Text in Talk: Lightweight Messages in Co-Present Interaction

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While lightweight text messaging applications have been researched extensively, new messaging applications such as iMessage, WhatsApp, and Snapchat offer some new functionality and potential uses. Moreover, the role messaging plays in interaction and talk with those who are co-present has been neglected. In this article, we draw upon a corpus of naturalistic recordings of text message reading and composition to document the face-to-face life of text messages. Messages, both sent and received, share similarities with reported speech in conversation; they can become topical resource for local conversation–supporting verbatim reading aloud or adaptive summaries. Yet with text messages, their verifiability creates a distinctive resource. Similarly, in message composition, what to write may be discussed with collocated others. We conclude with discussion of designs for messaging in both face-to-face, and remote, communication.

CCS Concepts: • **Human-centered computing → Empirical studies in ubiquitous and mobile computing**; *Empirical studies in collaborative and social computing*;

Additional Key Words and Phrases: Mobile devices, text messaging, video analysis

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1 INTRODUCTION

Our smartphones—and the apps we use on them—have not only enabled a variety of exciting new communication channels, but they have also taken those communication channels into a wider variety of settings. Familiar forms of communication, in particular the humble text message, have acquired new found significance and functionality through new apps such as WhatsApp, Line, WeChat, Viber, Skype, Facebook Messenger, Snapchat, Secret, and KaKao Talk. While these services have made text chat available in a wider range of places, they have also changed the media itself—messages may now contain images, audio, stickers, and video clips and, along with text, and these can be exchanged between distributed groups and presented in threaded conversations. In some applications, these conversations are persistent and develop over time, in others they are transitory or even anonymous. These evolving forms of mobile communication continue to attract attention within the research community. Building on a long tradition of research into computer

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mediated communications (CMC) practices, and in particular those surrounding short message service (SMS) and instant messaging (IM) [20, 53–55, 57, 58], we are now beginning to see more recent studies which focus more specifically on new forms of mobile messaging and associated practices [7, 40].

While this earlier work has highlighted a rich and varied set of issues relating to the practices surrounding these types of technologies, what is also apparent is a strong tendency to treat text communication as a single generic communication channel between distributed parties. Some recent papers seek to reconceptualise this [11, 21, 26, 32, 40]—one promising shift is to see these technologies and encounters as part of our ongoing sociability and relationships over time [28, 32, 40]. This ongoing sociability is made up of the various interactions, exchanges, and encounters with others experienced across a wide range of media and contexts, both face-to-face and remote. These inter-personal encounters are not experienced as discrete entities in and of themselves, but rather as interrelated encounters, with meaning and significance woven together in the production of social relationships over time. This means that not only do encounters having a bearing on past and subsequent interactions, but that this network of encounters produces our sociality with others. This is the lens through which we look at digital messaging in this article.

Here, we focus on text messaging in the context of *co-present* face-to-face interactions: how messages are shared, how they take shape, how they can be given additional significance within the context of local talk, and the ways in which local participants come to be included in their production. These interactions take place in text messaging apps, but also in other applications such as Instagram, or Facebook. Early ethnographic work on mobile phone interaction highlighted the importance of considering the part played by mobile phone interactions in the context of local interactions, e.g., [60]. Yet rather than how phones might *contribute* to face-to-face interaction, much of this work was concerned with the ways in which mobile phone interactions were uneasily positioned within the context of co-present interaction—with messaging a disturbance or something that needed to be respectfully managed in the context of collocated others [6, 15, 17, 34, 36, 37, 46]. Some authors, such as Taylor and Weilenmann, did highlight the mobile phone as an object and looked at how our interactions with it were used as a means to subvert and steer local conversation in particular ways. Nevertheless, phone interactions were again seen as disruptive to the particular unfolding of local conversations (albeit in deliberately artful ways). This connects to one of the pivotal moves in computer-supported cooperative work (CSCW), to consider the multiparty use of computing devices in co-present activity around screens and devices [23]. Yet there has been relatively little attention paid to how these interactions take place around mobile devices (with the notable exception of Luff's classic paper [35]). In part, this is due to the difficulty of observing and recording interaction around necessarily smaller devices. Yet, if co-present interaction is as common a feature of mobile device use as it appears to be for desktop computing, then this could have implications for design—interaction *around* devices should be designed for, as well as interaction *with* devices.

In this article, we draw on an original corpus of over 70 hours of recorded video data of iPhone use, including text messaging behaviour. The corpus was collected using screen recording software that recorded users' interactions with their own device, as well as audio occurring around the phone that was recorded by the iPhone's microphone. Fifteen participants recorded their mobile device use for an average of seven days each, and the resulting corpus of content spans a range of messaging applications including WhatsApp, Facebook messenger, iMessage, and Skype. Indeed, communication apps represented almost the majority of device use recorded, with 33% of the videos featuring applications including Messages (iMessage), Mail, Skype, Google Hangouts, Viber, and WhatsApp.

We use this data here to make a number of arguments about less-well documented aspects of text messaging practices which relate to their position in co-present interaction. We draw on Bakhtin's notion of the 'dialogic' form of meaning to give us resources to understand how messages and messaging rely to an extent on previous conversations [1]. These arguments open up messaging, from being a single-party to single-party communication method to a form of multi-party to multi-party communication. In particular, Bakhtin focused on *reported speech* [14, 24, 59]. Reported speech refers to the construction of 'socially consequential images' of another communicator through their reporting of a previous conversation in their current co-present interaction. The reported instances discussed in the current article are of text-based communications—*reported text* if you will. Adopting the dialogic form, reported speech offers us a new way to view these text-based communications. Text chat can be at times considered a distraction, but can also more positively act as an active contribution to ongoing face-to-face interaction and talk. With this is mind, we explore the role of a message as *topic* in co-present conversation—that can be read aloud, summarised or commented on to spark off conversation. We consider further how this reporting is constructed using specific conversational mechanisms to convey the reporter's orientation towards the person and content of the text-based encounter [30], and how this opens messages up to subsequent evaluation and comment by the co-present party [14, 24]. The interface of the phone itself can be seen to have some impact on the interaction in how different aspects of reported text can be 'shown' to other parties. Finally, we discuss co-production where a message is written involving assistance from the other local parties. In our conclusion, we discuss the multi-party nature of mobile device use, reflect upon the nature of device use in co-present conversation, and how these might be taken into consideration in the design of mobile apps.

2 THE HISTORY OF TEXT

Over the years, computer-mediated communication (CMC) in its various forms has been a central concern for HCI and studied extensively both within the community and beyond. While a full review of all the CMC issues is not possible here, there are a number of studies that we wish to highlight. Of particular relevance are those concerned with understanding the practices of IM and SMS [2, 12, 16–19, 33, 39, 42, 44, 56]. Overwhelmingly, what these studies point to is the use of such messaging systems, by teenagers and young adults, to maintain social relations and contact among friends and family beyond their face-to-face interactions. In particular, messaging is done with 'close ties' rather than 'weak ties', reflecting real space relationships. A number of these studies highlight how particular characteristics of the technologies influence or 'shape' such practices—for example, the fact that they are lightweight, quick, cheap, and offer certain abilities to time-shift and place-shift their communications in ways relating to their particular social and physical circumstances.

Grinter et al. [17] contrast IM and text messaging—highlighting certain differences such as the use of media sharing and group chat in IM, yet many of the differences are bound up in how and when these different communications can be performed in relation to the mobility of SMS compared to the desktop or laptop use of IM (their study, as they acknowledge, coming before large scale adoption of IM on phones). More recent work though, would indicate that there are potential relational differences in terms of the use of the different forms on the mobile. Looking at Blackberry Messenger (BBM), for example, Reynolds et al. [47] found that 'BBM social contacts are relationally closer and include more friends but fewer family and acquaintances than SMS'. This would suggest that these are being oriented to in different ways, bringing into focus the shifting communications landscape that has emerged over time. The adoption of mobile devices running platforms such as iOS and Android now offers a much richer variety of communication possibilities beyond that available in the earlier studies. In this respect, we are beginning to see greater

concern with these communication dealings as a whole, and how people manage this [3, 25, 27]. In their study of smartphone users, Barkhuus and Polichar [3] note that while this complexity of choice would outwardly appear problematic, users are rather resourceful and capable customizers of their own devices. They found communication 'flexibility was paramount', and that users exploited the 'seams' created by the technical properties of different modes of communication in order to manage their various relationships. Others have pointed to 'channel blending' [27, 50] as a concept to understand how different communication channels can be integrated. As Isaacs et al. [27] articulate, 'rather than thinking in terms of technology-based sessions, we might think about coherent social acts that may take place over time and across channels (including face-to-face), and allow people to build on the context created during the ongoing interaction' [27].

