

Understanding Affordances of Voice-Based Match-Making: The Case of Soul

ANONYMOUS AUTHOR(S)*

As the user requirements expands, increasingly new forms of online dating apps are emerging. Soul, for example, allows users to use voice to make friends without discovering profiles. Many previous works focused on the influence of visual on profiles. But with Soul's voice dating mechanism, users seem to pursue voice timbre in the non-visual aspect. To identify what changes does voice dating bring to online dating and how people interact in the voice dating. We report on a study of Soul, based on interviews with 18 dedicated users. Our research findings show that users are inclined to perceive the emotion, reaction and personality of potential partners during voice dating. Voice dating also makes the communication between users become synchronous, which is conducive to the promotion of online dating atmosphere and the deepening of mutual affection. Eventually, we found group chat room and host can help users quickly find potential partners.

CCS Concepts: • **Human-centered computing** → **Human computer interaction (HCI)**; *Empirical studies in HCI*.

Additional Key Words and Phrases: Online dating, affordance, voice, social media, online communities

ACM Reference Format:

Anonymous Author(s). 2022. Understanding Affordances of Voice-Based Match-Making: The Case of Soul. In *CHI '22: ACM SIGCHI Conferences on Human Factors in Computing Systems, 2022, New York, NY, USA*, 18 pages. <https://doi.org/10.1145/1122445.1122456>

1 INTRODUCTION

With the development of smart phone apps and the increasing feasibility and reliability of online dating, online dating has become a common way for people to find potential partners [20]. Moreover, 38% of US adults have used online dating sites or smartphone apps to seek potential partners when they were single, indicating that the online dating market is slowly becoming mainstream and the user base is gradually expanding [28]. Under various opportunities, the online dating industry has received a large amount of financing, the market develops comprehensively, and the number of various types of online dating apps shows explosive growth [29].

However, the rapid development of online dating apps is accompanied by a negative homogenization of dating apps. The success of Tinder's "discover profile — successful match — text-based messaging and interaction" dating process makes this model used for reference by many online dating apps [42]. In terms of the dating process and user communication methods, homogenization is mainly reflected in the fact that most online dating apps still adopts the mode of visual selection and the communication between potential partners is still primarily in the form of text [1]. Visual selection refers to Tinder's "swipe left swipe right" mode, in which users evaluate other users based on photos [15]. The profile of users is particularly important in the traditional online dating process. Many online dating apps also design profiles as a focal point, which indirectly results in users' tendency to evaluate whether other users are their potential partners solely based on appearance and photos [12]. Users also tend to over-emphasize appearance, including physical features and sexual attraction [1]. At the same time, in terms of the way of communication, due to the lack

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 ACM 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.

© 2022 Association for Computing Machinery.

