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Seeing through screens, hearing through speakers: Managing distant studio space in television control room interaction

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Abstract

This paper explores how an only partially visible and audible television studio space can be accountably understood from the perspective of a television control room. A proper grasp of the studio space is necessary for understanding, for example, who is talking to whom in the studio, and the position of camera operators relative to both one another and the people they are filming. Such an understanding is crucial for the on-line collaborative editing of the studio interaction, in a way that is intelligible for the audience of viewers. Based on video-recordings of the control room and the studio interaction during the live production of the French interview program *Rideau Rouge*, this study describes some of the multi-modal resources and practices that the personnel in the control room mobilize for resolving, in interaction, practical problems pertaining to the studio space, e.g. how they manage to show relevant participants, show participants from complementary angles, and direct camera operators to produce specific shots.

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1. Introduction

The notions of ‘space’ and ‘place’ have so far been only rarely focused on in linguistics and pragmatics. And when touched upon, these notions have often been treated as unilaterally influencing the linguistic and social structures that are observable in particular kinds of situations. As an alternative to such a ‘container’ conception of ‘space’ and ‘place’, some recent studies in Conversation Analysis and Ethnomethodology have proposed a *re-specification* of these notions *as members’ phenomena* (see e.g. Garfinkel, 1991). Instead of treating ‘space’ and ‘place’ as “already there” when interaction begins and statically encompassing it as it unfolds, it is proposed that these phenomena are accomplished, maintained and dynamically shaped in and for a particular interaction, and undertake to study the systematic methods by which members reflexively shape space for the practical purposes of their action. A number of settings and situations have been studied, for example, archaeology teaching, court hearings and children playing

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hop-scotch (Goodwin, 1994, 2000), car riding (Laurier, 2005), giving directions and guiding tourists in the street (Mondada, 2005), examining works of art in museums (Lehn et al., 2001), and managing telephone interaction with a distant party within a local environment (Relieu, 2005), just to name a few. Most relevantly for present purposes, there have been several studies of so-called “centers of co-ordination” (Suchman, 1992). These are places where the activities and manifest understandings of participants who are distributed in different locations are coordinated, often by means of complex audio–visual communication technologies. Settings that have been studied so far include the control and supervision rooms at the London Underground (Heath and Luff, 1992b; Heath et al., 2005), airport control rooms (Goodwin, 1996; Goodwin and Goodwin, 1996), operating rooms during laparoscopic surgery for a distant audience (Mondada, 2003, 2007), emergency centers (Cromdal et al., 2008) and TV-control rooms (Broth, 2004, 2006, 2008a,b; Esbjörnsson et al., 2008). See also Button (1993) and Luff et al. (2000) for two important collections of papers on interaction in technologically advanced environments.

The present study contributes to this growing body of research, and focuses specifically on the relevance of location and spatial relations for live television production. Analyzing an exceptionally problematic sequence of TV-control room interaction, I will address the question of how participants in the control room achieve a common understanding of, and deal with, locally relevant aspects in the distant studio space from what the bank of screens shows and the loudspeakers in the control room let them hear. Crucially, the analysis will show how the collaborative work of the control room personnel and distant camera operators is based on an interactional and dynamic shaping of the local control room space. These dynamics allow the participants to achieve mutual attention to different parts of the bank of screens before them, a shared understanding of mediated studio phenomena, and, ultimately, an intelligible and (almost) flawless TV-broadcast for the viewing audience.

The studied sequence was recorded on 10 June 2003. It is an episode of the French TV-show named *Rideau Rouge* that was broadcast live on *TV5 International*. Three views were simultaneously recorded by the researcher in the control room: a wide-angle shot of the control room (Fig. 1), a more zoomed view of only the screens (Fig. 2), and an extreme close-up of a monitor that showed the studio (Fig. 3).

The studio interview is shot by five camera operators, of which four (camera 1–4) manipulate cameras on stands and are assigned a particular shooting area relative to both the other camera operators and the participants in the studio interview: Camera 1 or 2 should cover guests, and camera 3 or 4 should cover the moderator. The remaining operator (camera 5) produces shots more freely with a portable camera.

The actions of the entire TV-production crew are coordinated in the control room. Here, at the other end of the technological interface, the location and materiality of the five cameras and their operators within the studio ecology are transformed into a bank of screens (1–5 from left to right, see Figs. 1 and 2). The director,



Fig. 1. The control room.



Fig. 2. View of the screens only.



Fig. 3. Close-up of screen showing studio.

the production assistant (or “PA”), the technical assistant and occasionally other people as well observe and make sense of the five emerging shots as they are visible one next to the other. Through the mediating interface, the control room personnel follow the studio interaction, orienting to its systematic endogenous organization as an interview (Broth, 2008a).¹ Participants in the control room primarily focus on the bank of screens, not on the other people in the control room sitting next to them, with whom understandings of studio events are nevertheless interactionally achieved and coordinated in and for their teamwork.² At every moment during the

¹ Interviews are accountably accomplished through an orientation to a specific kind of turn-type preallocation, according to which questions should be asked by the interviewer and answers should be provided by the current interviewee (see Greatbatch, 1988; Clayman and Heritage, 2002).