While these studies present some important characterisations of the multi-channelled nature of communications, the methods used result in some blind spots. Much of the existing work on text messages used either recall methods (such as interviews), or logging methods to study lightweight messaging. Both of these approaches have certain strengths; recall methods can usefully support a broader investigation of the values and feelings of messaging behaviour, and the role that they play in individuals' lives. As with interview studies more generally, however, there are certain tendencies in answers to interview questions to discuss the unusual, or spectacular accounts of device use. Studies that rely more upon logs of sent and received messages offer the opportunity to overcome some of these limitations. Logs give relatively unfiltered and unmediated access to system use [45]. They offer the ability to aggregate behaviour over large collections of users, rather than focusing intently on a selected few. Logs can also provide researchers with key details of a conversation thread that may add further insights into the particular practices and significance of these technologies in people's everyday lives. Even with such logs, however, there remain particular challenges and limitations. In particular, one of the key challenges with such mobile messaging practices is in understanding the 'in the moment' and *in situ* context, and how messaging practices unfold in that context. Observational and shadowing techniques offer certain insights on these practices, but such techniques introduce particular challenges in the heterogeneous locales of mobile use and may be intrusive on the natural unfolding of behaviour around these technologies. Furthermore, it can often be difficult to combine such observations with suitable access to the actual content on devices at the centre of these behaviours.

3 METHODS

In reviewing earlier work, we sought a method that might allow us to look at text messages 'as they happen', rather than reported retrospectively—so taking some of the advantages of log-based approaches yet gaining further access. We also wanted to get access to some of the context around message reading and composition. Accordingly, here we draw hereupon a corpus of real world recordings of mobile messaging communications as they are received, read, composed, and revisited. Drawing on the methods of [5], we utilised a bespoke screen recording application that was installed on the mobile phones of those participating in the study. The application was developed for Apple iOS, with iPhone ownership therefore being a requisite of participation in the study. The screen recording software was triggered automatically when there is any interaction with the phone. Unlike some other screen recording applications, the software worked across any app with which the user was interacting. This allowed the screen recordings to cover unfolding interactions with various messaging apps, interweaved and situated within the broader context of multi-application switching characteristic of mobile phone use. Over and above the screen recording components, the software also recorded the location of use, the applications used, and the ambient audio—including conversation—that happened around these mobile phone interactions.

This gave us some access to the context of use and how the mobile interactions are situated in the broader context of social and conversational activity taking place in the vicinity of the phone.

The data collection system consisted of this local recording application installed on participants' iPhone, and a website that allowed each participant to review and annotate their own data recordings, the location of the recording, and the list of applications used in that session of use. During the use of applications, a red bar was shown at the top of the screen reminding users that recording was taking place. Participants had multiple options to hide data both before and after it was recorded; recording would stop during phone calls or when the device was put into sleep mode, the main screen of the application had one button to pause recording for 30 minutes and another to delete the last 30 minutes of data, and the participants always had the option of simply turning the recording application off. The video data and associated meta-data were uploaded opportunistically when the device was locked and simultaneously connected to both a power supply and Wi-Fi. After the data had been uploaded from their iPhone, the participants were asked to review the videos and annotate them with diary entries providing the reason for each device use. Here, they also had the opportunity to hide confidential recordings from the researchers, with all recordings initially hidden before the participant had explicitly marked them as available to researchers. Exit interviews with all participants were conducted at end of each week either face-to-face or over Skype. During these researchers discussed interesting behaviour or ambiguities in their video data, and extracts included in this report were discussed in exit interviews. Alongside the diary entries, these interviews clarified areas of uncertainty in the recorded data.

In total, 15 mobile phone users participated in the study; 10 of whom were recruited through adverts on social media and student websites, and the remaining participants were recruited using Mechanical Turk. All participation was rewarded with either gift tokens or Mechanical Turk payment. Of the 15 participants, six were female and nine were male—all participants fell within age range 22–50 years and lived in Sweden, the UK or USA. They were recruited with the request that they are regular iPhone users and they use their phones naturally throughout the period of the sessions. Eight of the participants were first language English speakers, and all interaction with and surrounding the phone was conducted in English—while seven participants used a mixture of Swedish and English throughout their sessions. In terms of occupation, our participants represented a diverse range including: opera producer, lecturer, actuary, creative director, massage therapist, nanny, HR consultant, and student.

This method comes with its own trade-offs. First of all, in contrast to [5], we chose to adopt audio-only recording, rather than full video recording of the surrounding context of interaction. The primary limitation of this is that we have no access to things such eye gaze, gesture, or other rich features of the environment and actors that comprise the interaction context. While capturing such data would have been possible, the intention was to keep the data collection as unobtrusive as possible—thereby allowing interactions with and around the phone to be recorded whenever and wherever without restriction and also to enable interactions to unfold as naturally as possible with minimal intrusion. Second, the recording app on the phone was automatically triggered by interaction with the phone, meaning that sometimes the activity directly preceding the session was not available. The automatic triggering was felt to be a key component of our recording app, since it balanced privacy concerns for the participants (the app only recorded when the screen was on), and our ability to record meaningful data. However, if phone interaction took place less than 1 minute after previous phone use, there would be no pause in recording—moreover, by analysing interactions that took place in the midst of a session of use we can collect considerable data before and after the interaction of interest. All but one of the data clips we discuss here have been taken from just such longer recorded extracts, and so we have access to what occurred

before and after the sequence of interest. The clips presented are cropped for reasons of space and comprehensibility.

Clearly, as with any video recording study the presence of recording equipment (in this case software) influences behaviour. Moreover, in this study participants could choose to hide any sensitive usage. The app usage data collected alongside the videos is broadly in line with data collected from longer term and less obtrusive studies, suggesting that the usage we recorded was not different from these earlier studies. This is in contrast to earlier work such as [5] where the presence of wearable cameras seems to have affected usage to a greater degree (such as in the lack of data on game playing). For a longer description of the technique adopted in that (the 'in vivo' method) we refer readers to [38], published in 2015, which discusses at length some of the practical methodological, but broader analytic challenges in dealing with a corpus of this sort, and of video corpus of mobile phone interaction in general.

3.1 Analytic Approach

A large corpus like this presents challenges for analysis. Some of the clips only have the video of the device available—there is no talk, ambient noise, or user's diary entry that might help identify surrounding activity. For other clips, while there is no talk there are aspects of the audio which, when combined with the location data, can identify the use as being on public transport, driving or walking. For the clips with diary entries, however, it is possible to reconstruct more of the situation of use. Moreover, analysis is often supported by talk around the clips in that the reaction of others provides a rich source for understanding the context of use. When we look at this rich video data, we are presented with the means of analysing social behaviour in situational context, in what Faris [10] describes as 'frameworks of interaction' from which, he suggests, the dynamics or codes generating the moral order can be abstracted. For this article, we were broadly interested in use of messaging apps, and so we first segmented the corpus by app usage—taking up the third of the video data collected which featured the use of messaging apps.

The further selection of clips for analysis was an iterative process. First, the remaining clips were divided between the authors, and in preparation for a joint data session each author selected clips that included interactions around, with, or through text-based messaging apps. The focus of our data analysis was then established over multiple day-long data sessions looking closely at this subset of the data. During this iterative process, meaningful concepts are formed by combining existing knowledge of other domains, with the available details of the ecological and social details of the current setting in order to understand what is happening in clip. This process of combining what is already known with what is seen and learned in the video data before us, relates to Faris' methodological notion of 'concept formation' which he defines as, 'the distinction between inventing and identifying' [ibid]. This acknowledges that while some interactions in our video clips may be recognisably familiar, they are not predictive of the next action and moreover, each interaction is in some way uniquely different.

