

Ephemeral Communication and Communication Places

What Influences College-Aged Negotiation of Instant Messaging Usage Within App Ecosystems?

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Abstract. In this paper, we present the preliminary results from an interview study of ten undergraduate students on instant messaging applications. We focus on how participants used both features of the applications and perceived atmosphere to determine how to manage their social network across multiple applications. Using qualitative methods, we identified factors of intimacy, playfulness, and ephemerality to play a key role in influencing the choice of messaging application.

1 Introduction

Since the migration of instant messaging to smartphones, there has been a proliferation of new applications dedicated to messaging, with social media platforms creating their own internal messaging systems that compete with both standard messaging and texting. All of this as messaging has grown in prominence as a mode of communication and users have defined their own social rules and structures within their application ecosystem.

Researchers have been studying how users utilize these technologies since early desktop instant messaging applications. Particularly, a recent work by Nouwens et al. [1] studied the ecosystem of instant messaging applications used by the individual user, and was one of very few that looked at how users manage multiple applications in concert, as the majority of users now do. They found that some users define a “communication place” with certain emotional connotations, a perceived purpose, and membership rules based upon an application’s userbase, functionalities, and the communication patterns used in that space. The user’s communication place informed how they used the application. Their usage patterns then cyclically lead to experiences that shaped the way they perceived the communication place.

The goal of this paper is to investigate what influences users’ decisions in what applications to use for messaging and how they negotiate the use of those applications with their social network. We conducted an interview study with ten university students who considered themselves current users of both texting and instant messaging. This population group was selected as they represent the highest rates of usage for instant messaging among the current university-aged demographic [2]. Focusing on this specific population also allowed us to reduce variance in the types of social networks

between participants. In this paper, we will report on the details of our interview studies, the qualitative analysis of the interviews, and the results of our analysis. We end the paper with a discussion of how our results compared to prior work in this area and provide design implications based on our findings and avenues of future work.

In comparison to prior work [1], we found our participants far less likely to mention contact management and membership rules as factors that influenced their decision making. Instead, the consistent threads that showed up between users were the desire for or against ephemerality and emotional connotations generated by users developing their own private usages of application features.

2 Background

In the context of social use of messaging applications, much of the literature has focused on either current usage patterns or the connection between messaging behaviors and security decisions.

O'Hara et al. [3] looked at socialization on the instant messenger WhatsApp and identified what aspects of those conversations led to feelings of intimacy and more generally how users dwelled within the application. They investigated the way users utilized features such as read indicators, media messaging, groups, notifications in order to create a sense of continuity within a conversation in order to enact friendship. O'Hara et al. emphasized the importance of looking at messaging decisions in context of the social needs of the users, not just in the context of economics or technological features.

In investigating how users navigated the many functionalities of modern smartphones, Barkhuus and Polichar [4] looked into how users switch between communication channels. They found that convenience, urgency and pragmatic factors dominated the reasoning for choice of channel when initiating contact. Meanwhile, Ogara et al. [5] investigated factors that led to satisfaction with and continued use of instant messaging but did not differentiate between messaging applications. Wang and Datta [6] attempted to develop a theoretical model showing why users continued to use an application after initial adoption.

De Luca et al. [7] looked at what security knowledge users brought into their application usage decisions and whether that differed between normal and security expert users. Despite considering security important, they found that both groups did not make decisions primary along security lines. This was backed up by Abu-Salma et al. [8] who found that the primary drivers of application adoption were not usability, privacy of data or security concerns. All of these looked at what motivated use of and choice of applications and that was context we built off of. We've particularly focused on Nouwens et al. [1] as one of the most recent papers to address the same app ecosystem questions we're investigating.

3 Methods

3.1 Study Design

We designed the interview questions in an iterative process through several rounds discussions and revisions to narrow down the focus of the study and design our questions

to best address the focus of the study. This process also involved two pilot interviews conducted by the first author. The pilot interview feedback was used to finalize question wording and determine question order. Interviews were semi-structured and took between 30 and 45 minutes. Questions covered a range of subjects related to the participants' use of instant messaging but only questions pertaining to negotiation of usage between applications were ultimately used in the analysis.

The final set of questions included four primary sections: (1) on the ways the participant used instant messaging, (2) on the applications the participant used for messaging, (3) on ranking and comparing the applications used, and (4) on demographics, comfort with technology, and user self-perception. Some examples of questions that became relevant during analysis were:

“Are there particular types of conversations you tend to have only via instant messaging?” (1)

“Do you still use this app for same types of social interactions?” (2)

“How do you choose which application to contact them [for contacts available on multiple channels] on?” (3)

“What access to or information about your messages would you be willing to share with a researcher in a future study?” (3)

“What features make this application work for you?” (4)

3.2 Procedure

Ten participants were recruited for this study, all university students between the ages of 18 and 23, 7 women and 3 men. Recruitment was conducted via posting flyers on campus and snowball sampling on social media. Interviews were conducted in person by the first author, recorded and then transcribed. The interviews were then coded through an iterative process. Using four of interviews, the first author conducted the first iteration of extracting themes and codes emerging from the interview data. All the emerging themes were discussed to refine the final set of codes, which were used to code the rest of the interviews.

