Video Analysis: Lessons from Professional Video Editing Practice

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Abstract: In this paper we join a growing body of studies that learn from vernacular video analysts quite what video analysis as an intelligible course of action might be. Rather than pursuing epistemic questions regarding video as a number of other studies of video analysis have done, our concern here is with the crafts of producing the filmic. As such we examine how audio and video clips are indexed and brought to hand during the logging process, how a first assembly of the film is built at the editing bench and how logics of shot sequencing relate to wider concerns of plotting, genre and so on. In its conclusion we make a number of suggestions about the future directions of studying video and film editors at work.

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1. Film Editors?

We usually associate the *making* of a film with the name of its director. Thus it is that Francis Ford COPPOLA, Martin SCORSESE and Quentin TARANTINO stand for some of the finest and most successful film productions in contemporary American Cinema. Seldom do we know the names of other professionals involved in the production of a film: screenwriters, cinematographers, sound designers, or digital editors. Compared to COPPOLA et al., Thelma SCHOONMAKER; Sally MENKE and Walter MURCH, are relatively unknown, even though they have received Oscars for their work and are renowned within film industry. Of these invisible figures, Walter MURCH (Illustration 1) has received the most public attention in recent years (see, for example ONDAATJE, 2002; KOPPELMAN, 2005). MURCH is the winner of three Academy Awards, with an unprecedented double for *The English Patient*: Best Film Editing and Best Sound. Other feature films edited by MURCH include *Apocalypse Now*, where he and his team developed Dolby 5.1 (or Surround Sound), *The Unbearable Lightness of Being*, *Ghost*, *The English Patient* (where he not only won the only double Oscar for film editing and best sound but also was the first editor to win it using AVID, a non-linear editing system); *The Talented Mr Ripley*, *Jarhead*, *The Conversation,* and the feature film whose editing we will examine in this paper, *Cold Mountain*. [1]

Cold Mountain was one of the first feature films to be edited with Apple's Final Cut Pro software, as a result MURCH's decision to risk editing a major feature with a relatively untested and cheap tool generated considerable discussion in the industry, attention that MURCH has himself engaged with in a number of books (KOPPELMAN, 2005). Alongside this literature being of value simply as a belated response to Dai VAUGHAN's (VAUGHAN, 1983; MURCH, 2001; ONDAATJE, 2002) commemoration of the invisible men of film-making, it provides us with a remarkably detailed, if secondary source, on the work practices of a professional film maker. In this sense our article does not re-open KOPPELMAN's (2005) timely discussion of the ramifications of digital editing, instead it uses it as a germane and ethnographically satisfying text for learning about the editor's work and workplace. On that basis we can draw out some implications from professional film editing that inform video and film analysis as pursued by a number of social scientists. Consequently in what follows we will draw extensively on Charles KOPPELMAN's *Behind the Seen* (2005), where he documents, in considerable detail, MURCH's tasks in the editing of *Cold Mountain*.
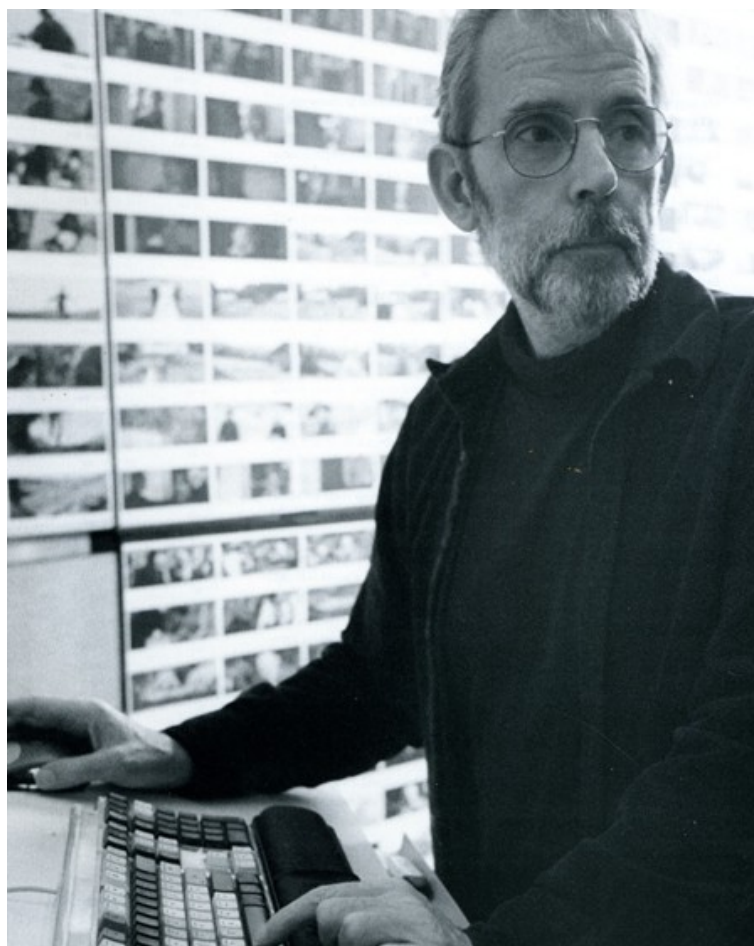

Illustration 1: Walter MURCH at his editing desk (KOPPELMAN, 2005, p.2) [2]

