others are not wholly convinced. Ruby argues, for example, that to insist as Heider does upon supporting written materials devalues the film itself, treating it as little more than an audio-visual aid for teaching purposes (Ruby 2000: 3). In doing so, the power of film to communicate in a unique fashion is devalued, rendered subordinate to the primacy of the written text. Ruby and others have proposed a variety of filmic strategies which seek to insert analysis into the film text itself. In Ruby's case, he advocates what he calls '*trompe l'oeil*' realism: a strategy that

exploits documentary film's potential to present an apparently realist view of the world and then to subvert it by reflexively drawing attention to the film's own creation. In this way audiences are forced to confront the (inherently analytical) construction of knowledge that the internal narrative conveys (Ruby 2000: Chapters 6 and 10). Coming from very different analytical perspectives, Peter Biella (1988) and Don Rundstrom (1988) both claim to have inserted anthropological analysis directly into the internal narrative of the film in quite formalist ways, through consciously adopting particular camera angles and editing styles. Rundstrom et al.'s film *The Path* (1971), for example, is a highly constructed film about a Japanese tea ceremony which uses colour, camera angle and frame to convey an aesthetic sensibility rather than a realist representation.

Yet another approach, one adopted by a variety of ethnographic filmmakers working broadly within an observational film paradigm, or as MacDougall more accurately calls it 'participatory cinema' (MacDougall 1995), is to encourage the film subjects to speak for themselves, to convey – or be prompted to convey – a broad spread of background information necessary as context for the film's main narrative. Typically this involves asking a film participant to 'show us around' – to describe the immediate physical environment. In a sequence at the start of *To Live With Herds* (1972) David MacDougall asks the main character to 'describe the extent of Jie territory' which he does by pointing out features on the horizon and naming the various other pastoralist groups who live in this arid area of Uganda; similarly in the MacDougalls' *Lorang's Way* (1977), Lorang (a Kenyan Turkana elder) shows the filmmakers around his compound, explaining features as he goes along. The same technique is adopted by John Baily when he asks Amir, a refugee Afghani musician in Pakistan to show him around the single room house he shares with his wife, parents-in-law and children (in *Amir*, 1985). In my own case, I took the principal character of *Raju and His Friends* (1988b) up on to a rooftop and asked him to describe the buildings around us. In all these cases, what is elicited is not merely a catalogue of physical features, but a narrative that uses those buildings and objects as containers for biographical and social knowledge. Amir's itemization of his possessions allows him to reflect on his refugee experience; Raju's geography of the town's religious buildings provides the basis for a discussion of intercommunal relations. Such approaches, while valuable and much used, do not completely obviate the need for additional contextualization, external to the film. For one thing, the social knowledge that forms the bedrock of people's lives, the most taken-for-granted aspects of existence, are by definition the very things that people rarely if ever discuss, even when prompted (see also Holy 1984).

In the end, the argument for and against accompanying study guides is a false one, for several reasons. First, whether a specially prepared study guide exists or not, all documentary films exist in an intertextual relationship with other films and with written literature. It is difficult to conceive of a group of people or a subject of sociological interest that has not received attention from other social researchers. If a film viewer wishes to, or is instructed to, she can find an academic literature that does not necessarily 'support' the film, but which can provide an alternative representation. Film and written text can thus be brought into an analytically constructive dialogue, rather than one passively supporting the other.[10]

Following on from this, films that are produced by social researchers in the course of their work are inevitably only part of the presentation of their research findings, albeit the major part in some instances. The social researcher will also produce books, papers, dissertations or other written materials which will be directly linked to the film's narrative. Films made by professional filmmakers in the course of their work may undoubtedly contain material of potential sociological interest but that is probably their limit. Social researchers who make films but do no other research on the topic and present no other research findings are behaving as filmmakers, not as social researchers, and their films should be judged in that light. Films presented as the products of social research that are unrelated to any written materials indicate a weakness or aberration in the social research process itself, not a weakness in the medium of film.

A final bypassing of the film and study guide issue, one that addresses the physical separation between the two (which has the consequence that one may be easily available and the other not) is to combine film, study guide, and a whole variety of other textual, audio and visual materials into a single multimedia package. This is the subject of Section 6.4 below. First, however, the issue of image digitization needs to be addressed.

6.4 Databases and digital images

One advantage of image digitization is that it facilitates quick and easy access to copies of visual materials, allowing a researcher to share her results with other researchers and – in some cases – with her research subjects. A researcher studying Javanese classical dance can digitize sequences of her video research footage and email them to an expert on Labanotation (a form of dance and movement notation) on the other side of the world to check that her transcription of movements is correct. A researcher using still photography to explore children's playground

interaction in schools across the European Union can digitize the photographs and press a Photo-CD for each school, allowing the children to see and comment not only on themselves, but on their European counterparts. Such uses of digital media are strategic and pragmatic, not intended to deny the materiality of the originals (Chapter 3), nor pretending that the circulation of images in this way transcends their social embeddedness (Chapter 2). It is up to the researcher to choose whether or not to incorporate these factors self-reflexively in her work (she must also consider the ethical and copyright issues involved where appropriate – see Chapter 5.6 and Section 6.5 below).

Beyond these specific and limited forms of presentation, a researcher may decide to make a wide range of her visual materials available. To facilitate easy access a catalogue is necessary, and preferably some means by which a subset of material can be isolated for further study. This is most effectively accomplished using a computerized database, regardless of whether the visual materials exist in digital form or not; if they are, they can be incorporated into the catalogue itself, if not the catalogue can reference an external source.

I have constructed two such catalogues in recent years, and consulted many more: the following section rests largely on my experiences. The more recent catalogue is a database containing digitized copies of my fieldwork and other photographs. This is intended as a private database for my own use, to sort and select images for publication or for teaching. A simple off-the-shelf database package stores low-resolution scans of the photographs and associated textual information; the high resolution scans – suitable for sending to publishers – are stored on CD with back-up archive copies kept on a secure server. As I am the only intended user and the database is relatively small I can tailor the text entry fields in the way I find most convenient and implement as many search routines as I wish. The earlier catalogue, discussed in more detail below (Section 6.4.2), does not contain digital copies of the material but instead references external sources.

