

The Tyranny of the Everyday in Mobile Video Messaging

Sean Rintel
Microsoft Research
Cambridge, UK
serintel@microsoft.com

Richard Harper
Social Shaping Research
Cambridge, UK
rhrharper@hotmail.co.uk

Kenton O'Hara
Microsoft Research
Cambridge, UK
keohar@microsoft.com

ABSTRACT

This paper reports on how asynchronous mobile video messaging presents users with a challenge to doing 'being ordinary'. 53 participants from three countries were recruited to try Skype Qik at launch for two weeks. Some participants embraced Skype Qik as a gift economy, emphasizing a special relationship enacted through crafted self-presentation. However, gift exchange makes up only a small proportion of conversation. Many participants struggled with the self-presentation obligations of video when attempting more everyday conversation. Faced with the 'tyranny of the everyday', many participants reverted to other systems where content forms reflected more lightweight exchange. We argue that designing for fluid control of the obligations of turn exchange is key to mobile applications intended to support everyday messaging.

Author Keywords

asynchronous messaging; video; mobile; everyday; turn-taking; exchange economies; self-presentation

ACM Classification Keywords

H.4.3 [Communications Applications]: Computer conferencing, teleconferencing, and videoconferencing

INTRODUCTION

The appetite for video in the consumer mobile social space seems insatiable. PEW reports that, in the US, uploading or posting videos online doubled from 14% in 2009 to 31% in 2013, and 23% of adults who post videos online do so using a mobile app [35]. Sharing mobile video clips is popular in Social Network Sites (e.g. Facebook, Sina Weibo), messaging services (e.g. iMessage, WhatsApp, WeChat), and short picture and video services (e.g. SnapChat, Vine, Instagram, Dubsmash). Of course, posting video is rarely a unitary act, it is a turn in communication exchange of some sort. This suggests that an economy is operating to organize value, allocation, and relative distribution of such turns [41]. Despite the importance of video, though, one commonality of the services above is that whether video is

Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyrights for components of this work owned by others than the author(s) must be honored. Abstracting with credit is permitted. To copy otherwise, or republish, to post on servers or to redistribute to lists, requires prior specific permission and/or a fee. Request permissions from permissions@acm.org.

CHI'16, May 07 - 12, 2016, San Jose, CA, USA

Copyright is held by the owner/author(s). Publication rights licensed to ACM.

ACM 978-1-4503-3362-7/16/05...\$15.00

DOI: <http://dx.doi.org/10.1145/2858036.2858042>

the primary definer (Vine) or one in a number of modalities (WhatsApp), video tends to be exchanged for responses in *other* modalities: text, emoji, images, likes, favorites, etc.

Despite the introduction of Multimedia Message Service (MMS) in the early 2000s [44], exchanging mobile video clips in a manner akin to conversational turn-taking has not become a mainstream MMS activity. In the smartphone era, it took until mid-2013 for the Glide video messaging app to experience even a short period of viral growth [32]. 2014 and 2015 saw the launch of at least four similar services (Skype Qik, Peep, Peeq, and Pop) but video messaging has still not attained anywhere near the prominence of other mobile video sharing. This raises the interesting question as to why this might be. Technology adoption is influenced by a combination of market, social, and technological conditions, skills and cultural practices [19], and the perceived comparison of value to effort. In this paper we explore how people reason about the economies of turn exchange in asynchronous mobile video messaging.

The paper will be structured as follows. We introduce Skype Qik, highlighting the design constraints that made it a useful site for research. We then review self-presentation in video-mediated communication and report our methods and analytic approach. We provide empirical findings based on interviews and observed videos, and conclude with a conceptual discussion and issues for design.

SKYPE QIK

Skype Qik (Figure 1) was intended to afford rapid, light touch, everyday video messaging amongst close contacts.

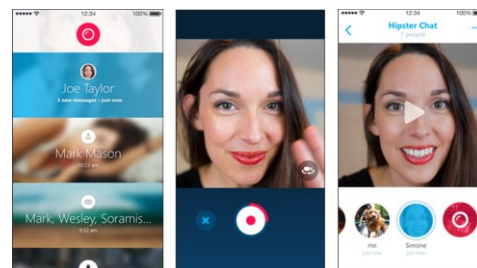


Figure 1: Skype Qik key screens.

It was launched in October 2014 as a standalone from the established Skype service. Although Skype acquired a mobile livecasting service named 'Qik' [11] prior to Microsoft's acquisition of Skype itself, Skype Qik takes no features from its apparent namesake. At launch, Skype Qik users could create video messaging threads for groups of 2 to around 200 people from their phone contact lists. Video

clips of up to 42 seconds each could be recorded and then added to the message thread by any participant in much the same way as one might add a text message to a thread in a messaging app. Threads were represented as a series of thumbnail videos below the main video window. A video message could be played individually or connected sequences of video could be played from any point in the thread. The earliest messages auto-deleted after 14 days. Sharing of clips was not possible; one sent, one received, but could not forward. The single concession to clip re-use was ‘Qik Fliks’: Users could pre-record six-second videos to be used in threads as ‘personalized emoji’.

However, in contrast to virtually every other messaging app, Skype Qik excluded all other communicative modes. No text, emoji, images, sound clips could be created, nor were there meta-communicative capabilities such as likes, favorites, or votes. Creation was constrained to what could be achieved externally to the camera in a single recording take. There were no capabilities for augmenting visuals, no uploading of clips from any sources, and no editing. This limited feature set provided a rare opportunity for field research into the effect of extreme constraint that was not artificially created for the purpose of the study. Would new users intuitively take to pure asynchronous video for everyday messaging or revert to one of their existing apps?

FITTING VIDEO INTO ORDINARY LIFE

This study continues the HCI interest in everyday mobile messaging [29, 30]. Displaying ourselves and observing others as fitting in to ordinary life is a practical achievement. For Goffman this means engaging in “normal appearances”: silent displays of public inconspicuousness ourselves and providing “civil inattention” for others [17, p.314]. For Sacks, “no matter what happens, pretty much everybody is engaged in finding only how it is that what is going on is usual, with every effort possible”, which he called “doing ‘being ordinary’” [40, p.215].

Doing ‘being ordinary’ via video-mediated communication has been more complicated than its pioneers in the 1920s dreamed [7]. It has taken most of the last century for video-calling to become a mainstream activity [42]. Although technical and economic factors have played a large part in this struggle, research across contexts (domestic to institutional) and technical variations (asynchronous to always-on) has consistently found a central tension between the perceived emotional value of video versus the self-consciousness of being seen and heard [13, 20, 27].

When mobile video-calling was still relatively new in 2006, it was used to complement other mobile communication modes and was thus saved for special moments: cultural occasions or showing things outside of a fixed field of view [29]. However, the flexibility of mobile video calling was set against the self-consciousness of being seen unprepared or being overheard. Synchronous mobile video calling has since become a comfortable everyday event for many users. Teenagers are especially comfortable with self-presentation

via video, static or mobile [6]. This is somewhat puzzling since many of the same self-presentation issues are at play. For adults in distributed work settings, asynchronous video has sometimes been evaluated as satisfying for emotional and personal reasons, but there are concomitant burdens of shyness and invasiveness [2]. Deaf adults tend to be the exception, reporting that video allows them to convey the nuances of sign language [8, 21]. On the other hand, children take readily to the emotional richness of asynchronous video clip exchange, engaging fully with its specialness by treating it as play [15, 22, 37].