Manuscript submitted to ACM

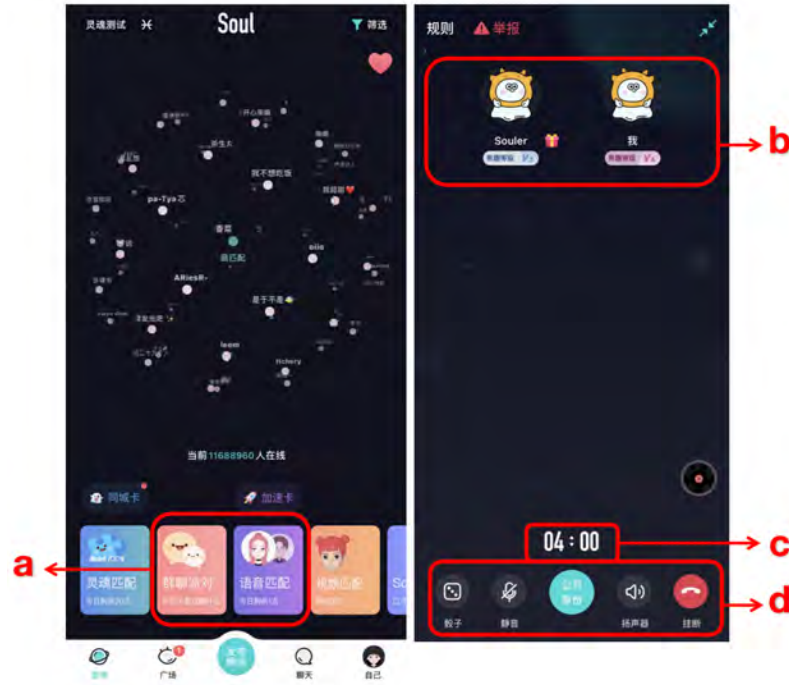


Fig. 1. Left: The main interface of Soul, which contains: (a) group chat room and voice matching. Right: The interface of voice matching, which contains: (b) two users in an undisclosed state; (c) the length of the chat, which is limited to four minutes if neither user ends up with an identity appeal; (d) some function buttons, which are dice (for entertainment), mute, disclose identity, speaker and Hang up.

of mood, intonation and other conditions that can signal live reaction in text communication, potential partners will easily fail to show the most real emotions to the other party through text communication. Pure text communication is also prone to misunderstandings between users [26]. Therefore, due to these limitations of text communication, the communication environment between potential partners does not reflect the real feelings of both parties [7].

Different from other homogenized online dating apps that emphasize visual elements and asynchronous messaging, the mobile app Soul (Figure 1) is an online dating and match-making app based on voice communication. According to Baidu Baike, Soul had more than 30 million monthly active users in January 2021, making it one of the apps with the highest daily active users in its category. [2]. Due to its unique design features of synchronous voice-based interaction between users and its popularity in China, Soul serves as a perfect site for HCI researchers to understand affordances of synchronous voice-based interaction for online dating and match-making. In order to further explore what affordances Soul have for online dating users, why the users tend to choose synchronous voice communication for online dating, and how they conduct online dating via synchronous voice-based communication, we conducted in-depth interviews with 18 Soul dedicated users.

We found that Soul disrupts the homogenization of online dating, mainly in three aspects. What comes first is that in the process of voice match dating, users can focus on the content of their communication with potential partners rather than focusing on their looks. The avoidance of visual is beneficial to those users with low sexual disgust, which can reduce the probability of meeting users who want to hook up [27]. Communication without reference to visual can

make online dating users perceive the responses of potential partners through voice communication, including their emotion, intonation and speaking style. It helps the user determines whether potential partner is satisfied with the conversation. Voice communication can also make online dating more in-depth, so that users can better understand the personalities, life experiences and values of potential partners.

Coming next is that Group chat room and host helps users connect with other users through group voice communication, which helps to diversify the online dating environment so that users don't rely on a single matching method to find potential partners. Soul group chat room has many different themes, in which users can interact in a variety of ways. The interaction modes and contents of users in different theme group chat rooms have different characteristics, especially speed dating room, casual chat room and topic chat room.

Finally, Soul differs from Tinder's traditional match-making process and instead affords two main processes that allow users to find potential partners. The first process is "voice matching — voice communication — successful match". The second is: "speed dating voice chatroom — group voice communication — successful match". Of Soul's two main dating processes, voice communication is the key to communication between users. Compared with text communication in traditional online dating applications, voice communication shows synchrony. Asynchronous text communication can be accompanied by a user not responding to a message immediately and forgetting to reply later, which is not good for a relationship. However, synchronous Voice Communication is good for continuous communication and emotional connection.

Our study can help HCI researchers deepen their understanding of the relationship between online dating and voice communication as well as other new forms of online dating apps.

2 RELATED WORK

We review some literature about self presentation on text based online dating apps, some designs for online dating apps, voice based social apps and online communities. Based on previous research on text based online dating, we hope to find out the differences in voice based online dating.

2.1 Self Presentation in text based match-making

Usually, the early stage of self presentation in online dating is to establish a preliminary impression, and impression management mainly has two key processes: the first is the motivation of impression generation, and the second is the process of impression construction [35].