6.4.1 Can computers see?

With the advent of relatively cheap and powerful personal computing, more and more scholars in the social sciences are turning to computers to store and present visual research results. Even if, as is still common, visual materials are originated on non-digital media – 16mm movie film, analogue videotape, 35mm still photographic film – all can be transferred by more or less complex processes to a digital format. Anything that can be done to analogue media to prepare it for presentation can equally well

be accomplished using digital media, often more easily and cheaply. Still photographs can be cropped or have the contrast enhanced or the exposure corrected, to bring out important detail. Digital video can be edited and subtitled, maps and diagrams can be inserted, and variant versions can be produced for different target audiences. However, the ease with which such mechanical tasks can be accomplished should not hide the fact that all the conceptual issues surrounding image use in the social sciences remain. Indeed, new conceptual problems may be introduced (see Section 6.5 below). Some mechanical tasks associated with analogue media also remain with digital media, chief among them the task of indexing and retrieving images.

While computers provide easy and convenient storage for digitized photographs, movies and other images they do not really understand them. Of course, computers do not understand text either, but language translated into digital text exhibits regularities and patterns that computers can be instructed to recognize and process. Strictly speaking, while a word processor or text editor cannot search an electronic text for the word 'butterfly', it can be instructed to search for a pattern of code. If the human user creates a pattern of code that she understands as the word 'butterfly', typically by typing it on a keyboard, then the computer can attempt to match it. Lacking a mind, a computer correspondingly lacks the concept of 'a butterfly'. A photograph of a butterfly can be scanned into a computer as many times as is wished, but the computer will still understand it only as a disorganized jumble of shapes and colours (actually, it won't even do this – it will recognize only histograms of colour frequency and the like). This presents serious difficulties when attempting to use computers to organize and sort collections of digital images.

Considering only still photographs for the moment, there are two basic approaches that can be taken towards this problem. The first and most simple, though laborious, is to add textual meta-data manually to all images – labels, captions, keywords. Here the computer, and the digital nature of the image and its textual meta-data, merely expedite what can be and is accomplished with a straightforward card index catalogue of photographic prints and negatives. These data are of course external to the image, part of the external narrative that influences the reading of the image. A great deal of forethought must thus be given to how the meta-data are constructed. Some categories of factual information are relatively straightforward – assigning the image a unique reference number, providing details of the date of production, the name of the photographer, and so forth. The problems occur when trying to describe the content,

translating the jumble of colours and shapes into language-coded concepts – a task of which the computer is incapable. I have explored this issue at length in Chapters 1 and 2 and there is no need to repeat the arguments here. Suffice it to say that the degree of abstraction and interpretation encoded in the textual meta-data associated with an image will constrain later readings of the image.

The second approach to sorting catalogues of visual materials on a computer is far more direct, and apparently more objective in that the external narrative of the image is effectively ignored. Although well beyond the skill of most social researchers, computer vision scientists can create algorithms that analyse the formal properties of digitized images in terms of colour, shape, line, texture and brightness (similar algorithms lie behind the filters used in off-the-shelf image manipulation software, such as Adobe PhotoShop). Once properties have been assigned a numerical value – a code pattern – the computer can then search for similar values in other images, sorting the complete catalogue into predefined categories or matching one image against another to find duplicates. These techniques work best with restricted and often false-colour data (for example, star maps, where visual and non-visual data such as X-ray radiation are converted into visual form, colour being used to mark variation in signal intensity) or where the range of variation between images is extremely narrow (such as iris-recognition scanners on security devices). Beyond these narrow parameters such systems have extremely limited autonomy: as the manufacturer of one image-recognition toolkit states '[the software] can be used to build seemingly smart programs . . . [but these] do not understand the concepts of an image in the way a human being does – there are no built-in functions that "find all images that have butterflies in them" . . . they do not automatically understand what's important about your data' (Excalibur Visual RetrievalWare Web site: FAQ). The process of 'understanding what is important about your data' is, of course, part of the external narrative surrounding an image, a process that for the social researcher can only be derived from a social research agenda. Most computer vision research is driven by mathematical and natural science agendas, which currently renders it of limited utility, although some art historians are now becoming involved.[11]

Software also exists to aid in the indexing and classification of digitized and analogue moving images – the first route discussed above. Meta-data tags can be attached to sequences or frames of digitized movies to aid classification and identification. Alternatively, the software can drive a video playback machine, helping the user to create an index of the tape, but one which is stored on the computer not the tape. While obviously

slower, as there is only linear not random access to the tape, there is a saving on the large amounts of storage required for digitized movies. The balance of speed against storage cost is insignificant for a few minutes of material, but becomes important when several hours of video footage has been produced in the course of a research project. While some research work in robotics is concerned with the autonomous recognition of moving images – the second route above – the computing power required is still far beyond that available to most qualitative social researchers and the results still far too crude. Even when a computer can automatically scan hours of digitized footage in search of a particular individual, or a sequence of movement, the motivation and intellectual justification for performing such a task will still lie beyond the capabilities of the machine.

6.4.2 The HADDON Catalogue

The HADDON Catalogue of archival ethnographic film and film footage is a Web-based meta catalogue, incorporating information from the catalogues of other institutions, but it contains no actual digitized film footage and only a very small number of digitized frame stills.[12] It brings together information about approximately 1600 films and lengths of film footage located in archives and film museums from around the world (some of this information was sent electronically on request and merely had to be reformatted, but in most cases I and an assistant visited the institutions and transcribed all the relevant records). My overall objective in designing and disseminating the catalogue was to alert scholars and others to the research potential of historical film footage shot by largely amateur filmmakers in the first decades of the twentieth century. For years, visual anthropologists have bemoaned the fact that visual resources are rarely if ever incorporated into the studies of their non-visual colleagues. My hypothesis was that in part this was down to the fact that many scholars – anthropologists, sociologists, historians and others – were simply unaware of the material, particularly the early material, and that even if they suspected its existence it was extremely difficult to locate.

The amount of material which could be documented by the catalogue was potentially vast, and so my first task was to impose some criteria for selection. Although I will return to the issue of potential users (that is the 'audience' for the catalogue) below, a general rule of thumb is that users get greater utility from something that is tightly delineated and where the criteria of inclusiveness are readily apparent. It is better for some users to know immediately that this is exactly the resource they require

and for other users to know that it is not, rather than for all users to waste their time discovering this for themselves.

I settled on two selection criteria: one quite specific, if arbitrary, the other far looser. The specific criterion was date: all the material had to have been produced in the 50-year period from 1895 to 1945 (though a few later films were allowed to creep in if they formed part of a series commencing in the specified period). The start date precedes the earliest 'ethnographic' film footage by a year or so, just to be on the safe side;[13] the end date is arbitrary but gives a neat 50-year span, and takes into account a large amount of footage produced as an indirect result of the Second World War.