Self-presentation in asynchronous video has been found to be less of an issue among adults when they are in close-knit social groups and where gifts of emotional response are the organizational premise of the experience [10, 31]. For example, in the Social Camera study [10], users posted photographs to a small close-knit social group, who responded with three second silent animated GIF files. These GIFs were considered more emotional, authentic, and special than the standard messaging response modes of text comments or likes. It is critical to note, though, video was never initiatory, only responsive. Of significance here is that users treated these constraints as framing the app specifically *not* as an “instrument of communication” [10, p. 988] but of sharing special experiences. Communication-oriented video-messaging was reported as burdensome in terms of impact, quality of content, and flexibility of content consumption, especially if sound was included.

The common theme here is that there is a “moral order of looking” [23] in video-mediated communication; sets of rights and obligations surrounding the enactment of intimacy over distance through an explicit technical frame. Further, this moral order is not something that simply “exists” to be followed. Rather, it takes socio-technical work to establish and maintain in each call and over many calls. Licoppe and Morel [25] argue that the moral order of looking is a practical problem of recipient design at the turn level. Recipient design refers to way that turns are constructed with an orientation to who is being addressed [40, p.229-231]. Users have to ‘ask’ of their interaction as they conduct it: “what to show, and why, consider (how) what they show becomes available to the scrutiny of the recipient, and liable to be assessed for relevance.” [25, p.8].

This brings us back to doing ‘being ordinary’. Self-consciousness about video stems not just from a concern for being able to control a *favorable* self-presentation but the practical effort of doing so while also putting forward an *observably ordinary* self-presentation. As noted above, it is with this issue in mind that we became interested in Skype Qik as a research site. While an incumbent asynchronous video messaging app would be a traditional choice for a study of everyday use, Skype Qik’s research appeal was the purity of its constraint to video exchange only. To take advantage of this, we chose to focus this study on whether new users would intuitively take to Skype Qik’s as

affording ‘ordinariness’ or they revert to other systems in which they could more easily do ‘being ordinary’ – in whatever form that might take. Both situations would expose their reasoning about the exchange economies of mobile messaging for keeping in touch.

METHOD

This paper reports results from a field trial in which participants tried Skype Qik on their own mobiles from the day of launch for two weeks. Since Skype Qik messages auto-delete after two weeks, matching the study to this limit ensured that messages would potentially be available for viewing. The two-week limit also ensured that experiences would be fairly fresh during interviews. We acknowledge that this choice means that our findings cover developing behavior and reasoning rather than mature understandings, and should be read as such. On the other hand, the virtue of novelty is that it exposes reasoning that is otherwise difficult to find once patterns become entrenched. In particular, novelty exposes how easy or hard it for participants to transfer methods of doing ‘being ordinary’, which is our particular interest in this paper. Future research of mature use is likely to uncover different patterns of consistent use (e.g. as [3] has reported for Snapchat).

Given that Skype Qik was a new service without a preexisting user-base, we recruited to maximize take-up. PEW has found that older teenagers and young adults record the most video on mobile phone and post the most video online [34], and this same demographic has been found to be comfortable sharing everyday images and video in apps such as Snapchat [1, 3] and synchronous video-calling services [5]. We used convenience and snowball sampling in three countries, ultimately recruiting 53 total participants: 23 participants within the UK (many of whom were European nationals), 17 in Australia (some of whom were nationals of other countries), and 13 in Macau (all of whom were Chinese nationals). The countries were chosen for convenience of contacts, but we hoped they might provide for a variety of cultural experiences. Participants ranged in age from 17 to 44, with 70% between 19 and 25. 55% of participants identified as female, 45% as male. All but 10 participants were university students, the others being four secondary school students and six workers (all in the UK). In the UK we recruited two individuals and six friend groups varying in size from two to five people. The Australian and Macau participants were students who used the app with one another and occasionally some people outside of the classes. All reported using multiple mobile applications daily, such that all could be potential adopters of a new messaging app.

We acknowledge that our recruitment of primarily university students limits our findings to that population, and that behavior and reasoning are likely to be related to context – young parents, for example, might be more likely to share video of children [27] rather than flirt. As with our

choice of technology maturity, we hope that future research will explore use by different demographics.

The two-week study began with a kick-off interview, included a check-in interview at the end of week one, and concluded with a debrief at the end of the second week. In kick-offs, participants were asked about their different uses of mobile video followed by ‘onboarding’ them with Skype Qik and eliciting first impressions. At check-in, users were asked for impressions from initial use. Debriefs involved short surveys on factual aspects of amounts and times of use but were primarily concerned with eliciting longitudinal narratives of use. When participants allowed us to watch Skype Qik threads, we were able to use stimulated recall [34] to probe sequential issues rather than relying on entirely on reported glosses of behavior.

During the consent process, participants were briefed that we did not have access to their messages via in-mobile recording or server recording, only what they chose to tell us about and show to us in interviews or send to us directly. The UK participants, to whom we had direct access, graciously allowed us to record their message threads. Two Australian participants sent one message thread each to us. Three UK participants, five Australian participants, and two Macau participants also sent us feedback directly via Skype Qik messages. While this form of research always carries the risk of participants ‘performing’ for researchers as a secondary audience, we also briefed participants to treat their use of Skype Qik in the same manner as they would try any new messaging app that they come across organically. As such, there was no requirement to use Skype Qik exclusively, no set times or tasks, and deciding to stop using the service at any time was acceptable. Our sense from interviews was that there was very little that was especially performative for us, and, further, we argue that our focus on turn exchange rather than cataloguing uses and gratifications produces findings that do not dwell on what users themselves treated as interesting.

Our analysis takes the form of Ethnomethodological and Conversation Analysis (EMCA) approaches as used in HCI [12, 14], focusing on how people make socio-technical reasoning visible in situated local practices. As we noted in the introduction, given the highly constrained video-only messaging model of Skype Qik, we were interested in participants’ reasoning about the values and practices associated with video turn construction and response as an economy of exchange [41]. As such, after transcribing all interviews and video, our analysis focused on drawing out reasoning around the basic binary of when asynchronous video messaging was treated as enjoyable and when it was a struggle. In line with this tradition of research, our goal was not generalizability of participant attitudes to Skype Qik but rather understanding interactional reasoning. The findings below concentrate on detailed illustrations of perspicuous cases of reasoning within each perspective. All users are referred to by pseudonyms in the findings.

