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Handling troubles with discretion: Transforming informings into announcements in a control room behind a mixed-reality performance

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ABSTRACT

People often encounter troubles, which in co-present situations may involve the assistance of others. We investigate how a control room uses a particular division of labor to notice and handle troubles within a mixed-reality live performance: Monitors (tasked with noticing troubles of performers outside the control room) only *inform* directors about troubles; directors then may *announce* those troubles to performers (how to resolve them). We present two key findings: First, although informings typically contain trouble-formulations, these are often absent from the announcement, which allows directors to focus on the progressivity of the performance rather than topicalize the responsibility of trouble or the recurrence of the trouble. Second, directors avoid attributing responsibility for the trouble either by adopting agent-less formulations or by aggregating agency. Together, these practices allow directors to handle troubles “with discretion.” Data are in English.

People often encounter troubles as part of what they are doing. When people are talking to one another, the organization of handling troubles of speaking, hearing, and understanding is known as “repair” (Schegloff et al., 1977, p. 361). When people are engaged in other practical courses of action, the organization of handling troubles may be referred to as “recruitment” (Kendrick & Drew, 2016) or “assistance” (Kendrick, 2021). In many cases, handling troubles may be heard as doing *other* actions, such as complaining, blaming, or accusing (Jefferson, 1987, p. 88). To minimize this, others may design their handling in such a way as to keep these possibilities “off the conversational surface . . . to correct with discretion” (Jefferson, 1987, p. 100). It is this phenomenon we explore in this article.

There are many different dimensions in the organization of handling trouble. Two important questions concern *who* handles trouble and *where* the trouble is handled (Schegloff, 2000, p. 207). With respect to the first, Schegloff et al. (1977) highlighted the fundamental distinction between self and other in the initiation of repair. With respect to the second question, Schegloff et al. (1977) showed that repair-initiation can occur in the same turn as the trouble source, in the next turn, or in the turn after that. Similarly, Kent and Kendrick (2016) distinguished between directive imperatives that precede, coincide, or follow the trouble source—that is, the relevant action.

The focus of this article is a third dimension: *How* is the trouble handled? Participants have various alternatives available in handling trouble. In their work on repair, Schegloff et al. (1977, p. 369) highlighted that there are different types of other-initiated repair, which differ in their “strength” to locate a repairable. For example, open class repair initiators, such as *sorry?* or *what?* are the weakest in terms of their capacity to locate a repairable (Drew, 1997, p. 72). Jefferson (1987) distinguished

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between two different devices for doing other-correction, which she termed “exposed” and “embedded” correction. And in their research on recruitment, Kendrick and Drew (2016) described a continuum of methods (from verbal requests to embodied projections) that differ in how the trouble becomes recognizable and is handled.

The choice of method may have interactional consequences, in particular, in cases in which others handle a trouble of self, such as other-initiated repair (Schegloff, 2000) or other-initiated assistance (Kendrick, 2021). There is a vulnerability in the other handling trouble, because what other is doing may be taken not just as handling the trouble (thereby helping with the progressivity of the talk/practical course of action) but also as other attributing responsibility of the trouble to self. As Robinson (2006, p. 139) put it, “other-initiated repair is vulnerable to communicating a stance that responsibility for trouble belongs to the speaker of the talk that inspired the repair-initiation.” Similarly, Kent and Kendrick (2016, p. 284) noted, “any imperative directive that occurs after the relevance of the directed action has been established is vulnerable to being heard as holding the recipient accountable.”

Handling troubles can be a risky business. Hence, designing assistance to minimize the possibility of holding the other responsible or accountable and, instead, “to focus on restoring progressivity to the directed course of action rather than topicalizing a transgression” (Kent & Kendrick, 2016, p. 272) may be preferable. To keep “issues as incompetence and/or impropriety off the conversational surface . . . to correct with discretion” (Jefferson, 1987, p. 100) weighed heavily in our particular setting of interest.

This article is based on video-recordings from a control room behind a mixed-reality performance, in which performers on the streets of a city are video-streaming to a live online audience. One key purpose of control rooms is to notice and resolve troubles outside of the room (C. Goodwin & Goodwin, 1996, p. 86; Suchman, 1993, p. 115). Kendrick (2021, pp. 79–80) argued there are three essential steps to handling troubles: recognizing the trouble, generating a possible solution, and implementing the solution. Although in everyday situations these are contingently distributed over self and other, in our control room, these are fixed and split over three people: One person, the monitor, is tasked with monitoring a single performer for trouble outside the control room. He or she can recognize trouble, and tell people inside the control room about it. However, the monitor has no means to communicate with the owner of the trouble, who is outside the control room (the specific performer). Instead, monitors have to communicate with someone inside the control room who can, in turn, contact people outside the control room: the director. The director is tasked with directing and managing the performance. He or she can use a walkie talkie to talk to the owners of the trouble outside the control room, the performers, and tell them how to handle the trouble. However, the director being inside the control is removed from the place where the trouble occurred. So, the director cannot implement the possible solution. Only the performers outside the control room can.

We investigate how informings by monitors to the director about troubles outside the control room are transformed into announcements by the director to performers outside the control room (how they should resolve those troubles). This was also the focus of M. H. Goodwin (1996), who investigated how informings in the operations room of an airport are transformed into announcements going out of the operations room to ramp crew on the ground (Figure 1).

Goodwin was interested in differences in prosodic features and found that informings are delivered as a single intonation unit, whereas announcements are delivered in three intonation units (as they will be heard outside the operations room in circumstances unknown to the speaker). We are investigating how monitors’ informings are transformed into directors’ announcements to handle troubles with discretion. Figure 2 depicts an example from our data in the format of Goodwin’s diagrammatization (Figure 1).

In this example (which we will discuss in Extract 1) the runner, Emma, who is on the streets outside the control room, has zoomed in her camera too much, making it difficult for the online audience to see anything (Figure 2, 1). The monitor therefore informs the director: *Emma’s zoomed in again* (Figure 2, 2). The director then makes an announcement on a shared radio channel to the performers outside the control room. However, the director does not simply repeat what the monitor has said, but transforms this into: *This is Hannah to Emma, can you please zoom your camera back out. Thank you* (Figure 2, 3). There are a number of aspects this transformation. First, a change from trouble-

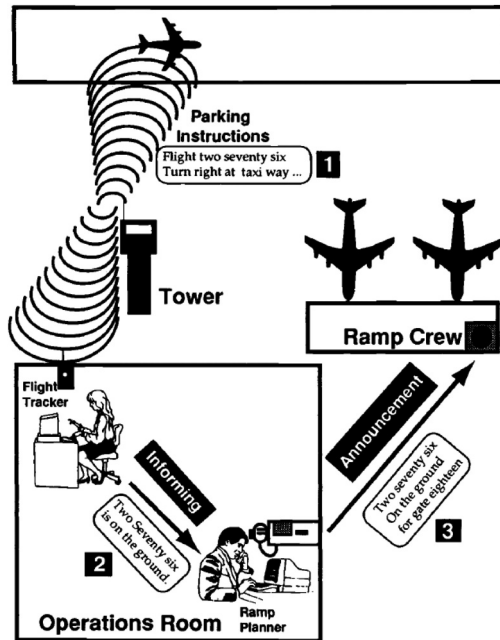


Figure 1. Transforming an informing into an announcement (M. H. Goodwin, 1996, p. 438). Note. The image is reproduced with grateful acknowledgement from Cambridge University Press through PLSclear.

formulation to solution-formulation (Kendrick & Drew, 2016). That is to say, whereas the monitor talks about a trouble (zoomed in), the director presents a solution (*please zoom your camera back out*). Second, whereas the monitor topicalizes that this trouble has occurred before (again), this is not mentioned by the director. In so doing, the director's announcement focuses on the progressivity of the performance, rather than topicalizing the responsibility of trouble or the recurrence of the trouble.