From this exercise, we further reduced the number of clips to be transcribed and analysed to 30: those clips that seemed most promising for highlighting and contrasting our developing understanding of messaging. Those selected featured conversation around the device, seemed to cover different aspects of messaging (such as composition, discussion, images), and were of sufficient length. Borrowing from the interactional analysis and conversation analytic traditions resulted in a further reduced corpus of four clips, which we will present in this article. These four clips were selected in part because they illustrate four different aspects of messaging behaviour (role in conversation, relationships, images and composition), but mainly because they contained sufficient behaviour around the phone to provide us materials to analyse and understand what messaging meant for the participants.

Our analytic approach is built upon the lengthy and detailed examination of video recordings of actual use in focused analytic sessions, and its purpose is to remain anti-reductionist: by avoiding generalising abstractions, our findings remain embedded in the specific and detailed nature of the phenomena being investigated. Our output then are not generalisations about phone text messaging, but what can be learned from a detailed understanding of the ways in which interaction, talk, and application use come together in specific examples. There is much about activity and complex behaviour that escapes generalisation in the terms of frequency of action, or correlation. While our goal is to understand use and behaviour in a way that has relevance beyond the individual clips discussed here, this is not achieved by presenting behaviour that is 'typical'. Instead, we propose that other situations of use may be understood in relation to the clips that we do present here. The goal is also more broadly ethnographic: we explore if these video clips may be used to understand the changing nature of what text messaging is for those who use it, and the role it plays in their social relationships. These clips then are revealing rather than typical—in that they allow us an analytically available way into messaging behaviour.

4 RESULTS

While most of the findings here discuss in detail the analysis of our video data, an initial general overview might help to situate the reader in our recordings. The corpus consists of 1,695 video clips of mobile phone use, with additional 62 videos hidden by our participants. Combined, these clips represent over 70 video hours of iPhone use. The median clip was 38 seconds long, although 10% of our clips were over 277 seconds (4 minutes 37 seconds) long. Participants each contributed from 22 to 440 video clips of use, with a median of 123 clips submitted per user. Forty percent of our clips have user entered diary entries. For the work here, we focused on instances in the data where a text messaging app was used on the iPhone. The apps used included Apple's inbuilt SMS app (23% of our video clips have SMS use in them), Skype (0.8%), Google Hangouts (0.7%), WhatsApp (0.6%), and Viber (0.63%). A further 7.6% of app use involved use of the Facebook app, an app which (at the time) incorporated both messenger and social media functionality. While there is obviously much less use of the non-standard messaging apps (beyond Facebook) the large video corpus means that we still captured significant amounts of application use—e.g., 48 minutes of Skype use recorded. In total, there are around 22 hours of video clips where a messaging app (or Facebook) was used—or around 33% of our total corpus.

Our results are arranged around four clips, and four core arguments. First, the 'Aunt Darlene' clip reveals how messages can be a *topical resource* in face-to-face interaction, and how reading text messages aloud can be used to characterise and describe social relationships. Second, the clip 'Two's a party three's a crowd' is of two friends discuss their mutual relationship with their online friend, 'Jake'. This clip reveals that talking about what others have said is an 'inexhaustible topic' and it allows discussion on how *mutual relationships are talked into existence*. In a third clip, 'Catfishing', we look a little at how *images* are used in co-present talk. Finally, in 'Jeremy's wine', we look at *collaborative text composition*, and consider the importance of composing and writing text messages as a site for co-present interaction and mutual assistance.

4.1 Aunt Darlene: Topic

Let us begin then with a relatively straightforward example—a recording within which an incoming Facebook message is used in conversation between the participant phone user and their partner, who is sitting in the same room at home. Two voices are audible on the recording: that of our participant Alan plus his partner, along with the sound of typing. This clip is from the middle of a longer recording, and is preceded by 11 seconds of silence, during which Alan receives and reads a Facebook message from Aunt Darlene. Alan goes on to verbally summarise his aunt's

[3 seconds silence]

((A message is received from Aunt Darlene. The discussion has covered where they live and the location of various relatives))

[8 seconds silence]

A: Aunt Darlene wants us to move to Bakersfield

((While telling B about the message, A closes Facebook, opens Mail and begins to review and delete, without opening, a number of emails in the inbox))

A: You're too far away

((Adopts an 'Aunt' accent while continuing to explain the Facebook message))

(.) to which I would have to say, something to the effect of, we:e:ell you haven't seen me in fortee (.) no, thurty eight years

Fig. 1. Aunt Darlene. Conversation at home between participant and their partner (left). Screenshots of the Facebook message discussed (right).

message as, 'Aunt Darlene wants us to move to Bakersfield' (Figure 1). The report is framed as 'news', a report of a message received from Darlene, with its topical relevance provided by the participant being on the phone, presumably reading messages. The full details of the message (Figure 1) from the aunt are not reported by Alan—many of the details not being salient to the interpretation he brings out. Rather, the reporting is a summary of what he thinks his Aunt Darlene is hinting at in her message. Indeed, Aunt Darlene's message does not actually suggest they move; 'Wish you were closer' is the relevant text from the message. Alan's reporting conveys a particular stance on the message—not just bound up in the details of her forthcoming move—but also Aunt Darlene, who she is and her relationship to the couple. Aunt Darlene is someone who is presumably known to both Alan and his partner, so there is some shared basis for understanding the brevity of this reporting. The use of the word *us* in 'Aunt Darlene wants us to move to Bakersfield', is perhaps of significance, in that it gives Alan's partner a role in the conversation. Without a response from his partner, Alan's report shifts into an imaginary dialogue that he might have with Aunt Darlene: 'You're too far away [...] you haven't seen me in forty [...] years'. A short, imagined conversation with a distant—and perhaps slightly insincere—aunt.

The collocated talk between Alan and his partner about the Facebook message is not, then, just the reporting of information; it is about telling a story (in a mocking way) of relationships between Aunt Darlene and the couple. The report takes a message that was relatively full of details of the

aunt's life (that she is moving back to Bakersfield, that she misses her family), and makes it relevant to the collated recipient in the room—this is not a story about the details of the aunt's message but rather about distant family relationships.

With this first clip, we can make a few initial points about text messages in conversation. First, the message here provides a *resource* for the conversation—the topic. The message does not come as a distraction to the ongoing conversation. Indeed, it does the very opposite: the message comes to provide a resource for further face-to-face conversation. Here the message provides an outside (although shared) resource that can be drawn upon topically to tell a story about family relationships. Yet messages need not be seen as complete conversational packages to be simply reported upon in talk. The term 'topic' is deliberately open, in that they can be used for the purposes the recipient sees fit. In this case, it is family relationships that are commented upon, and in particular an imagined complaint from the aunt. Through the discussion of 'us', the talk around the messages also subtly outlines the relationships between all parties to the message, and there are three distinct parties involved: a message recipient (Alan), a message sender (Aunt Darlene), and additionally, there is a listener (Alan's partner), all making in turn for different relationships. In subtle ways, the reference to a message from the sender can be used to remark upon on the relationship between listener and message recipient, (in this case: 'wants *us* to move'). The difference between listener and receiver also means that there is differential access to messages. This 'reported message' provides considerable freedom for the retelling—and as we see in this clip, the report of a message may not be a verbatim tale, but allow for more open commentary, jokes, or statements.

4.2 Jake is OK: Two's Company, Three's a Crowd

The previous clip can be taken as an introduction to the data under scrutiny in the paper—every day, unremarkable talk around the phone where the limited access to much of the environment is balanced against the naturalistic nature of the data. It also begins to probe the role of messaging apps, and specifically text messaging, in on-going interaction and conversation. While in this example the spoken conversation is fairly one-sided, we can begin to see how a message may be incorporated into face-to-face conversation—as a resource for creative retelling.

In our second clip, we move on to a local discussion about an earlier text message conversation, where the intertwining of text and talk is even more evident. In this clip, two friends discuss their mutual relationship with an online friend, 'Jake'. The clip lets us discuss how mutual relationships come to be talked into existence, and we observe how talking about what others have said is an 'inexhaustible topic' [49:389]. Here, we have two female friends, Beth (our participant) and Olivia, in conversation at work in the early afternoon. The conversation concerns a mutual male friend, Jake, with whom both women had been in chat conversation the previous evening (using Skype messenger).