FINDINGS

As a baseline step in the kickoff interviews we elicited participants' understandings of personally created asynchronous video in mobile communication apps. Narratives of messaging on WhatsApp, WeChat, and Facebook Messenger, highlighted one-off videos as dropped into conversations specifically for quick comment and evaluation but rarely described as expecting or encountering video responses:

I'll send a video of my dog and then we'll just send haha or cute or whatever and then we'll move on. (Ann: 25, UK, worker)

We send WeChat video of like seasonal events or happy birthdays. Then you say thanks. (Hau (F): 21, MO, postgraduate)

I use videos or GIFs to communicate like a feeling or something in messaging, but not the whole thing (Jim: 20, AU, undergraduate)

Narratives of sharing personal video on Facebook, Weibo, Instagram, Vine, and Snapchat highlighted a sense of a broadcast fishing for attention with interest in accumulating likes or views, but not demanding sustained engagement:

I make, like, deliberately stupid Vines... No-one responds, I just see how many loops. (Ken: 17, UK, high school).

I might make a video of a beautiful scenery just to send to friends to relax but video isn't for communication (Liu (F): 20, MO, postgraduate).

Videos are for Facebook, where people have time to look at them and comment. They don't really fit into messaging (Jon: 19, AU, undergraduate)

Our baseline, then was that while posting or receiving video clips may well be an everyday affair, video continues to be treated as a special mode. Video is treated by users as the outcome of social choices about showing and being shown. However, there is a distinct absence, indeed there is resistance, to considering video clips as a desirable medium for communicative exchange. Video clips are conceived of as initiators of, or wrapped in, streams of other content more than an ongoing turn and response modality.

First impressions of asynchronous video messaging

The design intention of Skype Qik's first time use flow ('onboarding') was to show how easy video was to use for everyday messaging. The onboarding flow began with a short video of others using the services and finished with the user framed by the front-facing camera in pre-capture mode. Despite this onboarding, suddenly seeing oneself in the state of 'being ordinary' was often surprising:

Oh! It puts me on the spot! (Mia: 23, UK, worker)

Mia's response serves as a summary for almost all participant reactions to Skype Qik. She is alluding to how the material view of herself provided by the technology is

already construed as a matter of exchange *obligation*. The point here is that using video in messaging does not 'come for free' simply because people have seen themselves in other video services. For each new application the value of the exchange economy has to be negotiated anew.

The most common first impression was, as expected from prior research, a concern for visual self-presentation:

First thing that springs to mind is obviously you've got to look half decent all the time when you're using it, because obviously everyone can see what you look like. (Ann: 25, UK, worker)

Music videos are fun to make. [Chinese music video service] is very popular. It makes all the girls look beautiful. But if this app doesn't then why use it? (Jia (F): 21, MO, postgraduate)

The understatement of "you've got to look half decent" in Ann's comment is belied by the three overstatements that surround it: "obviously", "everyone", and "all the time". The appeal of generic messaging is that dwelling-apart-together through text, emoji, and images can be accomplished in different manners with different others no matter where one is or what one looks like. Ann's comment suggests that everyday video exchange is in a practical sense impossible because video provides too much information about oneself to allow everyday, unscheduled, and ongoing messaging with all possible recipients. Jia's comment is more extreme still, proposing that the value of video lies in its ability to present an idealized self. It would be confusing for video to present one's ordinary self.

The other typical initial impression was that sound would limit the flexibility of video messaging:

You can't use it somewhere where you shouldn't make sound, so that limits it a bit. (Mia: 20, UK, worker)

I can look at texts in WeChat or Weibo anywhere but if I get video in this app sometimes I won't be in the right place to listen, especially in class (Bai (M): 21, MO, postgraduate)

I'm reluctant to open it in lots of places because I don't know how noisy it's going to be (Amy: 19, AU, undergraduate)

All of these quotes indicate that a strong 'conventional' constraint [28] of reciprocal obligation for video with sound far outweighs that of generic messaging. While for traditional messaging a sneaky look at a text or image and even typing a quick response can be accomplished almost anywhere and very quietly, the likelihood that sound will accompany video has an assumed high transaction cost for both sender and recipient to consider in terms of attention to the surrounding context.

Right from the first moments, then, participants were reasoning about Skype Qik in terms of the practical economies of exchange – how will turns be sought, valued, and avoided, and how will they be distributed.

Embracing Skype Qik as a gift economy

Those who embraced Skype Qik particularly focused on video as well suited to a gift economy [31, 45]: the use of specifically crafted emotionally-oriented clips in which the obligations of turn and response were demonstrative of the relationship. However, even when users told us about or showed us such clips, most consisted of two/three turn exchanges rather than sustained conversations. Sustained clip exchange was not as simple as one might imagine. We illustrate this with issues from two sets of participants, a pair of female best friends and a shorter report of a group of five in which a man flirted with four women.

Exchanging video gifts to enact friendship

Ada and Zoe were best friends from Eastern Europe currently studying in the UK. Coinciding with the period of the trial they were to be separated for two weeks while Zoe returned to her home country. When together they typically used Instagram, Facebook, and VKontakte (a Russian messaging platform) to message one another every day. They reported total comfort with creating both glamorous and unglamorous selfies and readily agreed to trying Skype Qik while Zoe was away. The result was around 30 total messages over two weeks. Most videos were one-offs showing aspects of their respective days, for example Ada smoking with another friend outside a building or Zoe sending a head and shoulders view over herself while in a public toilet during a night out. These raw views of one another's life indexed the intimacy of their friendship. One short sequence of messages between the two women involved a specifically strong sense of the exchange of video made as gifts of relational value.

In Figure 2 Ada starts the sequence saying (translated):

Zoe we're sitting here we miss you. We got an espresso for me and a green tea for you, so it's like you're here with us. So come back soon, we really miss you.



Figure 2: A place at coffee for an absent friend.

Unlike other one-off videos from this pair where showing the location and activity were focused on a quick raw version of oneself, Ada's turn specifically refers to geographical and intimate separation. The recording also has several attributes that encourage response and frame the nature of that response. Making a place at coffee for her absent friend materially proposes a 'place of response' for Zoe – as had Zoe been at the table should would be part of a co-present turn-taking exchange. Ada has also provided “an

espresso for you”, which is not only a literal gift but also a resource for a response – Zoe can say something about the espresso. Further, Ada's “we miss you” and “we really miss you” propose a format for a mirrored response (“I miss you too”). Finally, while the same words could have accompanied a still image, video with ambient noise seems emphasizes the authenticity of the situation.

Zoe does respond to the emotional quality of Ada's video, although she does not respond about a place at coffee, the gift of an espresso, or explicitly match “We miss you”. Rather, Zoe responds with a gift that reciprocates the emotional intensity of the relationship. Zoe sing Ada the entirety of the song "Cry" by Rihanna, which deals with the subject of being broken hearted due to separation. For this pair, singing for one another and singing together were common practices of friendship. Their prior gifts of singing were created in definable units: a short made up song, a known-in-common section, or a full song.

As Zoe reported in their joint debrief interview, she knew about the 42 second time limit but had not considered it especially relevant until this occasion. Now she had found that the response she had embarked upon was longer than 42 seconds, so she had a choice of stopping with the song incomplete or continuing the sing the full song in 42 second chunks – and she chose the latter (Figure 3).

