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Video Calling in Long-Distance Relationships: The Opportunistic Use of Audio/Video Distortions as a Relational Resource

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Abstract: Video calling is now a realistic option for couples in distance relationships. This paper explores whether audio/video distortions block intimate relational talk. From a naturalistic two-month trial of couples trying video calling to maintain their distance relationships, it is found that couples can opportunistically use audio/video distortions as a relational resource rather than simply treating them as a blocking or outside of relational talk. First, technological mediation can be treated as relevant to disambiguating whether the repair involves simple content repetition or a more complex relational issue. Second, distortions can be treated as resources for relational parody and teasing. It is argued that the opportunistic use of distortions as a relational resource extends Hutchby's (2001b) notion of technologized interaction, in which technology frames but does not determine social action. Rather than proposing yet another model of communication that includes more detail about noise as deviance that must be remedied, or taking an undifferentiated approach to distortion as "trouble," the technologized interaction approach broadens our conceptions of online relationships as involving the use of technological features to a more holistic sense of technological mediation being part and parcel of maintaining online relationships.

The Next Best Thing to Being There?

While by no means ubiquitous, video calling hardware and software have penetrated far enough into institutional, personal, and mobile computing that, as of 2010, PEW Internet reports that 23% of US Internet users have tried video calling in one form or another (Rainie & Zickuhr, 2010). In the personal domain, video calling is now a realistic communication option for couples in distance relationships (Neustaedter & Greenberg, 2011) who are looking for "the next best thing to being there" (Molnar, 1969). However, audio/video distortions are still common due to the limitations of consumer-level Internet connections (especially Wi-Fi): Audio and video can be choppy, clipped, muffled, missing, lagged, blurry, frozen, or desynchronized.

All of these distortions impact upon the fundamental communicative requirement of establishing and maintaining a connection with a co-participant (Goodwin, 1981; Kendon, 1990; Laver, 1975; Schegloff, 1986). The research question guiding this paper is whether such audio/video distortions block intimate relational talk. From a naturalistic two-month trial of couples trying video calling to maintain their distance relationships, it is found that couples can opportunistically use audio/video distortions as a relational resource rather than simply treating them as a blocking or outside of relational talk. First, technological mediation can be treated as relevant to disambiguating whether the repair involves simple content

repetition or a more complex relational issue. Second, distortions can be treated as resources for relational parody and teasing.

The paper situates the problem of distortion in video calling through an exploration of several literatures: video calling in relational contexts; video calling and operational distortions; operational distortions within the frame of affordances and constraints; and repairs in co-present and video calling interactions. The methods are discussed with a special emphasis on the naturalistic recording. The findings are laid out in two large sections: disambiguating content repair in the context of relationally sensitive talk and then distortion as a resource for relational parody and teasing. A short conclusion section discusses the resourceful treatment of 'troubling' technology.

Video Calling in Relational Contexts

Much early video calling research was conducted experimentally in laboratory settings (e.g. [Chapanis et al., 1972](#)), largely because of infrastructural requirements. However, a rich body of family, friend, and relational video calling field research has been developing from the early 2000s, coinciding with the widespread deployment of consumer-level broadband connections and cheaper hardware and software. The family has been a primary research focus. Researchers have investigated the ways in which video calling can be used to overcome geographical separation of family units ([Judge et al., 2011](#)), the easing of children's anxieties due to divorce ([Yarosh & Abowd, 2011](#); [Yarosh, Chew, & Abowd, 2009](#)), how personal presence and portrayal can be improved ([Chatting et al., 2006](#)), the nature of mediated play ([Follmer et al., 2010](#); [Yarosh & Kwikkers, 2011](#)), and the different sense of video mediated conversation versus sharing a window of ongoing life ([Judge & Neustaedter, 2010](#)). In the broader domestic context it has been shown that it takes considerable effort required to initiate, run, and troubleshoot domestic video calls ([Ames, et al., 2010](#); [Kirk, Sellen, & Cao, 2010](#)).

Common across much of the family research, and in the more nascent relational video calling research ([Neustaedter & Greenberg, 2011](#)), is the notion of a re-imagined and re-accountable sense of intimacy. This has been called "presence-in-absence" ([Howard et al., 2006](#)) or "intimacy at a distance" ([Hutchby, 2001b](#)). Whatever it is termed, central to the concept is the notion that research into online relationships should not treat technology as simply a container of relationships or seek to understand only the perceptions of variably rich transmission of relational material. Rather, it should seek to explore how users develop specialised practices in response to contingencies of mediation. These stem from a variety of issues in the communicative situation; from the affordances and constraints of camera and microphone placement, through negotiating opening and closing phases that display sufficient intimacy while dealing with technical issues, to the complexity of scheduled versus spontaneous intimacy. This paper contributes to this body of research on practices of mediated intimacy in video calling by considering not the features of video calling, but users' management of its failings.

Video Calling and Operational Distortions

It has been well established by the Computer-Mediated Communication (CMC) field that people develop ways to display emotion when channels and cues are constrained (see overview in [Walther, 2011](#)). However, research into operational distortions such as audio/video distortion has tended to focus on perceptions and task effects rather than the moment-to-moment participant management.

The HCI video-mediated communication literature contains a deep body of findings on users' responses perceptual limitations of video calling. Despite the apparent centrality of video to video calling, users prefer instantaneous audio, even at the cost of desynchronization with video ([Isaacs & Tang, 2003](#)). Users are also very sensitive to audio degradation ([Watson & Sasse, 2000](#)). We do know from experimental results that poor quality video can lead to less fluent speech ([Monk & Watts, 1995](#)), increased caution ([Jackson, et al., 2000](#)), and make it harder to detect lying ([Horn, Karasik & Olsen, 2002](#)), but we know less about how users actually manage those issues as part of the conversational business. [Heath & Luff \(1991\)](#), [Dourish et al. \(1996\)](#), and [Dourish \(2001\)](#) have illustrated asymmetries in getting attention in a media spaces, but these are the result of design constraints, not operational distortions. One of the few studies to have investigated the turn-by-turn results of operational distortions in video calling is [Ruhleder & Jordan's \(2001\)](#) demonstration that network latency distorts the interactional timing associated with preference organization of turns at talk. For example, an apparent delay in answering a question may lead to the questioner treating the response as dispreferred.

Quality of Service (QoS) research includes some studies that contrast network differences among

consumer video calling services, but they do not observe users' management of those differences (Lu et al., 2010). Hashimoto and Ishibashi (2006) report that network latency annoys players in rock-paper-scissors played over video calls, but while they report thresholds of latency detection, they do not report the players' practices for managing that latency.

Operational distortions within the frame of affordances and constraints.

Gibson's (1979) ecological concept of affordances was first popularized in HCI by Norman (1988, 1999) and Gaver (1992), both of whom were searching for ways to explore how material properties and limitations are related to action. Gibson argues that the definition of what the object is depends on its stable actionable material properties, which he calls affordances, but because actors define what an object is through interaction, the possibilities for action can be creatively employed. However, not everything done or not done with an object is related to its material properties. Norman (1999) has argued that objects may have perceived affordances that relate to logical, cultural, or conventional possibilities for action rather than stable actionable material properties. The concept of affordances has been taken up in HCI research to explore how designs suggest (or fail to suggest) actions to users (e.g., Magnussen, 2010; McGrenere & Ho, 2000).

Affordances have an obvious counterpart in constraints: stable material properties of objects that limit action. Constraints on action may be both material and social and may be the result of either deliberate and accidental design decisions. Operational problems such as audio/video distortions, however, tend to be treated as distinct from constraints in this body of research, perhaps because they result from computational infrastructure issues (e.g. the packet-switched nature of the internet or the complexities of audio/video codecs) rather than user-level design issues. However, I contend that audio/video distortions are a fundamental part of the experience of video calling – at least at present – and thus should be considered within the frame of affordances and constraints.