The second selection criterion was far more open-ended: the material had to be 'ethnographic'. Somewhat to my surprise I found myself setting aside current debates surrounding the nature of ethnographic film and adopting an old-fashioned definition: the film footage should contain a significant number of shots devoted to 'exotic', non-European people, preferably involved in 'exotic' activities. There are several reasons for this choice. Most importantly, this essentially colonialist view of ethnography is contemporaneous with the material I wished to catalogue. It was shot from this perspective and has to be understood within this perspective. Secondly, I specifically wished to exclude as much European and metropolitan material as possible (an exception was made for East and Central European folkloristic films). While undoubtedly of interest to many anthropologists and sociologists, this material is generally better catalogued and more accessible; for example, in the next few years, the entire British Pathé newsreel will be online. Moreover, there is a vast amount of this material – the Pathé footage alone constitutes some 3000 hours. As the original aim of the HADDON Catalogue was to highlight and make visible obscure amateur footage shot in parts of the world generally regarded as remote by metropolitan centres, it would have been self-defeating to bury it again in a morass of information describing films shot in London or Paris or New York. Finally, if I had adhered to a modern definition of ethnographic film – for example, film shot by a professional anthropologist on the basis of a sustained period of field research and underpinned in shooting and editing by an explicitly anthropological analytical agenda – then very few pre-Second World War films would fit the criteria and the HADDON Catalogue would have been exceedingly short. The focus, therefore, was predominantly and self-consciously on the content of the images, the film as a product, and largely ignored the intentions of the filmmaker or the subsequent reception of the images (Ruby 2000: Chapter 7).

At the same time as devising the selection criteria, my assistant and I were also selecting the potential users. We did this in a number of ways: I drew on my own knowledge of some of the material and we made assumptions about who might use it and how; I drew on my own memory of the times I had met people looking for old footage, what their reasons and aims had been; and we drew on the few scholars who had actually sought out and used archival footage of this type (for example, Vaughan 1991: Chapter 8). Principally, however, we solicited opinions by posting messages on electronic bulletin boards and email lists (the selection of these obviously biased the kinds of potential users who responded). Perhaps unsurprisingly, but worth checking anyway, those who expressed an interest in such a catalogue were either academics and students (in anthropology, sociology, development studies and history) or museum staff and librarians (particularly those in charge of image collections) who wished to extend their service provision.

From those who did respond, we then drew up a tester group: a cross-section of respondents who agreed to answer various questionnaires, do some simple Web-based research tasks, and eventually to test pre-release versions of the catalogue. In order to get a sense of how the catalogue should be best constructed, we identified a number of existing image databases and catalogues on the Web, and then asked the testers to perform assigned tasks and report back to us. We were interested in how easy they had found it to make the searches, what they understood the range of the database to be, and other issues relevant to our own catalogue. All social researchers expose their ideas and research trajectories to testing at regular intervals during the course of a project, gaining feedback from grant-awarding bodies, dissertation committees, seminar audiences, anonymous reviewers for journals and publishing houses, examiners. Web-based projects and other self-directed and self-published ventures should be no different, though a depressingly large number seem to be lacking in scrutiny and constructive feedback, resulting in poorly conceived projects and poorly presented results. Therefore, in addition to constituting the user-tester group, my assistant and I also approached a number of senior academics to act as an expert panel of advisers, to which we submitted regular progress reports.

The feedback and advice we received determined a number of presentational and operational aspects of the catalogue. The most significant of these was to steer users away from making a subject-based search across the whole catalogue, such as 'find all the films – from anywhere, at any time – that show pottery manufacture'. The reason for this is straightforward, if frustrating. Although we watched a great deal of the material we subsequently catalogued, we could not possibly watch

it all in the time available, still less take detailed notes on the contents of each shot. We relied instead on each holding institution's own descriptions of the films or footage. While this ranged from the highly detailed, to the completely inadequate (typically, a paraphrase of the film's given title, so a film entitled 'Arctic Life' would be described as 'A film about life in the Arctic'), more importantly, in almost every case each film description was written without reference to a uniform keyword list, by different people, at different times and with different objectives. The HADDON Catalogue contains entries for a number of films featuring pottery manufacture, but for some it will be described as 'pottery', for others 'clay', for others 'earthenware'. There is a huge gap between the necessity for keywords – and authority lists for keywords – to make a large database work effectively, and the current lack of any agreement on how moving image descriptions should be compiled. We simply did not have the time or the resources to transcend this gap, as indeed neither do the majority of the institutions from where we obtained the original descriptions.[14]

However, our work with the testers also told us that the majority of users were not interested in using the catalogue in this way. Most already had, or predicted they would have, a specific group of people or geographical region in mind for their research and were interested in finding films about those people or featuring people who lived in that place. By the time a subset of films matching these ethnic or geographical criteria are isolated from the whole of the catalogue, the total number of entries is typically quite small. It is then manageable to read each film description in turn, to see if any mention is made of pottery manufacture, however described. We therefore made the catalogue geography led. Users must first select one of three levels of geographical specificity (sub-continental region, country, region within a country) from pull-down lists to isolate a subset of the catalogue, after which they can either read each entry manually, or further narrow the subset with an additional search (see Figure 6.4). By designing the interface to use pull-down lists of geographical areas we achieved a further aim that had been indicated by our user tests: the need for a positive response. On the first search of the catalogue it is impossible not to achieve a hit, as the pull-down lists are automatically generated by the catalogue entries. Even if, by the end of the search, the hoped-for film has not been found – for example, a film from the 1930s about pottery manufacture in the Indian state of Gujarat – at least the user can have a fair degree of confidence that she has searched the catalogue thoroughly and correctly. Of course, a final null result does not mean that the desired film does not exist, simply that the HADDON Catalogue does not contain a record of it: this is true of all