2. Video Analysis *in vivo*

But why turn to a professional video editor's work to learn about video analysis? In the social sciences many argue that we are only just beginning to discover the possibilities of audio and visual materials. Despite pioneering work on video analysis (HILL & STONES CRITTENDEN, 1968; RYAVE & SCHENKEIN, 1974) and a century of ethnographic film making academic practice has remained a firmly writing and text based endeavour in both its subjects of attention and practice of production. This is not to ignore, of course, substantial bodies of work in visual sociology (PINK, 2001) and anthropology (CHALFEN, 1975; SOL WORTH, 1973), cultural geography (ROSE, 2000) and so on, yet these are small parts of what the overall social sciences investigate, analyse and produce. By contrast with the growing body of work on what video analysis might be in the social sciences, LUFF and HEATH (1999) and others have argued video analysis as a vernacular practice is its unexamined alternate. Where we want to place this article on video analysis is thus alongside those pioneering studies of Paul LUFF and Christian HEATH (LUFF, HEATH, & JIROTKA, 2000), Lorenza MONDADA (forthcoming, 2006, 2003), Charles GOODWIN and Marjorie GOODWIN (1996; 1997; GOODWIN 1997) that have located and investigated groups of practitioners whose daily business in one way or another involves the description, assessment, evaluation, production, recognition and general analysis of video. Investigating a number of different communities of video practitioners they have taken up Michael LYNCH's (1993) reminder that conversation analysis when initiated by Harvey SACKS (1992) was not to be a disengaged inquiry of conversation, a collection of professional analysts theorising about language from the benefit of a higher ground. The analysis of conversation, urged SACKS, was to be the analysis made *by speakers themselves* in and through their conversation. Growing out of Harold GARFINKEL's ethnomethodological studies (GARFINKEL, 1967) this was an approach that studied ordinary methods that are used to produce social orders *in vivo*. The methods ethnomethodology investigates are the methods of members of society themselves. Consequently to investigate video methods is to investigate the video methods of any group that uses video whether they are social science researchers or home-movie makers. [3]

Conversation analysis (CA) was one of the disciplines that realised the possibilities provided by video for recording and recovering the fine details social order, particularly as it was found in everyday conversation (HEATH, 1986). Having consistently utilised audio tape recordings and transcripts to access otherwise overlooked, missed or unimaginable details of talking together, video recordings opened up the possibilities of examining the gestural and scenic details otherwise lost on an audio-tape. At the outset of analysing, sharing and presenting video, twenty years or so ago, this involved clunky equipment that was barely transportable from data sessions to conferences. Understandably its uptake was limited, however with the shift to miniDV, laptops with complex editing and presentation software and digital projectors, video as a method for gathering, sharing and presenting language in action and interaction has grown. Video has been, for some in CA, treated as only providing a supplement to what remains primarily audible interaction. Video's uses and nature being in adding gestures

and scenic features to the core topics of conversation analysis (e.g. turn-constructional units, prefaces, P-terms etc.). The object and means of analysis thus continues to be, understandably, conversation and the myriad methods that speakers used to talk with, to, for and past one another. Shared conversational techniques used to sequence turns, to make announcements, to receive news, to interrupt (and to guard against interruption), to confess, to prosecute, to remember (and the list of social practices continue). What MONDADA and others have initiated is a program of video analysis that shifts its focus toward video as the central object and means of inquiry. They have sought out groups of practitioners whose daily business is the analysis of video. The GOODWINs, turned to court room expert testimony providing conflicting interpretations of the infamous video footage of the Rodney King beating (GOODWIN & GOODWIN, 1997) and to airport control room staff coordinating workers who load and unload airplanes (GOODWIN, 1997; GOODWIN & GOODWIN, 1996). For LUFF and HEATH (1999; LUFF, HEATH & JIROTKA, 2000) these have been staff monitoring video screens of passengers' activities in the control rooms of the London Underground; for MONDADA (2003) surgeons teaching students using video for their instruction and recently (MONDADA, forthcoming) the use of split screen techniques by social scientific researchers and TV show editors; for Mathias BROTH (2004) the coordination of camera operators and shot selection in studio-based TV production; and for Dylan TUTT et al. (TUTT, HINDMARSH, SHAUKAT & FRASER, 2007) the broadcast work involved in remote collaboration in CA data sessions. In a similar vein we turn to Walter MURCH because video, or to be more precise video *and* film analysis, is his routine work. Day-in day-out, he scrutinises film and video footage and listens to sound tracks in order to edit together groups, sequences, mixes and assemblies. What we intend to do in this paper is to elaborate on some of the (ethno-) methods involved when professional film editors produce such visual orders. We begin by stressing two departures from existing research on vernacular video analysis that guide us towards what we might call a *praxeology of film editing.* [4]

Firstly, when looking at a filmed sequence we can usually observe two features that are involved in the making of the recording. Imagine a car leaving a parking space. On the one hand the camera follows the car. We see how the camera pivots when the car is on the road and starts driving away. The camera fits and adjusts to the phenomena it records. On the other hand the camera actively shapes how we see the car. The camera films from a chosen vantage point, selects how the car should appear in the frame and decides how long the car shall be followed. The camera is involved in the configuration of the phenomenon. Douglas MACBETH has called this a "praxeology of seeing with the camera" (BÜSCHER, 2005; MACBETH, 1999; MONDADA, 2006, forthcoming). What we see is further shaped by our common sense knowledge of activities "beyond the image". To explain this we might briefly turn to a CCTV study. LUFF and HEATH (1999) in their study on London underground control room staff and their use of video technology they elaborate on practices of seeing and viewing as being not only the result of the application of an organised framework of perception of an interest group, but as intertwined with "the routine actions and activities in which they engage" (p.4). Surveillance personnel can, even when they do not see on

the screen, use what they see as a way of determining activities and events beyond the image, relying on their workplace familiarity with patterns of conduct in the station and how they sequentially unfold in specific activities and into specific places. [5]