There are many ways to construct impression, such as creating attractive personal profile, actively interacting with potential partners, etc. [8, 35]. In traditional online dating apps, the most common way that potential partners interact with each other is to use text. In other words, Communication methods such as text communication provided by online dating are key to helping potential partners interact and self-presentation [9]. CMC (Computer-mediated communication) Hyperpersonal Model believes that text-only communication has positive effects on online impression building and social attraction promotion [34], but such positive effects usually occur in non-romantic relationships. In the environment of online dating, due to the idealization brought by text communication and the other party's failure to meet the expectations of text chat, many potential partners often show a strong sense of estrangement after switching to offline relationships [25]. A paper completed an experiment, and the experiment process was roughly as follows: In an online dating app, male users sent greeting messages to female users and recorded the probability of male users receiving reply messages. Most men do not receive replies after dialogue messages, which also reflects some problems in text communication in online dating apps [11]. In addition, compared with text-only communication, which provides

text for users to imagine, people are more inclined to use additional physical factors to evaluate potential romantic partners, namely their physical characteristics [32]. Online dating apps based on voice communication provide physical characteristics such as reactions, voice timbre, and speech patterns to potential partners to help online dating users assess and judge whether a partner is a good fit for them. From this perspective, in the online dating environment, due to the idealization (non-authenticity) of text-only communication is not conducive to the further development of online dating. It is worth mentioning that based on the original text communication, the main forms of content provided by online social media platforms are text and voice [36]. Sprecher once conducted a comparative experiment of text-only and voice-only communication in non-romantic relationships, and the experimental results showed that the two parties with voice communication felt more intimate [30]. Any communication with an audible cue is better than text-only communication [1]. We wondered why Soul users preferred voice communication and what aspects do they evaluate potential partners by?

2.2 Online dating apps design

Many previous papers looked at classic and popular online dating apps such as Tinder, which focused on the design of app features, users' matching mechanisms and personal profiles. Matching mechanisms based on different algorithms will affect users to match different types of potential partners. The earlier papers also mentioned that users tend to choose potential partners similar to themselves, which indicates that the matching mechanism design of online dating app has great guidance and importance for users' potential partners [11].

Recently, many online dating app designers, in order to satisfy some people's purpose of fast food dating, accelerate the speed of understanding between different users and reduce the time of communication, namely "speed dating" features [21]. In this mode, it's hard for users to get real relationships because the app itself is designed to focus on looks, not connections.

Today's online dating apps all tend to be homogeneous. In terms of the discovery mechanism of users, the relative geographical location of users is listed as the key [42]. Without exception, there are two key features designed by many online dating apps: profile pages and private messaging interfaces [10, 42]. These two features are important to help users screen potential partners, but many online dating apps follow a rigid order of profiles first followed by messaging. "Discover Profile – Match Notification-Messaging Interaction" is the most common online dating app dating process at present.

More and more such fixed design makes many users tired of online dating apps. As a result, users often find that the personality of the potential partner who they meet on online dating apps is completely different from that of online dating apps. Only through photos, text-only communication or viewing other users' profiles can not really have a real understanding of each other [21].

The design of Soul is just like its name, and the designers hope that users will make friends in a process of getting to know each other's souls. In other words, Soul wants users to make real connections. We were curious about how potential partners express themselves and form a real bond through voice communication on online dating apps, especially on Soul.

2.3 Online dating community

According to Lee, A.Y. and A.S. Bruckman, online dating is closely linked to the real world, as many people often engage in one of two activities: using non-dating social software to find potential partners; Share personal profiles with real life friends, thus linking their approach to finding potential partners to real life [18]. Can communities be formed in

virtual worlds? Some previous papers explained that online dating users could not only form a community on the third-party platform in the virtual world, but also share their emotions with each other in the community in addition to information exchange [20, 37]. From these perspectives, online dating can promote the establishment of the community of the third-party platform. An exception is Soul, where users can create virtual themed communities within the app, called group chat rooms. Users of Soul can spontaneously choose their favorite group chat room theme, and members in the group chat room interact with each other through voice communication [24].

We are very curious about how the community of different topics in Soul works, how the internal members interact, what role they play in the development of potential partners, and what the disadvantages of this voice based community model are. we posed the following research questions:

RQ1: Compared with the text communication of traditional online dating app, what is the motivation for users to choose Soul?