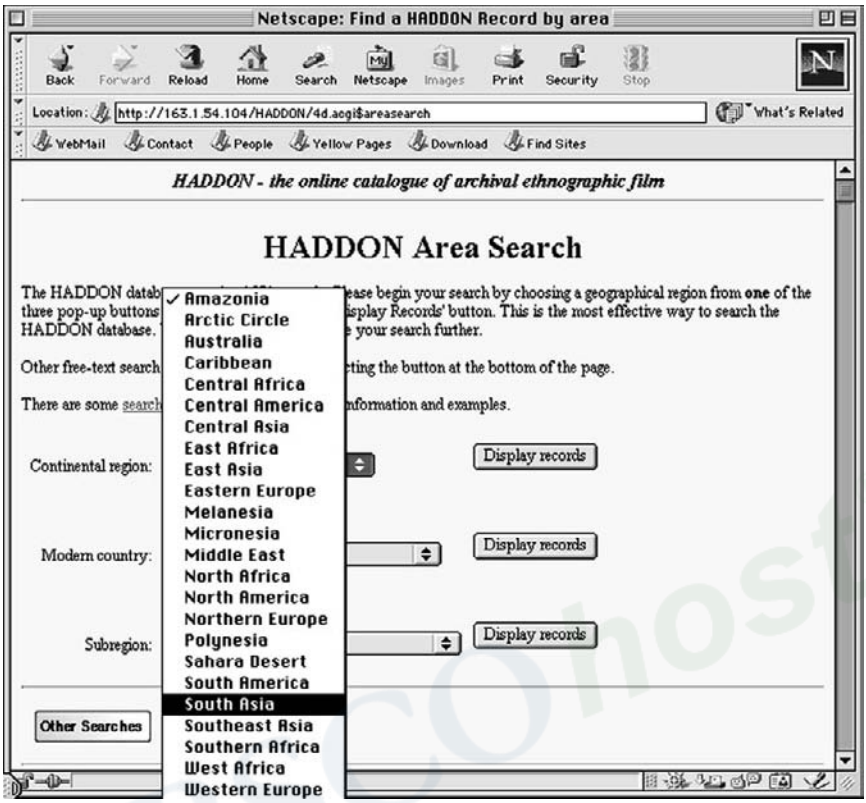

Figure 6.4 Screen shot from HADDON Catalogue Web site, showing selection of geographical area

catalogues, paper and computerized, though the larger a catalogue is – such as a major university library catalogue – the easier it is for users to fall into the representational trap of thinking that it is a perfect and complete index of that which it catalogues.

As I said above, the HADDON Catalogue is a meta-catalogue, drawing together and standardizing subsections of many other catalogues to address a narrow and specific target audience. Its one great weakness is that it does not contain digitized copies of the films themselves. While this is technically possible, it is not practically possible for the simple reason that very few if any film archives have the resources even to contemplate digitizing their collections (and on the budget available to me for the catalogue project, nor could I). Single films and lengths of film footage are, however, increasingly being incorporated into academic and commercial multimedia packages (see Section 6.5.1 below).

Whether digitized copies of their still photographs, movie film and videotape exist or not, the social researcher should also consider the possibility that their own material may one day end up in an archive, for use by future researchers. I said above that my own database of digitized fieldwork photographs was for my own private use and was, therefore, organized and indexed for my own convenience. With an intended audience of one issues of presentation are easy to resolve. The principal problem with archiving visual material is to anticipate the needs of unknown future users, a vast potential audience of unknown interests. The only answer is to provide as much information as possible. A complete account of the external narrative surrounding the images should be provided – when and where they were taken, by whom, with what intention, how they have subsequently been used – together with a grounded reading of the internal narrative, not only covering a description of the image's superficial content but also the basis upon which that reading is founded.

Many of my field photographs, for example, depict aspects of Indian Jain ritual and ceremonial life, but my reading of the content rests in part on my understanding of Jain social organization. Figure 6.5 (a repeat of Figure 2.14, printed at the end of Chapter 2), depicts a woman in a sari leaning over to serve something to a smiling man, seated in a row of

Figure 6.5 A fieldwork photograph. Jamnagar, India, 1983

men. It depicts a particular named woman, serving a particular food item to a particular named man, at a particular named feast held at the conclusion of a named period of fasting, on a particular date, in a particular place. It depicts a Jain laywoman honouring a Jain layman in recognition of an austerity he has performed. It depicts a reversal of status with a woman (not a man) gifting food to a man, rather than preparing it as a domestic duty. It depicts ties between migrant Jains in the UK (the woman is British) and India. At each level, the reading of the image becomes increasingly linked to my own sociological analysis – more interpretative and less reliant purely on the internal narrative, as it were. If intended for archival deposit, I should therefore make the basis of my interpretation clear in my description of the image.[15]

6.5 Multimedia projects

In an oft-cited 1945 article, Vannevar Bush, then President of the Carnegie Institution, envisaged a hypothetical machine – the 'memex', 'a device in which an individual stores all his books, records, and communications, and which is mechanized so that it may be consulted with exceeding speed and flexibility' (Bush 1995: Section 6). Once a user had stored (on microfilm) all the relevant material, and indexed it, he would use a series of mechanical levers and dry photographic processes to create 'trails' through the information, forging links between relevant items. Bush envisaged the 'memex' primarily as a research tool, though he also describes how a researcher could demonstrate a 'trail' to another party – the example he gives is of proving the technological superiority of the short Turkish bow over the English long bow used in the Crusades (1995: Section 7).

Today, despite the claims that Bush's device intellectually prefigured the World Wide Web, users of the Web still have no easy way to link items of 'found' information in the way that Bush envisaged, short of constructing a crude list of 'bookmarks' or 'favorites' in their Web browser. Users can, however, construct their own Web sites (or stand-alone multimedia corpuses written on removable media such as CD-ROMs) which do permit a greater finesse of linkages. Within their own Web site or other corpus, links between sound, text and image files can be constructed at will, although again such links are largely presented as givens to the user. Consequently, although many multimedia applications within the social sciences (Web-based and free-standing) often have a strong orientation towards promoting and facilitating research by users – allowing them access to unedited text, raw video footage, and so on –

they can equally well be seen as presentational applications, presenting materials and interpretation in a form that has already been pre-structured, implicitly or explicitly.