In so doing, I am employing Hutchby's (2001b) notion of "technologized interaction:" that participants enact social action that treats the constraints of technology as a framing but not determining social action. This is not the same as arguing for yet another model of communication that includes more detail about "noise" as deviance that must be remedied. Rather, the technologized interaction approach refocuses attention from operational distortions as externally imposed effect to how operational distortions are a participant's concern. Specifically, they are a logical extension of the omnipresent orientation to repair in co-present interaction.

The Ethnomethodological Approach to Repairs in Co-Present and Video Calling Interaction

This article takes an Ethnomethodological approach to investigating how audio/video distortions come to constitute part of how couples enact their relationship. Ethnomethodology (EM) investigates how the local production of practical social understandings is a situated achievement (Garfinkel, 2002). The related approach of Conversation Analysis (CA) focuses on the sequential methods of situated achievements, showing how interactional turns are treated as proposing slots for next actions and next turns ratify, modify, or resist the understandings of prior actions (Clayman & Gill, 2005; Sacks, 1992a; Schegloff, 2007). The other related approach of Membership Categorisation Analysis (MCA) explores the practices by which members propose who they are to one another and states of social order through various methods of direct and indirect categorical links or boundaries (Fitzgerald, 2012; Housley & Fitzgerald, 2009; Stokoe, 2012).

Ethnomethodologists argue that interpersonal intimacy does not consist of stable categories or solely internal attitudes towards others (Egbert, 2004; Pomerantz & Mandelbaum, 2004; Raymond & Heritage, 2006). Since relationships are as much an interactional achievement as any other social fact, we should expect that audio/video distortions are incorporated into a local relational episteme (Heritage, 2012) that encompasses the full experience of technological mediation.

Ethnomethodology claims validity on the basis that social understandings are methodically made visible by one participant to another in interaction. As such, researchers can access the practices of sharing understandings in ways similar to that of participants. Ethnomethodology's attention to practical methods of technology engagement (Dourish, 2001; Suchman, 1987) are thus well suited to analyze the *in situ* management of audio/video distortions of the intimate content of couples' video calling. This is especially the case for managing audio/video distortion, as it is central to Ethnomethodology that the repair of

production/nearing/meaning troubles is reported and achieved within the same sequential stream as other interactional action (Drew 1997; Schegloff, Jefferson, & Sacks, 1977).

As Greiffenhagen and Watson (2009, p. 69) explain, “what counts as ‘error’ or a ‘mistake’ is not given by the psychological functioning of individuals, but is instead constituted in and through interaction between co-participants.” The way participants cope with understanding repair is integral to the mechanics of interaction and participants often use repair as a resource or device for social action (Lerner & Kitzinger, 2012; Arminen, Auvinen, & Palukka, 2010; Sacks, Schegloff, & Jefferson, 1974). People are experienced with repair and, indeed, while understanding that troubles do occur, people are very active problem solvers. As Suchman, Blomberg & Orr (1999, p. 394-395) argue, “conversations among people succeed not because of the absence of troubles of understanding, but rather due to a wealth of resources available for their collective identification and repair.”

Schegloff, Jefferson, & Sacks (1977) argue that repair in co-present interaction is organized to prefer self-repair. Speakers have first access to repair initiation because speakers and recipients hear the same turn produced in the same way at the same time, but speakers have the more direct access to what might have been said but for some form of error. Speakers therefore often get to set the agenda for the repair. Recipients do not have to abide by that agenda, but they will have to respond to it.

Video calling changes the access to the experienced production of turns and hence possible repair orientations. Speakers experience the turn in its real-time production but recipients experience an electronic reproduction of the turn. When distortions occur, speakers experience their turn produced flawlessly but recipients experience the same turn as distorted. Since only recipients have direct access to the experience of distortion, recipients, not speakers, have first access to repair initiation. Recipients are thus materially afforded the first access to the agenda of repair, while speakers are materially constrained to a position of second response. Further, the range of orientations will be materially different in video chat interaction. When distortion occurs, obviously, the biggest change to repair will be that distortion can be attributed to technology, which has ramifications for the kind of repair that can be attempted. Thus there are two sets of material frames for interaction when distortion occurs: transmission/reception and distortion of transmission/reception. That being said, participants are free to generate meaning using these frames in any way they wish, hence mediation and distortion are interactional resources for participants.

Methods

The fundamental responsibility of social analysis is to explicate social order at whatever level it can be found (Schegloff, 1986). As noted above, in Ethnomethodological research, the emphasis is on finding principles of context-free but context-sensitive interactional practices (Lerner, 2003). With few exceptions, these practices are to be endogenous, found either in naturally occurring talk (rather than controlled lab or survey situations) or in a “perspicuous setting” (Garfinkel & Wieder, 1992, p. 184), that is “a setting that in its specificity and uniqueness allows us to highlight methodic and systematic features” (Mondada, 2007, p. 198). For this project, the goal was to explore whether and how participants oriented to endogenously-arising distortions as an interactional issue in long-distance relational maintenance.

To that end, couples in distance relationships were recruited by flyers and email in the Northeastern USA, supplied with webcams and video calling software, and asked to try video calling at home for two months. The six self-selected couples that ended up participating all belonged to a distinct demographic: native English speakers, under 21, college-educated, and primarily white. While not representative of the US population, this group was reasonably representative of well-resourced members of the Millennial generation (Taylor & Keeter, 2010), who have grown up with technological mediation and represent the future of mainstream users’ understandings of technology. Internet users aged 18-29 are twice as likely (29%) to have participated in video calling than Internet users age 65 or older (15%) (Rainie & Zickuhr, 2010).

The couples were asked to talk for at least 20 minutes, once a week, for two months, on their own timetable. No tasks were required and there were no other controls apart from minimum technology standards. With their consent, an automatic remote recording system captured all video calls without any effort on their part. This combination of task and technological freedom maximized the ecological validity of the recordings, allowing for very naturalistic experiences (see Rintel, 2007 for details).

Since the recording system was effectively a third party in a three member group call, it did not allow for

analysis of individualized latency or audio/visual asymmetry at each end of the conference in the manner of much prior videoconferencing research (e.g. [Ruhleder & Jordan, 2001](#)) and media space research (e.g. [Harrison, 2009](#)). However, it would have been almost impossible to record such naturalistic intimate relational talk – usually in bedrooms – had recording devices been used at either end of the call (see [Rintel, 2007](#)). Further, since the goal was to see what participants explicitly treated as relevant when coping with audio/video distortion, the precision of the recording system's timing was not as important as the sequential and categorical work, which was very adequately captured. The recording system did not capture the entirety of each participant's screen, nor interaction in other media, so it is not claimed that this project captured the entirety of online relational maintenance, including some talk about distortions on mobile telephones and text-based chat, but, again, this was a tradeoff for the naturalistic recordings, and the tool was adequate for the task.

As mentioned above, the notion of audio/video distortions as a material issue for the conduct of distance relationships via video calling arose endogenously from the experiences of the couples. Altogether the six couples each had between 5 to 11 calls, in which a median of around 8% of the time was spent coping with distortions. As reported in an earlier report on this project ([Rintel, 2010](#)), 145 total cases of coping with distortions were collected, which were broadly separable into technology-oriented remedies (57 cases; 39.3%), content-oriented remedies (42 cases; 29.7%), and non-remedial accounts (46 cases; 31%). This paper draws only on examples from content-oriented remedies and non-remedial accounts; of these, this paper concentrates primarily on illustrations from the two of the six couples who experienced the most variety of audio/video distortions, with some brief examples from the other couples. These are not the sole examples of distortions used as relational resources (see also [Rintel, 2010, 2013](#)), but they are some of the most closely related cases.

