

Understanding Motivations Behind Co-Located Stranger Interactions

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Introduction

As humans we have great potential as individuals, but our relationships define who we are. While not all relationships begin as stranger interactions with zero knowledge (they can originate through interactions with a friend of a friend or an online connection for example), new people often grow into acquaintances, best friends, or even life partners. In this research, we are interested in better understanding how to facilitate meaningful relationships between strangers in co-located social interactions through technology, specifically looking at how technology can help generate follow through and ease awkwardness for co-located stranger interactions.

Co-located social interactions between strangers, or social interactions that are occurring between strangers in person, have a unique set of benefits. In *People-Nearby Applications: How Newcomers Move Their Relationships Offline and Develop Social and Cultural Capital*, Hsiao et al. identify two different categories of benefits for co-located social interactions specifically for dating apps, but whose benefits can still apply to non-romantic relationships. The two key benefits identified are “social capital” and “cultural capital”. They define social capital as “the resources and benefits accumulated through social relationships” and cultural capital as “the forms of skills, education, knowledge, or advantages a person has within a given society, or culture.” [1]

They specifically identify four important aspects of social capital: information, instrumental, emotional, and social companionship. Information social capital is any piece of valuable information such as the best restaurants in an area. Instrumental social capital is anything with tangible value, such as a free place to stay or free transportation. Emotional social capital would be gaining trust and empathy from another person. Finally, social companionship

describes a companion relationship between two individuals. The two aspects of cultural capital which they identify are social norms and language. Social norms are described as the rules that a specific group follows and language is the prospect of helping someone understand the language used by a specific population.[1]

While these are benefits specifically identified from co-located stranger social interactions, this does not necessarily mean there are no other potential benefits from these interactions such as relief of boredom or skill exchange. Because of the potential benefits for these kinds of interactions, we wanted to further explore motivations and design guidelines for individuals who already have a desire to interact with a stranger in order to maximize follow through in these interactions. We then use these design guidelines to hypothesize potential technical solutions to take advantage of these benefits.

Background

Both researchers and members of industry have recognized the benefits that can be gained from co-located interactions with strangers. We wanted to gain a better understanding of previous attempts at facilitating these interactions through app-based technologies.

In the late 2000's, Google released a location based API, which allowed everyday developers access to users geolocation data. [2] Multiple startups saw the potential of this technology to enhance co-located interactions and build valuable social connections between strangers. Sonar [3], Banjo [4], Holler [5], Yobongo [6], Igobubble [5] (see Figure 1) and many more companies attempted, in an age of evermore online interaction, to create connections between co-located individuals. For example, the app Holler allowed individual users to join groups with common interests, such as the "San Francisco Surfers". If a user were near someone

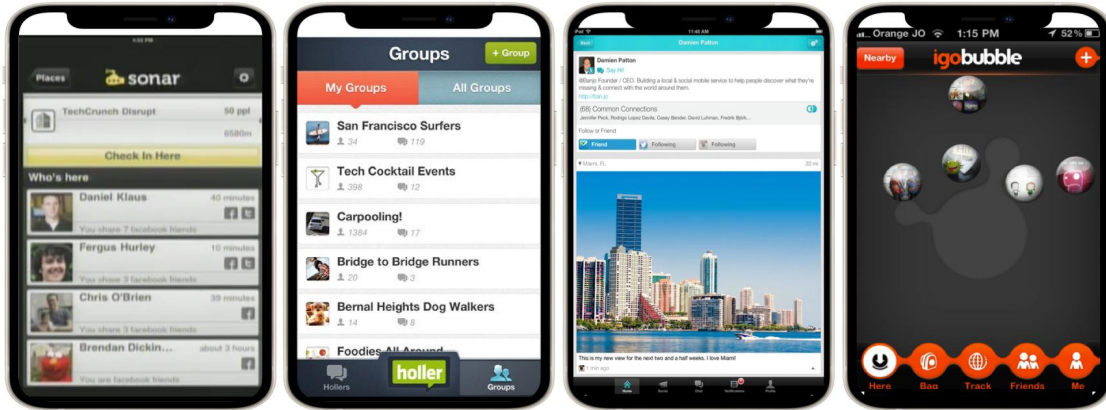


Figure 1: (Left to Right) Different User Interfaces for Co-Located Social Media StartUps: Sonar, Hollar, Banjo, IgoBubble

else who was in a group that had a common interest with that user, the user would receive a push notification on their phone to prompt an interaction. [7]

There are also multiple explorations into stranger interactions within the research field. There are many different forces at play when discussing in-person social interactions. One component of this problem lies in one person's desire to interact with another. While previous matching systems were based on proximity or simple similarity metrics to proxy desire, Mayer et al. showed the importance of higher level concepts such as “contextual rarity” or that the more rare an attribute that two people have in common, the greater two individual’s desire to interact will be. [8] Another component of this problem lies in people enjoying the activities that they do with others. Work from Liu et al. has created design guidelines to identify how technology can make interactions that are already co-located more enjoyable and engaging. [9] This research is crucial in beginning to understand how we value co-located social interactions. However, we feel that there is another gap in identifying the value of these interactions.