² Participants displaying joint attention towards a common object, in what has been called a “side-by-side arrangement” of the “F-formation” (Kendon, 1977:183), is in fact a very common situation, that is still under-researched compared to face-to-face interaction.

live broadcast, one of the shots is put on the air as a result of the director pressing the button, on the vision mixer in front of him, that corresponds to the screen in which that shot appears. The shot that is currently broadcast is indicated by a red tally light on top of that shot's monitor (as well as in the operator's viewfinder), and that shot is also visible on a bigger monitor, placed just above the row of small monitors in the control room. When the people in the control room talk to one another or give a direct verbal instruction to a particular operator over the microphones, this can always be heard by all five operators. However, as the operators cannot respond verbally from where they are in the studio, their only practical means of displaying a response is by moving their cameras in different ways.

The control room is thus a highly specific setting, functioning both as a *vantage point* from where it is possible to “see into” the studio and as a *center of coordination* for the activity of the crew. In what follows, I will describe some of the resources that the control room personnel can mobilize in the control room space in order to deal with problems that pertain to the studio space, and that they need to solve in order to successfully accomplish a live broadcast of the studio interaction.

2. Analysis of a sequence of TV-interaction

The production crew is not interested in every possible spatial aspect of the studio, but first and foremost in those aspects that are relevant for their current professional task. In the rather extended sequence that will be analyzed below, three distinct and successive tasks for the crew can be observed. Although there is only room for analyzing this single case here, it is worth bearing in mind that these tasks are indeed recurrent in TV-production, and that, according to what can be observed elsewhere in my corpus of video-recordings of more than six hours of interaction within this crew, there are clearly systematic procedures for dealing with them within the team. As we move through the sequence (subdivided into several shorter excerpts, with no break between them unless otherwise indicated) problems arise with regard to three specific tasks that all involve an understanding of locally relevant aspects of space: (1) introducing visually a new interviewee, (2) showing the interacting participants from the “right angles”, and (3) interacting with a camera operator so as to produce a specific shot. The ways in which these space related problems are interactionally resolved allow me to reflect upon the specific character of the mediated access that the control room personnel has to the spatial dimension of the studio, and how the local and specific contingencies of that access are exploited for their work.

2.1. Introducing a new interviewee to the viewers

In the majority of questions addressed to a different guest than the one speaking just before, the moderator Claude Sérillon states this person's name right at the beginning of the question (cf. Broth, 2006). This action of verbally identifying the next speaker immediately touches off a recurrent and systematic action sequence in the production work, which is represented in Table 1 (where grey shading represents actions in the studio interaction, and no shading represents actions by the production crew).

Table 1 is based on insights gained from a number of previous studies (presented in Broth, 2004, 2006, 2008a,b) as well as a slightly more cursory analysis of all remaining cases (totaling more than a hundred cases) of introductions of new interviewees in the overall corpus. It describes how each action in the studio leads to a normative expectation of specific responsive actions by the team, that are thus, if not “conditionally relevant” (Schegloff, 1968), at least relevant upon the occurrence of a particular action in the studio.³ Unfortunately, in the interest of text length a more detailed discussion of Table 1 is impossible here.

In the first extract (1) of the analyzed sequence, the moderator addresses a new interviewee. However, unusually, he does this *without* stating his name, which, as we shall see, soon leads to a collaborative search for the new interviewee by the crew.

³ Cf. Deppermann and Schmitt (submitted) on “anticipatory initiatives,” that may be relevant as next actions but are not analyzable as relevant in the “conditional” sense.

Table 1

Interlaced sequence organization for introducing a new interviewee in the studio interaction and in the interaction within the production crew.

A. The moderator takes the turn and addresses a new interviewee

1. Simultaneously relevant actions: The director puts the currently available close-up shot of the moderator on the air; the production assistant announces the name of the new interviewee and the name of the camera operator who is supposed to shoot the new interviewee; this camera operator produces a close-up of the new interviewee. If relevant, another camera operator produces a second close-up of the moderator from another angle, and the camera operator who covered the moderator until then may abandon his close-up in favor of another shot.
2. The director puts the close-up of the new interviewee on the air as soon as, or shortly after, it is stabilized (i.e. presented as “broadcastable”) by the camera operator.

If the moderator's question comes to an end and the interviewee begins answering while the close-up of that participant is on the air, the team skips actions 3–4.

3. The director switches back to a close-up shot of the moderator, which now has to be from a complementary angle to that of the new interviewee.

B. The moderator finishes his question and by doing so selects the new interviewee as the next speaker.

4. The director switches to the close-up of the interviewee.

C. The interviewee begins answering.

5. The director “holds” the close-up of the interviewee; the technical assistant inserts the name key of the new interviewee onto that shot.
6. After a few seconds, the technical assistant deletes the name key, and the director is free to choose other shots.

- (1) RR030610-R2 [22:58:37–22:58:51]. Participants in the studio: Robert Malley (RM), Miguel-Angel Moratinos (MM), Claude Sérillon (CS), Camera operators 1–5 (Ca(n)); Participants in the control room: director (Dir), production assistant (PA), technical assistant (Teca), journalist (Jou). Switches between the shots of camera 1–5 are transcribed on a separate line (introduced by “sw”). Distant studio talk is represented in grey characters, control room talk and other actions within the team in black characters; translation in italics. See Appendix for further transcription conventions.