This small N is common in highly-interactionally-focused HCI studies on video calling (e.g. [Heath & Luff, 1991](#); [Licoppe & Dumoulin, 2010](#); [Ruhleder & Jordan, 2001](#)), primarily because while EM/CA/MCA research does have some examples of very large corpus studies (e.g. [Stivers, 2005](#)), participant numbers and example numbers are usually fairly small, favoring highly granular inductive analysis of a few “telling” cases that illustrate moment-to-moment operation of interactional principles ([ten Have, 2007, p. 38](#)). [Fitzgerald \(2012, p. 309\)](#) has also argued that while large collection-based studies have value for showing the regularities of membership categorization practices, those "...principles regarding data collection and building collections are irrelevant to an ad hoc collection or an ethnomethodologically grounded thick description of a single case in which the layered depth and texture of members' category work is explored." This article, then, focuses on telling cases that illustrate the layered sets of interactional, relational, and technological orientation choices in moments of audio/video distortion.

Findings

Disambiguating Content Repair in the Context of Relationally Sensitive Talk

Repair of audio distortions.

Content-oriented remedies of distortion comprised an aggregate 29% of the management practices of all couples, and they were overwhelmingly oriented to repairing distorted audio content ([Rintel, 2010](#)). In most instances of audio distortion the reason and form of repair were treated as unambiguous. Since speakers could not hear their own distorted sound, hearers had to alert speakers to the need to repair. Repair initiators indicated a need for clarification of locatable content, and the repair was a production of content with no further discussion. Examples 1 and 2 are representative of many instances of audio distortion management. In the transcripts, P→ indicates the distortion, I→ indicates the repair initiator, and R→ the repair turn.

Example 1.

1. HAL: P→ She um broke out the- uh t{___ (0.5)} cake
2. EVA: I→ The what?
3. HAL: R→ She broke out the cheesecake
4. EVA: H↑oh↓ ((laugh)) that's[nice]
5. HAL: [yeah]

[Case079-p02-c05of05-t11p5307-08m08in-00m27s]

In Example 1, Hal is reporting the previous night's events, but is not aware that part of his story cut out (P→; line 1). After Hal's turn is hearably complete, Eva initiates repair, locating the problem as being with the immediately prior referent (I→; line 2). Hal repairs by repeating his entire prior turn (R→; line 3). The repair initiator is treated as unambiguous and the repair is accepted without explanation. Neither the nature of the content nor the technological cause is treated as relevant to accomplishing the repair.

In Example 2, Kim's repair initiator (I→; line 11) refers to the fact that she did not hear Cam, but she does not specifically treat technology at issue and nor does Cam in his simple repetition of his turn (R→; line 12).

Example 2.

```

1.  KIM:      I'm hungry
2.  CAM:      Really?
3.  KIM:      Do you know that yesterday I ate no real food? {{echoed}}
4.  KIM:      [I ate    ] chocolate {{echoed}}
5.  CAM:      [yeah I do  ]
6.  KIM:      [((garbled))]
7.  CAM:      [And I know-] I know that for the entire month you eat no real food
8.  KIM:      .h [no]
9.  CAM:  T→   [A-] and don't tell me don't tell{_____}(2.0)}
10.          (1.0) @Closed-mouth smile@
11. KIM:  I→   What I didn't hear you {{echoed}}
12. CAM:  R→   Don't tell me pancakes and toast count as real food
13. KIM:      I didn't say that. What I will say is tha:t when I don't eat that I
14.          don't eat anything

```

[Case139-p05-c11of11-t04p2452-49m29in-00m36s]

However, distortion management may be treated differently when the topic of conversation is relationally sensitive. As Example 3 illustrates, distortions during relational topics may require disambiguation as to whether the repair initiator referred to distorted content, which just needs to be supplied for the conversation to continue, or an issue with the nature of the content, requiring relational discussion. The fact that the conversation was technologically mediated is both the reason and the resource for this disambiguation. In addition to the indicators used in the transcript above, RT→ indicates a repair that includes a candidate (Pomerantz, 1988) technological cause and Y→ indicates confirmation of the candidate.

Example 3.

```

1.  DES:  P→   Um::: someone can probably sleep on the c{_____}(2.5)}s three .h
2.  KAY:  I→   Wait what?
3.  DES:  RT→  Someone can probably[ sl]sleep on- did it cut out?
4.  KAY:          [oh ]
5.  KAY:  Y→   Yeah
6.  DES:          O*h. Someone can probably sleep on the couch

```

[Case052-p01-c09of09-t10p5139-34m23in-00m15s]

In this example, Des and Kay are making plans for a vacation in another city with a group of friends. Shared vacations are very important to long-distance couples because they represent times to be together and special freedom from home responsibilities. When incomes are limited, as they were for the participants, planning shared vacations often involves negotiation as to whether the couple will have their own hotel room, and thus be able to be as intimate as they wish, or share a hotel room with others to save money but have more limited intimacy. Here, Des proposes that a third person might stay on the couch in their hotel room, ending his turn with a downward intonation and in-breath that indicate a completion point (line 1). However, from Kay's perspective a large proportion of Des's proposal is dropped out (P→; line 1),

so she initiates repair (I→; line 2).

Unlike Example 1, in which Eva initiated repair with a search for clearly locatable content (“The what”; Example 1, line 2), Kay’s repair initiator “Wait what?” is more interruptive, calling for both a halt and some form of repair. Des initially orients to the repair in terms of Kay missing part or all of his immediately prior turn and begins to repeat it (RT→ “Someone can probably[s]leep on-”; line 3). Three words into Des’s repair, Kay overlaps Des with the change of state marker “Oh” (line 5). This “Oh” is likely to be a retrospective indicator of understanding the repaired turn in the midst of its repeated production. However, since this occurs in overlap with Des’s repair, Des may not hear Kay clearly. Whether he does or not, this second overlap from Kay is potentially indicative that Des’s turn-in-progress may not be on the right track. This, together with the “wait&rdq uo; of “wait what?” seems to lead Des to re-orient his repair design. Des

cuts off his content repetition to request confirmation of a candidate technological reason for Kay’s problem indication (RT→ “on- did it cut out?”; line 3). Des’s guess at a technological problem is an artful device for determining whether he should simply repeat the content or assume that the content is understood but that the sleeping arrangements are a matter of relational sensitivity that needs to be addressed. As it turns out, Kay’s confirmation of Des’s candidate (Y→; line 5) provides Des with the go ahead to repeat the content (line 6).

While the repair resources used by Des and Kay are not dissimilar to that of Eva and Hal and Kim and Cam, as well as being common to repair initiation and design across many media and contexts, there are two points that make Example 3 stand out. First, only Des, in example 3, directly invokes technology, in his use of “cut out”, a direct reference to technological mediation. This is quite different to Eva’s use of open class repair (“The what?”; Example 1, line 2) and Kim’s reference to hearing (Example 2, line 11). Indeed, even Kay’s repair initiator “Wait what?” (Example 3, line 2) is open class, even though it is more urgent than Eva’s “The what?”. Hal, Cam, and even Des initially, provide simple repetitions in response to these repair initiators. Further, the reason for the repair is not treated as relevant in Example 1 and Example 2. Example 3, by contrast, Des chooses to stop his first repair and check on its provenance in a context of a relationally-sensitive issue. Thus the potential for distortion of talk by the technology, and hence its specific reference in disambiguation, is of particular relevance when talk is sensitive. In this case the sensitivity involves the relationship, which is the business of the call, although we might see similar technological disambiguation in sensitive talk across a range of contexts. It should also be noted that the video was not treated as relevant to the disambiguation process in this example and, indeed, across most of the couples (Rintel, 2010), with limited exceptions. One such exception was when relational content itself was distorted.

Repair of video distortions.