RQ2: How do users present themselves on Soul (via voice)?

RQ3: What role do voice-based community interactions play in forming interpersonal relationships?

RQ4: What are the negative experiences of using Soul?

3 METHOD

In order to explore how users can use voice chat on the voice-based online dating app to obtain authenticity and the factors affecting the authenticity, we conducted a semi-structured interview with 18 participants. We interviewed each participant for about an hour about how they used Soul voice matching, what they felt about voice communication, what they talked about during voice matching, what they experienced in Soul group chat rooms, and how they felt compared to traditional online dating apps. All of our 18 interviews were conducted on Zoom, and some participants also used WeChat to supplement some information for our analysis and coding.

3.1 Features of Soul

The initial stage of Soul is similar to that of some traditional online dating apps. It asks users to fill in their personal information and expectations about potential partners, and it forms a large database of users based on this data. Then the matching algorithm is based on this database. But unlike traditional online dating apps, Soul officially doesn't encourage users to upload photos of themselves because Soul hopes the user can provide a lot of information about inner self, such as: hobbies, personality and professional fields. Another important reason is that the dating process of Soul is not profile-focused, and the inner self information provided by users in advance can serve as an important basis for potential partners to start a conversation.

The main functions of Soul are voice matching and group chat rooms. First is voice matching, the user can match to one potential partner through the voice matching, but in the first four minutes, both sides of the user are in an undisclosed account status, the user can only see some labels about each other on both sides, the tag is set up by the users themselves, which are including interest, work areas, fields, etc. Only after both sides choose to disclose their identities can they chat for an unlimited period of time. The interface of voice matching is shown in (Figure 1). After disclosing their accounts, users can see each other's avatar and profiles. The Soul users' avatar is a cartoon character, and users can make their own cartoon avatar.

The second is group chat room, in which there are group chat rooms with different topics, such as making friends, chatting and singing. Users can choose to enter different group chat rooms. In group chat rooms, users mainly

Table 1. Summary of Interviewees

ID	Gender	Age	Occupation	ID	Gender	Age	Occupation
P1	M	24	Student	P10	F	21	Student
P2	M	23	Intern	P11	F	22	Unemployed
P3	F	22	Student	P12	F	22	Student
P4	M	24	Student	P13	F	23	Designer
P5	F	21	Student	P14	M	24	Student
P6	M	24	Intern	P15	F	23	Teacher
P7	F	24	Student	P16	M	24	Office Clerk
P8	F	24	Student	P17	M	20	Student
P9	F	26	Teacher	P18	M	24	Student

communicate by voice. The maximum number of users in a room can speak by voice, and the extra users can participate in the chat by text.

3.2 Participants

Eighteen deep users of Soul participated in our study. In order to ensure the representativeness of the interview content, we recruited participants who had at least several experiences of voice matching and in-depth experience of group chat rooms. Table 1 shows some statistics of our participants.

Due to the survey data, the ratio of male and female users of Soul is 1:1, and the users are mainly under 35 years old, with 28 percent under 24 years old, 30 percent between 25 and 30 years old, and 28 percent between 31 and 35 years old [40]. In order to keep participants within Soul's active user age range, our primary recruitment target is 18-35 years old. Ultimately, among the participants we recruited, participants in the study ranged in age from 21 to 26, including 10 female participants and 8 male participants. We recruited participants mainly by posting recruitment information on social media, users the researchers knew during observation, and some introductions from people who had been interviewed. All recruitment materials emphasize that participants will be asked to describe in detail their experiences with Soul and ensure that all stories are true. In order to improve the authenticity of the interview, participants will be informed that the whole interview process is anonymous before we interview them.

In the screening of participants, we have three requirements for participants. Firstly, in order for participants to be deep users, they need to have been using Soul for more than a year; Secondly, participants need to have used traditional online dating apps based on text communication; Finally, participants had to have multiple voice-dating experiences. We arranged the table according to the order of the interviews.