1. RM: *qui s'était finalement-, (0.2) et à petits pas,
who had finally-, and bit by bit,
2. sw 1*2 ((clearly hearable clicking sound))
3. RM: réen{ g a g é d e p u i s[:]}depuis une semaine].
reengaged since since a week
4. CS: [.} H H H H H H H H] H alor*s,\=
so 2*3
5. sw
6. Dir: {°c'est bien les enfants:°}
it's good my children
7. CS: processus de paix:, feuille de rou:te,
peace process, road map,
8. CS: plantu: euh:: nous a:: (0.2) { illustré ce plat}eau:t
Plantu ehm has decorated tonight's studio for us
9. PA: {ah ON VA REMETT' LE DESSIN}¿
okey we will put in the drawing again
10. CS: euh:: l'eu{R O p e e s t T O }ta* euh=
ehm:: Europe is tota- ehm
11. sw 3*6
12. Dir: {ouais j'avais le passer}.
yeah I'll put it on the air

13. CS: =semble totale{ment a b s e n t e,}=
 seems totally absent
 14. Dir: {(attends x) c'est ça}=
 wait x is that it
 15. CS: {de quelqu'e cho*se, qu'elle avait pourtant} initi{é.
 from something that it had nevertheless initiated



((Bank of screens at #, line 17))

16. sw 6*((dir inserts shot of drawing)) . . .__((cont. 1.33))
 17. Dir: {=:} {c'#=}
 18. TecA: {(°ouais:° x x x)}
 yeah x x x
 19. MM: { (0.9) alors},\
 well
 20. Dir: {=est qui là.
 who is it now
 21. PA: { (0.2) je sais PAS= }
 I don't know

At line 4, the moderator makes a clearly hearable inbreath and thus reflexively accomplishes that the guest currently speaking quickly finishes his turn. After mentioning that the famous French artist Plantu has made the illustrations in the studio this night – which occasions the insertion of one of the images by the production crew (lines 9–18) – the moderator turns to Miguel Moratinos, EU representative to the Middle-East, with what might be heard as a rather provocative statement,⁴ and not so much a question. The orientation to a normative rule for interviews, according to which an interviewee only has the right to speak after a question, might be manifest (*a contrario*) in the 0.9 pause that follows (line 19): visibly Moratinos did not at first project the end of the moderator's statement as a relevant place for turn transfer (cf. [Greatbatch, 1988](#)). As the example suggests, even though the precise moment at which turn transfer should occur is unclear, there is no question *who* the next speaker should be, as the moderator accountably selects the next speaker by directing his body (leaning slightly forwards), gaze, and talk to Miguel-Angel Moratinos. These phenomena are readily observable by co-present participants in the studio.

However, the way the moderator's turn is built, with no address term, and declarative rather than interrogative syntax, presents the production crew with some manifest difficulties. The situation is further complicated by the fact that the production crew is working to broadcast a shot of a drawing in the studio when the moderator first turns to the new interviewee. Although not visible in the video of the control room, the sound engineer arguably has trouble finding out that a guest is now about to speak and also who that guest might be, for he keeps Moratinos' microphone closed for quite some time after the beginning of this participant's turn (until the second syllable of "absente" (line 13), when the sound regains its usual volume). Also the director and those crew members that are placed in front of the screens in the control room, where there is at this stage both the "old" (from camera 3) and a "new" (from camera 4) shot of the moderator but not of Moratinos (see image of bank of screens between lines 15 and 16), are initially at a loss concerning the identity of the next speaker. This is publicly displayed (lines 17–21): "c'est qui là?" "je sais pas" (Who is it now? I don't know).⁵

These observations lead to some first conclusions regarding the particular character of the access that participants in the control room have of the studio. First, attending to it over a mediating interface of speakers and screens, the control room personnel has access only to those aspects of the interaction that these artefacts can represent. And inasmuch as both

⁴ But note the reformulation (lines 10–13) from "l'Europe est" (Europe is) to "l'Europe semble" (Europe seems), which manifests an orientation to a more neutral stance (cf. [Clayman, 1992](#)).

⁵ That this indexical expression is taken to refer to the next speaker and not to the current speaker, who is also visible on the screens, nicely supports previous claims about TV-production as prospectively oriented ([Relieu, 1999](#)).

sound and vision are actively and accountably produced (cf. Macbeth, 1999) by other members of the production crew (sound engineers and camera operators, respectively), they can only perceive what these members of the crew produce for them to hear and see. If, as in the beginning of the extract, there is no sound or view of a participant, the doings and the identity of this participant can, at best, only be inferred. Second, it is clear that, in their inference work, members of the crew orient to the turn-taking system for interviews (Greatbatch, 1988) as a crucial contextual resource (Broth, 2008a). Although the spatially restricted close-up of the moderator effectively hides the recipient of his talk to the people in the control room, the moderator is treated as talking to *someone in particular*. The control room crew's efforts to understand who this person is also project the immediate relevance of a next turn from this, as yet unknown, participant. Identifying, localizing and producing a close-up of this participant thus becomes an urgent task for the crew.