Now imagine the same scene but filmed by two cameras, one, a close-up of the parking space and one of distant-shot of the end of the street. In this case, a film editor is editing the camera shots. The editor adjusts to what the car is doing: the parking camera is used first, to show how the car leaves the parking space; the street camera is used second, to show how the car drives down the street. Even as the editor draws upon common knowledge of how anyone goes about parking, their editing can in various ways further configure what we see happening. Depending on when the editor switches from the car to the street camera we are offered different possible senses of the action, to catch a glimpse of the driver, for example, would add a person to the car to whom one of the perspectives may belong to. The film script indicates the driver is in a hurry, and yet ought to leave the parking space without attracting undue attention. The editor analyses the video material she has been given and make use of the sequential order of the car: a. leaving parking space, and b. entering street. At the same time as she will be providing an intelligible sequence, she will be orienting to the dramatic possibilities of this scene, so that it will cohere with the plotting of the film. She will re-view the material and she might try a new order, she might increase the running speed and add background sound captured elsewhere or during another take. [6]

Beyond this skeletal description there are an array of preceding and subsequent editing practices, such as capturing of clips, logging, rewinding, playing, stopping, adding effects and filters, repeated previews of the same scene, talking to other editors and persons involved in the film process, taking notes, showing the scene to work colleagues or showing the entire movie to a selected audience. Most relevant for our study is the key point that editing is reflexively embedded not only in the filmed phenomena, but in a set of activities that are displaced from the writing of the script and the original film set. [7]

Secondly, a central topic of workplace studies is the coherency of its objects be they flight-paths (HARPER & HUGHES, 1993; SUCHMAN, 1993), timesheets (BROWN, 2001) or library shelves (CARLIN, 2003; CRABTREE, 2000). Scientific research using video, for example, has an epistemic task, this is to find and stabilise facts in video recordings. A court trial involving video recordings of what may (or may not) be prosecutable actions will draw on them for the purposes of revealing "what actually happened". The study by GOODWIN (1994), mentioned earlier, examined the relationship between a seemingly self-evident record of a brutal beating and the defence's use of police expert testimony during the "Rodney King" trial. During the court session a police instructor was invited to scrutinise the amateur video tapes that showed police officers striking Rodney King near a filling station in Los Angeles. Goodwin documents how the expert in court applies a divergent but coherent coding system to the video recording. Whilst the video was seen by many as clear evidence of an unprovoked and

savage beating, the expert testimony in court transformed how the recordings were seen by the jury. The application of police typologies for recognising aggressive movements from suspects re-configured King's arm and leg movements as threatening officers rather than as responses to the threat of the officers. The police officers actions were re-classified as not only defensive but also standard procedures. What the jury could see on the video was controlled counter-violence to disable and prevent the suspect's "attacks". The analysis of a video sequence made accountable a "socially organised perceptual framework shared within the police profession" (GOODWIN, 1994, p.616). [8]

While GOODWIN's study reveals how professional analysis of video tapes can shape an alternate witnessing of events as an epistemic concern of the court-room, video analysis in film editing is not concerned with recovering what actually happened during any particular event[1]. Film editors of feature films analyse their video and audio sources as part of the creative work of producing, for example, a thriller, horror movie or a domestic melodrama. The concerns film editors are orienting to as they assess footage, set edit points and so on are of a *filmic* order rather than an *epistemic* one. They sequence, overlay, cut and transition between images, sound, effects, rhythms, to tell a story, to realise a character, to shape an audience response and more. In examining MURCH's concern with the filmic we are thus departing from GOODWIN's studies of video analysis with epistemic concerns. Before doing so however let us make one further remark about a useful parallel with the court-room. LYNCH and BOGEN's studies of court-rooms (LYNCH & BOGEN, 1996) remind us how central the reading, interpretation and deconstruction of documents is to the prosecution and defence. [9]

As a brief aside, in the current situation where the materiality of film stock (the negative) co-exists with a digitised version of that material, there comes a point where once all the digital cutting is complete these cuts have to be carried out on the original roles of film on a frame accurate basis. What mediates between these two visual media is a text, more precisely an edit decision list (EDL). An EDL is a database in form of, for example, an "XML" sheet, in which all the used shots, the succession of scenes, in and out points, effects and transitions are codified and listed. It bears some resemblance with LATOUR's much-cited black-boxing (LATOUR, 1987) in which all the controversies, discussions, successes, compromises, failures, alliances between a myriad of agents are briefly locked up tight. It marks out a likely end to any further recutting because it is handed over to the negative cutter, who carries out the delicate, fairly irreversible work of cutting the original film footage together in his laboratory. Negative cutters usually have no access to the previous lengthy editing process other than this text. The EDL refers precisely to roll, shot, scene and individual frames of the original negative and tells the cutter how to put the film footage together. [10]

Editors work with digital copies of the original negatives. Film exposed on set is copied rapidly afterward in order to produce a workprint. Whilst the negative is stored in cans and safely locked away in the film-lab, editors will work with

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1   Something that may well be a concern of documentary film-makers.

multiple copies of the digitised material. After shooting, all negative film has to be copied, nowadays transferred to digital video using a telecine machine. EDLs will only work if all materials, originals and copies are key coded. Every single frame in the workprint refers to the same frame in the negative via a code. This original negative reappears in the production process only when all editing decisions have been taken and the final version of the film has been agreed on. In our paper we will examine what precedes the handing over of the EDL. We will thus touch on the software, uncertainties, previews, variations, work settings (see LATOUR, 1987, p.4) that precede the stabilisation of the film. [11]

