"on my way":
Deceptive Texting and Interpersonal Awareness Narratives

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ABSTRACT

Managing one's availability for interaction with others is an increasingly complex act, involving multiple media and the sharing of many types of information. In this paper we draw on a field study of 183 SMS users to introduce the idea of the "interpersonal awareness narrative" – the coherent, plausible and sometimes deceptive stories that people tell each other about their availability and activities. We examine participants' use of deception in these accounts, and focus in particular on "butler lies," those lies told to enter or exit conversations or to arrange other interactions. We argue that participants use this type of deception in SMS strategically, drawing on the inherent ambiguities of SMS while maintaining plausible narratives.

ACM Categories and Subject Descriptors

H.5.3. Group and Organization Interfaces: Computer-Supported Cooperative Work.

Author Keywords

Computer-mediated communication, deception, interpersonal awareness, SMS, text messaging

General Terms

Design, human factors, theory

INTRODUCTION AND BACKGROUND

Novel communication and collaboration technologies have enabled an unprecedented number of geographically distributed work and social networks. This often means that people can be reached anywhere and any time. On one hand, this means people can get information when they need it and socially coordinate in novel ways. On the other, however, there has been a plague of unwanted interruptions and distractions [4].

This raises the question of how to support interaction and awareness among communicators. Hancock et al. [6]

review two general approaches to this problem. A technical approach to awareness focuses on detailed bits of information, such as presence or current activities, that can be used to convey or discern the availability of others, with some attention to which of these types of information can be shared with which contacts (i.e., privacy).

Alternatively, some [1, 2] advocate a more social approach to awareness that focuses less on specific bits and types of information, and more on how people use various media strategically to manage their interactions and availability. This follows from substantial literature on how people draw on resources available in the environment and modify their behavior to manage others' impressions of them (e.g. [3]).

In exploring impression management, Hancock, et al. [6] focused on instant messaging (IM), and in particular on the use of deception, one strategy that is commonly employed to create a virtual barrier between individuals and unwanted conversations [6]. Their results suggest frequent use of deception in managing IM interactions, particularly in attempting to take leave of conversations without being perceived as rude or disinterested, as well as in excusing or rationalizing prior or future communication behavior. They refer to these lies as *butler lies*, defined as using deception to manage the entry and exit of social interactions, including avoiding interaction and taking leave of interaction. The term alludes to the social buffering role that butlers once played for their employers, such as telling a visitor that their employer is busy, when in reality she just does not want to see the visitor.

The strategic and deceptive use of communication technology in these social contexts is worthy of attention because it has implications for managing privacy and sharing awareness information. While most privacy models focus on the sharing of classes of information (e.g.., photos, presence) with specific individuals or groups (i.e., friends, relatives, etc.), there is also utility in focusing on threats to the plausibility of information (deceptive or otherwise) that is shared with specific individuals in specific contexts. Jim, for example, may ordinarily be happy to share photos with Jane, but might not want her to see the ones of the party he was at when he told her he was at home studying. Moving toward such a model, however, requires a more detailed

understanding of how people share and manage social information.

With this in mind, and drawing on Aoki and Woodruff's [1] suggestion that researchers and designers make room for the stories people tell each other, we introduce the notion of "interpersonal awareness narratives." These are the plausible stories that people regularly use to manage their interactions and availability, such as Jim's telling Jane that he was studying in the example above. As in Jim's case, these narratives sometimes involve deception as people draw on the ambiguities inherent in social media. We present a study of the use of deception to maintain interpersonal awareness narratives in SMS/text messaging.

THE PRESENT STUDY
We here examine the practice of lying in text messaging (SMS), paying particular attention to butler lies [6]. As with other communication media, there are ambiguities inherent in SMS that can be exploited by those engaged in deception. The nature of the ambiguities inherent in text messaging along with the social functions typically accomplished via SMS should systematically shape the types of deception used to manage availability and interaction.

First, SMS is an asynchronous mode of communication, meaning that it is not clear when a message was received or read. This ambiguity makes messages like "I just got your message" a plausible excuse. Given the asynchronicity of SMS we expected to see deceptions that draw on this temporal ambiguity.

Second, Grinter and Eldridge [5] found that an important social function of text messaging is coordinating future encounters between individuals. In contrast, IM tends to support ongoing conversation, and as such butler lies in IM tend to involve exiting conversations [6]. Butler lies in SMS should be more concerned with arranging future social interactions than butler lies in IM.

Moreover, because butler lies in SMS are expected to involve the coordination of real face-to-face encounters, they should be plausible. That is, we expected people to lie in ways that are consistent with the interpersonal narrative they wish to convey both via SMS and face-to-face.

Third, Taylor and Harper [8] noted that teens in their study felt compelled to respond to texts they received, and that failing to respond in kind can impact perceptions of the state of a relationship. From this, we expected that some SMS butler lies would be geared toward preserving relationships from response failures, consistent with prior models of impression and relationship management [3, 6].

More generally, we also wondered how frequently messages in SMS are deceptive overall, and what proportion of deceptions in SMS are butler lies. Finally, we also examined whether butler lies are impacted by demographics (e.g., gender, age) or other user characteristics (e.g., SMS experience).