About half an hour before this clip starts Beth has messaged three lines; 'Hey', 'Heyyyy', and 'Noooo' to Jake and is waiting for a reply. As our extract begins, she opens up the Skype chat with Jake from the previous evening (Figure 2, left) and starts to browse through the conversation. The chat from the previous evening had ended inconclusively—as the chat is being drawn to a close, the message from Beth, 'Rry?', (an affected form of 'really?') indicates an emotional turn in the chat, coming after 'I miss you y'know'. The 'Rry?' invites a particular kind of continuation and response and the fact that the conversation is left hanging is something that perhaps requires some accounting for: why has he not responded; what does it mean; is he OK; is he OK with me? Having not yet received any response from him, Beth responds the next day (Figure 2, right).

It is within this context that Jake is raised in the local conversation between Beth and Olivia. It becomes apparent that both of them had been in text chat with him the previous evening, and they are both now trying to establish some mutual interpretation of his behaviour and his state of

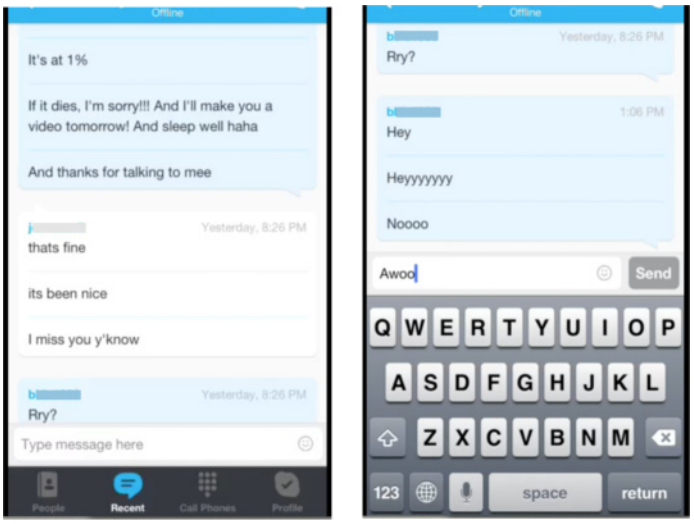


Fig. 2. Exchange from the previous night (left) and Beth's response (right).

mind as revealed through their respective chat threads with him. We join the discussion as Beth opens up Skype to revisit and inspect her text chat with Jake from the previous evening. The screen shots refer to Beth's phone, although Olivia also opens and refers to her own phone during the conversation in Figure 3.

The recording starts when our participant unlocks her phone, and Beth opens with an expression of disgust. From Beth's initial reaction of disgust it would appear that an assumption is being made that Jake has perhaps said something odd in the chat with Olivia. Olivia clarifies that nothing bad was said but there remains an implication that there was something 'off' about his behaviour. Olivia begins to offer further detail about what was said in the chat thread, but at this point there is a vagueness in how these are relayed—'he was bored or something' and, 'he was talking about how like he needed like female company and all this stuff'. Beth offers some additional interpretation (from her own chat encounter) to this account and their inquiries. During the talk, Beth is simultaneously scrolling through and verbally reading from her own IM chat sequence with Jake.

In doing this scrolling and revisiting of the chat thread in this local context, she attempts to establish the temporal circumstances of her own and Olivia's respective chats the previous night, perhaps with a view to casting additional light on their emerging interpretation of his comments in the chat. We can see in the messenger interface, that each message in the thread has a visible time associated with when the message was sent and it is these in combination with the content that are being used to establishing temporal circumstance. Indeed, while we do not have any access to the visual field between conversationalists, it is likely that Beth's rapid scrolling makes available her search through the conversation. In this respect, there is little need to account for what is going on and there is no further elaboration from Beth. Indeed, this search does not interfere with the conversation, and Olivia elaborates on her own conversation with Jake from the previous night, and when Beth has scrolled back to a relevant point in the chat history, she interrupts her own utterance, 'OK cool, OK'. This can be seen as an account of her progress in the search—that she is getting close to where the chat sessions started and that she should have an answer imminently. Beth then reads out a sequence of timings used to coordinate with what is visible to her on the screen. 'He must, –no–OK I was talking to him at… 8… 7, hold on, 7.49'. Her use

B: Eeeeeuuuwwwww.
O: He ((referring to Jake)) didn't say anything bad–he was just like–erm - he said he was bored or something
B: Oh yeah he was really lonely last night [scrolling back through chat as she talks].
O: Yeah and he was talking about how like he needed like– like female company and all this stuff

((Beth continues scrolling through the chat history as Olivia is talking))

B: Oh yeah don't look at it in the wrong - Ok cool, Ok
O: I don't. 'cause I kno Cause I feel like I know him [.] thru you but
B: (((scrolling)) He must, no ((scroll))–OK I was talking to him at eigh:t see:ven hold on seven four nine [.]
B: It must have been right before we started talking then
O: Well anywayz he's just like–he's- I don't wanna say depressing but he really needs to get his shit together.
B: No, he really does [still scrolling back], like he ermm ((scrolls))
B: wh::en. ((scrolls again))

O: I was trying to given him advice. He was like OK, just
((scrolls again))
B: three [.4] six
O: Oh he was again trying not to stalk my ex like on Facebook and I was like don't do it you're gonna regret it and he was like [.] erm what did he say
O: He was like yeah I just need some female company and I was like Ha ha yeah understandable and I was like Just pretend that life sucks without you and never look to see if it actually does

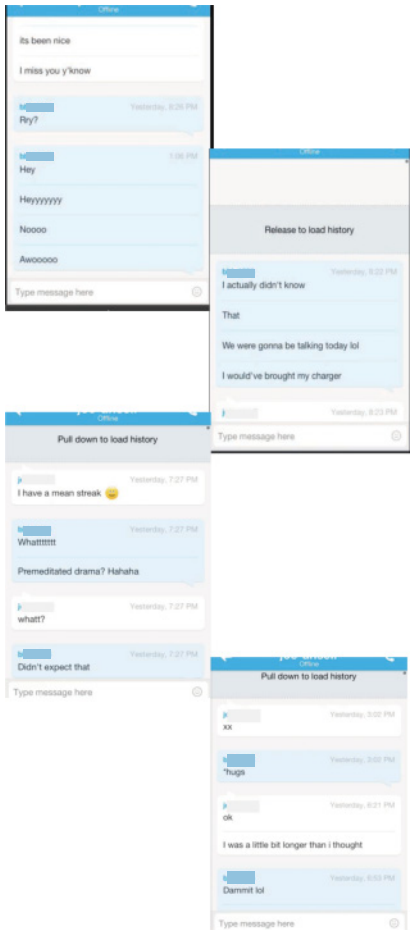


Fig. 3. 'He was like OK'. Transcript of conversation between Beth and Olivia (left). Screenshots of Beth's phone as she scrolls through the previous evening's Skype conversation with Jake (right).

of time approximations (first the hour) and then the more precise times, (7.49) highlights how she homes in on a time of significance for the interpretation they are trying to establish. What is notable here is that she does not just say 8 in a clipped way but rather her utterance of the hour is drawn out to synchronise with the change in screen as new messages from the chat history are loaded—similarly with the 7 and with the 7.49. This intonation in her speech helps align the attention of our two collocated conversationalists to what is happening on screen and offers some sense of her commitment to the local conversation when her attention seems elsewhere (on the screen, scrolling through the text).

Such accountability to the local interaction and demonstration of commitment to the conversation are further apparent in Beth's subsequent utterance. Here, being unable to precisely locate the starting time she resorts to the response, 'it must have been right before we started talking'. In continuing her search, she is relinquishing the demands on Olivia's attention, acknowledging that the search is taking longer than is justified. She continues to search but gives up the floor for the

conversation to proceed handing over with the utterance, 'Well anywayz', and continues with her side of the story. We can see in the screen recording that Beth continues scrolling back through the chat history loading the previous content and mumbles, 'when', and utters under her breath some further times of the messages. Olivia herself seems to read from her phone, commenting, 'erm, what did he say'. This (presumably) verbatim reading of the message is of some interest, coming as it does between various formulations made of the past conversation: 'He was like yeah I just need some female company and I was like ha ha yeah understandable and I was like just pretend that life sucks without you and never look to see if it actually does.'