Across all the couples the repair of distorted visual content was even more strongly linked to relational issues than repair of distorted audio content. Distorted, frozen gestures and facial expressions were overwhelmingly let pass in this trial (Rintel, 2010), despite the impact we might expect them to have on both sequential and epistemic use of expressions and gestures. As such, those occasions when visuals became a direct object of repair stood out, and, as with Example 3 above, they occurred in the context of specifically relational material.

While recipients were very sensitive to audio distortion and thus tended to initiate repair, recipients were far less sensitive to visual distortion. Often recipients did not even treat the visuals – including visual distortion – as relevant, responding only to the last verbal turn. Speakers, on the other hand, knew that they had performed a visual action (such as a gesture or facial expression), found recipients unresponsive to that visual action, checked on its reception, and then worked to have the visual taken up as part of the interaction.

Example 4 shows this in the case of a missed wink from Kay, designed to soften a relational tease, leading to a lot of work to ensure its uptake by Des. In addition to the indicators use above, C→ indicates a candidate answer question and Q→ indicates a request for report.

Example 4.

Figure 1. Repair of disrupted wink (Example 4, Case 021)

1. KAY: ((laugh)) You have no teeth ((laugh))
 2. DES: @Opens mouth with lips over teeth@
 3. [@Closes mouth, turns to left@]
 4. KAY: [Your mouth is like so blurry] it looks
 5. like it's sewed shut ((laugh))]
 6. DES: [Alright] I'll turn up my quality it's
 7. still choppy I wish it was better
 8. KAY: M:e too but it's not [. this is why] you can't date people far away
 9. DES: [Yeah I know]
 10. KAY: [@Open mouth smile and raised eyebrows@]
 11. DES: [((choked laugh))][@Looking away@]
 12. KAY: [@Exaggerated wink@]
 13. KAY: P→ @Disrupted exaggerated {wink with frames missi[ng]}@
 14. DES: [Very] funny
 15. KAY: I→ Did you like that
 16. DES: Q→ What'd you do?
 17. KAY: R→ @Exaggerated wink@
 18. DES: C→ Did you wink?
 19. KAY: Y→ @Very exaggerated wink, keeping eye closed, extreme close-up@ Mhm
 20. DES: ((laugh)) Here u:m, oh [boy]
 21. KAY: [Can you] see that? ((laugh))
 22. DES: Yes I saw that . [How do I look now?]
 23. KAY: [@Exaggerated slow wink with other eye@]
 24. (2.0)
 25. KAY: You look better
 26. DES: Am I: choppiier? @Rotating head from side to side@
 27. KAY: No
 28. DES: You should turn your frame rate down to seven. That's what I just did

[Case021-p01-c03of09-t11p3852-18m57in-02m19s]

The example begins with Kay's joking complaint that Des's mouth looks blurry (lines 4-5). Des responds with his own complaint that his sound is choppy and wish that the system worked better (lines 6-7). Kay agrees with Des's complaint and then proposes a teasing upshot (Drew, 1987) that cuts to the heart of why the couple is trying PV: "M:e too but it's not [. this is why] you can't date people far away" (line 8). She then smiles and raises her eyebrows (line 10) to indicate that this is a tease. While Des agreed with Kay's assessment (line 9), Des responds to the upshot reasoning with a choked laugh that indicates that he understands the upshot as a joke but does not find it especially funny (line 11). To further defuse her tease, Kay winks at the camera with two exaggerated winks, the first of which appears clearly (line 12). The

second is disrupted; she appears to move toward the camera, freeze, then move back (P→; line 13).

Des's ironic assessment "very funny" (line 14) is a verbal continuation of his ironic choked laugh. Kay's request for candidate positive assessment treats Des as not having provided an adequate or expected response to the winks, and is thus a repair initiator (I→; "Did you like that?", line 15). By asking if Des liked the winks, she is less interested in an actual assessment of the winks' "likeability" than Des understanding the winks as indications that the prior turn was a tease that is now being softened. Of course, Kay does not know that the winks were troubled, only that she did not immediately receive the expected response and that she is trying to defuse a relational tease. Thus she has a strong warrant to ensure that Des sees the winks.

Des's response to Kay's candidate is to request a report of what he was supposed to assess (Q→; "What'd you do?", line 16). Kay does not speak but produces another exaggerated wink (R→; line 17). Sensitive to the need to report on a correctly apprehended visual, Des proposes a candidate check that he was supposed to see a wink (C→; line 18). Kay confirms his candidate with an accompanying heavily exaggerated wink and "mhm" (Y→; line 19). Des's laughter (line 20) finally provides Kay with positive assessment of her visual action that shows him to be following along with Kay.

The pursuit of this visual content as relevant specifically to its relational context takes place within a larger instance of the couple explicitly orienting to the two other forms of distortion: blurry video (Kay) and choppy sound (Des). Technology-oriented remedy (moving the application's image/sound quality controls) was very much explicitly on the table right before and after this instance. But in the moment, the relational tease which specifically invokes the problems of using video calling to maintain the long-distance relationship is treated as the most relevant repairable.

Distortion as a Resource for Relational Parody and Teasing

Almost a third (31.7%) of couples' reactions to distortion involved accounting for the disturbed connection but not attempting to remedy the content or technology issue (Rintel, 2010). In terms of opportunistic relational talk, sometimes this was as simple as using attention to distorted visuals to deliver an indirect compliment (lines 10-12). Ora's basis for her assessment is that the technological shortcomings of the visuals are to be let pass when judged against its relational gains (see also Rintel, 2010).

Example 5.

1. ORA: @Arranging her wet hair@
2. JED: I→ Is my video blurry on your screen or does it
3. look nice?
4. ORA: Um:::::[:]
5. JED: I→ [D]oes it look pixelated?
6. ORA: Yeah
7. JED: Oh okay
8. ORA: @Looks away towards door@
9. JED: [So does yours]
10. ORA: R→ [It's fine] It doesn't- it doesn't bother
11. me it's fine. As long as I can see your
12. beautiful face @smiles@

[Case142-p06-c04of07-t09p5558-16m26in]

In contrast to situations such as Example 4, where visual content was repaired because it was relevant to a relational tease, among the non-remedial reactions to distortion were several instances in which the participants opportunistically capitalized on visual distortions as a resource for relational parody and teasing.

Visual distortion as a resource for relational teasing.

Example 6 illustrates that frozen video can form a practical resource for accomplishing relational teasing. Example 6 begins with an attempt at content remedy of visual trouble (akin to that of Example 4). The couple has been moving to conversational close and Hal's video froze about one minute prior to this case and remains frozen throughout. This distortion is used by Hal to transform the repair attempt itself into a tease. Hal describes throwing Eva's blown kiss into the garbage precisely because his frozen video allows him the creative freedom to describe his action as he wishes

Example 6.