3. Editing *Cold Mountain*

Cold Mountain is an adaptation of a novel by Charles FRAZIER (1998) set during the American civil war, wherein a pair of lovers are separated by the war and suffer all manner of trials before being re-united. Anthony MINGHELLA, the director of *Cold Mountain*, shot a considerable amount of film for Cold Mountain—more than the average director—some 115 hours or so (although not as much as Francis Ford COPPOLA who shot 230 hours for Apocalypse Now). Shooting as much as ten times more footage than is required is the norm for commercial films. The ratio between these two provides the parameters for an abiding task of any film editor: reducing down the quantity of film. On *Cold Mountain* Walter MURCH spent around ten months editing together what is called the first assembly wherein the largest reduction ratio occurs. This was followed by another eight months pulling together the final cut. This studio time was preceded by MURCH reading MINGHELLA's adaptation of Charles FRAZIER's novel and, significantly, a number of discussions around whether to use Final Cut Pro or Avid to edit the film. The latter provided the impetus and dramatic backdrop for KOPPELMAN's book on editing *Cold Mountain*. [12]

The film was shot on various locations in Romania. New exposed film stock had to be brought on a daily basis to the Bucharest Kodak lab where MURCH and his team were located. Whilst MINGHELLA was involved with actors, location of sets, work with the cinematographer and the film team on site, elsewhere MURCH was supervising the digitisation process of dailies, watching newly arrived clips and starting to organise the film material. Like the director, MURCH was not working alone at this stage. His assistants played a crucial part in syncing up and screening dailies, preparing digitised footage and editing work on the various workstations in the lab. Laboratory technicians were involved in the digitisation process. Drivers drove back and forth between the film set and the lab, transporting newly recorded footage. MURCH and MINGHELLA collaborated at a distance. MURCH feeding back on the quality and comments on the received film material by email and during one or two visits on the set. MINGHELLA informing MURCH about progress on the set and the next footage that will arrive in the lab. [13]

Later MURCH begins work on the first assembly, in some ways, a rough-and-ready putting together of what the final film will be and yet still a well-built thing that does not distract by showing its seams. [14]

After the screening of the first assembly editor and director settle into a new work pattern. MINGHELLA and MURCH now work together on what MURCH calls a "second pressing" in their London editing studio, if all goes well this will reduce the first assembly to the length of a feature film. The routine is shaped by three-weekly preview screenings of newly-edited parts for an audience of around ten invitees. After each screening visitors would sit together with the film team. MURCH and MINGHELLA would take notes of their comments and then use this notes to "decide priorities, and establish goals for the next screening" (KOPPELMAN, 2005, p.197). After one month's work the first assembly was refined to a four-hour film. But editing here is not only about length. Every bit that is removed puts the story and the structure of the film into question and changes the moods of scenes and characters. [15]

The work phases "first assembly" and "second pressing" are not as clearly kept apart as we present it here. We use this vocabulary to provide an insight into what is a complex workflow. We will call the last step of the production the "final cut", which ends, as we have already explained, with the handing over of the EDL. Together with various technicians, and on various occasions with the director of *Cold Mountain*, MURCH moved on to being involved in colour correction, sound mixing and visual effects. First preview screenings took place outside the editing studio. For friends and family in London, then for the production company in New York and finally test screenings in New Jersey. Audiences of test screenings consist of invited people, who have agreed to fill in a survey card, a selected sample of the test audience will participate in a focus group that is held after the screening. Movie executives, producers and various other people that were involved in the making of *Cold Mountain* took part in these events. Back in London MURCH and MINGHELLA made last, not unsubstantial, adjustments, removed footage and consolidated the film based on comments, notes and surveys that they have received and collected during the pre-views. A last viewing is organised for executives from the film production company. Finally the film is locked and the EDL handed over to the negative cutter (Illustration 2):

The cut list in construction order:

Shot   Time   Duration Keycode   In Frame Out Frame Roll
Scene Take

    01:00:00:00 to 01:00:00:14 Fade-in of 12 frames (00:15)
    In-coming KI 73 0819 from 6328&11 to 6329&02

001 01:00:00:00 00:16:04 KI 73 0819 6328&11 6347&17 A33
1   4

002 01:00:16:04 00:01:12 KI 73 0819 6569&02 6570&15 A33
1A   2

003 01:00:17:17 00:04:16 KI 73 0819 6429&04 6434&12 A33
1   5

004 01:00:22:03 00:05:02 KI 73 0819 6810&08 6816&09 A34
1A   3

    Note -- 1 frame was added to the end of this cut.
005 01:00:27:05 00:01:19 KI 73 0819 6451&11 6453&09 A33
1   5

006 01:00:28:24 00:04:19 KI 73 0819 6818&09 6823&19 A34
1A   3

Illustration 2: An edit decision list (EDL) (KOPPELMAN, 2005, p.70) [16]

As noted earlier an over-arching orientation in film editing is toward reduction; for MURCH on *Cold Mountain*, getting a two and a half hour film out of one hundred and fifteen hours of footage. Reduction is not simply reduction of course, no more than a sculptor's work is getting rid of a large amount of marble. The editor is one of the many pairs of hands and eyes involved in *making* the film. Quite what editing the film consists of is so varied, technical and complex that here we will mostly end up glossing over it, but we offer some initial characterisations of what is a craft learnt as a lifetime's work. Indeed, in focusing on MURCH's editing practice, which certainly provides us with a number of insights into the nature of editing, we should not equate MURCH's practice with all editors (Illustration 3).