As with the 'Aunt Darlene' clip, the conversation with Jake is relayed and discussed, but not simply reported with a verbatim reading. Indeed, the use of a 'gist' initially may be the appropriate way to introduce the encounter as a topic of inspection among the collocated friends. There appears some ambiguity in the interpretations of the original conversation both in terms of state of mind of Jake but also in the ways that he was potentially relating to them in the encounter. This collocated encounter then is an occasion for producing a collaborative interpretation that is grounded both in their concern for Jake's state of mind, but also has implications that may be revealing of how Jake is relating to Olivia.

A verbatim reading of conversation then offers an additional specific level of evidence for discussion. By giving a verbatim reading of the chat, Olivia offers a more precise rendering of the encounter that serves both to plausibly account for her initial interpretations, while safely opening it up for agreement or reinterpretation.

There are multiple strands of work being done in this exchange. First of all, we can see how mutually known but absent parties can be brought into local conversation through the persistent text of the chat exchanges. These become a resource for talking about absent parties (spatially and temporally), a resource for showing concern or a resource for holding both conversationalists and those distant and remote, accountable to the broader network of relationships within which they co-exist. In question here though is not simply the absent third party as the topic of mutual interest to the collocated parties, there is also the scrutiny of details revealing of their own, respective relationships with him. Further, we can see how it is also the vehicle through which they are able to understand and enact particular ways of relating to each other—what they open to scrutiny by the other, which in turn provides opportunities to extend the ways that they relate to each other.

This exchange, we suggest, 'talks friendships into existence'—in that it produces relationships as stable, objectively visible parts of the participants' lives. The relationship with Jake is not exclusively an online conversation, but relevant for face-to-face talk as well. Talking about friendships *creates* friendships—makes apparent to others the existence of those relationships and their nature. Moreover, it is friendship in the plural that we witness here—the two friends conversing have mutual relationships not only with the remote conversationalist, but also with each other. Their talk helps to produces a *group*—three friends who have mutual relationships together, beyond their individual peer relationships. Social life broadly is not experienced individually but in groups constituted by differing affiliations and individual relationships within a group. Talk about a specific relationship, then, is not isolated from the group as a whole but rather contributes to the group's sociality.

One classic issue concerning text conversation, from media richness theory [8], was that text based media were less rich, in that they could impart less meaning and subtlety in the communication. Indeed, misunderstandings in text conversation are not unusual [41]. Yet, here we see how ambiguity can itself be a *resource* for conversation rather than a failing, in that the lack of a reply from Jake after the previous evening, serves to contribute to the face-to-face conversation and the inspection of mood. We can think then of how ambiguity can turn into a conversational

resource—the shared ambiguity on the state and mood of their friend is not necessarily harmful, and is dealt with through talk.

In this clip, clearly there is also more going on with the interface than the previous example, with the message coming into the talk in more diverse ways. The interface of Skype here supports particular sorts of interactions. Since the conversation is 'threaded', a user can look back and forward in a conversation and not simply reply to the last message. In this case, the threaded format for the chat allows for a conversation about the conversation—first, around the timing of the messages but secondly in terms of our participant's friend reading out parts of their conversation. Having access to the text of earlier conversations allows for a verbatim reading—particular phrases can be inspected for their meaning, and responses can be raised and inspected. Moreover, unlike the traditional SMS display of incoming messages, the presentation of the whole conversation supports reading aloud—whereas with the more traditional presentation of only incoming messages, a more disconnected rendition is possible. The threaded chat also prominently displays the times of the message, proposing this as something that can be read aloud, becoming a subtopic (Figure 3). While the pauses as Skype loads in older messages do disrupt the conversation a little, (at least in terms of the need to wait while searching backwards)—these older messages can nevertheless be found and re-read.

4.3 Catfishing: Images in Talk

These two initial clips introduce some of the basic features of talk about text. There is the provision of topic; the possibility of inspection of differing relationships; the inspection of past text conversation and last there is the role of the interface and the threading of chat, in providing for something mutually seeable.

In our third clip, 'Catfishing', we look a little at how images have come to be used in co-present talk. In this clip, Claire is chatting to a work colleague (Linda) about her cousin Josh, and a new Jamaican woman Josh has met online. Claire has been on iMessage with Josh within the last half an hour, and Claire has mentioned this new relationship to Linda just before our conversation extract in Figure 4. This short face-to-face conversation revolves around clothing sizes, and in particular the small clothing size of the new Jamaican acquaintance of Josh. This topic leads onto Claire reflecting on her own clothing choices and making a self-deprecating comment about her choice of dress.

This leads up to a revelation, 'I was just trying to visualize what a size 5 is and I was like Oh you haven't MET her and he goes no'. Josh has not physically met the woman in question, rather they met online on the 'Christian Mingle' website. After this Linda remarks, 'yeah she is small', and then Claire opens up a photo of the girl and browses the two images she has been sent.

Our initial interest in this clip came from the use of images, and in particular, 'yeah she is small'. This seems to remark upon the images that are visible on the screen at that point in the conversation. This is followed by Claire looking through the images, possibly showing them to Linda, although the conversation continues as she looks through these images, moving onto the issue of asking a woman her clothing size. Claire opens the chat and scrolls to the images, showing them to Linda, prompting the reply, 'yeah she is small'. Reflecting again on the threaded chat, and the inclusion of the images in the conversation, we can see how this allows for a very quick 'overlook' from the co-conversationalist.

Access to the images in question is also quick. The photos then are stored in a convenient place—embedded within the conversation. These photos are presumably themselves forwarded from another online source, be it a conversation or the dating site itself. The images then can be easily moved around and shared, be it across a messenger or face-to-face in conversation. There is practical value in an image for indicating clothing size, and while the image itself contains little

L: I know but I'm saying she is wearing Junior's clothes
C: I know so I mean she is probably my age–I wear juniors clothes.
L: Really? Oh.
C: Yeah. Like I wear
L: I haven't worn odd numbered clothes in years
C: Really? I mean its probably just my style though like if I looked for like grown uppy clothes they'd probably would be in even size numbers - I obviously dress like a child so …
L: No ((laughing)) I'm not saying that
C: No it's true ((opens chat from Josh)) you're right I cannot dress myself–its like ridiculous
L: I mean size 5 who wears size 5 anymore
C: Yeah he was like I was just trying to visualize what a size 5 is and I was like Oh you haven't MET her and he goes no.
L: She is little
C: He found her on Christian Mingle
L: Yeah she is small
C: Opens the photo to full screen
L: Did he ASK her what her size was?
C: Er: she probably told him
L: It was like you don't ask a girl that
C: I know
C: I hope he is not going to get Catfished.
L: MMm:
C: wouldn't that be awful. I would feel so bad for him
L: Welcome to my life
C: ((laughs))
L: Its happened to me twice now
C: Has it really
L: Yeah
C: Oh my gosh:
L: With Becko my ex-boyfriend and with Terence

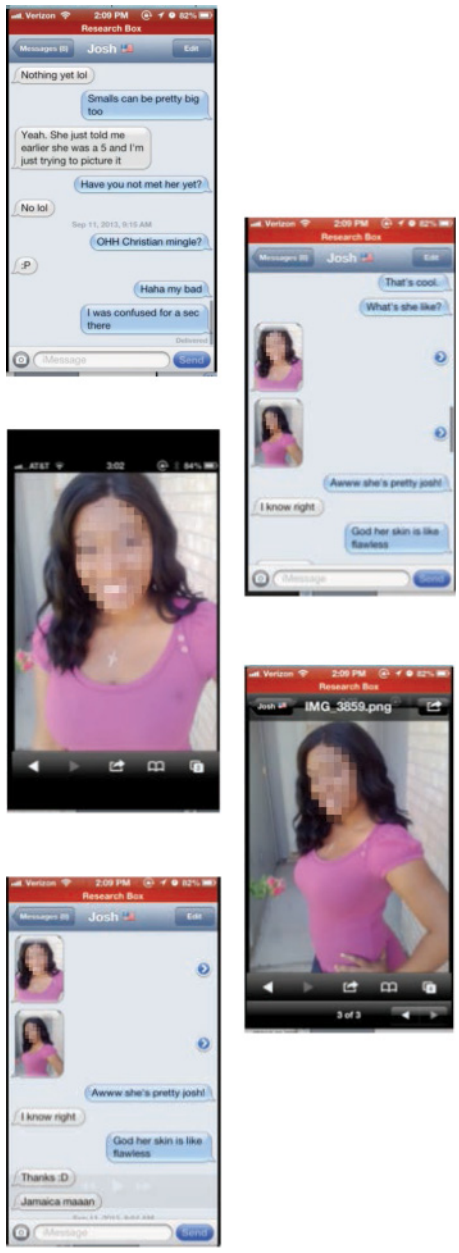


Fig. 4. Discussing a Christian Mingle acquaintance.

to 'scale' the woman's size, the photo does give some sense of proportion which perhaps prompts the confirmation of size, ('She is small'). In the original conversation with Josh, the image prompts compliments—which are acknowledged by Josh as compliments of the *relationship* rather than just the girl herself ('Thanks: D').