We focus on instances of a monitor-informing leading to a director-announcement and present two key findings: First, as just exemplified in Figure 2, the informings of monitors to directors almost always have a

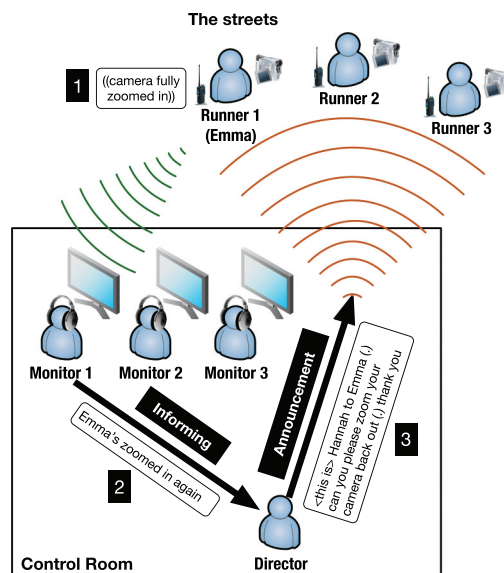


Figure 2. Transforming an informing inside the control room to an announcement to runner(s).

trouble-formulation. However, when directors use the radio to communicate with performers, they almost always have a solution-formulation and only rarely a trouble-formulation. On one hand, this reflects the division of labor in the control room (monitors tasked with monitoring for trouble; directors tasked with resolving them). On the other, it points to how directors are trying to keep the question of the responsibility of the trouble implicit, “off the conversational surface.”

Second, there are two additional practices through which directors avoid attributing trouble-responsibility in their announcements. On one hand, in cases in which announcements still contain a trouble-formulation, directors employ “agent-less formulations”—that is, they formulate troubles as “unhappy incidents” that are not caused by an agent (Pomerantz, 1978); for example, *your stream has just gone down*. On the other hand, they “aggregate agency” (Lerner & Kitzinger, 2007)—that is, they transform monitor’s informing about a specific performer to an announcement addressed to all runners. Both of these allow directors to avoid attributing responsibility for the troubles they mention in their announcements (or that could be inferred from their announcements).

Background

This article draws on two main areas of prior research: research on how people attribute responsibility to others in relation to troubles and research on how control rooms handle troubles.

Troubles: Responsibility and solutions

The inspiration for our title comes from Jefferson’s (1987) research on how others can correct with discretion, which she developed in her discussion of two forms of other-correction: “exposed” and “embedded” correction. For exposed correction, a speaker produces some object (X), a subsequent speaker produces an alternative (Y), and then the prior speaker accepts that alternative (Y). This form of other-correction makes correcting the “interactional business” (Jefferson, 1987, p. 88), as progressivity is halted. This can lead to other “attendant activities,” such as instructing, complaining, accusing, or apologizing. In other words, this format does not only correct but may address “lapses in competence and/or conduct” (p. 88). In contrast, embedded correction is done by subsequent speaker simply using an alternative word (e.g., a change from *police* to *cops*, Extract 14). Here, correction is done “as a by-the-way-occurrence” (Jefferson, 1987, 95)—that is, does *not* become the interactional business at hand and does *not* topicalize responsibility. It thereby keeps “issues as incompetence and/or impropriety off the conversational surface” (100). This format, as Bergmann and Drew (2018, p. 22) put it, “accomplishes correction without drawing attention to ‘correcting,’ without disturbing the progress of the talk, so that it barely causes a ripple on the surface of the interaction . . . correction remains untropicalized and hence discreet.” It allows, “the opportunity to correct with discretion” (Jefferson, 1987, p. 100), just as in our case.

Robinson (2006), in a sense, generalized Jefferson’s remarks on exposed-correction and drew attention to “the structural vulnerability of other-initiated repair with respect to trouble responsibility” (p. 139). Robinson pointed out that other-initiation of repair is structurally vulnerable to communicating repair-initiator’s stance that trouble responsibility belongs to others. This is a consequence of Schegloff et al.’s (1977, p. 374) finding of the structural preference of self-initiation over other-initiation in repair—that is, the fact that “other-initiations regularly are withheld a bit past the possible completion of trouble-source turn” to allow the speaker of the trouble source to correct him- or herself. As a consequence, if other-initiated of repair does occur, it can also be heard as claiming that the opportunity for self-repair has been missed. Any instance of other-initiated of repair thus may “raise the relevance of a lapse in competence (i.e., a lapse of self-correction) by the trouble-source speaker” (Robinson, 2006, p. 140). Others may therefore try to find ways to minimize ways of either not attributing trouble responsibility, or at least not blaming self for them.

Issues of accountability and responsibility are also at the center of Kent and Kendrick’s (2016) investigation of imperative directives. They noted that there are different sequential environments for

these: Imperatives can precede, coincide, or follow, the relevance of the directed action. Imperatives that follow the relevance of the direction action can be heard as holding the recipient accountable. In other words, they can be heard as blaming the recipient for not having performed the directed action: “any imperative directive that occurs after the relevance of the directed action has been established is vulnerable to being heard as holding the recipient accountable” (Kent & Kendrick, 2016, p. 284). Kent and Kendrick (2016, Extract 4) provided an example in which participants are engaged in a family meal and a child, Emily, says *bon appetit*, which marks transition from serving to eating. However, Emily transforms this into an activity in its own right, singing *bon appetit* and thereby delaying the meal. So mum interrupts Emily with the imperative directive, *eat*, which is repeated because Emily continues with her performance. Although Emily is not explicitly held accountable, the prosodic stress with which mum says *eat* indexes accountability for the prior nonperformance of the directed action. Such directives explicitly tell the recipient to do something, “but they also tacitly treat the recipient as accountable for not having already done so” (Kent & Kendrick, 2016, p. 276).

Pomerantz (1978) also investigated attributions of responsibility, although in the context of blamings. She noted that to attribute responsibility requires “formulating an actor-agent” (p. 118) and remarked on types of report, which she called “unhappy incidents” that do not involve an actor-agent—that is, they “are shaped as reports of ‘events that happened’ rather than actions performed by actor-agents” (p. 117). She gave the example of *It blew up* (Extract 2). Pomerantz showed how, in order to allocate blame, participants treat unhappy incidents as a consequence of antecedent incident, which does have an actor (and therefore can be blamed). In our data, we find directors formulating trouble without an actor-agent—that is, as “agent-less.”