By the mid 2010’s almost all of this wave of location-based social networks had died off. The fact that these apps did not last, even with some of them having tens or hundreds of thousands of users, and the fact that the research still leaves some questions unanswered exposes

that we are still lacking a fundamental understanding of what makes strangers follow through with one another to create these valuable connections and break the initial barrier of interaction.

We argue that in order to design technologies that build on co-located interactions, we first need to understand the exact motives, context and barriers behind an individual's willingness to follow through with interaction that they desire to have and that they feel they will enjoy. We address this gap in knowledge by interviewing 13 University students to understand what, where, with whom, how and why people are willing to follow through on their desire to interact with strangers in person. Next, we present three main takeaways and design guidelines from our user interviews.

Method

We conducted interviews in order to gather qualitative insights that helped us better understand users willingness to follow through on co-location social interactions with strangers. We presented an semi-structured open ended interview protocol (Appendix) in order to understand both individuals past experiences with co-located stranger interactions as well as their thoughts around potential co-located stranger interactions. We began each interview by collecting demographic information such as age, gender, race, major, relationship status and level of introversion / extroversion.

After this we asked two primary questions: “Tell me about the one or two times that you spent time with a stranger.” and “Are you spending time in the coming weeks doing anything that you would want company for?” We then continued the open-ended semi-structured interviews by asking follow up questions attempting to understand the participants responses in relation to the question of who would individuals feel comfortable interacting with, what would

individuals feel comfortable doing, when would individuals feel comfortable, where would individuals feel most comfortable, and why individuals wanted to interact in stranger interactions. Each interview lasted around 30 minutes and participants were compensated with a snack for their time.

Based on the best practices of Charmaz's grounded theory [10], we iteratively changed our understanding of the analytic frame. As a result, we simultaneously updated and appended our interview question prompts to reflect the concepts that emerged as our interviews progressed. After transcribing responses to question prompts, we analyzed the interview data based on this updated understanding to pull out emerging themes, and focused on similarities between transcribed responses and their relationship to these main themes. Our analysis is interpretivist, our goal is to gain a deeper understanding of how participants view their interactions with strangers and the common defining characteristics of their views and experiences with corresponding interactions.

Results

Our investigations revealed answers to the previous questions around who, what, when, where and why in co-located stranger social interactions, however, these results came together to present three substantial design guidelines for building co-located social interaction systems to maximize follow through.

Participants overall stated they had no real preference for who they wanted to interact with in terms of demographics, however, they did mention that interacting with "strangers" who were friends of friends is always easier because they already know information based on their mutual friend and their interactions. Participants also did not indicate any preference for when or

where an activity takes place, although some participants did mention that performing an activity when they are in the correct mood was important, and they prefer to interact with strangers in places that they are familiar with but not places that are too familiar such as their own house or apartment. Finally, subjects mentioned that they were motivated to interact with others either because of boredom, exchange of skills, or to expand their own understanding of the world around them.

While understanding the who, what, when, where, and why are important, there are three additional main takeaways from our semi-structured interview process that emerged as essential to a follow-through and therefore key to design solutions.

First, the pairing of optimal mood and intent to act is paramount when deciding to act on a stranger match. Our participants noted that they not only needed to be in a good mood, but also that they needed to be in a mood where they would be open to interacting with strangers.

Participant 11 mentioned, “When it's nice outside it kind of gives me the energy to be more open to social interactions. When it's cloudy, and I am not getting energy from the sun, I just want to be focused on what I am doing and not necessarily interact in a way that is taking me away from the experiences that I'm having.” Participant 6 mentioned, “Has it been a hard day? What kind of social energy would it require? Conversations can be socially draining.” Finally, Participant 9 mentioned, “I was in a good mood. I was eating delicious food. I was feeling fat and happy.”

These results suggest individuals not only need to be in a “good” mood when interacting with strangers, but more importantly they need to be in a social mood. Contrasting from opportunistic social matching systems, these results suggest that one of the primary factors in determining follow through is as simple as people wanting to meet strangers. Participants mentioned multiple different reasons for being in a social mood such as loneliness, boredom, companionship and

exchange of skills. It is important to take into consideration the importance of mood not only in the desire for individuals to interact, but to even go a step further and focus on intent based matching in future design solutions, which would be different from previous systems based on opportunistic matching.