The first suggestion as to the identity of the new guest comes from one of the bystanders in the control room. At the beginning of extract (2) a journalist, who has participated in the preparation of the show but who is now only watching it take form, states Moratinos' name (in line 24 below):

(2) RR030610-R2 [22:58:51-22:58:59]

22.MM: {(0.3) on n'est pas absente,
we are not absent
23.PA: {=:¿ (0.3) mais qu[i est la ca]}-
but who is the ca-
24.Jou: { [moratinos¿]}
25.MM: c'est toujours le:{ .hhh l'obsession.= l'eu }rope=
it's always the obsession Europe
26.Dir: {mora[t i n [o s ,] }
27.PA: { [ah ben d'a[cco :]rd,]\ }
oh alright
28.Jou: { [M O R A]T I]NOS}
29.MM: { = a b s e n t e + . }
(is) absent
30.PA: {>C'EST POUR TOI AMELIE:<},
it's for you Amélie
31.MM: .HHHH euh : : : *comme vous dites,=
ehm as you say
32.Cal: _ <.<.<.< < < < <
33.sw ((shot of drawing))*,,,,,,,,,,,,,,,,((dir takes away shot of drawing))
34.MM: =euh::: (le) l'eu*rope a initié la f*euille de rou@te,=
Europe initiated the Road Map
35.Cal: < < < < < < < (GP MM) +R
36.sw / / / / / / / / *6 6*1

As the journalist was not filmed, it is not possible to ascertain what made him understand that Moratinos is the current interviewee. One likely source is the very wide shot of the studio that is put on air for a couple of seconds, and where the direction of the moderator's body is clearly towards to right side of the studio. He might also have inferred from the subject of the question, which is "Europe", that the question is addressed to the participant representing the European Union. Whatever the case, the journalist's naming of the new interviewee leads the production assistant to cut off her turn in progress (line 23), and both she and the director immediately turn their visual attention to the left part of the bank of screens in front of them. As this is where the shots of cameras 1 and 2 are displayed in the control room, the collective head turn projects a response to the journalist's announcement by either of these two cameras. However, as neither of the two cameras pans to a close-up of the new interviewee (they produce instead shots of the artwork in the studio) during a brief moment of intense visual attention to these screens (right after line 24), the director reconfirms the identity of the new guest (line 26). As he talks, he turns to the other screens, and simultaneously the production assistant looks down and verbally displays that she has understood the identity of the new guest (line 27). By turning their attention to these different objects in the control room, the director and the production assistant accomplish distinctive tasks in dealing with the problem of the missing close-up, tasks that are predicative of their professional categories (cf. [Hester and Eglin, 1997](#); also [Deppermann and Schmitt, submitted](#)). The director looks for alternative next shots in the absence of a close-up of a new interviewee, and the production assistant checks from the drawing map

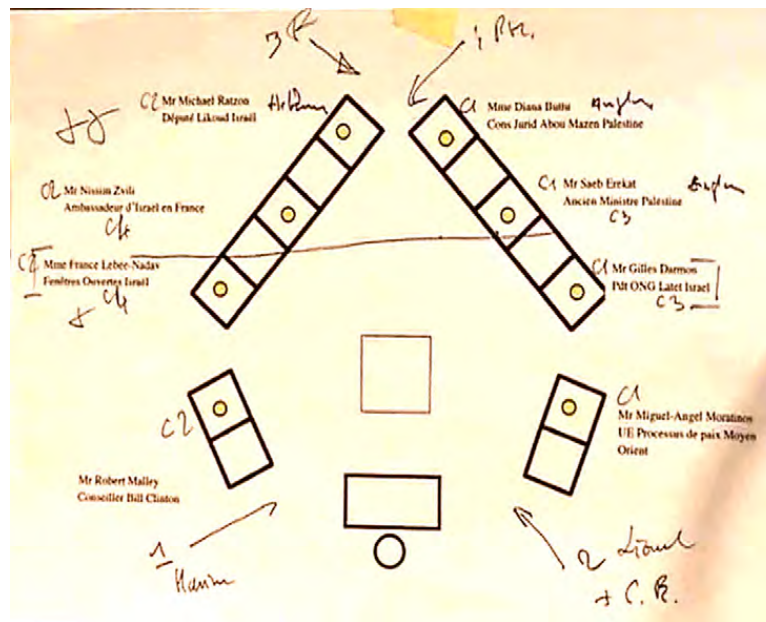


Fig. 4. Drawing of the studio, representing guests (as small circles in black squares and names), the moderator (as a bigger circle), and camera operators (by numbers, names and arrows in handwriting).

of the studio (Fig. 4) who is responsible for shooting Moratinos (see Goodwin and Goodwin (1996) on the practice of juxtaposition of different kinds of representations for accomplishing a specific task).