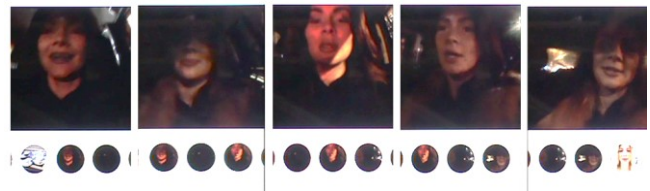


Figure 3: Singing "Cry" in 42 second increments.

Zoe reported that an unfinished song would not be a sufficiently valuable response. Perhaps even more than Ada's gift, Zoe's song is well-suited to the video messaging paradigm because it demonstrates personalized authentic emotion using the richness of video. Even the 'constraint' of 42 second increments works in Zoe's favor, as Zoe's perseverance demonstrates her commitment to Ada. Although Zoe does not use the resources of Ada's turn, the pair enact a valued exchange. The day after Zoe's song, Ada effusively thanked her friend. Ada told us that she had treated the video as a replayable gift:

I watched the video of her [Zoe] singing that song in the car many times.

As positive as this might seem, the 'obviousness' of this gift economy comes with a substantial practical burden. The value of video richness is its fit to contextual need. Only in extreme situations will such effort be made if video is the only communicative mode. Video is not simply a container of richness that can be counted upon to self-evidently provide its own value.

Flirting: The gift of responsiveness

This brings us to our second illustration. Asynchronous video messaging was found to be of tremendous value for flirting. One male participant, Ben (20, UK, undergraduate), exchanged video with four different female participants at an astonishing rate. Ben had exchanges of between 10 and 20 videos per day, almost every day, with all four women. Ben's videos were instructive on the effort required to sustain asynchronous video exchanges. His videos, either initiatory or responsive, had three things in common. First, if initiating, he would ask questions, fish for responses, or tease, thus always proposing that sustained exchange was to be expected. Second, he would always respond, usually rapidly, and he always had the last word, to propose a sense that every video had value (as he said in the interview above) and that this value was to be demonstrated by response. Third, he would respond from anywhere, often even on the move in the street, or in bed, to propose a sense of urgency. While clearly flirtatious, the content of these messages was not especially romantic or sexual. Rather, Ben's emphasis on response had value in a gift-oriented economy not just because they were personal, but because they emphasized the intoxicating gift of exchange itself.

Ada and Zoe, and Ben and his group, were the most enthusiastic users in our study. Ben's flirtatious agenda took more effort than quick pictures or texting but clearly he found value in it. For Ada and Zoe video provided a medium for the kind of emotional exchange they wanted to cope with separation. We turn now, though, to the far more prevalent findings of struggle.

The tyranny of the everyday

For many of our participants, exchange outside of a gift economy was a struggle with the 'tyranny of the everyday'. Doing 'being ordinary' is to display and attend to the world that everything is as usual, banal, nothing much [40]. But for our participants, this was dissonant with their reasoning about how to engage with others using asynchronous video. Being ordinary in Skype Qik was a challenge because the ordinary was 'inherently unshowable':

I am constantly thinking, 'What would this look like on video?' But it's just finding the stuff... (Sam: 22, AU, undergraduate)

If I was lying in bed, for instance, do I really want my friend to see me in my pajamas lying in bed? Probably not. (Viv: 21, AU, undergraduate)

I was retaking some of them, and some of them I just- I deleted so many videos. (Pam: 19, AU, undergraduate)

Since the visual element was primary to the app's design, participants reported difficulties 'finding' appropriate video to capture when one 'just' desired to 'say' something:

There wasn't something I wanted to show at this moment, it was just something I wanted to say so if it's just something I want to say it would be very strange if I'm just filming the

wall or something and talking at the same time (Ivy: 20, UK, undergraduate)

I'm a commenter, not a... Like I don't have to be seen for that and I don't want to have to actually say it (Mia, 23, UK, worker)

The mundanity of what might be said is not the problem. Rather the desire to express oneself even mundanely is being treated as complicated by having to be seen to practically produce that expression both visually and vocally. The 'talking head' view that might accompany being a "commenter" draws attention to the *making* of the comment rather than the comment itself. A view of "the wall or something" that Ivy proposes as an improbable solution would draw attention to the meaningful link between the visual and the verbal or be accountable for the lack thereof. The problem of creating value of turns as produced-to-be-seen complicates the assumed value of the turn exchange itself, which works against 'being ordinary'.

Voice struggles

Many participants were more reluctant to speak than to be seen or to show other things. The common issue of not wanting to be seen in a state not chosen (e.g. in one's pajamas) was considered less of a problem than the active dislike of one's own recorded voice.

I feel weird recording myself talking (Pam: 19, AU, undergraduate)

Ann: It's really awkward because you don't want to talk on them. Nobody likes hearing their own voice.

Interviewer: But you're not hearing your own voice. The other person hears your voice.

Ann: Yes, but not if you're replaying them. (Ann: 25, UK, worker)

However, for those who were negatively self-conscious about their voices, the desire to replay a just-filmed video to check its overall content also raised the problem of hearing their own voice and thus being sensitized to the possibility that the recipient might replay the video. This is not an entirely unwarranted possibility, although deliberate replaying was only reported by a few participants, such as Ada above. While Zoe's video for Ada was a special gift, and probably produced to be replayed, nothing precludes any recipient from replaying any video. This is distinct difference from synchronous video calling in which voice is ephemeral and replayability is not a requirement (although synchronous video can, of course, be recorded and replayed).

The normative position that participants are expressing for Skype Qik here is that a message created to be ordinary, outside a gift economy, should not be accorded the replayable status of a gift. To engage in asynchronous exchange of video that has no pre-defined requirements is to give up control over what will be treated as having value.

Video struggles: Recruiting others

Struggles to create video played out in attempts to entice others to join the service by making clips which the recipient would see if they responded to an SMS message inviting the recipient to the service. Liz, who reported being comfortable creating videos in Snapchat and Vine, told us in her kick-off interview that she felt she would easily recruit her friends. However, from serious requests, to funny faces, and then personalized raps, she failed to recruit any other users except her partner. As another user said:

I've asked friends and I tried to get my sister to download it, but as soon as you say 'video' people are like, 'What am I going to send you videos of?' So that off put a lot of people. (Pam: 19, AU, undergraduate)

To some extent YouTube faced this same question when it was first released as well, but YouTube is a broadcast medium not a messaging medium. "What am I going to send you videos of?" does not, on the face of it, even report discussion of a messaging, it reports a proposed burden of the recruitee having to produce video specifically for the recruiter. Since no unique production hook is being offered for these videos, there is dissonance between 'being ordinary' needing practices to show that 'nothing special' is going on while video is assumed to need special content.

Video struggles: Moving on from matching play

Recording a video as a conscious act without feedback from another focuses attention on finding resources for production. One strategy was the age-old practice of playing around in front of the camera. From an exchange point of view an obvious response would be to either match or one-up the initiating message. Oli filmed a cut-off view of his face emphasizing his eyes, a close-up of his laptop, knocked over a ladle, and then zoomed in and out of homework on paper (Figure 4, top).