In their study of repairs to self-reference, Lerner and Kitzinger (2007) detailed two repair operations: extraction of an individual from a collectivity (e.g., repair from *we* to *I*) and aggregation from an individual to a collectivity (e.g., repair from *I* to *we*). They then analyzed aggregation as an interactional resource and noted that aggregation allows “a shift of responsibility authority” (Lerner & Kitzinger, 2007, p. 546), from an individual to a collectivity. They gave the example of a call from a clergyman to a parishioner. The clergyman makes a delicate request (for the parishioner to befriend a woman who, like her, has had a young adult die). It is in the course of making the request that a self-repair from *I* to *we* is made. The request is formulated as involving more people than the speaker, “thus broadening the scope of responsibility—and thereby perhaps attenuating individual responsibility” (p. 547). In our data, we also find moments of aggregation, which thereby attribute trouble responsibility to all performers, obscuring individual responsibility.

Finally, although they did not deal with trouble responsibility, Kendrick and Drew (2016) introduced an important dimension in the organization of trouble: a distinction between trouble-formulation and solution-formulation. They noted that it is not just a question who initiates recruitment for assistance, but also who provides a solution. For example, reports can be done in different ways, “those that formulate a solution to a trouble (e.g., *I need that pen back actually*) and those that formulate a trouble or difficulty (e.g., *I need to plan my Shakespeare lesson*) for which the recipient may generate a solution” (Kendrick & Drew, 2016, p. 6, footnote 1). In those cases in which self only formulates or indicates the trouble, the trouble still needs to be generated by other: “Other must generate this independently” (p. 11). This is one of the key transformations in our data.

Control rooms as places that handle troubles

There is a long tradition of ethnomethodological and conversation analytic studies of control rooms. Two are particularly important for this project: a study of an airlines operations room in the United States (e.g., Brun-Cottan, 1990; Drew, 1997; M. H. Goodwin, 1995, 1996; C. Goodwin & Goodwin, 1996; Suchman, 1993) and a study of London Underground control rooms in the United Kingdom (e.g., Heath & Luff, 1992, 1996; Luff & Heath, 2002; Luff et al., 2000).

Suchman (1993) characterized control rooms as “centres of coordination” which have to (1) manage and distribute activities, (2) deal with “an indeterminable horizon of troublesome contingencies” (p. 115), and (3) do so for activities distributed across substantial distance, often in a rapid

manner. In other words, as soon as people in the control room become aware of a problem, they will try to remedy it (C. Goodwin & Goodwin, 1996, p. 86).

These studies have highlighted that control rooms are characterized by a division of labor. For example, in the London Underground, there is a line controller who is tasked with managing the railway and a division information assistant (DIA) who is tasked with communication with passengers and station managers. This division of labor is reflected in the spatial organization of the control room (Suchman, 1997, p. 53). Nevertheless, because control rooms are open spaces (due to the absence of walls), workers in the control room have access to what others are doing. This allows for what Heath and Luff (1992, 1996) have termed “surreptitious monitoring”: While engaged in one activity, workers can simultaneously notice what others are doing.

Most relevant for our research is previous research on the communication within and out of the control room. Previous research has highlighted the diverse range of communication, including between workers within the control room (and people coming into the control room) and between parties inside and outside the control room—which, in the case of the London Underground, includes train drivers, station managers, and passengers. There is also a different media of communication available, which includes voice within the control room and various technologies, such as telephones, radios, walkie talkies, and loudspeakers.

Luff and Heath (2002) described the radio system used in London Underground, which queues incoming calls and therefore allows controllers to identify callers and choose which calls to answer (or to make their own calls). This has a strange consequence—namely, that “the controller, and only the controller, ‘makes calls,’ even when ‘answering’ requests for calls” (p. 345). They also note that callers identify themselves, or are identified, not by name but by number.

Brun-Cottan (1990) investigated a different communication technology, which is similar to the one used in our study: walkie-talkie communication via radio. Walkie talkies are typically unidirectional (= half duplex)—that is, transmitters can speak but cannot hear until they stop broadcasting (phone communication, in contrast, is full duplex: Parties can talk simultaneously). Communication over walkie talkie typically involves a shared channel, so it is not clear who is speaking to whom. Consequently, most utterances start by identifying the speaker and recipient. Brun-Cottan gives the example of *Ops = maintenance*, which first identifies the recipient (Ops), then the speaker (maintenance). In our data, participants employed the reverse logic, by first identifying the speaker, followed by the recipient. Finally, Brun-Cottan (1990) highlighted an important aspect of walkie-talkie communication: Speakers cannot see what recipients are doing; for example, recipients may be occupied, be on the phone, or speaking on another radio. In other words, “the initial summons may arrive in an environment where it competes with other constraints of which the caller is unaware” (Brun-Cottan, 1990, p. 283). In our case, although the control room can often see the recipients, there is a time delay to what they are seeing.

As indicated in the introduction, we follow M. H. Goodwin’s (1996) study of the transformation of informings into announcements. In her example (reproduced as Figure 1), the tower gives parking instructions to pilot of a plane. This is heard by the flight tracker inside the control room (over a loudspeaker next to the tracker’s desk). The flight tracker then makes an informing to the ramp planner inside the control room (*Two seventy six is on the ground*). This is then transformed by the ramp planner to an announcement to the ramp crew outside the control room (*Two seventy six. On the ground. For gate sixteen*). Goodwin focused on differences in prosody. Informings are delivered with raised volume and higher pitch than other talk in the control room, allowing them to be heard over the “sonic soup” in the control room. It also addresses the lack of visual access, as speaker and hearer are not always looking at each other (but are focused on their screen). In contrast, announcements have a three-part structure: flight number of the plane, the phrase *on the ground*, followed by the gate the plane will be arriving at. These announcements are designed to be clearly heard by people engaged in other activities in often noisy environment—that is, to deal with the problem outlined by Brun-Cottan (1990).

Finally, previous studies have shown that there are many different participation frameworks in control rooms. In the case of the London Underground, for example, line controller to DIA (inside control room), line controller to train drivers, DIA to station managers, and DIA to passengers on platforms. In the case of the ground operations control room in the airport, we have tower to pilot

(heard over loudspeaker), flight tracker to ramp planner (inside the control room), and ramp planner to ramp crew. It is not just that there are multiple participation frameworks but, more importantly, that one utterance may be relevant *simultaneously* within two participation frameworks. For example, a controller talking to the driver is also heard, and acted on, by DIA (Heath & Luff, 1996, p. 103). Similarly, the ramp planner making an announcement to the ramp crew is also ratifying that they have heard the informing from the flight tracker (M. H. Goodwin, 1996, p. 439).

The setting

Our study is based in the control room of a mixed-reality game/performance called *I'd Hide You* (Reeves et al., 2015, 2024), a touring work by the artists' group Blast Theory.¹

I'd Hide You involves three performers ("runners") on the streets of a city. Each runner carries a camera and live-streams to the internet while being watched by an online audience, who we'll call "players." These online players can see the current location of the three runners on a live map (Figure 3) and can also actively participate in the game/performance via a text chat feature of the game's web interface.