3.3 Data Acquisition and Analysis

In the selection of interview form, all of our 18 interviewers chose remote interviews, and all interviews were conducted by Zoom. All interviews were recorded in video format. Among the questions we prepared, we mainly wanted to ask participants about their experiences in voice matching and group chat rooms. There are two main ways in which we develop our questions. One is to ask participants a general question and guide them to answer in the direction we want to study. The other is that when participants are unable to answer some relatively private questions, we ask them to share the experiences of other users that they have seen. For example, when we want to know which voice qualities the participant prefers, if the participant appears to be difficult to answer, we will change the question to ask the participant



Fig. 2. Major Dating Processes in Soul

which different voice qualities they have encountered in the process of voice matching. We then followed up by asking the participants which voice timbre they were impressed with. In this way, we can subtly learn which voice timbre participants prefer.

All of our interviews were recorded in video format and transcribed via Jianwai, a video, audio and text transcription site. In the analysis and classification of interview data, we mainly used coding for the transcribed text, and then checked and classified codes, and finally classified all codes according to different themes [5]. One group consisted of three researchers, one of whom transcribed all the original interview data into text, and two of whom were responsible for coding and review. Finally, all codes will be checked and analyzed repeatedly by three researchers.

4 FINDINGS

Based on the interview data, we found that most participants expressed a positive attitude in the process of making friends through voice-based match-making, and they all felt that they were more inclined to voice communication than text communication when seeking potential dating partner online. Participants also reported that during voice communication, What they think affects their willingness to communicate with a potential partner is the way they speak and the timbre of their voice. Many participants also said they formed a social network with other users in group chat rooms, and they kept in touch regularly.

4.1 The variety and uniqueness of dating process

The dating processes of Soul are different from traditional online dating apps such as Tinder. In related work, we have also mentioned that the dating process of traditional online dating apps is mainly as follows: The user's profile is discovered, the desired user is selected and matched, and the message communication takes place [42]. Compared to the processes of traditional online dating apps, Soul dating processes are unique and diverse. In terms of uniqueness, after abandoning the traditional online dating process, Soul mainly focuses on two dating processes for users to eventually find their potential partners. The first process is "Voice matching — Voice communication — Successful match". The second process is: "Speed dating Room — Group Voice Communication — Successful match", we will show the details of two processes in Figure 2.

Before the first process, users need to fill in a questionnaire when registering, which includes questions about interests, hobbies, personality and so on. As users refine the test, Soul will understand them better and match their potential mates more accurately. Then the matching robot helps user find the most suitable potential partner. During voice communication, the first five minutes are anonymous, and both parties cannot see each other's profiles. Profiles can only be seen if both parties believe that the other is worthy of being publicly identified. After revealing identities to each other, voice communication goes from a time-limited state to an unlimited one. The second process is: Users can quickly match up with other users in the Speed-dating Room, which has 10 to 30 users. Users mainly attract other users with their voice timbre by competing for the opportunity to open the mic. Moreover, after finding suitable potential partners, They can leave the speed dating room for voice communication. Speed dating room is a kind of group chat room. In this part, we only mention the dating path of speed dating room. In the following part, we will describe the findings of speed dating room in detail. In Soul's two dating processes, users do not start by discovering each other's profiles, but by taking voice chat directly. Regardless of the influence brought by profile, users mainly evaluate whether the other party is their best potential partner through the voice timbre, speaking style and personality of the other party in voice communication.

The diversity is reflected in the fact that not only are users limited to the two main dating processes that can be used to find potential partners, users are still free to engage in dating activities in other themed group chat rooms. Detailed group chat rooms with different themes will be mentioned in Section 3. Here we can take casual Chat Room as an example. Casual chat room is a common type of group chat room. Users in the room do not have a main topic, but mainly share their troubles and happy things with each other. Users may meet a person who has the same worries with them in the chat room, so the two users have a common topic, and they are likely to have voice communication alone after leaving the group chat room. Thus, Soul's diversity is reflected in the many different ways users can make friends.