Figure 2. Disrupted kiss and frozen image as a resource (Example 6, Case 076)

```

1.  HAL:      {{video frozen on @Pulling skin around eyes@}}
2.  EVA:      Alrighty
3.  HAL:      O[kay ]
4.  EVA:      [I love] you:
5.  HAL:      I love you t-[* [ *]
6.  EVA: P→      {{{@Quick} hand flash/disrupted blown kiss@}}
7.  EVA: I→      Did you get that
8.  HAL:      No do it again
9.  EVA: R→      @Blows a kiss@
10. HAL:      Oo::h
11. EVA:      ((laugh))
12. HAL:TC→      Look I caught it I dunno if you can see that
13. EVA: N→      I can't see it ((laugh))
14. HAL:      Wow that's too bad
15. EVA:      [I know]
16. HAL: J→      [In that] case I threw it in the garbage
17. HAL:      Oh: you bastard ((la[ugh]))
18. HAL:      [((lau]ghs))
19. EVA:      Alrighty, I [love you]

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20. HAL: [okay]
 21. HAL: I love you too
 22. EVA: Bye sweetie
 23. HAL: Mbye ((Logs off))

[Case076-p02-c04o05-t08p1320-25m03in-00m33s]

After producing a gesture that the recording shows as only a flash of her hand (P→; line 6), Eva immediately checks to see if Hal received it (I→; line 7) without waiting for Hal to respond. Without a turn from Hal, something else must be cueing Eva's check. As has been noted above, couples only checked on missing visual content when it was explicitly relational, and this example fits that model. However, it is additionally possible that Hal's frozen video is such an overt disruption of the visuals that Eva may be projecting her own inability to see Hal onto a possible inability for Hal to see her. Either way, Eva explicitly orients to Hal missing the blown kiss, and after Hal requests repetition, she does so in the clear (R→; line 9).

Hal indicates reception of the blown kiss with a sincere expression of appreciation (line 10), and then builds in this appreciation by describing his performance of catching the kiss but appends a check of Eva's reception of it in the form of candidate doubt based on the known technological distortion of being frozen ("Look I caught it I dunno if you can see that" (TC→; line 12). Eva verifies that she did not see Hal's action (line 13), which Hal proposes as a negative (line 14). Hal's turns describing the caught kiss and the misfortune of Eva not seeing it ratifies the relational importance of completing the blowing and catching a kiss sequence, especially as part of conversational closure.

Hal's assessment proposes what has been implicit all along: that technology has been to blame for the missing of gestures, not the intentional actions of Eva or himself. However, it also provides Hal with evidence that he cannot be seen. As such, Hal is now able to build a performance around what can and can not be seen. Hal does so by claiming the performance of a physical action that builds on the prior repaired relational sequence, claiming that he "threw it in the garbage" (J→; line 16). The gesture is unlikely to have actually physically occurred, but because of the value that the couple ascribes to blowing and catching kisses, this claim is a distinct relational tease. It could be argued that this kind of fake described gesture and associated tease is not limited either to video calling or to instances of distortion. It is always possible to claim the performance of an unseen physical action on the telephone or VOIP, and even in fully functional video calling one can move out of or cover the field of view and claim the performance of action. However, it is not the mere fact of lack of co-participant visual access that is important here. Rather, what is important is that Hal changes his continuity management orientation from distortion as repairable to distortion as an interactional resource for an intimate tease. Not only is the distortion a resource for Hal's tease, but the tease itself is a resource for framing the distortion as part of closing the conversation in a relationally intimate manner and thus not as an ongoing problem that requires further technological remedy. To be sure, the adequacy of the technology is on the table, but only in so far as it can be blended into the activity of closure.

Distortion as a creative spark used in combination with other visual constraints.

In most of the examples above distortions are used as resources in and of themselves. However, as with any interactional resource, distortions can be combined with other affordances or constraints to achieve social action. In the final example of this paper, Des combines an initial visual distortion (blurriness) with one of the fundamental constraints of video calling: that each caller has a very limited and generally fixed field of view of the other. Example 7 begins with Kay laughingly complaining about Des's lips being so blurry that they appear not to move when he talks (line 2). In response to this report of distortion, Des combines the concept of the distortion with the known-in-common concept of Kay's constrained field of view to produce an extended ventriloquism parody about an imaginary prurient third party (lines 5-27). In addition to the indicators above, in this transcript J→ indicates a joke that begins in one turn and continues through turns below.

Example 7.

Figure 3. Mouth movement distortion as a creative spark (Example 7, Case 020)

```

1.  DES:      You're so [cute      ]
2.  KAY: I→    [((laugh))] Your lips don't even move when you talk ((laugh))
3.  DES:      @Moves [mouth, no sound@]
4.  KAY:      [((laughs))      ]
5.  DES: J→    @Limited lip movement@ I'm not moving my lips right now
6.  KAY:      ((laugh))
7.  DES:      @Limited lip movement@ I'm not moving my lips right now
8.  KAY:      ((laugh))
9.  DES:      ((ventriloquist dummy voice)) I love you Kay
10. KAY:      ((laugh))
11. DES:      ((ventriloquist dummy voice)) Hello
12. KAY:      U[h]
13. DES:      ((ventriloquist dummy voice)) [K]ay is so sexy
14. KAY:      ((laugh))
15. DES:      ((ventriloquist dummy voice)) Kay is so sexy
16.      @turns to left@ ((regular voice)) Shut up over there
17.      @turns back to center@ (ventriloquist dummy voice) No I want to see her
18.      naked right now
19.      @turns to left@ (Regular voice) Shut the fuck u(h)p
20. KAY:      (Laughs) Okay if you insist .hh
21. DES:      Oh god, no, S- Sean is watching us
22. KAY:      ((laugh))
23. DES:      ((laugh)) Right n(h)o(h)w
24. KAY:      They're always watching (laughs)
25. DES:      What?
26. KAY:      I said they're always watching
27. DES:      I know. It's like Big Brother

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[Case020-p01-c03of09-t11p3358-14m03in-02m02s]

Des initially treats Kay's laughing report of his unmoving lips (I→: line 2) as an opportunity to use a joke to ratify that the brief visual distortion is not disruptive to conversational continuity (J→↓: line 5 and 7). He could have ended at this point, treating the entire distortion situation as passed and no other conversational activity has been interrupted. However, the ratified non-disruptiveness of the distortion combined with Kay's laughter provides Des with a choice: to move to another topic or to capitalize on the current amusement as a conversational activity in and of itself. He chooses the latter, first by two efforts at ventriloquism ("I'm not moving my lips right now"; lines 5 and 7), followed by an intonation change to represent an off-screen third party claiming to be in love with Kay ("I love you Kay"; line 9). This begins an

extended ventriloquism act in which the off-screen voice makes increasingly inappropriate suggestions to Kay while Des tries to quiet the voice and Kay somewhat plays along. In enacting the “off-screen voice,” Des is implicitly merging two different constraints of technological mediation – the momentary visual distortion and the ongoing field of view limitation – to play with the social meaning of how a voice could be heard when an image does not imply connection with the voice.

Des extends the parody by proposing that the third party is attempting to summon Kay (line 11), but failing a direct response to the third party from Kay he moves to another trope: the third party as voyeur (lines 13, 15-19) and his own entitlement to stop the third party’s voyeuristic requests. Des knows that Kay’s can only see a limited field of view on his end, and can not move that field of view, so he is able to create the ventriloquism act by looking at the camera as he performs the ‘off-screen’ voice with limited mouth movement, in contrast to turning his head to look off-camera and clearly moving his mouth to perform his own turns.

The act provides an opportunity for Des to do parodic sexual talk in Kay’s presence. Des’s talk is clearly not directly intimate in the romantic sense, but sexual parody involving one’s interlocutor certainly proposes a high level of relational closeness. In essence, Des has found an opportunity to demonstrate affection and closeness without having to manufacture a more serious moment of intimacy or wait for a conversational phase (such as closing) when declarations of intimacy are often enacted (Drew & Chilton, 2000).

The act reaches its peak in the “off-screen voice” expressing a desire to see Kay naked (line 17-18), which could be both part of Des’s joke and a test by Des to see whether this might, in fact, lead to a mediated sexual experience. Kay, in a tone of joking resignation, verbally agrees to the request (line 20) but makes no physical move to remove her clothing, ratifying the parody and allowing the relational fun to continue. Although her agreement is proposed as a joke, Des immediately proposes negation on the basis that they are being recorded (line 21), which leads to discussion of being watched (line 22-27) and movement into another topic.

While such a parody is obviously not original to Des, nor revolutionary simply because it is occurring in the video calling context, it does illustrate that “intimacy at a distance”, as Hutchby (2001a) calls it, is not simply a matter of the transmission of intimate action. The fact of technological mediation is quite apparent to both parties but its material frame does not determine that talk. Rather, distortion is treated as an initial creative impetus to an act that relies on the ongoing field of view limitation.