Illustration 3: Scene cards in the making (KOPPELMAN, 2005, p.141) [17]

Before any of the footage arrives MURCH makes "scene cards", based on the screenplay. These will help track the development of the plot and the movement of characters. Cards are coloured according to which character is involved in the scenes (e.g. yellow for "Inman"). His colour coding is used to help give him early clues about the rhythm of the film as a whole and potential problems that might need to be addressed in editing such as the pre-dominance of one character's appearances at the beginning of the film. He shapes some cards as diamonds to indicate a pivotal scene and also varies their length according the length of a scene (Illustration 4). This paper prototype served quite different purposes from either the film script itself or the shooting script. It is a document that helps plan and organise the editing work.
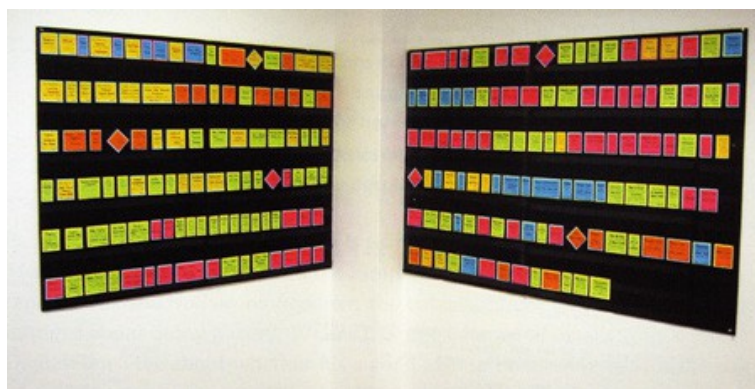

Illustration 4: Two boards with scene cards (KOPPELMAN, 2005, p.175) [18]

From the outset in shooting the film MURCH is involved, he overlooks the production of the dailies which members of the crew watch, as you might expect, daily and as that footage comes in he and the rest of his team begin *logging*. The latter involves a great deal of notetaking as we will see in a moment. After only a week or so of *Cold Mountain* footage coming in MURCH begins to "cut the

material into 'scenes and sequences'" (KOPPELMAN, 2005, p.31). As we have noted already an aspect of professional film editing that is under-appreciated, is the amount of documentation that accompanies, supports, shapes and is, indeed, part of the process. Film footage is accounted for through a number of record keeping systems. Here we are seeing only MURCH's documents, substantial though those are.

Illustration 5: MURCH's logbook for the Scenes of Veasey, Inman (etc.) (KOPPELMAN, 2005, p.176) [19]

MURCH uses Filemaker Pro to make brief notes when he *first* looks at any continuous camera take, during the production of the dailies. He notes in the higher box (see Illustration 5): "WS on Inman and Veasey, nsg . good shh gesture". [20]

Incidentally the notes above from KOPPELMAN's book are of a shot where one of the lead characters "Inman" played by Jude LAW, stands in a creak, helping an other character ("Veasey") with a dead bull that they want to butcher. [21]

As KOPPELMAN puts it, the second set of notes (above and below): "from his second viewing will be more detailed and analytical, go deeper, and record the footage counts for each of the 20 "beats" or dramatic moments that MURCH feels in this single shot" (KOPPELMAN, 2005, p.175). As MURCH adds: "The first set of notes are a lover's first impression of the beloved. The second set are surgeon's notes before making the first incision" (quoted in KOPPELMAN, 2005, p.175). [22]

The surgeon's notes are in more detail, potential reasons for disposal of the shot are added (see Illustration 5):

> "Inman walking in WS fast << seen through brush
>
> A little confusing what we are supposed to be looking at
>
> OK SH gesture from Inman >> short
>
> Looks off >> long
>
> Veasey moves << in fg MS
>
> *This shot doesn't feel composed, like an A camera*
>
> Inman held frame, dark shadows from hat, looking off << in profile
>
> *One hand tucked in his backpack like when he first met V*". [23]

This shot is now "a little confusing" and "doesn't feel composed" and "sh" gesture is re-assessed as "OK". The surgeon's eye sees the need for its excision. [24]

Building a group takes three days and the second set of notes is written on the first day. MURCH will typically watch three hours of footage (which is what he calls a "group"). It will take him nine hours to watch it and make these notes. And he is only *watching* it; the sound is turned off. On the second day this material is joined together to make scenes. On the third day the sound is finally turned on and shots are trimmed, re-arranged and dialogue crossed between them. Even though MURCH suggests that he is beginning to operate more ruthlessly, his editing here is still with what he calls "eyes half closed". The joining together of material following the template of the coloured paper timeline on the wall of the studio proceeds until "first assembly" is ready for viewing. Not only for the benefit of the editor to see the whole film together for the first time, it is also for the director Anthony MINGHELLA to be able to shift from director of shooting to director of editing. He and MURCH have worked closely on three films now—*The English Patient*, *The Talented Mr Ripley* and now *Cold Mountain*—and MINGHELLA is one of those directors who constantly revises and amends right up until the very last edit. [25]

The first preview of the film is shown at this stage and it is an intimate occasion involving MINGHELLA, MURCH, MINGHELLA's wife and his son, and a producer. However, for this film the screening does not work because of technical problems. MURCH writes in an email to a colleague: "You can imagine the disappointment all around, particularly for me. The editor has only one chance to show the director his version of the film, and this is gone now" (MURCH, quoted in KOPPELMAN, 2005, p.193). [26]

In a second attempt MINGHELLA and MURCH watch the four-hour assembly together. The first assembly is five hours four minutes and seventeen seconds. The final edit will be just under two and a half hours. MURCH, who has a love of mathematics, has posited 30% as the maximum that can be edited down from a first assembly without serious removals from the film such as excluding one of the characters from the story. Of significance to us, is that is at this point that the most analytic, creative and detailed part of the editing of *Cold Mountain* begins. [27]

Shifting from his scene cards and Filemaker Pro, MURCH makes up pictures boards (Illustration 6) to surround himself with at the editing table. These are another way of helping him visualise the relationship between the footage and the film, to put the footage at hand.