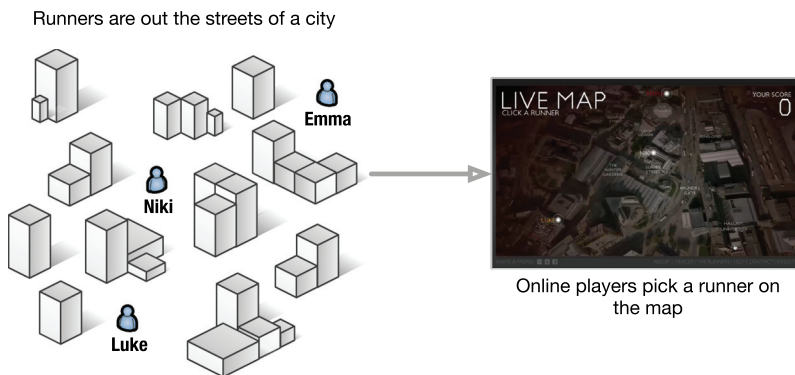


Figure 3. Runners on the streets of a city.

The three runners are playing a game of "hide and seek" with each other on the streets, where they are trying to capture other runners with their camera. By clicking on a runner on the live map, an online player can choose to follow any of the runners. If a runner "catches" another runner in the viewfinder of his or her video camera, he or she must press a button on the equipment, which now allows the online players to "snap" that runner, thereby scoring points (Figure 4).

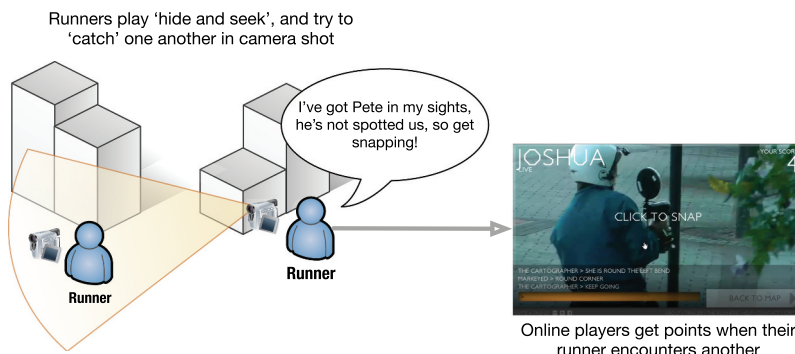


Figure 4. Runners playing "hide and seek."

¹A promotional video can be found at <https://www.youtube.com/watch?v=CdcvOXPg3j0>

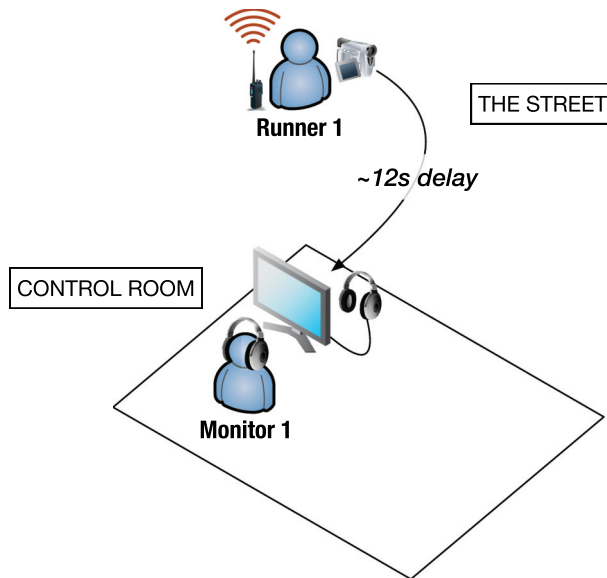


Figure 7. Monitor inside the control room observing performer outside the control room.

Monitors can only observe the runners outside the control room; they cannot communicate with them. So if a monitor notices a trouble (such as a microphone falling off, the video stream going down, the runner speaking too quietly, or the runner not framing the people they are talking to), the monitor will *inform* the director about this by talking to him or her inside the control room (Figure 8).

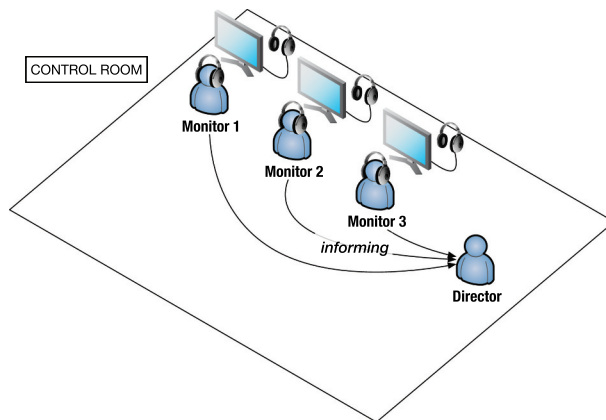


Figure 8. Monitors informing a director about something they have noticed.

Finally, if the director decides the trouble needs to be handled, he or she will use a walkie talkie to make a radio announcement, which will be heard by all runners (Figure 9).

Our focus is on the monitors watching the runner video streams and the director. However, there were other people present in the control room, for example, a technical director (placed behind the monitors), who performed various critical game tasks such as opening and closing the game sessions, ensuring game systems are running correctly, fixing technical problems; various helpers (who may be

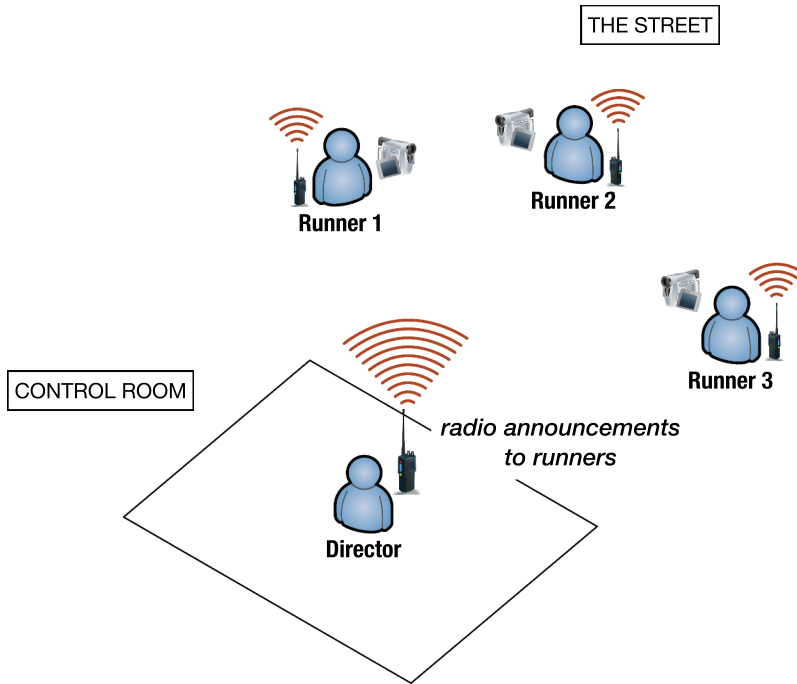


Figure 9. Director talking to runners outside the control room (via walkie talkie).

tasked with bringing items to performers outside the control room); as well as idle performers (there were three teams of three performers, only three performers were out on the street at any one time). See Reeves et al. (2024) for a more detailed description of the setting.