Conclusion: The Resourceful Treatment of “Troubling” Technology

Sacks (1992b, pp. 548-549) famously argues that technology is “being made at home with the rest of our world. And that’s a thing that’s routinely being done, and it’s the source of the failure of technocratic dreams that if only we introduced some fantastic new communication machine, the world will be transformed. Where what happens is that the object is made at home in the world that has whatever organisation it already has.” This article illustrates that couples in long-distance relationships may choose to treat audio/video distortions as not mere barriers to their relationship but rather as bound up with how technological mediation plays a role in enacting their relationship. Managing conversational continuity during distortions involved two opportunistic uses of the distortion as a relational resource. First, technological mediation can be treated as relevant to disambiguating whether the repair involves simple content repetition or a more complex relational issue. Second, distortions can be treated as resources for relational intimacy, in this case parody and teasing. The fact that the contingent relevance of technology and intimacy appeared and was resolved in fleeting moments should not be taken as an indication of irrelevance. Conversational turns are routinely exchanged faster than is apparently strategically possible; what matters is that they are produced as relevant to the participants (Sacks, 1992a, p. 11).

While audio/video distortions are unlikely to be preferred resources for enacting a relational talk, the couples’ ability to incorporate them as an interactional and interpersonal resource speaks a critical issue in technology research: that categories such as “trouble,” “disruption,” or “failure” need to be very carefully applied. The technology adoption (Venkatesh, Davis, & Morris, 2007) and Diffusion of Innovation (e.g. Rogers, 2003) literatures tend to treat operational problems such as audio/video distortion in an undifferentiated fashion, as assumedly negative, and as a threshold issue above which they might not matter. This has parallels to Button’s (1993) argument that a great deal of socially focused research treats technology as yet another platform in which standard sociological or psychological issues (power gender

technology as yet another problem in which standard sociological or psychological issues (power, gender, relationships etc.) are seen to play out (e.g. see the overview of computer-mediated communication relationship research in [Tong & Walther, 2011](#)). While we certainly do learn important things from such an approach, Button argues that that people's practical engagement with technology is often curiously absent from such research ([Button, 1993](#)).

Rather than simply arguing that relational context is a moderating factor in coping with distortions, this paper demonstrates the ongoing value of Button's (1993) injunction to demonstrate how "the facticity of technology is displayed, accounted for, and testified to" ([Button, 1993, p. 11](#)) as a resource for investigating online relationships. Hutchby's (2001b) notion of "technologized interaction" provides a foundational principle for just such investigations: that participants enact social action that treats the constraints of technology as a frame but not a determiner of social action. It is not being claimed that all operational problems occasion relational talk, nor that all relational talk is occasioned by operational problems. However, it is being claimed that resources for online relationships extend beyond the deliberately designed and correctly operational affordances or constraints of communication technologies. When audio/video distortions occur, long-distance partners can choose to treat them as resources for fitting the current experience into the organization of a world that involves necessarily mediated interaction.

Rather than taking an undifferentiated approach to distortion as "trouble," or simply refining a communicative model to include a more complex sense of noise, the benefit of the technologized interaction approach is that it refocuses attention from operational distortions as externally imposed effect to how operational distortions are a participant's concern; indeed, a logical extension of the omnipresent orientation to repair in co-present interaction. In turn, this broadens our conceptions of constituting online relationships as stemming primarily from technological features to a more holistic sense that all facets of technological mediation – the good and the bad – are routinely managed in the interactional business of maintaining online relationships.

Clearly this paper's approach is limited to illustrative explanations of micro-level social order. There are many questions that this approach cannot explore, such as any more generalizable regularities in reactions, variations in relational types, possible effects on adoption, or on the manner in which take-up of more standard constraints matches up with operational problems. That being said, the work does provide insights that can be transferred to other contexts.

For technology designers there are several intertwined lessons about communicative separability and holism. The findings show users treating the video and audio channels of video calling separately, and even use the distortion of video as an interactional resource as long as the audio continued to work. At the very least this indicates a need to consider how each transmission channel relates to a communicative channel that can be used for a task, and how, in turn, each transmission channel should gracefully degrade in a hierarchy of likely communicative task requirements. In a more complex turn, though, designers also do not need to second-guess what users will do. Rather, designers should provide users with ways to account for what channels are doing and ways for users to make and act upon their own choices for the communicative task, supporting the ways in which users fluidly move between treating mediation as more or less relevant.

The lessons are somewhat similar for communication technology researchers, especially those considering using communication technology interventions into existing contexts. Consider telehealth contexts, for example. Along with medical requirements (history-taking, current condition reports, diagnosis, and treatment) practitioners and patients must establish a working consensus of technical, social, and medical connection. In these situations, hoping that the technology will act as a transparent tool is, I would argue, less valuable than deliberately treating it as part of the interaction. Given the findings above of participants able to take a range of both distortions and affordances/constraints in their stride as they conducted their relational interaction – as we would expect given the omnipresent orientation to conversational repair – device design, practitioner training, patient training, and consultation scripts should all build in the recognition of mediation as relevant to conducting telehealth treatment. We might hope, then, that rather than technology acting as a distraction pulling participants in and out of potentially very sensitive medical tasks, that all users would orient to working with mediation – even troubled mediation – as an inherently recognisable condition. Attention to this might improve practitioner-patient rapport, instruction giving/reception, and, of course, coping with the inevitable operational problems that accompany even the best technology of intimacy at a distance.

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References

- Arminen, I., Auvinen, P., & Palukka, H. (2010). Repairs as the last orderly provided defense of safety in aviation. **Journal of Pragmatics**, *42*(2) 443-465. Retrieved from <http://dx.doi.org/10.1016/j.pragma.2009.06.015>
- Button, G. (1993). The curious case of the vanishing technology. In G. Button (Ed.), **Technology in working order: Studies of work, interaction and technology** (pp. 10-28). London, UK: Routledge.
- Chapanis, A., Ochsman, R. B., Parrish, R. N., & Weeks, G. D. (1972). Studies in interactive communication: I. The effects of four communication modes on the behavior of teams during cooperative problem solving. **Human Factors**, *14*, 487-509. Retrieved from <http://dx.doi.org/10.1177/001872087201400601>
- Chatting, D. J., Galpin, J. S., & Donath, J. S. (2006). Presence and portrayal: Video for casual home dialogues. In **Proceedings of the 14th Annual ACM International Conference on Multimedia** (pp. 395-401). Retrieved from <http://dx.doi.org/10.1145/1180639.1180723>
- Clayman, S.E. & Gill, V.T. (2004) Conversation analysis. In A. Bryman & M. Hardy (Eds.), **Handbook of Data Analysis** (pp. 589-606). London, UK: Sage.
- Dourish, P. (2001). **Where the action is: The foundations of embodied interaction**. Cambridge: MIT Press.
- Dourish, P., Adler, A., Bellotti, V., & Henderson, A. (1996). Your place or mine? Learning from long-term use of audio/video communication. **Computer-Supported Cooperative Work**, *5*(1), 33-62. Retrieved from <http://dl.acm.org/citation.cfm?id=246608>
- Drew, P. (1987). Po-faced receipts of teases. **Linguistics**, *25*, 219-253. Retrieved from <http://dx.doi.org/10.1515/ling.1987.25.1.219>
- Drew, P. (1997). "Open" class repair initiators in response to sequential sources of troubles in conversation. **Journal of Pragmatics**, *28*, 69-102. Retrieved from [http://dx.doi.org/10.1016/S0378-2166\(97\)89759-7](http://dx.doi.org/10.1016/S0378-2166(97)89759-7)
- Drew, P. & Chilton K. (2000). Calling just to keep in touch: Regular and habitualized telephone calls as an environment for small talk. In J. Coupland (Ed.), **Small Talk** (pp. 137-162). Harlow: Pearson Education.
- Egbert, M. (2004). Other-initiated repair and membership categorization: Some conversational events that trigger linguistic and regional membership categorization. **Journal of Pragmatics**, *36*, 1467-1498. Retrieved from <http://dx.doi.org/10.1016/j.pragma.2003.11.007>
- Fitzgerald, R. (2012). Membership categorisation analysis. Wild and promiscuous or simply the joy of Sacks. **Discourse Studies**, *14*(3). Retrieved from <http://dx.doi.org/10.1177/1461445612440776d>
- Follmer, S., Raffle, H., Go, J., Ballagas, R., & Ishii, H. (2010). Video play: Playful interactions in video conferencing for long-distance families with young children. In **Proceedings of the 28th International Conference Extended Abstracts on Human Factors in Computing Systems (CHI '10)** (pp. 49-58). Retrieved from <http://dx.doi.org/doi:10.1145/1753846.1753991>
- Garfinkel, H. (2002). **Ethnomethodology's program: Working out Durkheim's aphorism**. Lanham: Rowman & Littlefield.
- Garfinkel, H. & Wieder, D. L. (1992). Two incommensurable, asymmetrically alternate technologies of Social Analysis. In G. Watson & R.M. Seiler (Eds.), **Text in Context: Studies in Ethnomethodology** (pp. 175-206). Newbury Park, CA: Sage.