Nevertheless, one of the advantages of computer-based media is the access it provides to images, and the ability to promote research parity between sound, text and image. There is a price to be paid for this: in the digital world of bits-not-atoms, all bits are equal, but at the cost of the loss of the unique materiality of the atoms. The material difficulty (and economic cost) of publishing large numbers of high quality photographs in a written monograph, and the material impossibility of incorporating moving images or sound on the page are transcended, but in doing so an aspect of their unique materiality is lost.[16]

Nevertheless, if creator and user of a product are both aware that they are dealing with copies of images, texts and other original source material and aware that part of the external narrative of these objects has been stripped away, then computer-based multimedia carries a high potential for the presentation of research results to particular kinds of audiences.[17]

In a recent paper, Michael Fischer and David Zeitlyn note that there are several broad models for computer-based multimedia (Fischer and Zeitlyn n.d.). One is strongly time-based and sequential, similar in many ways to a film. For the audience, viewing it is a largely passive experience. A sequence of images, text, graphics and other items follow in predetermined order, although the sequences may be organized into chunks which can be viewed repeatedly or in a variant order. Typical examples would be a marketing presentation to a group of clients using a set of PowerPoint slides or a software 'guide' which uses animation to demonstrate the features of a piece of software. A second model is closer in organization to a book. A series of objects (such as text files) are linked in an overarching sequence, but the user has the opportunity to explore non-sequential links ('hyperlinks'), either to material outside the main body of the text – the equivalent of footnotes – or to other occurrences of similar material – akin to sequentially reading all the page references to a given term in a book's index, without reading the intervening material. Fischer and Zeitlyn point out that this model gives a 'more powerful' book, one which can incorporate moving images and sound. Visual anthropologists have increasingly been attracted to the possibilities this model opens up for adding visual and textual 'footnotes' to ethnographic films. In either case, the model is one of a principal text with associated subtexts.

A third model, and one that perhaps best exploits the medium's potential, is what Fischer and Zeitlyn term the 'layered' model. In this

model, no object or set of objects is necessarily primary, nor does the object or object-set necessarily have any definitive organizational structure or predetermined sequencing. Instead, a set of objects are linked to one another in (metaphorical) layers – a group of photographs, a set of fieldnotes – and also linked to objects in other layers: a photograph of an individual in one layer is linked to a genealogical diagram in which the individual features in another layer, and also to half a dozen fieldnotes that concern that individual in yet another layer. The linkages within the layers may be tight and sequential (for example, all the frames in a length of digitized film footage may be viewed randomly but are probably best appreciated in order) or relatively loosely linked (for example photographs of all the inhabitants of a village could be clustered into household or kin groups, but there is probably little to be gained by viewing the photographs in any predetermined order).

This last, the most 'open' model, is potentially the most powerful and useful for the social researcher, but equally the most fraught with potential difficulties – most of which relate to audience and audience use of the final product. In the first 'marketing presentation' model the audience is known or categorizable and their lines of enquiry relatively predictable: how will the launch of a new product affect next quarter's market share? what are the key features of this new version of the operating system? The familiar model of a lecture or talk by an expert aids the audience in making sense of similar material presented in a new medium. The second 'book' model also allows the audience to use familiar concepts, such as footnotes, appendixes and indexes, to navigate an initially unfamiliar product. In contrast, the third layered model makes new demands on the user by presenting a network of information rather than a narrative flow, which places a far greater onus on the user to steer their own course. We may not think serially, as Fischer and Zeitlyn point out, but 'we like to think that we think serially'. Dudley and Petch, who collaborated with Fischer and Zeitlyn on a museum-based multimedia project, recognize in reflecting on their experiences that this type of multimedia is an 'infant forum' for the presentation of material, one whose manipulation is still relatively unfamiliar (Dudley and Petch n.d.).

If the strictures advanced by critics such as Ruby for the production of ethnographic film (for example, Ruby 2000: Chapter 10) have any validity, then they apply equally to the production of computer-based multimedia. Not only should the source materials have been created or selected by a social researcher within the context of a carefully-conceived research project, but they should be assembled into a multimedia product

that is as clearly focussed. A difficult line has to be trodden in this respect with regard to freedom and authority. Multimedia, especially of the 'layered' type, offers a great deal of freedom to the user to explore their own lines of enquiry – indeed, this is the medium's strength. On the other hand, if the user has little or no sense of the research frame within which the project lies, nor any sense of the authority of the product's creator to compile the product, then it is difficult for the user to gauge the validity of the choices that she makes in navigating through the materials. If all authority is abrogated or concealed in the name of the freedom of consumer choice, then the user has no incentive to even bother exploring the product. Simply being told that a multimedia CD-ROM will help the user 'find out about' or 'explore' the issue of homelessness, or indigenous rights, or tribal art is akin to being told to go into a library and start reading.[18]

Following Ruby's suggestions (see Section 6.3.1), one clear way forward is the path of reflexivity. If a social researcher has a specific argument to make, one that she considers objective, universal and which will brook no gainsaying, then computer-based multimedia is probably not the best medium. If a social researcher has an argument to put forward, but is aware that there are variant interpretations of what is presented as supporting evidence (almost always the case with visual materials), then she can usefully employ multimedia to state her own case but also to outline the alternative interpretations and provide access to the raw materials to allow the user to test them all. In fact, this is almost always the case as soon as images are involved as an integral part of an argument, rather than merely as redundant illustrations.[19]

6.5.1 Interacting with the Yanomamö

A clear example is provided by Peter Biella and colleagues in a stimulating multimedia version of an explicitly visual product, in this case an elderly but renowned ethnographic film extensively used in North American anthropology teaching (Biella, Chagnon and Seaman 1997). The CD-ROM *Yanomamö Interactive* has at its centre Tim Asch and Napolean Chagnon's 1975 film, *The Ax Fight*. The film itself is unusual in a number of ways, not least because as originally constructed it is a self-conscious multimedia piece in its own right. At its core lies around 11 minutes of unedited film footage depicting a fight between two groups of Yanomamö Indians – an Amazonian group living on the Venezuelan-Brazilian border. This footage opens the film, after the opening titles and a brief snatch of narration, and is then followed by four further

sequences. First there is a short audio sequence over a blank screen in which the anthropologist and filmmakers discuss what they have just witnessed; then some of the original footage is replayed, but using frame stills and slow motion, as the narration describes the causes and progress of the fight; then there is a series of rostrum camera shots of genealogical diagrams, showing how each of the participants in the fight are related to each other; finally a section entitled 'a final edited version' replays the fight sequence again, without commentary but edited to provide a smooth clean sequence.