The production assistant identifies the relevant camera operator by “c’est pour toi Amélie” (It’s for you Amélie, line 30), and this can be heard by the entire crew. She raises the volume of her speech, which is a dimension of her action that the camera operators can perceive. As she leans slightly forward towards the microphone and gazes towards this camera’s monitor, she however also displays for her co-present colleagues through the mobilization of those multi-modal resources her orientation towards that particular screen and its operator.⁶ After a short while, the shot of camera 1 starts to pan (line 32). As an immediate response to the production assistant’s instruction, this panning movement projects a close-up of the speaking guest. This close-up is subsequently produced, and shortly thereafter put on the air (lines 35–36).

The above analysis of control room interaction provides a characterization of the audio–visual interface as it is exploited and oriented to by participants in the control room space. Control room personnel are potentially visually and aurally available to one another. Therefore, it is possible for them to see (directly or peripherally) and hear which area in the control room a co-participant is attending to at a particular point in time. They almost constantly direct their attention to the bank of screens in front of which they are seated, constituting it as their basis for accountable action. At particular moments, different parts and aspects of the bank of screens can be verbally or gesturally oriented to. This display, which is itself reflexively configured by the embodied multi-modal and sequential responses to it (because control room personnel continuously adapt their display of attention to the actions of the other members of the team), constitutes the very basis for their finely coordinated teamwork (cf. Heath and Luff, 1992b). In contrast, camera operators do not have access to the full multi-modality of the control room, as they can only hear what is said in that space (cf. Stokoe, this issue). Consequently, operators cannot perceive, but only infer, visual attention to their camera action by the control room personnel. Likewise, the participants in the control room can only infer that the image they see is actively produced by the operator (which is not always the case, as operators may at times look outside the viewfinder).

The control room deals with the distant studio space according to the affordances and specificities of the technological system, and for all practical purposes. Whereas camera operators may search for the relevant participant within the studio ecology so as to make a shot of her or him, the control room personnel urgently search for a *shot* of that participant *in particular screens*, so as to put this shot on the air. The question of “where” a relevant object is (and *what* it is) thus has different possible answers depending on whether you are in the studio or in the control room. In extract (2), the projected possible answers in the control room are “in screen one” or “in screen two”, and if the shot is not there, or projectably there by one of these cameras panning (Broth, 2008a), there is a problem that needs to be urgently solved. The way the

⁶ Cf. Relieu (2005) for a study describing mediated interaction as inevitably locally accountable.

close-up shot is collaboratively achieved — by the production assistant first identifying the relevant camera to shoot the new guest, after which that camera quickly finds and produces a close-up shot of him — nicely shows how these two locally relevant ways of localizing the new guest come together in the mediated work of the team.

2.2. Orienting to the 180° rule

In TV-production, there is generally an orientation to a normative rule for the sequencing of alternating shots of current interlocutors. This is to show shots of speakers from complementary angles, so that they be seen as positioned opposite and facing one another, rather than next to one another and side-by-side. Appropriate close-up shots of each interlocutor can be produced when alternating cameras are positioned on the same side of an imagined 180° line that passes through the two filmed persons. This orientation is visible already in the planning and organization of the studio space, where camera operators are assigned particular sectors of action, and interview participants are given particular positions relative to one another. There is one camera responsible for covering each of the two rows of possible interviewees (to make possible “listening shots” of likely opponents to the current interviewee, cf. Broth, 2008b), and two cameras for the moderator, only one of which is used depending on whom he talks to (see Fig. 4 above).

In extract (3), there is, unusually,⁷ a sudden concern that the camera currently filming the moderator is not the right one. This once more actualizes the questions of how the studio space is intelligible in the control room, and how space related problems are solved within the team:

(3) RR030610-R2 [22:59:04-22:59:12]. (Nine lines omitted from previous extract)

46. MM: =euh:: .hh{h h a : }:: [signalé à l'administr]=
ehm has signaled to the administra-
47. CS: [woa il faut faut dire fran@chement]¿=
woa one has to say that frankly
48. Dir: {c'est bien}.
that's good
49. MM: =ra]-
50. CS: =mo]nsieur bush a pas fran@chement=
mister Bush doesn't frankly
51. CS: {=envi[e, que l'euro]pe] vienn[e euh: : :=]
like that Europe comes eh
52. MM: { [(non non)] } [il faut il=]
no no we have we
53. Dir: {(° e n l è v e °.) }
take away
54. CS: [(.)et notamment la #{france
and especially France
55. MM: [=faut- il fa#{ut il faut retourner aoun : : au F A I t s. = }
have we have we have to return to the facts



((Bank of screens at #, lines 54–56))

56. Dir: #{heh C'EST PAS LA BONNE LÀ, pour euh::pour clau= }
hey it's not the right one, for eh for Clau=
57. MM: {et au faits c'est que pendant}:,
and to the facts it is that during
58. Dir: {=de hein.
=de right
59. PA: { (0.8) ah non¿}
no that's right

⁷ During approximately six hours of recorded TV-production, this only happens on two occasions.