Illustration 6: Walter MURCH surrounded by picture boards (KOPPELMAN, 2005, p.205) [28]

One of the delights of digital video for MURCH and other editors is its speed, and the ability to move and chop clips, undo and redo edits, seemingly at will. However having worked on older machines MURCH is aware that what is lost is the skimming through of other footage that was required with mechanical Moviolas and KEMs. Rewinding or fast forwarding to get to the clips meant constantly seeing other parts of the footage. In doing so, the footage, as it was skimmed through again and again, had time to show itself for what it was to the editor. By contrast digital video allows you to jump to exactly where you want thereby losing what had once been the unmotivated viewing of the other footage. On the subject of instantly finding clips, MURCH says:

> "That's actually something of a drawback because the machine gives me *only* what I ask for and I don't always *want* to go where I *say* I want to go. Wanting something just gives me the starting point. I expect the material itself to tell me what to do next." (MURCH, 2001, p.109) [29]

While the work of logging retains the closeness to the material, digital in some ways distances the editor from it. What we hope also strikes a chord here for conversation analysts is the editor's unmotivated looking at their footage. The material is being given a peculiar form of agency, or rather, it is of value if the material can provide you with something that was not simply what you wanted when you began your work. [30]

Like HEMINGWAY at his typewriter, MURCH stands at his keyboard to edit, a hangover from the bench construction of the older mechanical editing systems. Rather than thinking of MURCH's keyboard as a typewriter it would be better to think of it as his piano. MURCH, like many editors, is gifted in music and argues that a sense of rhythm is vital to being a good editor. This is not just a suggestive comment from MURCH. He is famous for his "on-the-fly" editing. What he does is let the film play and then at the point where he feels the cut should be he hits the edit key. He checks the frame number that he has hit, say 176. He plays the footage through again and hits the space bar when the cut feels right again, then re-checks the frame number. If over a series of these run-throughs he continues to hit 176 then that is where the cut should be. As Film runs at 24 frames per second so it is quite a thing to hit 176 each time—something MURCH hardly downplays, aware perhaps not only of his own skill but his reputation. MURCH developed this technique before using digital editing devices, though digital devices suit this method perfectly since they list the exact frame number. This concern with very fine rhythms and timings is manifest throughout in MURCH's book, which you will see on almost every living video and film editor's book shelf, is called "In the Blink of an Eye" (MURCH, 2001), the title originating in MURCH's theory of film, facial gesture and thinking. When cutting shots of people's faces MURCH found that he was often cutting at the exact point where they blinked. In watching actor's faces he came to appreciate that blinking occurred when the listener "gets the idea of what you are saying". Equally MURCH having watched audiences of his films is convinced that when the editing is right the audiences will blink in unison. [31]

Video and film editors in general have an intimate knowledge of gesture since so much of their editing utilises the fitting together of the gestures of actors that are in intelligible dialogue with one another. In Clip 1 MURCH is editing a section of *Cold Mountain*. Inman has been taken prisoner by a Southern bounty hunter as a mutineer along with Veasey and linked together as a chain gang.
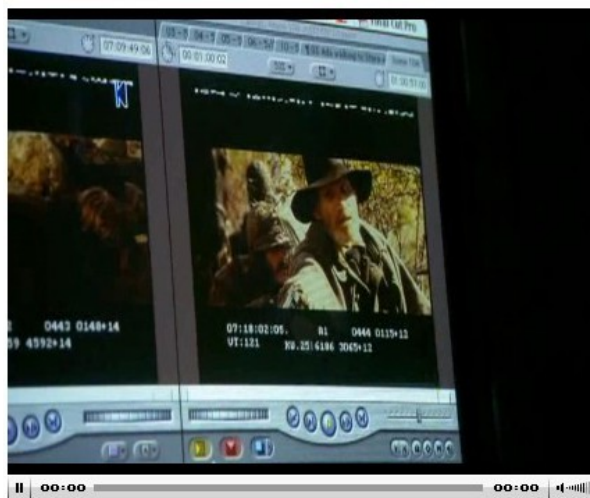
Clip 1: MURCH on the play of the eyes (taken from "The Cutting Edge", 1992) [32]

MURCH mentions that if we see a shot of the eyes of one character then the following scene is taken to be their point of view (POV). This is a classic sequential property of film. What, to adopt a phrase from conversation analysis, we could call an "adjacency pair". Without the paired adjacent shot of the eyes we would not treat the distant shot as necessarily POV. Without a longshot we would make others things of the shot of the eyes, though they might still raise the question of "what are they looking at?" [33]

In building his adjacency pairs, his longer sequences and the overall film MURCH places the greatest emphasis on emotion. Indeed he has a list of six rules of editing and his is the reverse of what is taught at film school: "At the top of the list is Emotion and you come to it last because it's the hardest thing to define and deal with. How do you want the audience to feel?" (MURCH, 2001, p.18) [34]