The talk about size, as with our previous two extracts, leads to a conversation about relationships. The revelation of the online nature of the relationship affects how it is told—in the retelling

of the conversation we have 'Oh you haven't MET her and he goes no. He found her on Christian Mingle'. The relationship is revealed to be an *online* relationship, one with a potentially different status. Yet it seems that both Linda and Claire are no strangers to this sort of relationship—indeed, Linda goes on to show concern for a potential danger with online relationships—the risk of 'Catfishing'. As defined by the urban dictionary, a 'Catfish' is 'someone who pretends to be someone they're not using Facebook or other social media to create false identities, particularly to pursue deceptive online romances'. Yet even as the conversation moves onto remarking on this danger, Linda takes the opportunity to show concern for Josh, and the potential harm that he might experience. Again, the relationship status of the listener to the message sender is topicalised—or at least entertained. Linda can show her concern for Josh, even though they have never met. A small harmonious synchronisation of concern is voiced, helping to build a potential friendship group. By admitting her own misfortune in being duped in this way twice, Linda also helps to normalise Josh's online relationship situation–admitting that she herself has been in the same situation, and indeed an even worse situation in that she has been actually, 'Catfished'. This helps mitigate the potential naivety of Josh highlighting that it is something that can happen to anybody. But it is also the vehicle through which the circumstances of the conversation can provide a safe way of revealing Linda's personal experiences.

4.4 Jeremy's Wine: Collaborative Composition

The three clips discussed so far, reveal different aspects of receiving messages and then talking about those messages in a face-to-face setting. We can see how conversations unfold using text or photographs from previous conversations, and making use of the threaded nature of the chat application's interface. Through the three clips we have also looked at three different applications—Facebook, Skype, and iMessage–although our data does not reveal any significant differences between these applications. However, messaging activity has two sides: as well as receiving them, there is sending messages. Just as our data covers instances of receiving (and discussing) messages, we also recorded messages being sent, and these included discussions in which messages were composed collaboratively, drawing on comments from those co-present. Our fourth and final clip contemplates this scenario. In the following clip, 'Jeremy's Wine', we consider collaborative text composition, and how text composition can be an important site for co-present interaction and mutual assistance.

Helen has recently received some devastating news that her best friend in Hong Kong has died, and is at home watching television with her partner, and recovering from the news.[1] As we come into this extract, Helen has been interacting with her phone checking through various messages in a variety of messaging applications, email, Facebook, iMessage and WhatsApp. We hear her mumble quietly, 'Huuuuuh. I'm, I'm gonna send to Andi and Jeremy'. Andi and Jeremy are her work colleagues whom she needs to contact to make arrangements to provide cover for her at work the following evening.

She opens iMessage and begins to compose a message to them (Figure 5). Understandably, in these circumstances Helen is under some considerable emotional distress. She is both having to ask for one of them to provide cover for her, as well as appropriately inform them of the sad personal circumstances in explanation for the favour. What is evident in the clip is the difficulty that she has with the composition of the message; both in its wording but also in the decisions bound up in the message about how long she will be absent from work. There are some moral tensions at play

[1]As to be expected, we have dealt with this clip with some extra sensitivity. We asked and were given specific permission that this extract could be used from the participant, and we have excised some parts of the conversation.

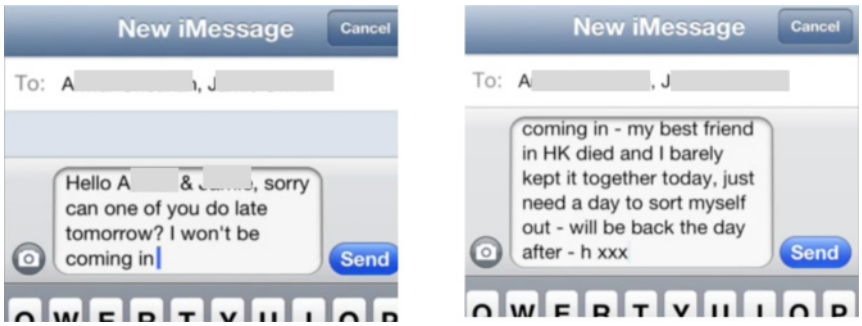


Fig. 5. Collaborative message writing.

Fig. 6. Misjudged message and repair.

here in terms of being reasonably allowed time to grieve, while at the same time experiencing a certain sense of obligation to her work colleagues.

There is also seriousness to the message and content that requires considerable deliberation to achieve the right kind of tone that explains events, without making requests for moral support beyond that of friendly work colleagues. Her personal issue intervenes with work and there is obviously some sensitivity towards how much grief can be shown. We get some indication of these difficulties and tensions in the 5 minutes it takes to compose and send the message, the many pauses as she types, the deleting of sections and in the re-reading and re-wording of the message.

Having sent the first message to her work colleagues, Helen then goes on to compose a message to cancel an existing dinner appointment with a friend. While she is composing this, she receives a response from Andi appearing in the notification bar of the phone: 'Looks like Jeremy can have another bottle of wine?' (Figure 6, left). This message from Andi seems like an odd response—a non-sequitur that seems inappropriately joking in response to the news sent. A second message comes in again on the notification bar (Figure 6, middle).

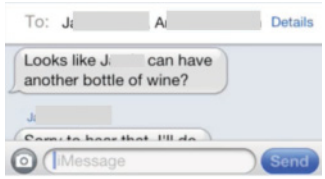
This is a reply from Jeremy: 'Sorry to hear that. I'll do lates tomorrow x'. Helen continues typing her message for about 20 seconds when a second message from Andi arrives in the notification bar: 'That's awful to hear!' (Figure 6, right). This seems like a more appropriate response, which suggests that he had more fully read the message she had sent through earlier. Helen finishes the text, she then opens up the chat thread with Andi and Jeremy in order to reply. It is here that we can see how the inappropriate first response from Andi produces an additional level of difficulty, creating a further awkwardness to deal with. She begins to compose (Figure 7) and type a response but the difficulties she is experiencing become apparent as she stops, deletes, and speaks to her co-present partner, questioning whether she needs to reply; 'don't need to reply do I?'.

H: and then it's like

((Helen scrolls up to reveal earlier responses))

H: I think he didn't read my text
H: and then Andi said
H: then we can have a bottle of wine
H: and then Jeremy's

((Helen scrolls down to reveal Jeremy's reply))



H: Sorry to hear that. I'll do the night and then

((Helen scrolls down to next message in thread))

H: that's awful to hear hhhHHH and then just hhH
H: don't need to reply do I? [1.2] should I say something?
B: Just [.] just say thanks for the sentiments and see you on [.]
((Helen starts typing "Thanks for"))
B: see you on erm [.3] Wednesday
H: mmm
((Helen goes back and deletes "for"))
((Helen types: "Thanks [pause]-I am in shock,"))
((scrolls up to review the original message))
((Helen deletes "I am in shock,"))
H: I don't know what to say "Thanks for"?
B: Sentiments
H: No don't ah don't want to be soo fo:r:mal
H: Thanks for that
((Types: "that,"))
H: in shock
((Types: "in shock"))
H: mmm
((Types: "but will be in"))
H: but will be in tomorrow. Will be in
B: Wednesday
((Types: "We"))
H: Wednesday

((Helen stops typing Wednesday goes back to edit the opening of the text))
B: ((As Helen types)) Would you like some noodles?
B: Cmon
H: [mmh]
B: let me make some [noodles] ah
((H continues typing to complete the message and then sends))

Fig. 7. Collaborative message composition. Transcript of conversation (left), Screenshots of messages (right).