4 Results

There was a range in how clearly participants could break down their own usage patterns and internal reasoning. Some users believed that the majority of their comfort with applications was due solely to familiarity (P1 and P7). Some could give no explanation for why a conversation would end up on a particular platform, while other users had extensive self-justifications for their application preferences and recognizable classification systems for conversations that broke down by application:

“I think that they're [the messaging applications used] all useful for the different purposes that they serve, and that most of the people that I know use them for the same reasons...we all understand which applications, yeah, which niche they serve and it helps us compartmentalize what we're doing on each one.” (P4)

4.1 Perceived Atmosphere: Intimacy vs. Playfulness

One recurring explanation for participants favoring one application over another or how they decided which application to use in certain conversations was the perceived atmosphere of the application, which follows what Nouwens et al. referred to as emotional connotations [1]. This was framed by our participants in terms of applications that were either 'intimate' or 'fun'.

All of the participants that described an application as 'intimate' were referring to the default SMS application on their phone. P9 chose to use texting over other messaging applications when they were having conversations that they felt required greater privacy: "I guess it seems somewhat more private over texting...I guess it seems more secure to me." P5 cited the same feeling to describe why texting was their preferred messaging application: "I guess it feels like a little more, like, intimate in comparison to the other ones? Because usually it's one on one. And it's not in the context of something else. The sole purpose of the messaging application - of texting, is to text." P4 noted that "I know most people use Facebook Messenger, but I still use texts. It feels more authentic."

While participants did not have a specific justification for describing texting as more intimate, identifying an application as fun or playful was often accompanied by noting individual features. P6 favored Facebook Messenger and described it as fun, citing the way they used the feature of updating what emoji represented their conversation as a dialogue with friends. P2 also favored Facebook Messenger and described it as a "playful atmosphere", recounting a story where a group chat devolved into various members of the group ejecting members from the chat as a way of airing petty grievances. Several participants mentioned stickers, gifs and emoji both as reasons they favored a specific application and as contributing to a feeling of 'fun'.

4.2 Ephemerality

Another significant emerging theme from the interviews involved the ephemerality of messages in the messaging applications. Presence or absence of a permanent records of messages seemed to significantly influence the choice of which messaging applications to use. This tended to come up most often in the context of Snapchat Messenger, which automatically deletes instant messages after they've been read.

P1 mentioned appreciating having a permanent record when using texting "...you have a record. Like, I did type this things so you can't deny it" citing the ability to resolve disputes using their text archive as an 'alibi'. For P6, the lack of permanent messages on Snapchat caused it to rank last because "I don't know what I was talking about." P4 described negotiating this challenge in the context of moving conversations off of Snapchat Messenger whenever they became something that they would need to remember, such as making dinner plans.

P4 described Snapchat Messenger as their favorite messaging application because of the lack of a permanent record.

"That I can say what I want to say without this fear that I'll go back on it and then say 'Ugh, what was I thinking? Like, I was so stupid'. Like, on Skype I

can go back over three years of messages. Do you know how terrifying that is? If you right click on the computer you can jump back in time. You can jump back by a year.” (P4)

P6 mentioned it as their application they’d use for “messaging for things I’m just a little bit more uncomfortable with”, a step down in perceived security from talking on the phone. They also mentioned feeling generally uncomfortable with the permanent record of their messages: “It is kinda creepy sometimes when you scroll back up and it’s like, we were talking about boys for like 20 minutes. Sometimes it’s just kinda like, eehh, I’d rather it not be on the record.”

Whether or not a permanent record was accessible on their device, several users were concerned about the companies that run their messaging applications having permanent records of their messages. P6 believed that Facebook had human moderators that could be reading any messages stored on their servers for the purpose of generating targeted advertisements. P4 said, in reference to both Snapchat and Skype “But I feel like when I send it it goes to a server and then it sends it to somebody and I feel like when it’s on the server, somebody could look at it...On Skype I’m convinced Microsoft has access to all the messages I’ve sent and they’re stored somewhere and they hold them there.”

5 Discussion and Future Work

5.1 Preliminary Results

Care should be taken extrapolating from the preliminary results of this study; we looked at a small sample group of the college-aged U.S. residents. However, our initial analysis is that at least some members of that group use various clues provided by their messaging applications to succeed in managing their messaging application ecosystems.

The framework that Nouwens et al. [1] sets out in their paper, of users developing communication places based upon the spaces and interactions provided for by an application, was backed up in our research by some of the participants. We did not find as strong of a focus on user management of their contact lists—when users mentioned managing contacts it was always in the context of initial avoidance. If they did not wish to include someone in the social network on a given application, they would not give their number, screen name or messaging access to the contact.

Within the population we interviewed, we did not see any evidence that users desired to reduce their number of messaging applications. While some users had more than five applications they used for instant messaging with largely overlapping groups of contacts, no one expressed a desire to streamline their instant messaging. Users that did desire to delete applications did so because of dissatisfaction with usability, the community of contacts on the application or the perceived tone of the application.

5.2 Future Work

There are a few essential unanswered questions about the framework of communication places. Presumably, all users have an internal conceptualization of an application as

they use it to some extent, some are merely less able to explain. To what extent are those conceptualizations communication places? And then, how does a users's level of intentionality impact their behavior? Do users that are less able to describe why they make decisions about their messaging habits make different messaging decisions?

Our conclusion that the majority of application choices were navigated around ephemerality or perceived atmosphere is counter-intuitive. These seem like very small components of applications that can have a great many features. On the other hand, almost all of the applications used by our participants offered identical core features and largely overlapping userbases. This magnified the impact of small differences on participant's decision-making.

One potential design consideration brought up in this study is that features that can be repurposed have the potential to become communication methods in their own right. Features that Facebook Messenger intended to be used to customize a group message were used by our participants in ways that their group of contacts codified as communication styles. For instance, a participant who created a method of ephemeral conversation by chatting in the chat's title instead of the actual messages. Having created their own method of communication made the application seem more personal and more playful and was cited as a reason users favored an application.

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