The question then is how does sequencing of shots and the looks of eyes achieve this and what sorts of others methods does the editor use. Music is key but not foundational. Instead we return first to the centrality of documents. Once the editing process is going on in earnest, MINGHELLA is beside MURCH a great deal of the time, talking things over, trying out different edits, watching the editing progress. [35]

Notes—in written and spoken form—circulate in their thousands around a film. KOPPELMAN gives us a hint about what kind of notes and comments arrive on MINGHELLA's and MURCH's desk after preview screenings. Notes from the film production company chairman, from Charles FRAZIER, the author of *Cold Mountain*, MINGHELLA's agent at Creative Artists, various notes from family and friends, and from staff involved in the film making process (KOPPELMAN, 2005, p.249). MURCH and MINGHELLA make notes to themselves. On the basis of reading these notes editor and director make further delicate adjustments to the edits. Whilst sitting in test screenings MURCH would type on his laptop. Later he would incorporate notes from others into his own notes. Picture editing, seemingly a profoundly visual activity, is also deeply textual, a point made very well by Lena JAYYUSI (1991) in relation to newspaper photography. [36]

During the editing of *Cold Mountain* a great many of the notes from different audiences are on matters of emotion. The central romance between Inman and Ada fails to convince many of the audience members. Indeed, MURCH and MINGHELLA and others have also been troubled by how to make the depth of love between Inman and Ada convincing. After a test screening Miramax co-chairman Bob WEINSTEIN noted, for example, "that there was more heat between Sara and Inman than between Inman and Ada" (KOPPELMAN, 2005, p.262). Sara is a female character that appears very late in the movie. Inman arrives at her house before undertaking his last part of the journey back to *Cold Mountain*. In the book by Charles FRAZIER this scene was conceived as Inman's last emotional obstacle to overcome before he meets Ada again. In this scene "a world and a woman are offered that are completely familiar to him, that need him, and to which a part of him responds more immediately than to the mysterious Ada" (KOPPELMAN, 2005, p.261). For the screen MINGHELLA intensified this

scene by adding more violence and more tragedy. In MINGHELLA's script Inman continues his journey only because Sara commits suicide and her baby dies during his stay at her house. These tragic events were mentioned in a number of notes as being more moving than scenes with Ada. MURCH reworked the scene in response to the various comments he received after the preview screenings. MURCH began by taking out a couple of lines of dialogue between Sara and Inman. In the original script when Inman arrived at her house, Sara said that she has work to do in her house ("to kill that hog and make of sense of the flesh and divisions" [KOPPELMAN, 2005, p.264]) which she could not do by herself. Her need of a man like Inman in the house is further emphasised when she and her baby are threatened and violently treated by three Unionist soldiers that arrive at her house. MURCH rearranged the scene by firstly taking away the lines in the dialogue. At first this left an awkward scene—"One simple extraction had triggered a major 'lift', as editors call a wholesale removal of a scene or large portion of a scene" (KOPPELMAN, 2005, p.266). MURCH hesitated to re-establish the original dialogue but then decided to take out Inman butchering the hog. The scene was further re-edited. MINGHELLA agreed to take out Sara's tragic suicide and the baby's death. This reconstructed the reasons why Inman leaves Sara. His leaving becomes a decision that shows his love for Ada. MURCH writes in his journal about this rearrangement:

> "Sara scene thoughts: Inman now leaves her of his own free will. Formerly, he had to leave because the baby died and she died, so fate took the decision out of his hands. It is actually better for his character this way. In addition to the time and structural issues." (KOPPELMAN, 2005, p.265) [37]

Another significant change to the film has been to add a number of voice-overs at a very late stage from Ada, as she writes letters to Inman. These require re-inserting scenes of Ada writing and Inman reading her letters in various places. In the ongoing trimming down of the length of the first assembly a scene was removed where Veasey witnessed his lover pregnant in town while he is part of the chain gang. It was that scene that then gives us his motivation for the escape from the chain gang that we saw MURCH editing earlier. Once that scene was cut, it then became puzzling that the previously self-interested Veasey would lead such a risky escape attempt. The solution was to shift who leads the attempt—the scene has to be reedited to bring it into line with an earlier edit. Feature films are more like short stories than novels, in that editing one section requires re-assessment of so many other sections of the emerging film. [38]

Ultimately in the re-working of the POV shot, edited together with Inman's eyes and head, it became his POV. Indeed, the chain gang scene had been a problem throughout the film-making process for various reasons, the unexpected benefit of which was thus a rich supply of shots and recorded dialogue to choose from. MURCH selected another section of dialogue between the actors—finding one reading of the line where Jude Law had (erroneously for the script's purposes) placed less emphasis in his tone on refusing, was, as a result, hearable as him urging everyone to get up and run. A line of dialogue that was ineffectual in its original context, becomes re-interpreted in the edit as appropriate. [39]

With this continuity solved MURCH and MINGHELLA were also putting in place a further instance that shows Inman's desperation to get back to Ada. What, then, is being accomplished here is restoring what the shooting and the first assembly had lost: the *romance* of the book. It is not just fidelity to book—MINGHELLA and MURCH are being faithful to the idea of a historical romance, rather than a historical movie about the civil war. Yet their efforts eventually are not without critique—*Cold Mountain* continues to suffer harsh judgements in terms of its romance even as it was complimented on excellence in other areas. [40]

Thus it is that additions and removals have ramifications that spread throughout the film. Scenes that were previously held apart are suddenly juxtaposed and this can result in surprising improvements (or not). Scenes that were reliant for something or someone being established earlier are suddenly orphaned. Or equally characters introduced at the outset become redundant because they never return. These changes are not merely stylistic but radically change the plot, emotion and viewer's assessment of the film. Editing's rearrangements into further previews of the film to come constantly re-create the need for the films core pre-viewers (MURCH and MINGHELLA) to deliberate on yet another edition of the film. [41]