For the purposes of the article, the game/performance involves three key participation frameworks, which are heavily mediated by technology and are partially overlapping:

- *Performers - Online audience.* The online audience is watching the game/performance via a live stream. They can see what performers are showing with their cameras and hear what performers are saying into the camera. The online audience can also communicate with performers by sending text messages to their phones; performers were encouraged to engage with this online audience.²
- *Control room - Performers.* People in the control room are also watching the live video-stream of the performers. However, only the director can communicate with performers via walkie talkie. This is a shared radio channel: What the director says is heard by everyone with a walkie talkie. The performers have an earpiece, which allows them to hear announcements. As a consequence, if the director talks to performers, this is only heard by the performers, but not by the online audience. But if performers verbally respond via their walkie talkie (e.g., “Received and understood”) this utterance is transmitted *twice*, via the walkie talkie and via the live stream. So, it is not just heard in the control room via the walkie talkie but also by the online audience via the live stream. Consequently, there were very few explicit verbal acknowledgments from runners during the performance.
- *Monitors - Director (in the control room).* What monitors and director say to each other inside the control room is not available to performers outside it. Only if the director chooses to use the walkie talkie does he or she enter into a participation framework with the performers outside the control room. These announcements are, again, hearable in two participation frameworks: They

²During a team meeting between performers, monitors, and artists, the director described it in the following way: “Engage those people. Say their names. People love to hear their names. It’s really, really good. And when you call out to somebody and go ‘Hi’, don’t forget to say: ‘Hi, Ju’ or ‘Hi, Henry’ or whoever it is. Because then it’s like a direct line straight to that person. And it’s just like lovely. It’s like live radio. It’s beautiful.”

are addressed to the performers via the walkie talkie and they are also heard by everyone in the control room (and could be heard as acknowledging an informing by a monitor).

Materials and method

We conducted four days of fieldwork, during which we observed different phases of the game/performance: the training of runners (many of whom were volunteers from a nearby university, although some were professional performers), the rehearsal, and eventually the actual performance over two days.

We carried out ethnographic observations and interviews with people inside the control room as well as the runners. We also captured video inside the control room itself. We obtained informed consent from all participants, and the study design was approved by the University of Nottingham School of Computer Science ethics committee.

The data for this research consist of video fragments from the control room captured during the following phases of the four days: rehearsals that occurred during the first day for 90 minutes (three sets at 30 minutes); further rehearsals on the second day for 180 minutes (three sets of 60 minutes), although the final set switched over to live performance; and finally, on both the third and fourth day, 180 minutes of performance (three sets of 60 minutes).

We collected all *transformations* inside the control room, which consist of

- an initial *informing* inside the control room (about something outside the control room); these were typically done by a monitor, but occasionally by other people in the control room, and
- followed by an *announcement* by the director, broadcast via radio to the runners outside the control room (see [Figure 2](#)).

We found 90 informing-announcement pairs. Our collection only includes instances in which we had both an informing and an announcement. On the one hand, there were informings that were not followed by an announcement (e.g., there were cases in which the trouble resolved on its own or the director deemed the trouble as not important enough). There were also announcements that were *not* prompted by an initial informing; for example, when the director noticed a trouble and made an announcement without being prompted by a monitor.

In the analysis, we first describe the most apparent finding in our data: whereas 72 of the 90 informings of monitors contained trouble-formulations, only 28 of the announcements by directors contained trouble-formulations. So, the trouble-formulation was removed in 61% of the cases. Second, we investigate the 28 of the 90 announcements of directors that still contained trouble-formulations and show that the majority of these were formulated as agent-less. Third, we look at the second major transformation that we observed in our data, which consisted of aggregating agency (Lerner & Kitinger, 2007) and occurred 12 times. That is to say, whereas the monitor formulates a trouble attributed to a *specific* runner, the director then makes an announcement addressed to *all* runners.

Removing trouble-formulations

As noted, Kendrick and Drew (2016) distinguished between utterances that only formulate a trouble (thereby leaving the generation of the solution to other) and utterances that already formulate a solution to a trouble. Although the majority of the informings of the monitors contained trouble-formulations, these were often removed in the announcements by directors.

When the trouble the monitor informed the director about could easily be fixed, the director simply formulated the solution by *requesting* the performer to do something. In cases in which the trouble had passed and could no longer be fixed, the director *reminded* performers about something that they should always do. Finally, there was a particular class of troubles that had to do with the artistic nature of the performance but were not “mistakes”; instead, they were something the director *encouraged* performers to do.

Requesting performers to do something

The simplest transformation we observed consisted of a monitor formulating a trouble, but the director instead requesting performers to do a particular action. Extract 1, which is the transcript of Figure 2 in the introduction, provides an example.³

Extract 1. (D4P2; 21:28:35); “Emma’s zoomed in again”.



img.1

img.2

01 + (5.0) +
 m1 +watches emm's stream, it is zoomed in+
 02 M1 ++ (1.0) Emma's zoomed in #again +
 m1 +looks over screen towards dir, then back down+
 img #img.1 #img.2
 03 (1.2)
 04 DIR p'dun?
 05 M1 Emma's zoomed [in again
 06 ? [in again
 07 (1.2)
 08 DIR ((into radio)) <this is> Hannah to Emma (.) can you please
 09 zoom your camera back out (.) thank you
 10 (15.0) #+ (2.0) ++
 emm +zooms camera out+
 img #img.3.1 #img.3.2

img.3.1

img.3.2

One of the three monitors, M1, is watching the stream of the performer P1 (Emma) outside the control room (line 1) and notices a trouble in the performer's stream: Emma has zoomed the camera in too much. As a consequence, when she moves the camera from left to right, the motion is massively exaggerated, making it difficult for the online audience to see anything. In line 2, the monitor therefore looks over the screen to the director and simultaneously informs the director, *Emma's zoomed in again*. In other words, the monitor tells the director about a trouble, a trouble that has happened before (again). The director, who has been talking to someone else, initiates an open repair (line 4). This prompts the monitor (line 5), and someone else in the room (line 6), to repeat the utterance. The director then uses a walkie talkie to make an

³Our transcripts indicate screenshots depicting performers' camera view via a dotted border around the relevant stills. All other stills are taken from fieldwork video cameras operated within the control room.

announcement to the performers outside the control room⁴ *This is Hannah to Emma. Can you please zoom your camera back out? Thank you* (lines 8–9).

These announcements over the walkie talkie can be heard by anyone who has a walkie talkie—that is, all three performers, but also various helpers. This is why the director starts an utterance with a formulation of who the current speaker is and who the recipient of the announcement is (*This is Hannah to Emma*). Fifteen seconds⁵ after the director has made that announcement, the monitor's screen shows how the performer is zooming out (line 10).⁶

In terms of the transformation work, the monitor's informing only contains a trouble-formulation (zoomed in). Furthermore, it also formulates this as a recurrent trouble—as something that has happened before. However, the director's announcement does not contain a trouble-formulation, but only a solution-formulation. Furthermore, it deletes any mention of the recurrence of the trouble. Finally, the director's announcement is not formulated as an imperative directive (such as *zoom your camera back out*), but as a request (*can you*) with mitigating devices (*please, thank you*).