The aim of the film is to build up a number of layers, commencing with raw 'reality' as the film crew experienced it (they had no forewarning of the fight and filmed with no preparation from a distant vantage point), which is then overlain with layers of personal and sociological detail and analysis. Viewers of this linear, time-based medium have to carry a great deal in their heads as the film progresses, in order to use it as a basis for reading the 'final edited version'. As Biella notes in the CD-ROM version's introductory essay:

> Despite its effort at precision, to many viewers [the middle] section of the film is unclear. The confusion comes in part from the poor visual quality of the genealogical diagrams and a series of clumsy cuts and pans. More than this, the argument itself is difficult . . . before viewers can even begin to understand the argument they must first associate different faces in the film with genealogical icons, and comprehend the genealogical relationships between the faces. The latter task by itself is difficult to master. (Biella 1997)

In short, the potential of what the film could achieve is hindered by the original medium; the multimedia CD-ROM version by contrast, opens up a non-linear space within which the detail can be absorbed at the user's own pace, and the arguments which rest upon that detail can be fully explored. The CD-ROM contains a complete digital version of the film, which can be played right through but also accessed at a number of cue points. *Yanomamö Interactive* is not, however, based upon the book model of multimedia described above – the film as a core text with a number of visual and textual footnotes. While the film is central, other materials – textual and visual – are included as additional layers, linked both to the film and to each other. These layers can be read in their own right, partly in order to test a neo-Darwinian hypothesis advanced by Chagnon and Bugos (1979, also contained on the CD-ROM) concerning the role of kin in disputes. Biella presents some variant forms of this hypothesis in his introductory essay and suggests ways of using the

filmic, photographic and textual material on the CD-ROM to weigh one up against another. He also suggests ways in which photographs of individuals and their biographical and genealogical data can be used to create a number of internal narratives that interrogate the original film, possibly to the extent of undermining the film's own narrative. For example, a narrative concerning the activities of women in Yanomamö society and their role in disputes can be 'recovered' from the film, despite the fact that the film's narration makes little mention of women in an active capacity, and the camera generally depicts them as reacting to rather than initiating action.

Technically, the construction of these narratives are made possible by embedding a variety of links in the textual and visual materials. While there are a very large number of such links, they inevitably serve to constrain and channel the user's navigation of the product. Within the textual materials – the full narration of the film, additional commentaries, associated essays – the links are embedded in a specific and self-evident way: clicking on an individual's name in a text in one window may cause a photograph of the individual to be displayed in another window, or a genealogical diagram to be redrawn with that individual at its centre. Within the visual materials, the links are less evident. Of the many persons and objects within the film and the associated still photographs, Biella and colleagues have chosen to tag individuals – men, women, children – rather than, say, items of material culture. A click on an individual's name in the narration window cues the film to the appropriate point and identifies the individual on screen with a red cross (see Figure 6.6). A click on the word 'hammock' or 'ax' does not produce the same result. This is not a criticism of the multimedia product, merely a reiteration of the point made above (Section 6.4.1) that while text is easily and automatically transformed into hypertext such that all text strings can be matched to all equivalent text strings, computers have great difficulty in dealing with 'hypervisuality' matching one image to another, or automatically linking text string to visual representation.

There is a great deal more that could be said about the value (and limitations) of computer-based multimedia for the presentation of visual research materials. Briefly, *Yanomamö Interactive* succeeds because the specific visual and textual materials are selected and interlinked with a clear aim and purpose. The authors have also considered their audience: they are explicit in stating what materials were used, and what thought lay behind the project – reflexivity – and in acknowledging that those encountering this 'infant forum' (Dudley and Petch n.d.) need clear and straightforward guidance to aid in their reading.

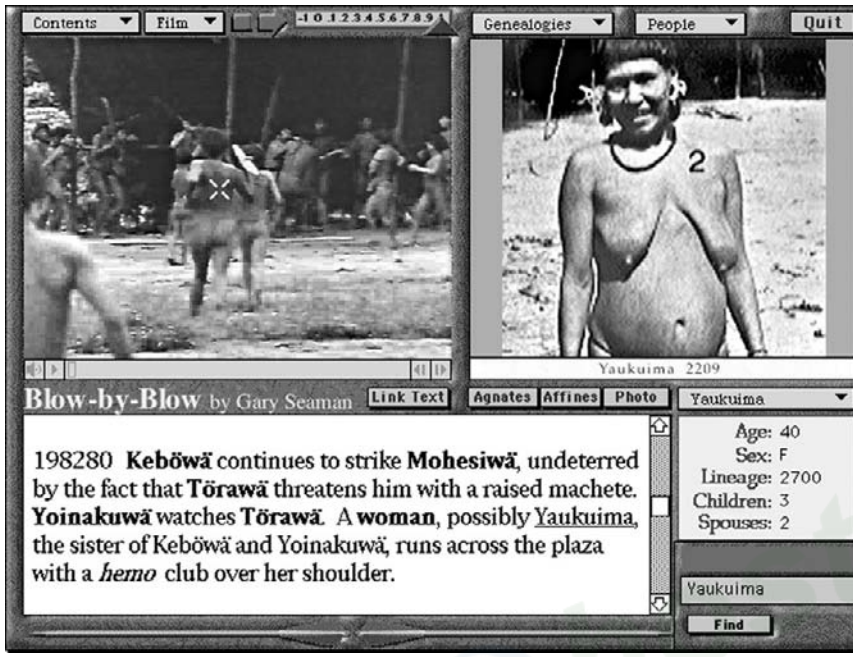

Figure 6.6 Screen shot from *Yanomamö Interactive* (1997); clicking on an individual's name identifies them in the film footage. Reproduced with permission of Harcourt Brace & Company.

6.6 Copyright

> I get very angry when I see some of the products that are advertised . . . they're stealing the Princess's image, they're stealing her dignity. (Trustee of the Diana, Princess of Wales, Memorial Fund quoted in the *Electronic Telegraph*, Issue 1089, 19 May 1998)

For an image to be stolen, it must belong to someone in the first place. Shortly after Diana, Princess of Wales, was killed in a car crash in August 1997 images of her began to appear on thousands of memorial objects for sale – mugs, plates, plaques – as well as in innumerable print publications commemorating her life. These photographic images presumably 'belonged' to the photographers who had created them or to the agencies for which they worked. They did not 'belong' to Diana or her heirs, unless they of course had taken them or legally acquired them. But later in 1997 the Diana, Princess of Wales, Memorial Fund sought to register the image of Diana as a trademark, filing around 50 images as samples of this 'trademark' with the British Trade Marks Registry (the trademark

Figure 6.7 Frame still from Paul Henley's film *Faces in the Crowd* (1994), showing Diana, Princess of Wales, on a visit to Solihull, West Midlands. Photographer: Paul Henley

application was later transferred to the executors of Diana's will). While single images of individuals have successfully been registered as trademarks – for example, a distinctive image of the racing driver Damon Hill looking through his visor – the large number of Diana images submitted appeared to be a claim for all and any image of Diana to be covered, preventing almost any use of her image from being used without payment of royalties to her estate (*Electronic Telegraph*, Issue 1329, 14 January 1999). On the back of this, the Fund embarked on legal action against the American manufacturers of a commemorative 'Diana' doll, claiming that the company was 'exploiting her identity' (*Electronic Telegraph*, Issue 1089, 19 May 1998).