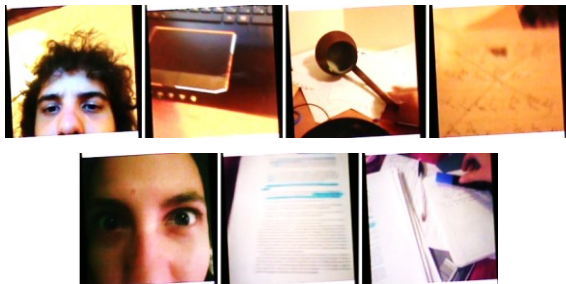


Figure 4: Matching absurdist play.

In response, Fay closely matched three of Oli's four vignettes, albeit not in quite the same order. She began with the same cut-off face to emphasize her eyes, then zoomed in and out of highlighted book pages, and finished by picking up and dropping her highlighter (Figure 4, bottom). This, however, was the end of the exchange for that evening. Such play is fun, but no pairs engaged in it more than a few times, nor did it lead to sustained exchanges.

Video struggles: The burden of response

Of course not all exchanges need to progress past one turn and response. However, if everyday messaging is the goal then an app must encourage doing 'being ordinary' via sustained interaction. This proved difficult for many users in the trial. We will illustrate this with an extended example from one participant pair whose difficulties we consider emblematic of the turn exchange burden of 'being ordinary' in asynchronous mobile video messaging. Ann and Bec were work colleagues who had struck up a strong friendship over the previous few months. They conducted a significant proportion of their relationship via WhatsApp, reporting it as "having a conversation like we're sat together" (Bec). We were fortunate to be able to interview this pair together and develop a joint account of their experiences. The pair found themselves stymied three times attempting to produce exchanges, and in each case fell back to another platform. How is it that participants so comfortable with WhatsApp struggled with Skype Qik?

Their first exchange lasted just three turns, the last of which was actually accidental. Earlier that day Ann had complained about eating soup too often that month and would have it again that night. Bec also happened to be eating soup that night, so she decided to use Skype Qik:

Bec: I was just having my dinner and I thought, 'I'll just send her my picture.' But I didn't want to speak over it and go, 'This is really good soup.' I just sent the still image of my thumb up, yes, so she knew it was nice.

In common with many participants Bec was negatively self-conscious about her voice. The problem she thus had to solve was not that she had nothing to say, or that what she had to say was topically mundane, but rather that she needed a soundless video to convey it. Conveniently, there was a common visual method of positive evaluation, the upraised thumb, which did not require verbal accompaniment. Thus she sent a short 'thumbs up' video accompanied by ambient room noise (Figure 5, left).



Figure 5: Matching silent evaluations of soup and an 'unresponsible' dog turn.

Bec's turn is an assessment, for which there is a preference for reciprocal or upgraded second assessments [33]. So in terms of recipient-design, Bec's initiating turn proposes the content and form of Ann's response. Videographically it is also easily matchable by Ann. Ann matched Bec's turn by indicating displeasure with her own soup situation via a

'thumbs down' over her own bowl of soup (Figure 5, middle). Ann's turn also matches Bec's turn by eschewing vocals for ambient room sound (the ambient sound bears no apparent relation to the visual). This first turn and response seems like the start of ongoing interaction: the turns are well matched, convey clear concepts, and fit the kind of content this pair would exchange in WhatsApp.

The next turn was a non-sequitur. Ann reported that after sending first response to Bec she accidentally sent Bec one of the example Skype Qik 'Fliks' (a dog in sunglasses licking its lips; Figure 5, right). Bec did not respond to this second turn from Ann. We were curious about why the exchange ended at this point. The pair reported that the problem was that they both wanted to respond in writing. We asked them what they might have written and why:

Ann: Probably something like, 'Still hungry' and that would have probably led to more interaction because then she could have then responded to that in some way. You know, maybe she was going on and having dessert or something.

Bec: I think with filming things for me to just be there going, 'How did your soup taste? Was it good?' I think you just want a quick answer to that. 'Yes,' 'No.' Whereas then obviously Ann would have to film something back and it just doesn't seem feel as instant. It just doesn't feel as natural. I just felt a bit weird just to go, 'How did it taste?' and then send that to her.

Both Ann and Bec express difficulties with generating an appropriate next turn in video, even though they can hypothesize the verbal content of a next turn and several more beyond. Nevertheless, Bec reports that video is inappropriately rich for asking and especially responding to assessing the soup's taste. Of note here is a nuanced concern with temporality. Speed of response reflects the simplicity and mundanity of the content but also a commitment to near real-time engagement. To produce a video response is seen as taking disproportionately long.

However, while Skype Qik use ended for that night, the talk did not. The pair reverted to WhatsApp. Specifically, Bec wanted to respond Ann's non-sequitur dog post. On WhatsApp, they said, the attentional focus of both participants would be on the spontaneous topical flow rather than the rich display of producing the video:

Bec: She sent me that image and I wanted to reach out to her and go, 'Cool,' and then I was like, 'I can't, but with WhatsApp I can.' 'Hey, cool picture. Cute dog.' Then we had like a 20-minute conversation on WhatsApp just about our evening. Just like, 'Watching TV. What are you doing?' 'Oh, I'm watching a really sad film, have you seen it?' 'Oh, it's so sad, this is what's happening,' and just giving each other updates on what we're doing.

Even though Ann's dog video post was a non-sequitur, Bec does not treat that as a problem. It is the kind of topical shift treated as 'being ordinary' in WhatsApp. The problem is

that Bec felt that should could not bring herself to make a video in which she said simply "cool". A video of saying "cool" is not 'being ordinary', *writing* "cool" is 'being ordinary'. For Bec, to "reach out" is something that she "can't" imagine doing with Skype Qik. This is an extreme formulation of constraint, especially in contrast to the ease of reaching out via WhatsApp:

Bec: Because we have to film each other, or I guess film the screen I'm looking at ... but then again, we can't say what we're thinking at the same time. So if I sent her the screen picture of what I'm watching, you want to say, 'This is sad,' but Emma wouldn't know that from just looking at the screen picture of the movie.

Interviewer: Because you would refuse to speak.

Bec: Yes.

The problem, again, is twofold. 'What to show?' is a constructional problem when the primary communicative desire is to comment, even when this comment is about a visual concept such as a sad film. This problem is exacerbated by the personal constraint of refusing to comment vocally in a video, vastly reducing the potential communicative value of the exchange.

For the next few days Ann struggled to conceive how she might construct moments of friendship with Bec:

Ann: Normally I wouldn't be sat there thinking, 'I really need to message Bec tonight. What can I say?' You just don't even think about it. You know, 'How's your night going?' Or, 'Oh, my God. Are you watching this on TV?' That kind of thing. You don't really think, yes, you just do.

What is of note here is the articulation of the intuitive friendship enactment enabled in WhatsApp: "you don't even think about it ... you just do." In this sense the medium retreats somewhat into the background enabling relationships to be lived and enacted. One of the challenges here is how video needs to be situated as part of a sequence of turn exchanges. A video in Skype Qik 'cannot' simply be the capture of a funny or special moment – as it might be in WhatsApp – because it would need to invite particular forms of *response* appropriate to video.