Again, there are social obligations at play here. While it is a difficult response to deal with, leaving things here would render the awkwardness of Andi's reply lingering. As such, there is a need to compose the message in a way that not only communicates her emotional state with regards to the bereavement but that also somehow expresses in its tone her recognition of the awkward and misjudged response and that she is fine with it. That is, she needs to deal both with herself and with the potential embarrassment of Andi (Figure 7).

For the second half of the extract, it becomes apparent that her partner is close to her with visibility of the phone, as she reads parts of the received message, as well as talking about the

message. Her question, 'don't need to reply do I?', implies that there is some shared visual context here; that he can see the responses that have come in from Andi and Jeremy. She begins here to elaborate a justification for her request to her partner by revisiting the threaded sequence to offer further explanation. Significantly here, she reveals each message thread in sequential order, timing their revelation on the phone as she partially reads them out loud, and partially paraphrases them to her partner whom we can likely assume is also viewing the screen at this point.

Revisiting the thread here in some ways makes the sequence tellable in its own right, something in which they share humour in spite of the difficulty of the broader situation. But it is also the means by which she articulates the challenge she faces in the situation: it acts as a precursor to her subsequent request for help from her partner regarding the appropriate form of response here. It explains the difficulty and uncertainty, and invites some support in the composition and wording of the message. Her partner offers a suggestion as to what to say, 'just say thanks for the sentiments and see you on…', to which she responds by typing his suggestion, 'Thanks for'.

As she is typing, it seems the tone is not right and she deletes the word, 'for', and then adding, 'I am in shock'. Her uncertainty continues here when she deletes, 'I am in shock'. Of interest here is that she is now becoming accountable to her partner who can see that she may not be following his suggestion. In making a second request she invokes some of his original wording but stops shy of using his suggested word, 'sentiments'. When he offers the word again, she has to be more explicit, rejecting his suggestion as too formal. At this point, she begins to verbalise out loud what she is writing. This verbalising becomes a way of keeping her partner included in the composition process, making it open rather than reverting back into a silent, private composition. Indeed, as she verbalises, 'Will be in tomorrow. Will be in…', he takes this as an opportunity to offer the suggestion of Wednesday, making it acceptable and reasonable for her to take an extra day without concern for any other obligations she may be feeling about the commitment. She offers her agreement by verbalising, and typing, Wednesday.

This data is perhaps as sensitive as it is fascinating, covering as it does a real tragedy for our participant. Clearly, the death is not just some logical matter for her, it is a moral phenomenon—there are things which must be done, and in other clips (which we have excluded for various reasons) the participant works on issues such as who to inform, what to say and so on. As Sacks puts it: 'death is not purely a natural, but also a moral phenomenon' [49:457]. One must present oneself correctly, grieving appropriately and with the right amount of public presentation. In this little extract, this morality is played out in the mundane matter of how to phrase and word the text message.

The simple ability to share the screen physically and visibly with another here allows for advice to be sought, and discarded. As with the earlier extracts, at the beginning of the clip we also hear the same narration of previously received messages, as well as giving an explanation for the anomalous, inappropriate reply from Andi, 'I think he didn't read my text'. Reading prior messages in mid-composition is clearly part of writing a message. We see frequent reflections on the previous replies as the message is being composed, as well as a threading of activity in that she receives and reads messages while she is composing the message to cancel her dinner appointment. When she sends this message and returns to the group message thread, she does not re-read the previous messages but rather jumps directly into typing her reply 'I am in shock'. While there is a multiparty aspect to this composition, it is not quite a joint enterprise, clearly there is a driver (the author—our participant) and passenger or advisor (her partner) who makes suggestions but does not make the decision on what will actually be written. Indeed, we can hear the Helen's partner walk away towards the end of the clip to prepare food, leaving her to finish the message.

As we have mentioned before, one worry about the advent of notifications has been the possible distractions that telephones provide is that they could provide a distraction from important

face-to-face interactions. Yet, here we have something quite different—we have an important message being sent by Helen, with the phone enabling this important communication activity, rather than distracting her. It is worth reflecting on how messages and communication made via the phone might, at times, be as important as those made in a face-to-face setting. Indeed, in this case the co-present interaction acts as support for the important job at hand: sending the text message.

One last remark to make about this final extract concerns the nature of the group conversation. As a group conversation, the request for cover is met by Jeremy, and although this message is directly in response to Helen, it is visibly 'overheard' by Andi. In this case, rather practically, this means that Helen need not reply again to Andi, and both her work colleagues now know that the work is being covered and they need do no more. Indeed, the mutual awareness of the messages is perhaps behind Andi's original inappropriate joke message which names the other conversationalist by name. Yet, while this mutual receipt is visible to those who are in the message thread, any face-to-face sharing that might go on around the device is *not* visible to the remote conversational partners.

5 DISCUSSION

What is apparent from these examples is that these text conversations are offering something more than a straightforward communication channel for absent parties. The messages are brought into both the context and the practice of local conversation—we have seen current conversations, both spoken and text, mixed with historical records of past conversations and authoring of new responses. Clearly these interactions with the phone serve as much more than a distraction. Rather, these threaded conversations, past and present, serve to provide a variety of resources to be actively woven into the fabric of the local encounter. While we can point to these scenarios, in some senses, as particular forms of 'channel blending' [27] that combine mobile threaded chats with face-to-face encounters, this, albeit a useful starting point, is not a sufficient articulation of what is at play here. What is it about these forms that enable the practical achievement of their coming together and more importantly, how are these practices given meaning in the context of the everyday network of relationships in which they are embedded?

Critical to our concerns here are some recent reconceptualisations of how we think about messaging technologies and the encounters associated with them (e.g., [11, 22, 26, 32, 40]). That is, rather than understanding our communicative encounters with these technologies in and of themselves, the reconceptualisation looks to see how these technologies and encounters are experienced as part of the ongoing production of our relationships and sociality over time, (e.g., [32, 40]). That positions our understanding of technology mediated encounters within the broader flow of social interactions, exchanges, and encounters that we experience with others across a wide range of media and contexts, both face-to-face and through digitally mediated forms. How these are all actively woven together becomes more apparent. This is not simply own encounters having a bearing on our past and subsequent encounters, but the ways that encounters between others are brought to bear on our produced ongoing sociality. It is with this in mind that we can start to see additional significance in these computer-mediated messaging encounters beyond the original site of their communication between distributed parties.

5.1 Reported Speech

In the introduction, the importance of discussions of *reported speech* to linguistics [14, 24, 59] was mentioned. In that practice, people construct 'socially consequential images' of another through their reporting of a previous conversation in their current co-present interaction. The 'reported speech' in our examples is of text-based communications. From the instances above we see a number of ways in which this aligns with reported face-to-face speech. In the first clip ('Aunt Darlene'),

we see how the reporter enacts a particular characterisation of Aunt Darlene in the reporting that portrays key elements of the reporter's attitude to Aunt Darlene and the content of her text. We see also, an imaginary conversation with Aunt Darlene being played out here that extends beyond the initial reporting. As with other elements of reported speech, this reporting of text in co-present interaction is constructed by the speaker in such a way as to convey, both explicitly and implicitly, the reporter's stance towards the person and content of the text-based encounter [30]. This reporting is not a simple relaying of information, or news-telling. Rather all sorts of conversational mechanisms—including story preface, shifts in prosody, voice quality, use of direct vs. indirect reporting—are all used in order to convey the reporter's stance and evaluation of the reported interaction in ways that open it up to subsequent evaluation and comment by the co-present party [14, 24].

In the second clip ('Jake is OK'), we see how the story preface and the initial reporting can highlight particular features of the reported text interaction, which then becomes the subject of collaborative enquiry and evaluation. The subsequent reporting unfolds in response to the comments and evaluations of the co-present participant and shifts from indirect gist reporting, to more specific and direct quotations as the circumstances and particular interpretations demand. In the negotiations around these interpretations we see nuanced aspects of the relationship between the participants play out. In the third clip ('Catfishing'), we see how the reporting of another who is not mutually known becomes a way for revealing wider elements of a social network to a co-present party. In making these unknown relationships knowable, we reveal further elements of our own social world to those with whom we are talking and sharing in the face-to-face setting. Within the face to face conversations we see how they also offer ways in which the content is made personally meaningful to the listener. In this sense, the content presents the participants with further resource through which they can accountably introduce their own personal experiences that may relate to the topics of the reported text.