- Gaver, W. W. (1992). The affordances of media spaces for collaboration. In **Proceedings of the 1992 ACM Conference on Computer-Supported Cooperative Work** (pp.17-24). Retrieved from <http://dx.doi.org/10.1145/143457.371596>
- Gibson, J. J. (1979). **The ecological approach to visual perception**. Boston, MA: Houghton Mifflin.
- Goodwin, C. (1981). **Conversational organization: Interaction between speakers and hearers**. New York, NY: Academic Press.
- Greiffenhagen, C. & Watson, R. (2009). Visual repairables: Analysing the work of repair in human-computer interaction. **Visual Communication**, 8(1), 65-90. Retrieved from <http://dx.doi.org/10.1177/1470357208099148>
- Harrison, S. (Ed). (2009). **Media Space: 20+ years of mediated life**. London, UK: Springer-Verlag.
- Hashimoto, Y. & Ishibashi, Y. (2006). Influences of network latency on interactivity in networked rock-paper-scissors. In **Proceedings of the 2006 NETGAMES Conference** (pp. 23-29). Retrieved from <http://dx.doi.org/10.1145/1230040.1230091>
- Heath, C. & Luff, P. (1991). Disembodied conduct: Communication through video in a multi-media office environment. In **Proceedings of the SIGCHI Conference on Human Factors in Computing Systems: Reaching through Technology** (pp. 99-103). Retrieved from <http://dx.doi.org/10.1145/108844.108859>
- Heritage, J. (2012). The epistemic engine: Sequence organization and territories of knowledge. **Research on Language & Social Interaction**, 45(1), 30-52. Retrieved from <http://dx.doi.org/10.1080/08351813.2012.646685>
- Housley, W. & Fitzgerald, R. (2009). Membership category analysis, culture and norms in action. **Discourse and Society**, 20(3), 345-362. Retrieved from <http://dx.doi.org/10.1177/0957926509102405>
- Howard, S., Kjeldskov, J., Skov, M., Garmoes, K., & Granberger, O. (2006). Negotiating presence-in-absence: contact, content and context. In **Proceedings of the SIGCHI Conference on Human Factors in Computing Systems** (pp. 909-912). Retrieved from <http://dx.doi.org/10.1145/1124772.1124906>
- Hutchby, I. (2001a). **Conversation and technology: From the telephone to the internet**. Cambridge, UK: Polity.
- Hutchby, I. (2001b). Technologies, texts and affordances. **Sociology**, 35(2), 441-456. Retrieved from <http://dx.doi.org/10.1177/S0038038501000219>
- Hutchby, I. & Barnett, S. (2005). Aspects of the sequential organisation of mobile phone conversation. **Discourse Studies**, 7(2), 147-171. Retrieved from <http://dx.doi.org/10.1177/1461445605050364>
- Hutchby, I. & Wooffitt, R. (2008). **Conversation analysis (2nd ed.)**. Cambridge, UK: Polity.
- Isaacs, E., & Tang, J. C. (1993). What video can and can't do for collaboration: A case study. In **Proceedings of the ACM Multimedia '93 Conference** (pp. 199-206). Retrieved from <http://dx.doi.org/10.1145/166266.166289>
- Judge, T. K. & Neustaedter, C. (2010). Sharing conversation and sharing life: video conferencing in the home. In **Proceedings of the 28th International Conference on Human Factors in Computing Systems** (pp. 655-658). Retrieved from <http://dx.doi.org/10.1145/1753326.1753422>
- Judge, T. K., Neustaedter, C., Harrison, S., & Blose, A. (2011). Family portals: Connecting families through a multifamily media space. In **2011 Annual Conference on Human Factors in Computing Systems** (pp. 1205-1214). Retrieved from <http://dx.doi.org/10.1145/1978942.1979122>
- Kendon, A. (1990). **Conducting interaction: Patterns of behavior in focused encounters**. Studies in Interactional Sociolinguistics. Cambridge: Cambridge University Press

- Kirk, D. S., Sellen, A., & Cao, X. (2010). Home video communication: Mediating closeness. In **Proceedings of the 2010 ACM Conference on Computer Supported Cooperative Work (CSCW '10)** (pp. 135-144). Retrieved from <http://dx.doi.org/10.1145/1718918.1718945>
- Laver, J. (1975). Communicative functions of phatic communication. In A. Kendon, R. Harris, & M. R. Key (Eds.), **Organization of behavior in face-to-face interaction** (pp. 215-238). The Hague: Mouton.
- Lerner, G. H. (2003). Selecting next speaker: The context-sensitive operation of a context free organization. **Language in Society**, **32**(2), 177–201. Retrieved from <http://dx.doi.org/10.1017/S004740450332202X>
- Lerner, G. H. & Kitzinger, C. (2012). Research at the intersection of reference and repair: Introduction to the special issue. **Research on Language and Social Interaction**, **45**(2), 111-115. Retrieved from <http://dx.doi.org/10.1080/08351813.2012.673371>
- Licoppe, C. & Dumoulin, L. (2010). The “curious case” of an unspoken opening speech act: A video-ethnography of the use of video communication in courtroom activities. **Research on Language and Social Interaction**, **43**(3), 211-231. Retrieved from <http://dx.doi.org/10.1080/08351811003741319>
- Lu, Y., Zhao, Y., Kuipers, F.A., & Van Mieghem, P. (2010). Measurement study of multi-party video conferencing. In **Proceedings of IFIP Networking (NETWORK 2010)** (pp. 96-108). Retrieved from http://dx.doi.org/10.1007/978-3-642-12963-6_8
- Magnusson, T. (2010). Affordances and constraints in screen-based musical instruments. In **Proceedings of the 4th Nordic Conference on Human-Computer Interaction: Changing Roles** (pp.441-444). Retrieved from <http://dx.doi.org/10.1145/1182475.1182532>
- McGrenere, J. & Ho, W. (2000). Affordances: Clarifying and evolving a concept. In **Proceedings of Graphics Interface 2000**. Retrieved from <http://www.graphicsinterface.org/cgi-bin/DownloadPaper?name=2000/177/PDFpaper177.pdf>
- Molnar, J. P. (1969). Picturephone service – a new way of communicating. **Bell Laboratories Record**, **47**(5), 134-135. Retrieved from <http://www.beatriceco.com/bti/porticus/bell/pdf/picturephone.pdf>
- Mondada, L. (2007). Multimodal resources for turn-taking: Pointing and the emergence of possible next speakers. **Discourse Studies**, **9**(2), 195-226. Retrieved from <http://dx.doi.org/10.1177/1461445611427210>
- Monk, A. F., & Watts, L. (1995). A poor quality video link affects speech but not gaze. In **Proceedings of the 1995 ACM Conference on Human Factors in Computing Systems** (pp. 274-275). Retrieved from <http://dx.doi.org/10.1145/223355.223671>
- Neustaedter, C. & Greenberg, S. (2011). **Intimacy in long-distance relationships over video calling**. Research Report 2011-1014-26, Department of Computer Science, University of Calgary. Retrieved from <http://dspace.ucalgary.ca/bitstream/1880/48735/1/2011-1014-26.pdf>
- Norman, D. A. (1988). **The Psychology of Everyday Things**. New York: Basic Books.
- Norman, D. A. (1999). Affordances, Conventions, and Design. **Interactions**, **6**(3), 38-41. Retrieved from <http://dl.acm.org/citation.cfm?id=301168>
- Pomerantz, A. M. (1988). Offering a candidate answer: An information seeking strategy. **Communication Monographs**, **55**, 360-73. Retrieved from <http://dx.doi.org/10.1080/03637758809376177>
- Pomerantz, A. & Mandelbaum, J. (2004). A conversation analytic approach to relationships: their relevance for interactional conduct. In K. Fitch & R.E. Sanders (Eds.), **Handbook of language and social interaction** (pp.149-171). Mahwah, NJ: Lawrence Erlbaum.
- Rainie, L. & Zickuhr, K. (2010). **Video calling and video chat**. Pew Internet & American Life Project. Washington D.C.: Pew Research Center. Retrieved from <http://pewinternet.org/Reports/2010/Video-chat.asp>