Methods
Participants. 194 students from a large US university took part in the study. Six were excluded for failing to provide messages. All received course credit for their participation. The final sample consisted of 188 participants, 145 of whom were female. Participants were 18 to 22 years old, and had an average of 4.73 years of SMS experience.

Procedure. After signing up, participants were sent an email with instructions and a link to an online survey completed at their leisure. After giving consent, participants read a short deception tutorial, which provided a definition of deception as well as examples of deceptive messages. The tutorial was designed to help students understand whether their messages were deceptive [6].

Participants then recorded each of the last 30 SMS messages from their phone outbox on the survey. After typing each message, participants were asked a series of message-specific questions, including relationship with the receiver (i.e., friend, boyfriend/girlfriend/spouse, co-worker, family member, classmate), the date and time of message and whether or not the message was deceptive.

If participants rated the message as deceptive (i.e., Yes or Not Sure), they also reported why the message was deceptive, and rated it on a 1 (slightly deceptive) to 5 (extremely deceptive) scale.

Finally, participants completed a questionnaire with their gender, age, year in school, major, and SMS experience.

Message Coding. Following [6], the messages rated as lies were coded in three phases: 1) for jocularity, 2) for butler lies, and 3) whether a butler lie concerned the entry or exit from current interaction or arranging another interaction. The coding scheme is available from the authors.

Jocularity coding was required as participants sometimes rated jokes and sarcasm as deceptive. A message was coded as jocular if it was not obviously intended to create a false belief in the receiver. Examples of messages in this category included "wearing no clothes today n working outside," and "also millions of peeps r just everywhere." Inter-rater reliability for jocularity was acceptable (*Kappa* = .70). Jocular messages were not coded further.

In the second phase, lies were coded for butler lies, defined as a lie related to managing communication. Butler lies are used to enter or exit a conversation, or to arrange a separate interaction (i.e., planning future interaction). Inter-rater reliability was acceptable (*Kappa* = .75)

In the third phase, butler lies were categorized into three types: 1) entering communication (i.e., "oops i think i accidentally dialed your number"), 2) exiting communication (i.e., "k ttyl"), and 3) arranging communication (i.e., "Yeah I'll be there soon"). Inter-rater reliability was acceptable (*Kappa* = .90).

RESULTS

General Deception Patterns in SMS

Participants provided a total of 5396 messages, of which 505 were rated as lies and 72 were rated as "not sure," which were treated as deceptive given that participants doubted their truthfulness. Fifty-eight of the self-rated lies were coded as jocular and were not analyzed further. Thus, of the 5396 messages, 577 were lies, indicating that 10.7% of all SMS messages were deceptive.

Out of these 577 lies, 173 or 30.0% were coded as butler lies, suggesting that nearly one-third of all lies told in SMS were used to manage social interactions. If we look at this relative to the total number of messages provided, 3 out of every 100 messages was a butler lie (3.2 percent).

Consistent with our expectations, the vast majority of butler lies (81.50%) involved arranging other social interactions (e.g., "on my way" when the participant had not yet left). The remainder either involved exiting (6.36%) or entering communication (12.14 percent), A chi-square test, $\chi^2(2, N = 173) = 181.50$, $p < .001$, revealed that lies about arranging communication were produced significantly more often than the two other categories.

Another key question is whether butler lies are considered more severe than other lies. To explore this we compared participants' perceived magnitude of butler lies with other lies. A hierarchical regression, nesting lies within participants, demonstrated butler lies ($M = 2.84$, $SE = .08$) were not different in magnitude from other lies told in text messaging ($M = 2.72$, $SE = .06$), $F(2, 78) = 1.98$, p = .14.

Next, we examined the frequency of butler lies by participant's demographic characteristics. Surprisingly, the results suggest that there were no differences on any demographic or experiental characteristics, including age, $F(4, 142) = 1.34$, $p = .26$; gender, $F(1, 145) = .44$, $p = .51$; number of years using SMS, $F(11, 135) = 1.59$, $p = .11$; frequency of SMS use, $F(3, 143) = .11$, $p = .95$, and number of people messaged regularly, $F(17, 129) = .61$, $p = .88$. Thus, butler lies are used in SMS with relative consistency across basic demographics and experience with the medium.

Qualitative Analysis of Butler Lies

We were interested in the details of how our participants used butler lies. To better understand this, we examined the nature of the butler lies and several themes emerged. As we predicted, participants frequently drew on the ambiguities inherent in the SMS medium in telling lies. We observed three types of ambiguity that are not mutually exclusive, but we discuss them separately.

Temporal Ambiguity

By temporal ambiguity we mean uncertainty related to time in two ways. The first is uncertainty about the past. Unless the sender and receiver of a text message were both in the same place recently, the receiver generally does not know what the sender was doing prior to sending the message. Participants frequently drew on ambiguity about the past in excusing late responses to a message. For example, one participant sent the message "sorry sorry i just saw ur txt!" but noted that this was a lie because "I actually just replied [to] him a while after I checked the text message." Ambiguity about the past was also a resource in excusing past social behavior, as when another participant sent the message "No seriously i just wanted to go join another conversation other people were having," but noted in their explanation:"That was not the reason I hung up the phone."