The second aspect that emerged as most important when following through on an interaction with a stranger was to have a common goal. Participants felt that common goals allowed them to feel more comfortable in their interactions because if both participants were motivated by an activity, it removed from the social awkwardness that can accompany new interactions and they know that the stranger is interested in the interaction. Participant 7 mentioned, “I’m gonna pick a person that will be there until I say they can go home. If it wasn’t someone that I knew super well, I would worry about if they would enjoy it or if they would make me mad or if they would think I’m using them.” This response highlights how common goal activities reduce awkwardness, which can be a significant barrier to following through on interaction with a stranger. Participant 10 mentioned that, “I think that part of what you look for is that you’re both driven by the activity. Golf is not like watching a movie, there are long periods of time where you are just walking or waiting, and it’s more fun to do that with someone that enjoys what you’re doing.”. Finally, participant 3 mentioned, “I would want someone who was friendly and would be willing to show up and commit (to exercising together).” These results suggest that future systems should be built around activities where both individuals are driven by an outside goal to reduce awkwardness and provide a common interest, facilitating an easier social interaction and preventing discomfort. In the absence of these uncomfortable feelings, our research suggests that participants will be significantly more likely to follow through on

interacting with a stranger. Further research could highlight what specific activities lessen social discomfort in strangers to the maximum degree.

Finally, when interacting with strangers, participants mentioned that very quickly within an interaction they could get a “gut feeling” that would tell them whether they would like to continue the interaction or not. Participant 1 mentioned, “I would know [If I was going to make a deeper connection] as soon as I get a few seconds of what someone is talking about.” Participant 6 mentioned, “It wasn’t on sight. It was probably within the first few seconds of conversation.” Finally, Participant 8 mentioned “The first thing I look for is a gut feeling. I think the decision of whether to make this an extended interaction happens very quick.” The concept of “gut feeling” ties to the broader themes of preventing awkwardness, but highlights a further barrier to follow through. If individuals meet a stranger and decide their “gut feeling” with the person is off, they will then be stuck in an uncomfortable social situation. Our research suggests people may avoid stranger interactions because this “gut feeling” based instant connection is not guaranteed.

Design Solutions

To maximize follow through in matching, users must be able to be matched only when they are ready to act, and barriers of awkwardness and discomfort must be eliminated. Our research shows these barriers can be eliminated by providing a common goal, and by capitalizing on “gut feeling”.

Based on our key findings of mood, common goals, and gut feeling, several design solutions emerge as solutions. First, the technology should not be opportunistic, but rather based on intent. An intent based system could be created by only matching strangers who actively

indicate they are ready to meet someone at that moment (rather than other opportunistic design solutions which propose sending push notification reminders when matches are in the same area). Second, users should be able to select for strangers with similar interests or hobbies to create a common goal. This can easily be added to user profiles so the technology can pair those with similar responses.

A more complex design solution must address the idea of gut feeling. We propose a technology that uses what we term as “pre-interactions” to establish the gut feeling connection. These would be interactions that allow individuals to interact online in a proxy of real co-location or face to face interactions over a video call such as Facetime or Zoom. This would allow participants to read social cues and get a better understanding of whether they would be comfortable following through an interaction with an individual as well as if they would want to follow through an interaction with an individual.

Limitations

The limitations of our research are our sample size (13 subjects) and our sample pool of Columbia students. In order to universalize our findings to the broader population we would need to have a larger and diverse participant pool.

Future Work

While previous research has discussed the importance of mood and common activities for the desire (not necessarily the follow through) of co-located stranger social interactions, our findings about “gut feeling” present significant opportunity for future understanding. Particularly, we hope to gain a deeper understanding of “gut feeling” and the factors that are

most important in two strangers having positive “gut feelings” about one another. As mentioned, some of our findings showed that gut feeling was very based on the physical features of a stranger, such as eye contact. We want to further identify how best to accommodate “gut feelings”.

With a better understanding of “gut feeling,” we can then further identify multiple technological solutions such as the one identified above and test these solutions effectiveness in fostering co-located stranger interaction follow-through.

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Appendix

Past Experience

Tell me about the last one or two times that you spent time with a stranger. It can be a stranger that you met at Columbia or elsewhere.

Follow Ups:

1. Who was this person, can you tell me a little bit about them?
2. What were you doing together?
3. When did this activity take place? Was it pre-planned or spontaneous?
4. Where did you meet for this activity?
5. Where did the activity take place?
6. Why did you participate in this activity with this stranger? What motivated you?
7. What barriers did you feel to have a more in depth interaction? (wanted to have lunch at a more expensive restaurant, didn't have the time commitment)
8. What facilitated this activity leading to a more in depth activity?

Future Experience

Are you spending time this week doing anything that you would want company for?

9. What would you look for in a person to do this activity with you?
10. When would this activity take place? Would you prefer it to be pre-planned or spontaneous?
11. Where would you want for this activity?
12. Where would this activity take place?
13. Why would you want company for this activity?
14. What do you think the biggest barriers that you would have would be doing this interaction with a stranger? (wanted to have lunch at a more expensive restaurant, didn't have the time commitment)
15. Is there anything that would make it easier for you to do this activity with a stranger?
16. (if they answered an activity that they were doing with someone they already knew:)
Would you be interested in doing this activity with a Columbia student that you had never met before?
17. What mood would you have to be in to do this activity with a stranger?