The case served to worry many people in the media that merely creating and reproducing an image may not guarantee ownership of that image. It seems relevant largely to representations of celebrities, those deemed likely to have a financial interest in the use of their representations and, with some exceptions, few academics routinely conduct research with such images. More down-to-earth issues of copyright still remain important however. Many images that the social researcher will

be using in the course of research will have been created by the researcher herself, and consequently she will normally own the copyright and have relative freedom in her use of the images (although see the earlier discussion in Chapter 5.6 on image ethics). However, any images used that come from other sources may well be subject to copyright and permission will have to be sought for their use in any publication, including 'publication' on a Web site.

Permission generally consists of two aspects: seeking permission from the copyright holder to publish the image or to screen a film, and payment of any reproduction or screening fee. In addition, the copyright holder may request (and be entitled to if it is a condition of the permission) a copy of the publication together with an acknowledgement in the publication, or film programme. Finally, the user normally has to pay whatever reproduction or handling charges are involved in making the image available.

Normally, for educational uses reproduction fees are waived or a purely nominal charge is made. Researchers requesting reproduction rights should make it explicit in their letter of request that the publication (or Web site) is academic not commercial (assuming this is in fact the case). Reproduction costs and handling charges are, however, fixed and inevitable costs incurred by the individual or organization that holds the copyright and are not normally waived.

The normal procedure is to identify the image or footage that is required and then to write to the copyright holder explaining what the image is required for and either requesting a copy of the image or permission to reproduce it from another source (for example, a book plate). A line should be added requesting that reproduction fees, if any, might be waived as the image will be used in a purely academic or educational context. Larger museums and archives normally have their own form to complete, covering much or all of the above.

There are, needless to say, many complications that can arise. Most commonly, the copyright holder may not be the individual or institution holding the image. In cases where book plate reproduction is sought, the first course of action is normally to contact the publisher if no other details are given. Alternatively, the caption for the image (or possibly the acknowledgements page of the book) will indicate the source of the image, such as a museum or art gallery. In the case of some film archives the archive acts as a holding institution for other people's material and does not have copyright in the films (for example, the UK's National Film and Television Archive does not own copyright in the majority of the films it holds).[20] In cases such as these, the reproduction is normally obtained from the holding institution – and appropriate charges paid; the

permission to use the image – and again, any rights or reproduction fees – are negotiated with the copyright holder. It is sometimes the case that the copyright holder cannot be located – especially if she or he were an amateur image maker who deposited the material long ago and has since died or moved on. When images such as these are used in academic publications, the publishers may cover themselves with a standard form of words in the book's introductory matter along the lines of 'Every effort has been made to trace all the copyright holders [of the images in this book], but if any have been overlooked, or if any additional information can be given, the publishers will be pleased to make the necessary amendments at the first opportunity' (Evans and Hall 1999: xviii).

Protecting one's own copyright in images is quite a different matter. For example, it is not wise to publish high resolution images on the Web without any form of digital or manual watermarking (see Chapter 3.5.1),[21] although in practice most network operators (the IT specialist who oversees a network of computers) would probably raise objections to this on account of the storage costs for such large files – several megabytes for photographic quality reproduction. Generally, the low resolution of 72 d.p.i. (dots per inch) which is all that is required for on-screen viewing is too poor quality for ink-on-paper publication.

Equally unwise is to loan a photographic print to a friend or colleague for publication without ensuring that appropriate credit will be given (in addition, publishers often have part of a book's production budget set aside for reproduction fees – the front cover image, for example – and it may be worth asking if a reproduction fee is available). Even if an image is not originally published on the Web it may easily find its way there through unauthorized scanning, after which it is extremely difficult both to monitor and to prevent unauthorized reproduction. The best an image maker can do if she sees one of her images used on a Web site without permission is to contact the site's owner and either ask for the image to be removed or for appropriate credit to be made (a request for a fee is unlikely to be met). If that brings no satisfactory result then the researcher should contact the Web host, the company that provides storage for the site's files and access to them. Many Web hosting companies, especially the larger ones with publicly quoted stock, are very sensitive to allegations of Web misuse. Of course, many amateur photographers and film- or videomakers are quite happy to see their work more widely distributed, or are simply not bothered about issues of copyright especially given that there is rarely any financial advantage to be gained. Some anthropologists, however – including myself – are concerned about the ethical implications of allowing images to flow freely through the networks, especially when their content becomes

divorced from their context. There is a potential for misuse, for example with images of tribal peoples when unwanted or misleading emphasis could subsequently be placed on their nudity or apparent savagery (see also Chapter 5.6 on ethics).

Notes

1 The extent to which clear communication is effected or to which presenters of research consciously consider their audiences at all is, of course, extremely variable. My argument here is not so much that social researchers should learn to present their results more effectively, simply that whether they are conscious of it or not, there *is* an audience.
2 Martinez cites several 'open text' films as examples; the qualities they share include reflexivity – an acknowledgement within the film that a filmic representation is being constructed (see Section 6.3) – and narrativity (see Section 6.2.1).
3 The Finnish photographer Jorma Puranen has actively sought to liberate the long-silenced voices of archival images. By rephotographing images from the 1880s of Sámi indigenous people, printing them on plexiglass, placing the panels in the northern Finnish landscape and then photographing the resulting installations, Puranen has loosened the constraining narrative of 'races and types' photography of the late nineteenth century, as well as the narrative of 'archival interest', and has effected an 'imaginary homecoming' for these long-dead Sámi (see Edwards 1997: 72–3; Puranen 1999).
4 For another account of selecting images for academic publication, see Harper 1987a: 7–9; see also Wright 1999: 97–105.
5 Harper also stresses that the assignment of images to any of the four categories depends on the overall research frame, not properties inherent in the images themselves. The other two categories, which I do not discuss here and which do not necessarily rely on viewing the images in sequence, are the scientific mode – images treated primarily as evidence or data; and the reflexive mode – images that mediate the relationship between social researcher and subject, as in photo-elicitation (see Chapter 4.4).
6 For Grady, rendering sociology more appealing to students is not a trivial issue. Following Becker (1986) he argues that the reproduction of the discipline is in crisis, producing students – and hence future teachers – who have little appreciation of what he calls the craft of sociology (cf. Epstein 1967) and who are 'insecure, deeply unsure of their work and their voice, and more concerned with justifying their projects than with carrying them out' (Grady 1991: 37, n. 5). Producing visual narratives instead of written essays from secondary sources, Grady argues, would allow students to develop these craft skills and consequently a confident analytical voice.
7 In my experience, some of the least engaging ethnographic films I have seen are those that were edited from research footage by their makers who had not

at the time intended to make 'a movie' but were unwisely encouraged to do so afterwards. See also Barbash and Taylor (1997: 287) on planning for the audience in advance of shooting.