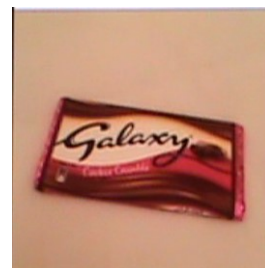


Figure 6: Ann's 'unresponsable' chocolate turn.

We see some of these concerns in the second attempt by Ann to engage with Bec. Ann, who had missed breakfast one morning, resorted to buying a chocolate bar and

thought this might amuse Bec (Figure 6). However, Bec did not respond. As with prior exchange, Bec was not confused about what Ann was trying to say, or had nothing to say herself. Rather, she was concerned with what she could show given her self-imposed refusal to speak:

Bec: If she just sent a message and I could just say what I thought to her film or something, rather than have to send another film back because, yes, I don't know what I'd send to accompany my message of, 'Healthy start to the day.'

What this points to is how video clips are more typically oriented to as one-off entities that can be made the subject of other modes of response, e.g. button-push evaluations (Likes, favorites, hearts, votes) or written comments and emoji. The burden of exchange, then, is not simply one that simply resides in video production for initiation of a thread. Rather the burden escalates when a response must occur in the same mode. In this case Bec's report that "I don't know what I'd send to accompany my message" indicates that commenting on Ann's content is the entirety of the task, but that that making a new video would necessarily entail creating additional content that would fall outside the 'content—comment' turn pair as she conceives of it.

The burden of response is not simply the result of limited imaginations or illiteracy with video. However, the respondent's ability to act is ultimately constrained by the resources around them at that place and in that time. We see this illustrated the final attempt by Ann to interact with Bec. In this final episode, Ann sends Bec a video her own pet dog (not the pre-recorded Qik Flik dog) (Figure 7):

Ann: My dog was doing weird stuff on the floor and I thought it was something that Bec would be able to relate to and I was hoping she was going to send me one back.

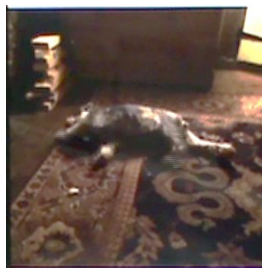


Figure 7: Ann's second 'unrespondable' dog turn.

Bec did not respond despite enjoying Ann's video. Bec imagined a matched response of her own dog doing something similarly silly and amusing:

Bec: I did look at my dog Fudge but he was fast asleep and I was like, well that's pretty boring to send her back a fast asleep one.

In the moment, situational circumstances create an implied burden of exchange value. The response needs to be videographically fitted along a range of dimensions (action, emotion, etc.). Bec had a dog that she could have filmed,

but it was not the resource she wanted to construct the imagined fitted response. She could have woken up her dog or otherwise found a visual using it, but she prioritized *matching* as the primary value of visual construction. The range of possible responses is not simply constrained by the limits of a user's imagination but also by the circumstantial resources at hand and how they are videographically available to demonstrate that an exchange of video for video is being valued. Bec reported again turning to more flexible possibilities of WhatsApp:

Bec: I went onto WhatsApp, 'Hey Ann, your dog's so cute, that's so funny' and then I think we spoke like for like half an hour or something about TV, watching X Factor. Then we spoke about Strictly. Then we spoke about World War Two. And then I was like 'Do you love the Royal Family?'

The topical openness and shifting of an extended conversation in WhatsApp is indicative of the issues at play here. Generic messaging offers people expressive flexibility. In this way, and in contrast to burden of video, participants are not constrained by what is around them at the time and in that place. They can communicate about television without having to watch a specific program; they can communicate about pets without training the pet to perform on command; they can communicate about WWII without having been part of it; they can talk about the Royal Family without needing to be in their royal presence. The leanness of text allowed for a very delicate level of social control. Discussing ordinary life is a far cry from allowing rich access to the 'backstage' [16] of that same life.

DISCUSSION

The usual limitations of small-scale studies apply to this research, and some service maturity and population limitations point to the need for future research. As such, our findings and conclusions are preliminary. Our study of Skype Qik at launch found that participants oriented less to video as efficient, time-shifted, high-fidelity access to the other and more to self-conscious concern about videographic obligations of turn-taking. Some embraced it as a gift economy but most struggled with using purely asynchronous video exchange in sustained manner for everyday interaction. Self-presentation was foremost in our participants' minds, but not simply in terms of favorable or unfavorable versions. Rather, the greatest struggle was how to do 'being ordinary' in terms of the construction of video turn-by turn. In that regard, participants expressed that being constrained to purely asynchronous video for exchange was dissonant with the freedom of 'lean' generic messaging. As has been found from the earliest days of CMC research [38, 39, 46], leanness affords two value propositions.

First, leanness decouples the topic of talk from its literal production context, such that there is extreme flexibility of what is discussed where, who is included, truth and its verifiability, and so on. That is not to say such issues cannot be raised and addressed, but that users have nuanced and sensitive control over its deployment, especially in

response. Even users who know each other well both online and offline are able to control fine details of access to personal aspects of life, or, indeed, to reduce their salience. Second, leanness allows for highly imaginative freedom. Topical flow based on fleeting and tenuous references between concepts becomes a defining feature of such exchanges. So, for example, though two friends messaging from home in the evening may expect one another to be in their pajamas, the fact that this is not visible affords both the freedom *to* exchange (there is no need to “look half decent”) and the freedom *of* exchange (the observable space is less likely to be a topic). This is an orientation to togetherness – ‘Me With You’.

When asynchronous video messaging is the only mode possible, by contrast, the morality of looking is highlighted. Direct and raw access to one another’s environment – even if crafted deliberately – lends itself to a sense that gaze is not neutral but interrogative. Our participants oriented to the practical issue of turn exchange as questioning their representations of self and other with respect to ‘being ordinary’. Instead of ‘Me With You’, asynchronous video messaging proposes an orientation to a simultaneous gift and a burden of obligation – ‘Me For You’.

Most of the time in generic messaging we are indeed ‘being ordinary’, and doing so with ease [4, 5, 9, 18, 19]. The “tosh” of everyday messaging [29] is the doing ‘being ordinary’ of phatic communion: “free aimless social intercourse, low in informational content, disconnected with the current activity, highly formulaic, and often ‘supremely obvious’” [26, p. 313]. Generic messaging supports doing ‘being ordinary’ across time and space precisely because words, emoji, and images that make up most generic messaging are ‘just enough’ to bond without the need for the complex displays of ordinariness required when we can see and hear one another. ‘Just enough’ communication can imaginatively be ‘quite enough’. The burden of richness carried by video is that clips that a viewer knows have been crafted to be ‘just so’ are interrogated for all the meaning that is contained in the visual and auditory fields. Little is left to the imagination.

This is not to argue that video does not support sharing everyday moments at all, but that the key is in whether such moments are treated as self-contained or treated as part of sustained exchange. [3] found Snapchat users describing their videos and pictures as carefree glimpses of “nothing”, “everyday stuff”, and “living in the moment”. Users may send responsive Snapchat posts, but this seems rare. [3] found that “participants typically understood Snapchat as a form of messaging rather than photo sharing” based on a distinction between “moments” versus the “momentous”. Our participants oriented to messaging as being about sustained exchanges rather than shared self-contained moments. The distinction between everyday exchange versus everyday moments, then, represents an important choice when developing design goals.