Note that although the director's announcement does not explicitly formulate the trouble, the trouble is still hearable: *zoom back out* suggests that the zoom is currently zoomed in. In other words, *zoom back out* makes this into a potential retro sequence (Schegloff, 2007, chap. 11): It may prompt the performer to look at his or her viewfinder to see why the director asked them to zoom out, as in the case of laughing: “laughter may ‘break out’ . . . and thereby occasion the relevance of a search by co-present parties for the laugh source” (Schegloff, 2007, p. 218). That is to say, someone laughing may prompt others to look back to what prompted the laughter.

Indeed, that no-trouble formulation announcements can still be heard as implying a trouble is clear to see in the following example from a training day (this example is not part of our collection of 90 cases, as it does not contain an informing by the monitor).

Extract 2. (D2RP2; 20:48:50); “yep, sorry about that.”



img.1

01 DIR #+(10.0) +
dir +listening to the stream of R1+
img #img.1

	02 DIR ((into radio)) this is Ju to James (.) could you slow down
	03 when you're speaking please (.) over
	04 (1.4)

	05 JAM yep, sorry about that, I'll get on it
---	--

⁴In order to highlight the different participation frameworks—in particular, communication *within* the control room and *out* of the control room—we follow the transcript conventions developed by C. Goodwin and Goodwin (1996, p. 80): “To separate the radio conversation from other talk in the operations room, boxes are drawn around talk within it and marked with walkie-talkie icons.”

⁵Although this zooming out occurs 15 seconds after the announcement in *the control room*, it does not take the performer 15 seconds to respond. The performer's stream takes about 12 seconds to reach the control room, so the performer actually responded within a few seconds.

⁶In the transcripts, in addition to radio communication, we also want to distinguish different visual scenes—that is, what happens inside the control room (e.g., between monitor and director) and what the monitors can see on their screens. Here we use a different box, marked with a camera icon.

The director is standing next to the first monitor. She is not just watching the performer's stream but also listening to what the performer is saying via a second pair of headphones attached to the screen (line 1). After a while, the director takes off the headphones and raises the walkie talkie to her mouth to make an announcement to that runner: *could you slow down when you're speaking please* (lines 2–3). After a moment, this is responded to by the runner via the walkie talkie with: *yep, sorry about that, I'll get on it* (line 5).

In the director's announcement, there is no explicit mention of a trouble that may have prompted the announcement. Yet the trouble is still hearable: If the runner is asked to slow down, then he is probably currently speaking too fast. Indeed, the runner clearly treats the director's announcement as prompted by himself having done something wrong, which is why he produces an explicit apology (Robinson, 2004). Note that this instance is from the first day, from the training session. So there was no online audience to hear the runner's apology over the live stream. However, it accounts for the fact that such explicit apologies did not occur during the live performances on Days 3 and 4.

Reminding performers to do something

Directors transformed a trouble-formulation of monitors into a request for performers to do something if the trouble could be fixed immediately by the performer. However, some troubles could no longer be fixed, in particular, if performers did not press the “snap” button during an encounter (which meant that the snapping mechanism would not work for the online players). In these cases, the director instead reminded performers to do something in the future.

In the following extract, a monitor is not just watching the second performer's live stream but also playing the game as if she was part of the online audience. When the monitor tries to snap another runner, she does not score a point, but instead is presented with the message to “try again.” This prompts the monitor to inform the director that the runner is not pressing the “snapping” button.

Extract 3. (D4P2; 21:31:09); “she's not pressing the button.”



img.1



```

01 M2  +(180.0)          +
      m2  +playing the game+
02 M2  +##she's not pressing her button          +[(2.0)] Niki
      img  #img.1
      scr  +'try again' message appears          +
03 ?                                         [(who)]
04 M2  Niki is not pressing the button
05      (0.4)
06 JU  Niki is not pressing the button (      ) (.) Niki
07 ?   she press- she pressed it too early=
08 DIR  ((into radio)) =this is Hannah to Niki (.) don't forget
09      to press your button when snapping

```

In line 1, we can see that the second monitor is not just watching the second performer's live stream but also playing the game. The monitor's screen contains two windows: the live stream on the left, and the game interface on the right. While playing the game, the monitor tries to snap a runner in shot (distant but visible through some tree branches). But instead of scoring a point, the system produces an error message: "TRY AGAIN" (line 3), which can be seen in the enlargement attached to Extract 3, [img.1](#)).

The monitor therefore informs the director (who is not visible on our video recording) that *she is not pressing her button* (line 2). Someone in the control room asks who the monitor is talking about (line 3), which leads the monitor to clarify that she is talking about *Niki* (line 2). The monitor repeats this (line 4) and Ju, who is currently not acting as the director and therefore does not have access to the walkie talkie, repeats the whole informing (Ju also is not visible in our video recording): *Niki is not pressing the button* (line 6). In line 7, someone in the control room then states that it may not be the case that Niki has not pressed the button at all but, rather, that she pressed it too early. The problem, however, remains the same: The online audience couldn't snap. The current director, Hannah, therefore makes an announcement to Niki over the walkie talkie: *don't forget to press your button when snapping* (lines 8–9).

While the monitor's informing (lines 2 and 4) contains a trouble-formulation (not pressing the button), the director's announcement (lines 8–9) does not. However, the director's announcement is not a request for the runner to do something. There is a simple reason for this: The moment when the trouble occurred and could be solved (i.e., pressing the button to allow snapping) has already passed. The runner no longer has the other runner in shot, so pressing the button at this moment would be pointless. All the director can do at this moment is to try to make sure runners avoid similar troubles from occurring again in the future. Consequently, the director formulates this as a reminder (Kornfeld & Rossi, 2023).

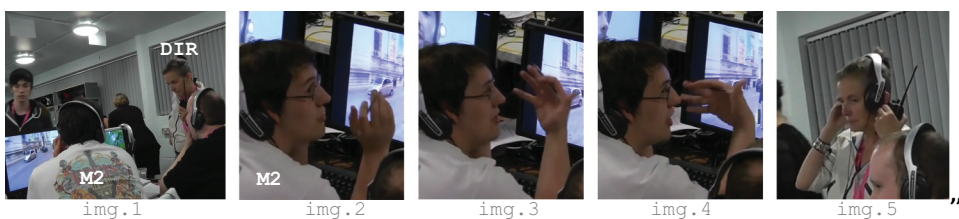
Note that the reminder does not specify *why* the performer should do so. As Kornfeld and Rossi (2023, p. 54) observed, "reminders do not elaborate on why participant A should comply with the enforcement." This is only possible if participants already know the reason for the reminder. In our case, performers were supposed to know that pressing the button is necessary for the snapping mechanism to work. This had been emphasized throughout the training as well as the debriefing sessions afterward, for example, "Obviously, clear snapping. When it's the opportunity to snap, try and make sure that you hit the snapping button. I know that caused a bit of a problem yesterday."

Encouraging performers to do something

Some troubles in the monitor's informing were not because performers were doing something wrong, like not using the appropriate zoom (Extract 1) or not pressing the button (Extract 3). Instead, performers were not doing enough of something that was deemed important for the artistic performance, for example, not engaging enough with members of the public on the street or not doing enough "face time" (Reeves et al., 2024, Section 4.3.4). In those cases, directors did not tell performers to do something but *encouraged* them to do it.