73. Ca3: < < < < < < < < < < > > (CU Moderator)

74. Dir: {#NON::/\ (0.4) ta-- pour=}
no ta- why

75. MM: {le premier ministre britannique + ,}
the British Prime Minister

76. ((omitted here for presentational purposes))

77. Dir: {=quoi on est comme ça : : .
are we like this

As camera 3 finally produces a close-up shot of the moderator (line 73), it however soon becomes clear that it is filming the moderator from the very same angle as camera 4. Although this shooting angle is in fact visible already in the previous shot of camera 3, if one looks closely enough, this manifestly is not what the director – who may look for specific types of shots in the bank of screens rather than examine each shot in detail – had anticipated (cf. Broth, 2008a:922; also Heath and Luff, 1992a). As he pronounces (in line 74) “NON::\,” with a stretched rise-fall intonation that is hearable as “deceived,” he moves his head to the left, only to find once more, in screen 1, the close-up shot of Moratinos from the same angle as the moderator. He then asks, while turning to watch other screens, why they find themselves in that position. As it happens, the production assistant has just found out, and answers immediately, beginning at line 78 in extract (5):

(5) RR030610-R2 [22:59:19-22:59:33]. (The small images between lines 75 and 76 illustrate the transcription of Moratinos’ head movement and gaze in line 76.)


75. MM: {l e p r e m i e r m i n i s t r e b r i t a n n i q u e + , }
the British Prime Minister
- 
76. mm@@
77. Dir: {=quoi on est c@[omme ç a @: : .]
are we like this
78. PA: { >>@[c'est parce@ qu'il re]gar@de- mais c'est parce qu'il=
it's because he looks- but it's because he
79. pa @((points to screen)).....
80. MM: {d ' A U : t r e s , }
other people
81. PA: {=regarde pas@ v-}=
doesn't look to-
82. pa .1.....@2....((1=gesture half-circle, 2=stroke to the right))=
83. MM: { .H H@ H l ' i n s i s t a } n c e d e : d u q u a r t e t t e + Q U E : ,
the insisting from the the quartette that
84. PA: {=il re@garde pas claude, là }<<.
he doesn't look at Claude (there)
85. pa =.....@.....
86. MM: .HHHH euh:{ : pendant : : : l a g u e r r e d ' i r a q , = }
ehm during the war in Irak
87. Dir: {p'tain=
shit =ouais ou[ais. xx
yeah yeah
88. PA: =(tu vas voir).= [il tourne son rega:rd,}
you'll see he turns his gaze
89. MM: =et juste après on {a dit il FAUT avoir la fe }uille de route.
and just after it was said that we must have the Road Map
90. TecA: {(he[in c'est ÇA qui est faux) }}
yeah that's what's wrong
91. PA: { [là il le regarde (.) voilà]].
there he looks at him that's it
92. MM: {.) il FAUT: la publi*{cation >d'un feuille de route< .H=,}
we need a Road Map to be published
93. sw 1*3
94. PA: {et c'est mieux sur la quatre, hein?}
and it's better on four right

Fig. 5. Extreme point of PA's pointing and turning gesture, followed by a stroke to the right.

in which the production assistant produces her description accomplishes a simultaneous display of the *conclusion* of her visual analysis of the screens (verbally, that the guest is not looking at Claude) and the *argument* or *reason* for that conclusion (by means of the gesture, that he needs to turn his head in order to look at him). As the director only slowly shows that he is now seeing the logic of all this, the production assistant makes the argument verbally explicit further on in the sequence (lines 88–91).

A couple of moments later, we get a second occurrence of a description of the distant studio space by means of talk and a pointing gesture, extract (6):

(6) RR030610-R2 [22:59:56-23:00:04]. (22 lines omitted from end of previous extract)

121. MM: {0.2} et il s'est réveillé::, évidemment::, avec,=
and it has woken up, obviously, with
122. MM: =euh: UN premier mini:stre, avec la feuille de route,
one Prime Minister, with the Road Map,
123. MM: .hhh et une opportunité de paix:.
and an opportunity for peace.
124. MM: .hhhh j{e (ç a : :), je crois que : aujourd'hui,= }
I (that) I think that today
125. PA: {(en fait) (.) il @regarde les gens qui [# sont p@ar]là:}
(actually) he looks at the people who are over there
126. pa @..((quickly repeated points))...@
127. Dir: { [#OUAIS oua@is.] }
Yeah yeah

After a three-part list by the interviewee (lines 122–123)⁸ the production assistant comments on whom the guest looks at when he does not look at the moderator (line 125). Also this time, the initiation of her utterance accomplishes that the director turns to the left, where he then visually can find her pointing gesture, again of a rather complex design. This time, the gesture that is introduced right after “en fait” (actually) is not only a pointing but also a forward-beating one (line 126). It is performed in the direction of the monitor of camera 5, accomplishing the relevance of that particular screen for the understanding of the indexical expression “par là” (over there) that is to follow. And its forward beating character may be seen as reconstructing the spatial dimension of the studio to allow her to refer not only to what can be seen in that two-dimensional screen but also to those participants visible in it that are *the furthest away* (Fig. 6). Her complex gesture can thus be considered a method for precisely referring to a particular area of a screen that is too far away to allow a visual matching of the point and the pointed to object by the recipient. However, because the gesture is performed well before the verbal indexical expression, the director does not need to wait for the verbal expression to understand the production assistant’s emerging action, but can agree in anticipation of its subsequent verbal production (line 127).