The most obvious implication for design is that when sustained everyday exchange is the goal, using purely video is probably of limited value to users except for certain niche contexts. For example, the Glide video messaging service specifically targets the deaf teen community in much of its marketing efforts [47], and even then Glide also allows users to respond to clips with comments, emoji, and evaluation buttons of various kinds. Video clips work best either as one-offs with such features attached to each, or when video is one of a number of features so that users can switch between lean and rich modes as best fits the needs of the communicative action in context.

The broader implication is rather than offering richness of mode, designers should strive for perceived flexibility of communicative control. Richness of modality is a not simple container of value or a threshold of fidelity beyond which mediated communication takes care itself. Richness should be conceived of in terms of the flexible control of fit between features and activity. This broadly echoes findings of prior research and more recent design frameworks of various video-mediated contexts [34]. Flexibility does not mean proliferation of features nor total configurability of features. Rather, it means considering how any given feature could be used for recipient design. The more that any given feature can provide a resource to fit a range of contexts, the richer that feature is. The Yo app, for example, allows a single indexical expression, “Yo” to be used in a multitude of notification situations [24]. Slack has recently ‘reinvented’ emoji [43] as ‘reactji’, allowing them to be shared and totaled for all sorts of scenarios as part of the app’s IRC-style messaging. This allows far more utility than ‘Like’ button because it provides more options that are more combinable across more contexts.

CONCLUSIONS

It is still too soon to predict the fate of asynchronous mobile video messaging, as the time, technology, and attitudes may not yet be right. Mobile livecasting, for example, seemed unlikely when the original Qik was released, but Meerkat and Periscope appear to have revived it. It is clear, though, that design needs to take into account how the moral order of looking and economies of turn exchange are resources for people’s practical reasoning about communication technology. As well as exciting new capabilities, successful communication technologies will likely be the those that support or augment people’s practices for displaying and observing one another doing ‘being ordinary’.

ACKNOWLEDGMENTS

We thank Skype for access to Skype Qik. We thank Richard Fitzgerald and students of the University of Macau, Daniel Angus and students of the University of Queensland, and all our local participants, for their generosity. Finally, we thank Rod Watson for early analytic help and our review committee for excellent suggestions for improving the final manuscript.

REFERENCES

1. Kath Albury. 2015. Selfies, sexts, and sneaky hats: Young people's understandings of gendered practices of self-representation. *International Journal of Communication* 9, Feature 1734–1745. <http://ijoc.org/index.php/ijoc/article/view/3132/1396>
2. Jeremy Barksdale, Kori Inkpen, Mary Czerwinski, Aaron Hoff, Paul Johns, Asta Roseway, and Gina Venolia. 2012. Video threads: Asynchronous video sharing for temporally distributed teams. In *Proceedings of the ACM 2012 conference on Computer Supported Cooperative Work (CSCW '12)*, 1101-1104. <http://doi.acm.org/10.1145/2145204.2145367>
3. Bayer, J. B., Ellison, N., Schoenebeck, S., & Falk, E. B. (in press). "Sharing the Small Moments: Ephemeral Social Interaction on Snapchat." *Information, Communication & Society*.
4. Nancy K. Baym. 2015. *Personal Connections in the Digital Age, 2nd Edition*. Polity Press, Cambridge, MA, USA.
5. danah boyd. 2008. Why youth (heart) social network sites: The role of networked publics in teenage social life. In *MacArthur Foundation Series on Digital Learning – Youth, Identity, and Digital Media Volume*, David Buckingham (ed.). MIT Press, Cambridge, MA, USA, 119-142. <http://dx.doi.org/10.1162/dmal.97802625248>
6. Tatiana Buhler, Carman Neustaedter, and Serena Hillman. 2013. How and why teenagers use video chat. In *Proceedings of the 2013 conference on Computer Supported Cooperative Work (CSCW '13)*, 759-768. <http://doi.acm.org/10.1145/2441776.2441861>
7. Russell W. Burns. 1998. *Television: An International History of the Formative Years*. Institution of Electrical Engineers, London, UK.
8. Anna Cavender, Richard E. Ladner, and Eve A. Riskin. 2006. MobileASL: Intelligibility of sign language video as constrained by mobile phone technology. In *Proceedings of the 8th international ACM SIGACCESS conference on Computers and accessibility (Assets '06)*, 71-78. <http://doi.acm.org/10.1145/1168987.1169001>.
9. Karen Church and Rodrigo de Oliveira. 2013. What's up with WhatsApp?: Comparing mobile instant messaging behaviors with traditional SMS. In *Proceedings of the 15th international conference on Human-computer interaction with mobile devices and services (MobileHCI '13)*, 352-361. <http://doi.acm.org/10.1145/2493190.2493225>.
10. Yanqing Cui, Jari Kangas, Jukka Holm, and Guido Grassel. 2013. Front-camera video recordings as emotion responses to mobile photos shared within close-knit groups. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (CHI '13), 981-990. <http://doi.acm.org/10.1145/2470654.2466125>
11. Audubon Dougherty. 2011. Live-streaming mobile video: Production as civic engagement. In *Proceedings of the 13th International Conference on Human Computer Interaction with Mobile Devices and Services (MobileHCI '11)*, 425-434. <http://doi.acm.org/10.1145/2037373.2037437>
12. Paul Dourish. 2001. *Where the Action is: The Foundations of Embodied Interaction*. MIT Press,
13. Kathleen E. Finn, Abigail J. Sellen, Sylvia B. Wilbur (eds). 1997. *Video-Mediated Communication*. L. Erlbaum Associates Inc., Hillsdale, NJ, USA.
14. Harold Garfinkel. 1984. *Studies in Ethnomethodology*. Polity Press, Cambridge, UK.
15. Michail N. Giannakos, Konstantinos Chorianopoulos, Kori Inkpen, Honglu Du, and Paul Johns. 2013. Understanding children's behavior in an asynchronous video-mediated communication environment. *Personal Ubiquitous Comput.* 17, 8 (December 2013), 1621-1629. <http://dx.doi.org/10.1007/s00779-012-0525-2>
16. Erving Goffman. 1959. *The Presentation of Self in Everyday Life*. Anchor Books, New York, NY, USA.
17. Erving Goffman. 1971. *Relations in Public: Microstudies of the Public Order*. Basic Books, New York, NY, USA.
18. Rebecca E. Grinter, Leysia Palen, and Margery Eldridge. 2006. Chatting with teenagers: Considering the place of chat technologies in teen life. *ACM Trans. Comput.-Hum. Interact.* 13, 4 (December 2006), 423-447. <http://doi.acm.org/10.1145/1188816.1188817>
19. Richard H. R. Harper. 2010. *Texture: Human Expression in the Age of Communications Overload*. MIT Press, Cambridge, MA, USA.
20. Steven Harrison. 2009. *Media Space: 20+ Years of Mediated Life*. Springer-Verlag, London, UK.
21. Ryno T. L. Hoorn and Isabella M. Venter. 2011. Using mass video notification methods to assist deaf people. In *Proceedings of the South African Institute of Computer Scientists and Information Technologists Conference on Knowledge, Innovation and Leadership in a Diverse, Multidisciplinary Environment (SAICSIT '11)*, 275-278. <http://doi.acm.org/10.1145/2072221.2072256>
22. Kori Inkpen, Honglu Du, Asta Roseway, Aaron Hoff, and Paul Johns. 2012. Video kids: Augmenting close friendships with asynchronous video conversations in videopal. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '12)*, 2387-2396. <http://doi.acm.org/10.1145/2207676.2208400>