- Raymond, G. & Heritage, J. (2006). The epistemics of social relationships: Owning grandchildren. **Language in Society**, 35(5), 677-705. Retrieved from <http://dx.doi.org/10.1017/S0047404506060325>
- Rintel, E. S. (2010). Conversational management of network trouble distortions in personal videoconferencing. In **Proceedings of the 22nd Conference of the Computer-Human Interaction Special Interest Group of Australia on Computer-Human Interaction** (pp. 304-311). Retrieved from <http://dx.doi.org/10.1145/1952222.1952288>
- Rintel, S. (2007). Maximizing environmental validity: remote recording of desktop videoconferencing. In **Proceedings of the 12th International Conference on Human-Computer Interaction: Interaction Design and Usability** (pp. 911-920). Retrieved from http://dx.doi.org/10.1007/978-3-540-73105-4_100
- Rintel, S. (2013). Tech-tied or tongue-tied? Technological versus social trouble in relational video calling. In **Proceedings of the Forty-Sixth Hawaii International Conference on System Sciences** (pp. 3343-3352). Retrieved from <http://dx.doi.org/10.1109/HICSS.2013.512> [Alternative: <http://seanrintel.files.wordpress.com/2013/02/rintel-2013-hicss.pdf>]
- Ruhleder, K., & Jordan, B. (2001). Co-constructing non-mutual realities: Delay-generated trouble in distributed interaction. **Computer Supported Cooperative Work**, 10(1), 113-138. Retrieved from <http://dx.doi.org/10.1023/A:1011243905593>
- Sacks, H. (1992a). Rules of conversational sequence. In G. Jefferson (Ed.), **Lectures on Conversation, Vol. I** (pp. 3-11). Oxford: Blackwell.
- Sacks, H. (1992b). A single instance of a phone-call opening. In G. Jefferson (Ed.), **Lectures on Conversation, Vol. II** (pp. 542-553). Oxford: Blackwell.
- Sacks, H., Schegloff, E., & Jefferson, G. (1974). A simplest systematics for the organization of turn-taking for conversation. **Language**, 50, 696-735. Retrieved from <http://www.jstor.org/stable/412243>
- Schegloff, E. A. (2007). **Sequence organization in interaction: A primer in conversation analysis Volume I**. Cambridge, UK: Cambridge University Press.
- Schegloff, E. A. (1986). The routine as achievement. **Human Studies**, 9, 111-151. Retrieved from <http://dx.doi.org/10.1007/BF00148124>
- Schegloff, E. A., Jefferson, G., & Sacks, H. (1977). The preference for self-correction in the organization of repair in conversation. **Language**, 53, 361-382. Retrieved from <http://www.jstor.org/stable/413107>
- Stivers, T. (2005) Non-antibiotic treatment recommendations: Delivery formats and implications for parent resistance. **Social Science & Medicine**, 60(5), 949-964. Retrieved from <http://dx.doi.org/10.1016/j.socscimed.2004.06.040>
- Stokoe, E. (2012). Moving forward with membership categorization analysis: Methods for systematic analysis. **Discourse Studies**, 14(3), 277-303. Retrieved from <http://dx.doi.org/10.1177/1461445612441534>
- Suchman, L.A. (1987). **Plans and situated actions: The problem of human-machine communications**. Cambridge, UK: Cambridge University Press.
- Suchman, L., Blomberg, J., & Orr, J. E. (1999) Reconstructing technologies as social practice. **The American Behavioral Scientist**, 43(3), 392-408. Retrieved from <http://dx.doi.org/10.1177/00027649921955335>
- Taylor, P., & Keeter, S. (2010). **Millennials: A portrait of generation next**. Pew Internet & American Life Project. Washington DC: Pew Research Center. Retrieved from <http://pewsocialtrends.org/assets/pdf/millennials-confident-connected-open-to-change.pdf>
- ten Have, P. (2007). **Doing conversation analysis: A practical guide (2nd ed)**. London, UK: Sage.

- Tong, S. T., & Walther, J. B. (2011). Relational maintenance and computer-mediated communication. In Wright, K.B. & Webb, L.M. (Eds.), **Computer-mediated communication in personal relationships** (pp. 98-118). New York: Peter Lang.
- Venkatesh, V., Davis, F. D., & Morris, M. G. (2007). Dead or alive? The development, trajectory, and future of technology adoption research. **Journal of the AIS**, 8(4), 267-286. Retrieved from <http://aisel.aisnet.org/jais/vol8/iss4/10>
- Walther, J. B. (2011). Theories of computer-mediated communication and interpersonal relations. In M. L. Knapp & J. A. Daly (Eds.), **The handbook of interpersonal communication** (4th ed., pp. 443-479). Thousand Oaks, CA: Sage.
- Watson, A., & Sasse, M. A. (2000). The good, the bad, and the muffled: the impact of different degradations on Internet speech. In **Proceedings of the Eighth ACM International Conference on Multimedia** (pp. 269-276). Retrieved from <http://dx.doi.org/10.1145/354384.354503>
- Yarosh, S. & Abowd, G. D. (2011). Mediated parent-child contact in work-separated families. In **Proceedings of the 2011 Annual Conference on Human Factors in Computing Systems** (pp. 1185-1194). Retrieved from <http://dx.doi.org/10.1145/1978942.1979120>
- Yarosh, S., Chew, Y. C., & Abowd, G. D. (2009). Supporting parent-child communication in divorced families. **International Journal of Human Computer Studies**, 67(2), 192-203. Retrieved from <http://dx.doi.org/10.1016/j.ijhcs.2008.09.005>
- Yarosh, S. & Kwikkers, M. (2011). Supporting pretend and narrative play over videochat. In **Proceedings of the 10th International Conference on Interaction Design And Children** (pp. 217-220). New York, NY: ACM. Retrieved from <http://dx.doi.org/10.1145/1999030.1999065>

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