Those kinds of encouraging announcements occurred most frequently when monitors noticed that runners were not doing face time. In the training and debriefing sessions, the artists behind *I'd Hide You* frequently emphasized the importance of what they referred to as face time, which involved runners turning the camera on themselves and talking directly to online players. This is a practice taken from movies, when a character "breaks the fourth wall" by addressing the audience, and was considered one key element in creating connections with online players. For example, the director in the debriefing session after the first day: "Lots of camera on face is really, really, really nice." However, in practice, face time was something that runners at times forgot to do; instead, they focused on catching other runners (Reeves et al., 2015), as in Extract 4.

Extract 4. (D2RP3; 21:54:28); “same as always; not turning it on herself.”



```

01      #+(2.0)          +
      m2      +looks towards dir+
      img      #img.1
02 M2      um (0.3) the same as always (.) Jordanne's +not      #really
      m2                                          +rotates hand -->
      img                                          #img.2 #img.3
03      talking+ to (the c- ?) (.) enough (1.7) um: (.) not
      m2      -->+
04      +not turning it on her+self
      m2      +rotates hand      +
      img      #img.4

05      +#(3.6)          +
      dir      +listening on headphones+
      img      #img.5
06 M2      m (.) sounds [bad
07 DIR      [((into radio)) <this is> er:: (0.8) Ju to
08      Jordanne=it's really lovely when you turn the camera on
09      your face and talk into the camera (.) over
10 JOR      (174.0) #
      jor      #img.6

```



img.6

At the beginning of this extract, the monitor is trying to get the attention of the director by looking at her (line 1, [img.1](#)). The monitor then tells the director about a recurrent problem (*same as always*, line 2): The monitor starts by saying, *Jordanne's not really talking to the c-* (lines 2–3). In other words, the performer is not talking directly into the camera. The monitor then reformulates this to *not turning it [the camera] on herself* (lines 3–4). This utterance is accompanied by a hand gesture that simulates rotating a camera from facing forward to facing it on yourself ([img.2–4](#)). The director listens for a few seconds on the performer's stream (line 5), during which time the monitor states that the stream *sounds bad* (line 6); the runner's microphone was dangling free during the moments prior to this (which the runner has noticed herself, and reports to the stream that it needs fixing). The director then makes an announcement via the walkie talkie: *it's really lovely when you turn the camera on your face and talk into the camera* (lines 8–9). As in the previous fragment, the performer eventually does this, almost three minutes later: [img.5](#) shows the performer doing face time and addressing the online audience directly.

As in previous examples, the monitor's informing contains trouble-formulations (*not really talking*; and *not turning on herself*), but the director's announcement does not. Furthermore, the director's

announcement is not a request or reminder, but again an encouragement, formulated with a lot of embellishment: *it's really lovely*.

In this section, we have focused on informings by monitors that contained a trouble-formulation, which was removed from the subsequent announcements by directors. We showed three ways in which this was done: When the trouble could easily be fixed, directors simply formulated the solution by requesting the performer to do something; when the trouble could no longer be fixed, the director reminded performers what they should do in the future; finally, for troubles that had to do with the artistic nature of the performance, directors encouraged performers to do a particular action.

Agent-less formulations

As noted, whereas 72 out of the 90 informings of monitors contained trouble-formulations, only 28 of the 90 announcements of directors contained trouble-formulations. However, of the 28 cases of announcements that contained trouble-formulations, 23 (over 80%) were formulated as agent-less—that is, as “unhappy incidents” (Pomerantz, 1978), as in Extract 5.

Extract 5. (D3P3; 22:53:20); “stream’s down.”

01	M2	(er monitor to Ju) (.) stream’s down
02		(1.6)
03	DIR	((into radio)) <this is> Hannah to Niki your stream has just
04		gone down (0.3) can you come to the stage door please ()

In this extract, the monitor informs the director that the *stream’s down* (line 1). In other words, the video feed from the runner is no longer broadcasting online. The director transforms this into an announcement to that particular runner: *your stream has just gone down, can you come to the stage door please* (lines 3–4). That is to say, the director asks the performer to come to the stage door, where one of the technicians will help the runner to fix this issue.

In this case, we do have a trouble-formulation in the director’s announcement: *your stream has just gone down*. However, it is formulated as agent-less—that is, as something that has happened, not as something that was caused by the runner. Indeed, it seems the runner is treated as not able to fix it him- or herself, since he or she is asked to come to the stage door. Of course, even with unhappy incidents, runners could still be asked to fix the trouble. Extract 6 provides an example.

Extract 6. (D2RP3; 22:26:26); “Jordanne’s mic’s down”



img.1

01	M2	Jordanne’s mic’s down (0.7) (#fallen [off]]
	img	#img.1
02	DIR	[whose is?] Jordanne’s?
03	M2	yeah, her mike has fallen off and you can’t really hear her
04		at all right now=
05	DIR	=((into radio)) <this is Ju> to Jordanne
06		your mic is fallen down (.) could you put it back up (.)
07		please over?

The monitor informs the director of a problem, namely, that *Jordanne's mic's down*—that is, it has *fallen off* (line 1). The director quickly checks which runner the monitor is talking about (line 2), prompting the monitor to elaborate on the trouble (lines 3–4). After this, the director makes a public announcement about the trouble, addressed to the runner, stating, *your mic is fallen down, could you put it back up please* (lines 5–7).

As in the previous example, the director's announcement contains a trouble-formulation, but it is again formulated as an unhappy incident—that is, as something that simply happened, but was not necessarily caused by the runner. However, in contrast to the previous example, the director then tells the runner to fix the trouble herself.

Aggregating agency

The second form of transformation we observed in our 90 cases occurred when monitors attributed a trouble to a specific runner, and the director made an announcement addressed to all runners. This occurred in 12 cases and is what Lerner and Kitzinger (2007) referred to as “aggregating agency,” as in Extract 7.

Extract 7. (D2R1; 20:06:33); “you didn’t press your button though.”



img.1

	01 EMM #+I hope you got him guys+ emm +running away from Pete + img #img.1
	02 (6.0)
	03 TEC: you didn't press your button though.
	04 DIR: who didn't press their button
	05 TEC: she (.) she didn't
	06 DIR: hhh e- who um (.) was that Niki
	07 TEC: uh (.) no Emma
	08 DIR Emma hhh
	09 ((into radio)) >all runners< please remember to press 10 your button when yo:u see another runner (.) otherwise the 11 snapping doesn't work? (.) over.

The performers have just had a “snapping” encounter. One of the performers, Emma, in the live stream said to her online audience, *I hope you got him guys* (line 1). That is to say, Emma is telling the online audience currently following her that she hopes that they were able to “snap” the other runner, Pete. However, as in Extract 3, the performer had not pressed the button. This is commented upon by the technical director in the control room, *you didn't press your button though* (line 3), which can almost be heard as response to what the runner had said to the online audience (but which cannot be heard by the performer, as it is not said into the walkie talkie). Upon hearing this, the director checks which runner had not pressed the button and it turns out to be Emma (lines 3–7). The director then makes an announcement via the walkie talkie (lines 9–11): This announcement is not addressed to that specific runner (Emma), but instead to all runners: *please remember to press your button when you see another runner, otherwise the snapping doesn't work*.