The extracts analyzed in this section thus once again underscore that the local ecology of the control room, including centrally the bank of screens, can be oriented to and exploited by participants for dealing with distant studio space. The analyses show how the production assistant and the director can mobilize not only talk and gaze, but also rather elaborate forms of gesture to achieve a mutual understanding of, and to collaboratively solve, problems pertaining to locally relevant aspects of the studio space.

Just as in the search for the new interviewee analyzed in section 2.1, the production assistant and the director base their action on a particular way of seeing and understanding the bank of screens. Comparing the close-up shots of 1 and 4, they identify a problem regarding the 180° rule: the moderator and the current interviewee, who are assumed to be looking at each other, are shot from similar angles. Both the way the cause for the problem is formulated and how the participants then at first try to solve it, rest on seeing cameras 3 and 4 as a pair, constituting the two possible alternatives for shooting the moderator, and camera 1 as the only alternative for shooting the interviewee (“If the 180° rule is not followed, then it will have to be the other one of either camera 3 or 4”). That the team in the control room subsequently

⁸ Cf. Broth (2008a) on the relation between emerging units in the studio interaction and action coordination in the control room.



Fig. 6. Screen 5 at “#”, lines 125 and 127.

was proven wrong regarding what camera to use underscores that it does not itself have a direct access to the studio space that it is working to represent in the broadcast.

2.3. *Interacting with and directing camera operators*

Having understood that the 180° rule is after all followed in the visual representation of the current studio interview, the control room personnel face a new problem: as a result of the search for the adequate shot of the moderator, there are now two cameras covering this participant, which is not an optimal use of the five cameras in the studio. The problem is to decide which one to keep, and to direct the other away from the moderator. At line 94 in extract (5) above, the production assistant initiates the topic of choosing between the two shots as she judges the shot of camera 4 to be the best, which however does not get any immediate uptake from the director.

There is, however, a reaction to the production assistant's assessment elsewhere: the monitor of camera 3 displays a “camera nod”, whereby that camera's operator arguably attempts to express agreement with the production assistant's immediately prior action and confirm her analysis (cf. Broth (2004) on the importance of timing for action constitution in TV-production). Unfortunately, the “nod” is produced as this camera is on the air, and the director treats it as a camera accident, hastily switching away from its shot (lines 96–98). As there is subsequently no audible reaction in the control room to the “nod” and as the director has just shown operator 3 that he could indeed still choose his shot for covering the moderator, reasonably then, operators 3 and 4 cannot at this point really know whether the control room understands the studio ecology in a relevant way, and which camera it has chosen for the moderator.

We have to wait for a couple of moments until the director treats this situation as problematic. At the beginning of extract (7), he addresses the camera operators 3 and 4:

(7) RR030610-R2 [23:00:07-23:00:19] (2 lines omitted from end of previous extract;)

130. MM: .HHH{#HH °euh° enCORE? ça nous: euh: DONNE= }
ehm still this euh gives us



((Bank of screens at #, lines 130 and 133))

131. Ca3: (CU Mod)

132. Ca4: (CU Mod)

133. Dir: {#c'est les deux caméras qui doivent croiser,=
it's the two cameras that should cross (angles)}

134. MM: {=euh::::: l'obligation et la respons} a b i l i t é : },
 ehm the obligation and the responsibility

135. Ca³⁺: , _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _ / _

136. Ca4:

137. Dir: {=là:: entre:: bertrand et pierre-alain & (0.3) vous êtes PAS-/ .HHH}
there between Bertrand and Pierre-Alain you are not

138. MM: { .HHHH de : redoubler, nos nos efforts : ? = }
to multiply our our efforts



((Continuous shot of camera 3, here and below))

139. Ca3: , _ , _ , _

140. Ca4:

141. Dir: {(0.2) euh:: .HHH je- JE SUIS SUR LA[QUATRE] , } =
 ehm I I am on four

142. PA: { [(ils sont-)] }
 they are

143. MM: {=euh : : : cet après-midi , on a été } : , =
ehm this afternoon, we went



144. Ca3:

145. Dir:={ber[TRAND t'es libre.] =mets-toi sur l'aut'}
Bertrand you're free cover the other

146. PA: { [presque presque]les+.=
almost parallels }

147. MM: =eh:: nous-mê{ : m e s + , /\ }
eh our-selves



148. Ca3:

149. Dir: {faut que je vous}=
I have to say it

150. MM: { . H H H l' admini}strati{on e u r o p é e } n n e , /\

the European administration



151. Ca3: . < . < . < < < < < / / / / / > >

152. Dir: {=dise effectivement}. {mais PAS SUR LUI?}
to you that's true but not on him

From where he is in the studio, the only other person (“l’aut”) that operator 3 can make a facing shot of is the current interviewee (that it is however never his task to cover!), and he pans to produce a medium shot of him (line 151). On the other hand, the director manifests, as he again looks at screen 3, that this was absolutely not what he had in mind (line 152). This misunderstanding suggests how understanding relevant objects in the studio space is contingent on the perspective and kind of access of the actor. Talking to the operator as the operator slowly pans back to the right (154), the director explains that he wants, instead, a shot of some listening guests in the studio, placed opposite the speaking guest and looking at him (the production assistant also aligns with this understanding, lines 155–160). During

this directed and collaborative search for the next shot, the director and the operator mutually adjust their actions to the verbal and visual contingencies, respectively, of the emerging action of the other. The director delivers his referring expression while the operator slowly pans and at first tentatively stabilizes his shot on the moderator at a point when the director's verbal description is not yet complete (ends of lines 154–155). The director also anchors the spatial indexical expression “CEUX D'EN FACE” (those opposite, lines 155 and 159) in the operator's just abandoned shot of the current interviewee, thus making the recent past of the shot sequentially relevant.