23. David S. Kirk, Abigail Sellen, and Xiang Cao. 2010. Home video communication: Mediating 'closeness'. In *Proceedings of the 2010 ACM conference on Computer supported cooperative work (CSCW '10)*, 135-144. <http://doi.acm.org/10.1145/1718918.1718945>
24. Natasha Lomas. 2014. Yo, The One-Word Messaging App, Updates So It's Not Quite So Absurdly Simple Anymore. *TechCrunch*. Retrieved March 27, 2015 <http://techcrunch.com/2014/08/12/yo-grows-up/>
25. Christian Licoppe and Julien Morel. 2009. The collaborative work of producing meaningful shots in mobile video telephony. In *Proceedings of the 11th International Conference on Human-Computer Interaction with Mobile Devices and Services (MobileHCI '09)*, Article 35, 10 pages. <http://doi.acm.org/10.1145/1613858.1613903>
26. Bronisław Malinowski. 1923. The problem of meaning in primitive languages. In *The Meaning of Meaning*, Charles K. Ogden and Ivor A. Richards (eds.). Routledge, London, 146-152.
27. Carman Neustaedter, Carolyn Pang, Azadeh Forghani, Erick Oduor, Serena Hillman, Tejinder K. Judge, Michael Massimi, and Saul Greenberg. 2015. Sharing domestic life through long-term video connections. *ACM Trans. Comput.-Hum. Interact.* 22, 1, Article 3 (February 2015), 29 pages. <http://doi.acm.org/10.1145/2696869>
28. Donald A. Norman. 2013. *The Design of Everyday Things: Revised and Expanded Edition*. Basic Books, New York, NY.
29. Kenton O'Hara, Alison Black, and Matthew Lipson. 2006. Everyday practices with mobile video telephony. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '06)*, 871-880. <http://doi.acm.org/10.1145/1124772.1124900>
30. Kenton P. O'Hara, Michael Massimi, Richard Harper, Simon Rubens, and Jessica Morris. 2014. Everyday dwelling with WhatsApp. In *Proceedings of the 17th ACM conference on Computer supported cooperative work & social computing (CSCW '14)*, 1131-1143. <http://doi.acm.org/10.1145/2531602.2531679>
31. Hyesook Kim, Andrew Monk, Gavin Wood, Mark Blythe, Jayne Wallace, and Patrick Olivier. 2013. TimelyPresent: Connecting families across continents. *Int. J. Hum.-Comput. Stud.* 71, 10 (October 2013), 1003-1011. <http://dx.doi.org/10.1016/j.ijhcs.2013.05.001>
32. Sarah Perez. 2013. Video Texting App Glide Is Going "Viral," Now Ranked Just Ahead Of Instagram In App Store. *TechCrunch*. Retrieved October 2, 2014 from <http://techcrunch.com/2013/07/24/video-texting-app-glide-is-going-viral-now-ranked-just-ahead-of-instagram-in-app-store/>
33. Anita Pomerantz. 1984. Agreeing and disagreeing with assessments: Some features of preferred/dispreferred turn shapes. In *Structures of Social Action: Studies in Conversation Analysis*, J. Maxwell Atkinson and John Heritage (eds.). Cambridge University Press, Cambridge, UK, 57-101.
34. Anita Pomerantz. 2005. Using participants' video stimulated comments to complement analyses of interactional practices. In *Talk and Cognition: Discourse, Mind and Social Interaction*, Hedwig te Molder and Jonathan Potter (eds.). Cambridge University Press, Cambridge, UK, 93-113.
35. Kristen Purcell. 2013. Online Video. *PEW Internet*. Retrieved March 22, 2015 from <http://www.pewinternet.org/2013/10/10/online-video-2013/>
36. Irene Rae, Gina Venolia, John C. Tang, and David Molnar. 2015. A framework for understanding and designing telepresence. In *Proceedings of the 18th ACM Conference on Computer Supported Cooperative Work & Social Computing (CSCW '15)*, 1552-1566. <http://doi.acm.org/10.1145/2675133.2675141>
37. Hayes Raffle, Rafael Ballagas, Glenda Revelle, Koichi Mori, Hiroshi Horii, Chris Paretto, and Mirjana Spasojevic. 2011. Pop goes the cell phone: Asynchronous messaging for preschoolers. In *Proceedings of the 10th International Conference on Interaction Design and Children (IDC '11)*, 99-108. <http://doi.acm.org/10.1145/1999030.1999042>
38. Howard Rheingold. 1993. *The Virtual Community: Homesteading on the Electronic Frontier*. MIT Press, Cambridge, MA, USA.
39. Ronald E. Rice and Gail Love. 1987. Electronic emotion: Socioemotional content in a computer-mediated communication network. *Communication Research*. 14, 1, 85-108.
40. Harvey Sacks. 1992. *Lectures on Conversation, Volume II*. Basil Blackwell, Oxford, UK.
41. Harvey Sacks, Emmanuel A. Schegloff, and Gail Jefferson. 1974. A simplest systematics for the organization of turn-taking for conversation. *Language*. 50, 4, 696-735. Retrieved March 20, 2015 from <http://www.jstor.org/stable/412243>
42. Steve Schnaars and Cliff Wymbs. 2004. On the persistence of lackluster demand—the history of the video telephone, *Technological Forecasting and Social Change*, 71, 3, 197-216.
43. Slack Technologies. 2015. 722 Ways To Say "I Got Your Message". *Several people are typing: The Slack blog*. Retrieved July 8, 2015 from <http://slackhq.com/post/123561085920/reactions>
44. Anne Soronen and Veijo Tuomisto. 2002. Mobile image messaging - Anticipating the outlines of the

usage culture. In *Proceedings of the 4th International Symposium on Mobile Human-Computer Interaction (Mobile HCI '02)*, 359-363. Retrieved March 18, 2015 from <http://dl.acm.org/citation.cfm?id=645739.666590>

45. Alex S. Taylor and Richard Harper. 2002. Age-old practices in the 'new world': A study of gift-giving between teenage mobile phone users. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '02)*, 439-446. <http://doi.acm.org/10.1145/503376.503455>
46. Sherry Turkle. 1995. *Life on the Screen: Identity in the Age of the Internet*. Simon and Schuster, New York, NY, USA.
47. Alan Weinkrantz. 2015. Watch How Glide's Real-Time Video Texting Helps The Deaf Connect In New Ways. *Geektime*. Retrieved March 25, 2015 from <http://www.geektime.com/2015/03/24/watch-how-glides-real-time-video-texting-helps-the-deaf-connect-in-new-ways/>