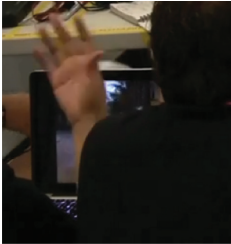
The announcement is prompted by an informing about what a specific runner did. However, that specific runner is not mentioned in the public announcement. Instead, the director removes the individual agency from the announcement and formulates it as a general reminder about the snapping button, with an explanation of why pressing the snapping button is important. Although there is no trouble-formulation in the announcement in Extract 7, a trouble is arguably still hearable. Why would the director make an announcement about having to press the button when seeing another runner if everyone was doing it “correctly”? Nevertheless, from the perspective of the performers, it is unclear who might have forgotten to press the button.

Many reminders by directors encouraging runners to do more face time contained a similar transformation, as in the final example, Extract 8.

Extract 8. (D1; 21:56:53); “Sheila hasn’t used the camera on her face at all.”



img.1



img.2

```

01 M1   Sheila hasn't ++used the #camera on      +her: [face (at all)]
      m1                                     +holds up hand and rotates+%
      img                                     #img.1      #img.2
02 DIR
03      (33.0)                                [okay]
04 DIR ((into radio)) this is Ju to all runners don't forget <that
05      you can:> turn the camera on yourself (.) and we can see
06      your lovely face (.) it's very nice to see that (0.5) over
  
```

In this fragment, the monitor informs the director that, *Sheila hasn't used the camera on her face at all*. In other words, Sheila is doing other activities, but not enough face time (similar to Extract 4). This prompts the director to make an announcement, addressed to *all runners*: *don't forget that you can turn the camera on yourself and we can see your lovely face. It's very nice to see that*.

This announcement has all the features discussed so far. It is addressed to *all runners* and not the runner that prompted the announcement. As in Extract 7, it therefore removes any individual agency about which specific runner has not been doing enough face time. Furthermore, it is formulated as a reminder (*don't forget*) about what to do in the future. Finally, it is expressed as an encouragement: *see your lovely face* and *it's very nice to see*. Rather than simply asking runners to do more face time, the director tries to encourage them to do so.

Reminders during co-present games described by Kornfeld and Rossi (2023, p. 54) provide an interesting comparison. They remarked that reminders “are firmly anchored in the here and now, including in the way they are addressed to and made relevant for the transgressor specifically, at that moment.” In other words, in their context, reminders are always addressed to specific transgressors. In contrast, in our data, reminders were frequently addressed to all runners, thereby making it impossible for other performers to know who had prompted the reminder. Of course, in the case of Kornfeld and Rossi, everyone is co-present, so people can see who did something wrong. In our data, the noticing of the trouble occurred, from the perspective of performers, “backstage,” which makes it possible to hide that agency.

In sum, sometimes directors removed individual agency from the public announcement by addressing it to all runners. Directors thereby show their preference and orientation to progress the live performance over attributing blame. They therefore transformed trouble-informings about a particular runner into announcements to all runners.

Conclusion

In this article, we have investigated how a control room behind a mixed-reality performance handles troubles. We have focused on how an informing by a monitor about a trouble outside the control room is transformed by the director into announcement to performers of how to handle that trouble. We have shown how directors thereby handle troubles with discretion—that is, handle-the-trouble-only and avoid doing other “attendant activities” (Jefferson, 1987)—in particular, holding performers for the trouble accountable. On one hand, directors transform monitors’ trouble-formulations into solution-formulations. On the other, directors avoid attributing responsibility for the trouble to performers by employing agent-less formulations and aggregating agency.

The focus on solution-formulations over trouble-formulations in the director’s announcements highlights that directors prioritize the progressivity of the performance over other issues, in particular, allocating blame for the trouble. Whereas the monitor’s informing formulates the trouble, the director generates the solution for handling the trouble. Directors thereby relieve performers of having to generate the solution for themselves (Kendrick & Drew, 2016, p. 10) and performers instead only need to implement the solution (Kendrick, 2021, p. 79). Focusing on the solution rather than the trouble also reflects professional advice on how directors should deal with actors: “Make all your direction and feedback to actors as positive as you can” (Weston, 1996, p. 284).

The focus on progressivity over blame can also be seen in how directors avoid attributing trouble-responsibility to performers. By employing agent-less formulations directors can talk about troubles as something that happened *to* performers, rather than something that was caused *by* performers. Furthermore, by addressing announcements to all runners, it obscured which specific performer may have prompted the announcement. Thus, although it is Niki in Extract 7 who does not press the button during a snapping encounter, this is not formulated in the announcement. Instead, all performers are invited to reflect whether they have done so in their previous encounter and reminded to do in their next one. Similarly, although the monitor informs the director that Sheila has not done face time with the online audience in Extract 8, the director’s announcement does not mention this, but encourages all performers to do so. Such “aggregation of agency” (Lerner & Kitzinger, 2007) can be found in other settings, as well. Thus, supervisors in the London Underground may spot a transgression of a particular passenger but make an announcement to remind all passengers of the rules (Luff et al., 2000, p. 201). Similarly, teachers in classrooms may spot either particularly positive or negative examples in what individual pupils are doing, and formulate these as something that concerns all pupils (Greiffenhagen, 2012).

Although the focus of this article has been on how a control room handles troubles with discretion, we can perhaps use this setting as a way to think about how people handle troubles more generally. As Kendrick (2021, p. 75) highlighted, handling troubles involves (1) recognizing trouble, (2) generating a possible solution, and (3) implementing it. In cases of other-assistance, moving from (1) to (2) is typically done by the same person. This is difficult to study, given the methodological principles of conversation analysis. The initial noticing is, in Schegloff’s (2007, p. 87, footnote 17) words, “a perceptual/cognitive event” and therefore not available to conversation analysis. It is only the second step, the generating a solution, that is an “interactional event” and therefore available to the conversation analyst.

Our control room can be seen as a “Cartesian setting” (Lynch et al., 1983, p. 225), which is a situation in which an action that is normally done by one person is split across two people, where one person is using mainly his or her body and the other is mainly using his or her mind (hence “Cartesian”). In the original example discussed by Lynch et al. (1983, p. 225), this split occurred between a disabled chemistry undergraduate student (Gordon) who was helped doing chemistry experiments by a sociology student (Schrecker), who was taking Garfinkel’s class. The chemistry student depended on the sociology

student's body to physically perform the experiments, whereas the sociology student depended on the chemistry student's mind to understand the experiments and know what to do. As a consequence of this division of labor, things that typically remain implicit have to be made explicit. As Lynch et al. (1983, p. 225) put it, "The isolation of Schrecker's handiwork from its theoretical basis in chemistry necessitated that Gordon and he make explicit for one another how the experiment was progressing as a witnessable production of chemistry." In our case, we had a division of labor between recognizing a trouble (which was done by the monitor) and generating a solution (which was done by the director). And it is this division that enables us to see the production of directorial discretion in action.

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