4. Brief Lessons

If we ask in this paper, what we can learn from MURCH's film editing about the analysis of video and film, a first lesson is that while editing almost always involves the reduction of materials, it is not about lessening the film as object, it is about forming the film as an object out of the materials that are there. This involves attending properly to what is already there in the material and must not be destroyed (RAFFEL, 2003). Such discoveries are reliant on making the material visible and becoming intimate with it. MURCH's editing room with its paper timelines and picture boards and his logging notes are methods for visualising and bringing to hand what materials the editor has to work with. Though, of course, there is also the preliminary documentary work through notes and comments by the many others involved in the making of a film in the first and second viewings which are pre-viewings of the film to come. These are followed by the thousands of pre-views and re-views of the evolving assemblies. Digital video allows for a great deal more of this pre-viewing and responses to pre-views than was possible before. And there, then, is a whole topic in itself—"pre-viewing"—a welcome alternate to the massive body of studies on viewing and viewers. [42]

A second lesson is to adapt a phrasing of Eric LIVINGSTONE's (1995), the ambition of the editor to achieve the *filmic*. Through the compositional work involved in editing the editor discovers a unique and yet familiar pairing of a watching account and the work of watching a film. Though, as we have noted, what the footage offers is constantly supplemented with notes of all kinds from a surrounding community of watchers from the co-editors and directors, via producers, to colleagues and outwards to preview screenings with marketing-selected viewers. There is in this a pre-responsiveness to the film that

emphasises the importance of the preview. The editors try to fold in a community of response to the final film and its proper, watching-really, as against watching toward re-editing. [43]

A third lesson, and a familiar one from other studies of vernacular video analysts, is that talented editors like MURCH not only have a remarkable grasp of how we see particular gestures, how we hear particular phrases and see and hear them in unfolding sequences of courses of conduct (such as trying to escape to rejoin the one you love). The most talented editors are attuned to the orchestration and attunement of our emotion and stance on events depicted on film. When they are successful they elicit certain shared feelings be they sympathy, despair, desire, excitement or alienation while watching the film. We are then coming upon a group for whom an intimate knowledge of gesture and speech, as recorded on video, is their daily business. [44]

Appendix 1: List Feature Films

The Cutting Edge (1992) Dir. Paul Michael GLASER. Interscope Communications.

The English Patient (1997) Novel by Michael ONDAATJE. Screenplay by Anthony MINGHELLA. Dir. Anthony MINGHELLA. Perf. Ralph FIENNES, Juliette BINOCHE, Willem DAFOE, Kristin Scott THOMAS. Miramax Films.

Apocalypse Now (1979) Screenplay by Francis Ford COPPOLA and John MILIUS. Dir. Francis Ford COPPOLA. Perf. Marlon BRANDO, Martin SHEEN, Robert DUVALL, Frederic FORREST. Zoetrope Studios.

The Unbearable Lightness of Being (1988) Novel by Milan KUNDERA. Screenplay by Jean-Claude CARRIÈRE. Perf. Daniel DAY-LEWIS, Juliette BINOCHE, Lena OLIN, Derek DE LINT. The Saul Zaentz Company.

Ghost (1990) Screenplay by Bruce Joel RUBIN. Dir. Jerry ZUCKER. Perf. Patrick SWAYZE, Demi MOORE, Tony GOLDWYN. Paramount Pictures.

The Talented Mr Ripley (2000) Novel by Patricia HIGHSMITH. Screenplay by Anthony MINGHELLA. Dir. Anthony MINGHELLA. Perf. Matt DAMON, Gwyneth PALTROW, Jude LAW, Cate BLANCHETT. Mirage Enterprises.

Jarhead (2005) Book by Anthony SWOFFORD. Screenplay by William BROYLES Jr. Dir. Sam MENDES. Perf. Jake GYLLENHAAL, Scott MACDONALD, Peter SARSGAARD, and Jamie FOXX. Universal Pictures.

The Conversation (1974) Screenplay by Francis Ford COPPOLA. Dir. Francis Ford COPPOLA. Perf. Gene HACKMAN, John CAZALE, William P. 'Bernie' MORAN, Frederic FORREST. American Zoetrope.

Cold Mountain (2003) Novel by Charles FRAZIER. Screenplay by Anthony MINGHELLA. Dir. Anthony MINGHELLA. Perf. Jude LAW, Nicole KIDMAN, Renée ZELLWEGER. Miramax Films.

Appendix 2: Credits and Copyright Clearance

Illustration 1: Walter MURCH at his editing desk, seen from left, right hand on mouse, left hand on keyboard (black and white) (KOPPELMAN, 2005, p.2)

Illustration 2: Edit decision list (EDL) (KOPPELMAN, 2005, p.70)

Illustration 3: Card desk (colour picture) on (KOPPELMAN, 2005, p.141)

Illustration 4: Two boards with scene cards (colour) on (KOPPELMAN, 2005, p.175)

Illustration 5: A page from MURCH's logbook for the Scenes of Veasey, Inman (etc.) on (KOPPELMAN, 2005, p.176)

Illustration 6: MURCH standing at editing desk, seen from back, looks to the left (black and white) on (KOPPELMAN, 2005, p.205)

Illustration 7: MURCH on the play of the eyes (taken from The Cutting Edge, 1992)

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Video_1: http://medien.cedis.fu-berlin.de/stream01/cedis/fqs/3-09/Laurier.flv (425 x 355)

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