Bakhtin's discussion of reported speech, however, goes beyond a focus on talk that quotes earlier conversation. More broadly this was part of a theory of how words and texts obtained meaning. Bakhtin argued that no comment, sentence or even work of literature exists independently on its own—instead, anything with meaning was in continual dialogue with what went before. As T. S. Eliot put it: 'the past should be altered by the present as much as the present is directed by the past' p49-50 [9]. Every word has a meaning that is dependent on earlier uses of that meaning, with those previous uses changed in turn by future uses. This 'dialogue' with the past builds up both individually, collectively and in situations like education, where children listen to and understand meaning and action together as they learn a language [61].

In terms of the memories contained within messages, the mobile phone provides a platform and tool for aggregating multiple different messages and media together in one accessible place. Unlike ephemeral reported speech, the mobile device provides the opportunity to permanently archive messages. There has been concern around, and research to investigate, whether technology mediated messages might detrimentally reduce the human tendency to look back on past events with positivity and gloss over unpleasant and unwanted details, since exactly what was said and done can be easily checked. Konrad et al. [29] found that rather than hindering 'adaptive' forgetting, technology mediated memory was found to encourage positive reflection on past events. Our clips support this view, revealing that messages were rarely ever recounted verbatim, and that accounts were readily adapted for the face-to-face recipient of the message receiver's story. Selected elements of messages were disclosed to promote interpersonal relations in the face-to-face setting.

The sites of discussion around messages we have studied here, then, offer a broader perspective than just talk around messages; they are the site wherein the meanings of messages, whether sent or received, can be engaged. From a dialogical perspective, each message depends upon earlier

messages for its meaning both in terms of the constitution of the genre, the nature of the relationship, and what messaging means for this particular group. Talking about text is therefore not just an activity in its own right, it is about establishing what texting is and the meaning texts have.

5.2 Designing for Co-Present Interaction

The above examples offer some additional implications that relate to ways in which we might rethink elements of the user experience with these technologies. What is highlighted in this, and indeed in the broader set of practices we have outlined here, are the opportunistic attempts (and challenges) for re-reading and reviewing elements of a prior messaging conversation within the context and social accountabilities of the local conversation. While the design of these technologies rightly privileges their immediate communication functionalities, there may also be opportunity to consider ways in which this re-reading and reviewing behaviour might also be better supported. The tasks undertaken by our participants with their archived text conversations point to areas where design could enhance both the user experience and the communicative act.

The ability to quickly and easily refer to a message or part of a thread of messages while in conversation with others, so as to not unduly impact the conversation at hand, could be designed for in a number of ways. By leveraging work such as the SAM system by Franz and Staab [13], text conversations can be processed and made searchable semantically rather than through keywords. This could be augmented with the context of each participant at the time of the message [31] allowing a user to search for parts of the conversation where A was at home, or B was with A (or possibly simultaneously talking to, depending on disclosure settings). The conversation could also be labelled with common features of instant message speech, such as the negotiation of moves to other communications media or detecting the rate of reply to infer how busy each participant was at the time [39]. Even the relatively simple addition of the ability to bookmark or label specific sections of a text message conversation for easy access to later on would be a useful enhancement in conversational settings. We can return to a point made by Taylor and Harper [56] some time ago regarding text messages—messages are *valuable* and their social worth is seldom acknowledged in interfaces. At the very least, we suspect there would be value in being able to select and archive particular messages that are of emotional value and worth–with these messages being extracted and saved. Again, we might think of interfaces that highlight and show the particular value of exchanges, rather than leave these messages hidden deep in particular message threads.

Providing more options to peruse previous text conversations would also allow them to become a more powerful topical resource. Rather than the traditional interface where the conversations are arranged by conversation partner and time, providing the user with summaries could make it easier to recall and find relevant parts of the past communications. Delete by Haiku [51] summarises text messages, and while this system deletes the original messages as part of an artistic process, the haikus it semi-autonomously creates could be one example of a summarisation system which could be used by users to quickly scan through long message threads to find topics of interest or relevance to the current conversation.

In detecting the negotiation of other forms of communication from within the text conversation, using queues such as those observed by [39], could be used to provide the user with a fuller picture of the communications between themselves and others. A visualisation of the interweaving of text and voice, private and group, and digital and physical communications would not only provide help to the recall and relocating of messages but could also become an interesting window on the different forms relationships with others present themselves in communication practices. Summaries could also be brought to bear here. For example, we might also think about how a text message thread can indicate important aspects of a relationship—and how these in turn might be interesting topics of interest. How can understanding the nature of a relationship help

communication that is part of that relationship? If we include photographs in which both conversational participants appear you could have interesting relevant material to be suggested. Facebook already goes some way towards this with features that automatically make videos compilations of material about friendships it knows about—perhaps something similar could work with friendships and messenger clients.

Of course, any change in the availability, meta data, or expectations surrounding text messages results in changes in use and interaction. As studies of Snapchat have shown [4, 43, 48] temporally bound communications, with explicit notifications if a conversation participant saves the communications, result in different goals and styles of communication. In providing easier and richer access to past communications a channel would orient its users' production and reading of those messages to that use. This orientation would then be used by consumers to place such a messaging application in the landscape of communications tools they use to keep in touch with their friends, family, and others. One can envisage easily searchable and sortable communications becoming more advantageous to coordination tasks, easily shareable communications for group and peer interactions, and such services working alongside temporally bound visually focused ones such as Snapchat used for peer and family bonding [4] and cryptographically secure (and optionally temporally bound) services such as Telegram for more sensitive communications. Adding the features and functions proposed here to archives of past messages, where the sender had no orientation towards such use in composition would potentially expose all parties in the conversation to the reuse of their communications in ways that they would not expect. There are a wide range of communication services, and one factor in choosing which one to use and how to use it is the trust placed in the communications partners. Easily searchable and shareable communications place a higher burden of trust on the sender of a message towards the receiver, and changing the required level of trust after the message has been sent is problematic.

6 CONCLUSION

This article has not focused on specific design implications or explorations, instead we have attempted to return to a familiar application and reassess its use. Building on [40], we have sought to explore how messaging apps are used in communication with those who are co-present, along with their more familiar uses for communicating with those who are distant and remote. Through access to a new data set which supports closer attention to the sites of use we discussed how 'reported speech' features in the presentation and discussion of text messages discussed and analysed with those co-present. Each one of our four clips reveal a different aspect of this collocated interaction—the drawing of topic from messages, the production of social relationships, the role of images and last, how message composition can itself rely upon suggestions and help from those co-present. In the discussion above we drew upon the notions of reported speech—the ways in which we discuss previous conversations in current co-present talk.

Our findings point to additional ways in which lightweight messaging content becomes implicated in collocated interactions. In particular here, the final clip ('Jeremy's Wine') illustrates a more active participation by a collocated collaborator in the production of the ongoing thread. The reporting is framed in such a way as to invite and enable participation by the collocated parties again with particular conversational mechanisms being used to convey a particular orientation and stance to the text and finding opportunities for involvement by the collocated other. In this sense, these particular collocated encounters become a site for further kinds of enactments of sociability—and in particular *faithfulness* [52]. Through these invites, we signify, for example, elements of reliance on the other, our trust in them, and a willingness to involve them in our own particular social network. For the collocated participant too, they can approach these opportunities

presented with relational intent, signifying their faithfulness to the other by interest and willingness to help, empathy and willingness to participate in the social network of the other.

Again, we would argue that there is much nuance to be further investigated in relation to the embodied and material circumstances of these collocated sites of reporting and participation. Text messaging, clearly, is not a single user application—or even a remote communication application. In its modern threaded chat design text messaging supports a resource to be drawn on in different ways in support of face-to-face communication. Moreover, the ability to go back over archived text and images allows for different sorts of reporting on those conversations—gisting, storytelling, verbatim reading, and the like, each of them designed with respect to local arrangements. Our concluding remarks refer not specifically to the design of such applications, but rather how we might reformulate what we think of text messaging, to see it as a historical application as much as a communication application, one where the value of text messages is as resource to be brought into our current concerns and talk. As our archive of informal text messages grows, we may start to think then of what role they are playing, and how one might expand on this. While we have hinted at the design space that this archival aspect of messages provides, we are actually thinking equally of the value that these resources provide for sociability. Over time, the archive of communications that text messages provide may prove to be one of our most valuable possessions.

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