Insofar as the director's talk is reflexively related to the dynamic shot he sees on the screen before him, the camera operator, in order to be able to produce that talk's situated meaning, has to take into account what his camera is currently showing the director. In this sense, the operator not only *sees* with his camera (cf. Macbeth, 1999), producing a public visual analysis of studio relevancies for his specific practical purposes, but he also *hears* with it, using it for the reflexive display of the way he hears the control room talk. The operator's shot is thus an accountably and interactionally accomplished dynamic visual space, that the participants can use as a shared contextual basis for accomplishing reference to objects in the studio space (cf. Mondada, 2007).⁹

3. Conclusion

While producing a TV-interview, the control room personnel do not have direct access to the studio space. Instead, they have to understand what is happening in the studio space and accomplish their professional work tasks by seeing through screens and hearing through speakers. This study has shown how the members of the team, in interaction and over the mediating technological interface, can achieve such an understanding, and relevantly deal with the studio space for the purposes of the live broadcast of the studio interaction in an intelligible way.

The detailed description of the ways in which the control room personnel accomplish and solve locally emerging professional tasks and problems constitutes a good argument against the “bucket theory” (see e.g. Drew and Heritage, 1992:19) of space, according to which action merely takes place in a space that sets the boundaries for it. In one sense, it is clear that the director, the production assistant and others are, physically, in a control room. This fact, however, does not further our understanding of the dynamic ways in which participants *interactively shape* locally relevant spaces for their action. Not all aspects of the control room, not even all the screens before the production assistant and the director, are always locally relevant. Instead, the participants, using embodied resources such as talk, gaze, pointing, and even body posture, sequentially configure locally relevant spatial and visual contexts for the interactional accomplishment of intersubjectivity and relevant tasks (cf. Goodwin, 2000; also Kendon, 1977:198).

The bank of screens is, of course, a crucial resource used by the production crew for achieving a common understanding of the distant studio space in TV control room interaction. The analyses reveal some fundamental aspects of how the control room personnel structure and make sense of visually available phenomena, i.e. their “professional vision” (Goodwin, 1994; cf. also Heath and Luff, 1992b). This way of seeing concerns the overall shape of the bank of screens as well as the shot that is visible in each of the screens. The overall shape affords the participants a possibility to display their attention to a particular area in it. The bank of screens is treated as structured in pairs (both as screen 1+2 and 3+4 and relevant paired combinations of one of each of those pairs), which are differently oriented to depending on what aspects of the studio space are relevant to their current practical problem. Moreover, the shots that are visible in each screen are crucially treated as indicative of accountable operator actions, rather than mere representations of the studio. Through their shots, the camera operators can thus participate in the collaborative building of a common understanding of relevant studio space in the control room. This is true regardless of whether or not they keep a shot steady to allow talk about it and precise reference to what it shows, or move their cameras to reflexively and sequentially respond to both control room talk and the unfolding studio interaction.

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⁹ The way that operator 3 is subsequently able to produce the asked-for shot (not shown in transcript) indicates that his position in relation to the guests that he is supposed to shoot might not be fully understood in the control room. Unfortunately, this analysis cannot be developed further here.

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Appendix. Transcription conventions

Except for the conventions used for transcribing aspects of the technological system, these transcription conventions draw from the system originally developed by Gail Jefferson (see, for example, [Clayman and Heritage, 2002](#), for a more explicit presentation).

Mod:	moderator
Ca(n):	camera operator(n)
Dir:	director
PA:	production assistant
pa	lower case indicates author of non-verbal action
[]	overlap
{ }	simultaneous events in the studio and in the control room
(.)	micro pause (0.1 s or less)
(n.n)	timed pause in seconds and tenths of seconds
=	latching (no pause and no overlap)
.	falling, final intonation contour
,	“continuing” intonation contour
ˆ	clearly rising intonation
?	high rise
/	rising intonation on last syllable
\	falling intonation on last syllable
--	unfinished intonation unit
°words°	words pronounced more silently than surrounding speech
<words>	words pronounced more slowly than surrounding speech
>words<	words pronounced more quickly than surrounding speech
WORDS	words pronounced louder than surrounding speech
wo-	cut-off word
.hh	breathing in, each “h” corresponding to 0.1 s
:	lengthening of sound
*	exact location of switch
(n)*(n)	switch from camera (n) to camera (n)
=R	“le Rouge” (red light), image on the air at the beginning of an extract
+/-R	image that goes on, or leaves, the air
...	camera movement/gesture towards object
,,,	camera movement/gesture away from object
<<<	zooming in
>>>	zooming out
—	steady shot
CU	close-up
(Gue)	participant shown in shot

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