The second sort of temporal ambiguity is about the future. Lack of knowledge about future activities is, of course, not restricted to text messaging, but drawing on this ambiguity was common among participants in constructing their lies. Many said they "might" go to an event that they had no real intent to attend or listed several possible options. One participant texted, for example, "I may go to bars or aepi, not sure" but noted in his explanation that "i knew that i was not going to the bars."

Activity Ambiguity

We also observed people exploiting uncertainty on the receiver's part about the sender's current activity. Participants frequently used this as a strategy to avoid more interaction or interaction via another medium such as the phone. One participant, for example, texted "hey sorry, i can't talk, i have a really bad migraine- in bed" but said to us that "I was too busy with friends to talk to my parents." These lies were also used to delay conversation, as with a participant who said "I'm eating now. Can I call you later?" but told us they were not actually eating.

Location Ambiguity

The third type of ambiguity that we observed related to participant location. While location and activity are often bound together, sometimes lies depended critically on uncertainty about location itself. This was particularly common when a participant was on their way to meet the recipient and seeking to excuse lateness, or possibly mitigate the recipient's face-to-face reaction to the sender's lateness. One participant, for example, said "i'm almost there! lol" but said that "I was not close to that place at all."

These examples are interesting because they show how butler lies are carefully crafted, given that an implausible lie could unravel their interpersonal narrative. If the person never showed up or was hours late, for example, it would be obvious that they had been lying about their location.

DISCUSSION

The SMS messages and butler lies examined here provide support for our concept of interpersonal awareness narratives, and how deception is used as a resource. We saw clear evidence of people using deception in their SMS messages to craft plausible narratives about their activities and availability, and they drew on the temporal, activity and location ambiguities inherent to SMS communication [2]. They rarely said simply that they were busy, but rather gave some plausible reason for not being able to meet or interact.

It was these reasons that were deceptive, and that allowed them to avoid conversations or activities while maintaining face, their own and their partner's, and sustaining their social relationships [3].

We also observed people trying to increase the plausibility of their narratives by giving themselves multiple options, as with the participant who said "I may go to bars or aepi, not sure." By listing multiple options, even though they had already made up their mind, this participant is, in effect, setting up a plausible future narrative about why they did not go to the bars (e.g., "sorry, I ended up going to aepi,").

We also found that the media characteristics and social functions of SMS shaped the nature of butler lies, especially when compared to butler lie patterns in IM [6]. First, consistent with the asynchronous nature of SMS and its role in coordinating encounters [5], the majority of butler lies in SMS involved arranging future social interactions, most typically avoiding them. In contrast, IM butler lies usually involved exiting an ongoing conversation. The importance of this social coordination function was also evident in the larger proportion of butler lies we observed in SMS (30.0%) than [6] observed in IM (19.3%).

Second, participants also used lies to account for social misbehavior, such as responding late to a message. The fact that participants used deception as a resource for explaining late responses speaks to the importance of the "gift-giving" qualities of SMS [7]. More generally, these data fit with the general notion of using deception to maintain positive social impressions and nurture relationships [3, 6].

Implications for Design
One clear implication from these results relates to location and activity ambiguity. As mobile devices become increasingly context- and location-aware, it is possible that some of the ambiguity currently inherent in SMS will fade away. We urge designers to consider how new features may affect how participants can draw on ambiguity in crafting plausible interpersonal awareness narratives.

This is not to suggest that context-aware features should be abandoned altogether or simply made options. The problem with the binary on/off approach of an opt-in or opt-out system is that the absence of information then becomes a source of information itself (i.e., not conveying your location could mean that you have something to hide). Tools can be designed in ways that allow for some ambiguity [2]. A location-aware cell phone, for example, might send its real location or a user-specified one.

A second implication is that many of our participants used SMS butler lies to avoid or delay interaction via other media, as when they said they couldn't talk now but wanted to later. Their choice of SMS in these cases suggests preliminarily that they value the ambiguity of SMS for conveying certain messages. There may be utility in continuing to provide people with media that have multiple levels and types of uncertainty.

Limitations
There are two reasons to interpret our results with caution. One is that we studied a predominantly female student population, so these results may not generalize to the broader population. Second, the method we used involves self-reports on lying, which may be problematic given that participants must be truthful about deception. While this is an inherent limitation to self-report, previous research demonstrates that people are capable of reporting honestly about their deceptive behavior in CMC [9]. Given the reliability of the coding scheme, especially in identifying self-reported lies that were not deceptive, we believe that the benefits derived outweigh the limitations.

CONCLUSIONS
The results from this study advance our understanding of how people use deception frequently to manage their availability and interactions using novel communication media. By examining how butler lies are used in SMS messaging, we showed that our participants regularly drew on the ambiguities inherent in SMS to construct plausible, though deceptive, narratives about their activities, location or availability. These findings shed light both on our theoretical understanding of interpersonal awareness, as well as provide design guidelines for a world in which technologies are context- and location-aware.

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