8 These debates are also found with regard to the internal narrative or content of the film itself. Proponents of the direct cinema and *cinéma-vérité* movements of the 1960s and 1970s generally eschewed voice-over narration and interviews, claiming that the flow of live action alone should be strong enough to sustain the film and communicate what the filmmaker wished to say; see also the debate surrounding Gardner's *Forest of Bliss* in Chapter 2.2.1.

9 It is one thing for a filmmaker to decide to write a study guide, another to decide what to put in it. Some I have seen are little more than a background ethnographic essay of a largely factual nature – details of economy, habitat, marriage practices and so forth. This approach would seem to indicate that the film is intended as little more than an illustration of these facts. Instead I would suggest that a study guide should include a full transcript of the film's dialogue, camera angles and editing cuts, together with an essay outlining the circumstances of the film shoot. In this way a viewer can appreciate the film as film – as a constructed representation, as well as the film as ethnography – as a representation of particular people.

10 The catalogues for the Royal Anthropological Institute's ethnographic film library (Woodburn 1982; Willson 1990) contain a list of recommended reading for each film.

11 In Britain for example, the Computers and History of Art Group (CHArt) encourages research and discussion in this area and organizes annual conferences. See also Frauenfelder (1997) for an interesting overlap of agendas.

12 The HADDON Catalogue is available through the Web at <www.rsl.ox.ac/isca/haddon/>.

13 At least for the early footage, my criterion was that material had to be shot on location, in the field, and hence the catalogue includes A.C. Haddon's Torres Strait Island footage (1898). Earlier material of some ethnographic relevance, though shot away from the subjects' normal location, would include Thomas Edison's Sioux 'Ghost Dance' footage (1894), Felix Louis Regnault's Wolof potter footage (1895), and the Lumière brothers' twelve shorts of Asante women dancing (1897); see Jordan 1992 for further details.

14 The current draft of *Archival Moving Image Materials: a Cataloguing Manual* (Balkansky et al. 1999) puts the position well. While devoting an extraordinary amount of detailed discussion to how cataloguers should differentiate between types of production credit, or how they should deal with films released with different titles in different countries, for the 'Summary' field devoted to a description of the film or television show's content it merely says 'Give a summary of the content of a work. The object of a summary is give the viewer a good idea of what to expect when he or she views the work, thus avoiding unnecessary handling of the film or video.' The brief examples given all focus on content, except for one that mentions the film includes

'close-up magnified photography'. While the descriptions of a film's content are at best inadequate at many institutions, and hence in the HADDON Catalogue, descriptions of a film's form and structure are almost entirely absent (see also Usai 1994: 48).

15 It would be hypocritical of me to pretend that this is anything other than a wish list, a statement of good intention. While my photographic collection is relatively well-organized, like many other visual anthropologists, I spend my academic life surrounded by cans of disorganized film footage and cassettes of unindexed videotape. Ideally, when budgeting time and resources for a research project an allocation should be made for archiving the materials at the conclusion of the project. Perhaps funding agencies should even insist on this, as the UK's Economic and Social Research Council currently does for quantitative and qualitative (but essentially textual) datasets.

16 In an article on computer-based music, Georgina Born includes some illustrations that are actually photographs of printed pages of an in-house computer software manual (Born 1997: Figures 7.3–7.7, pages 147, 149). Howard Morphy and I, the editors of the volume in which the article appeared, had some difficulty in persuading one or two readers of the manuscript that these images should not be replaced simply by a retyping of the text of the pages (their manifest content). Born's argument in part concerned the fact that these manuals were fluid and often incomplete documents needing handwritten annotations by those who were learning the programs from them and her photographs of the pages showed such annotations. Moreover, the poor quality of the manuals – dog-eared and blurred from much copying – was another aspect of their materiality, and a manifestation of the gap that she perceived between the supposedly pure and universal logic of the programming code and the highly socially-embedded circumstances of its communication. Mechanically reproducing the unique documents through a photograph was the closest we could come to communicating some of that unique materiality, where the latent content of the pages was foregrounded by Born's sociological analysis.

17 Strictly speaking, 'multimedia' is a misnomer, the computer being the single medium through which a number of sound, text and image files are displayed. The term acts as a useful reminder however of the media-specific objects – photographs, audiotapes, 16mm films – that have been brought together on the computer. The term is so omnipresent and associated so closely with a new physical object, the CD-ROM or DVD, that I shall continue to use it here.

18 I have written about these issues elsewhere, somewhat overstating the arguments against multimedia, particularly for educational use, to stimulate debate. See Banks 1994 and Biella 1994.

19 This variant interpretation reflexivity model is well-demonstrated in 'Ancestors in Africa', a largely text-based multimedia product by David Zeitlyn (Fischer and Zeitlyn 1999). Zeitlyn's project, together with several others, forms part of a package under the title 'Experience-Rich Anthropology', distributed

widely in Britain in 1999–2000 on CD-ROM. Many of the other projects include far more visual materials than the one I discuss here, but this nonetheless provides a good model.

20 By contrast, stock-shot libraries (film clips, normally out-takes from completed productions) and picture or photo libraries, have normally cleared the copyright on everything they hold, enabling the user to make a 'one-stop shop' and pay a single amalgamated fee. However, such libraries are normally commercial and oriented to the needs of commercial customers, making them expensive for the student or academic researcher.

21 Terence Wright raises the interesting point that a photograph taken from one source and subsequently manipulated digitally by another photographer or artist could be considered to be a new image, unconstrained by the original owner's copyright (Wright 1999: 164–5). This situation would be compounded when the 'original' was taken by a digital camera, there being no original source apart from an easily manipulable string of digital code to prove where the altered copy had come from. In fact, software similar to that used for digital watermarking is available that can tag electronic documents of all kinds and then indicate subsequent alterations.