4.2 Voice-Based Communication for Match-Making

In our interviews and observations, we found that when users engage in voice interactions, They tend to focus on the other person's voice timbre, style of speaking, life experience, etc more than just physical aspects of a potential partner, these aspects are often ignored by users in text based online dating apps [1]. For example, some Soul users can show a lot of charm when they sing even though they have an average voice timbre or appearance. This advantage comes naturally when relying on voice dating. Meanwhile, in the process of voice communication, due to the weakening of profile, users can focus on online dating, and both parties are easy to pay attention to non-visual aspects such as voice timbre and speaking style of each other. These non-visual features make the online dating environment more realistic and attractive to users [41]. More interestingly, in voice match dating, Soul users will give different styles of voice timbre different names based on the characteristics of voice. When meeting users with pleasant voices, users in the group chat room will also directly use these voice labels to discuss. Finally, we also found that due to the weakening of profile function, users in the process of voice match dating would imagine each other into the real image of the voice according to the voice timbre of the other party. *P2 said: "After hearing my voice, the other party may think that I am a gentle person, because my voice sounds very delicate. If you have a sexy voice, you're more likely to be pictured as hot. The user imagines the other person by voice."* In this section, we will present findings In voice labels, voice appearance, and the experience of voice interaction.

4.2.1 Voice label—Give the voice a name. Because the Soul users are so obsessed with voice timbre, they've given each voice its own label, giving each voice timbre its own name. For example, we found that male voices in the Soul are

classified as: bass voice, young middle-aged voice, youth voice, milk dog voice(the male voice is very weak and slender), smoke voice(voice is very husky) etc. Female voice timbre can be classified as: domineering lady voice(the voice was a little deep), young girl voice, Lolita voice, smoke voice and so on. Among them, bass voice and domineering lady voice are two kinds of voice timbre which are more popular among men and women respectively. Different people have certain preferences for how their potential partners sound. In an interview with two female participants, they each put forward their requirements for a potential partner's voice timbre:

"Personally, I prefer middle-aged voice, including gentle middle-aged voice and young middle-aged voice, I will choose between these two."(P9)

"I prefer the bass voice, which is slightly less glib or with a strange accent." (P10)

One of the male participants said he wanted his ideal potential partner to have voice timbre like this:

"To say my favorite voice timbre, I like a little sweet, a little domineering lady voice, a little aggressive speaking style."(P6)

Such voice labels also facilitates communication between users, who can use these tags to easily express what type of voice timbre they want in a potential partner. In speed dating room, users only need to say the intended voice label, and other users can know the ideal type of potential partner of this user.

4.2.2 Visualize the voice type. Although Soul users choose to listen to each other's voice rather than pay attention to each other's actual image, they can imagine each other's appearance through their voice timbre. Voice timbre forces users to imagine images of each other based on voices and images they encounter in real life. For example, a potential partner's voice is a weak male voice, a milk dog voice, which in real life is usually a thin male image, so users tend to imagine that the other person is a thin male because of this voice.

Users will use voice to imagine what the other person looks like. If the user is satisfied with the other party's voice, even if they do not know the other party's appearance, they will have a good impression of the other party. One participant explained why so much attention is paid to voice timbre.

Even, the importance of voice timbre has occupied a very important position in the eyes of some users. One participant shared that she could even put up with some shortcomings of the other party because the other party's Voice timbre is her favorite type.

"I spend most of my time chatting with a person who is paranoid or has defects in all aspects of the other person. From the perspective of normal people, he has many defects. But just because of the sound of his voice, I'm just a little bit lost. [...] I feel the charm of voice timbre on soul."(P9)

Soul's voice dating has made a big difference to the online dating environment, which has led users to focus on features other than physical appearance. However, we can also see from the user's comments that there can be a phenomenon of excessive attention to voice timbre.

4.2.3 The experience of voice interaction. Voice interaction can make online connections between users more real and more convenient. Through voice communication, they can perceive the real response of the other party, which is what many users need most when communicating, because they can decide whether to continue the conversation based on these real signals. Participant P15 mentioned: *"Voice in communication makes people feel real, because we can directly hear the other person's words, tone and intonation"*. Sensing the other person's reaction, such as emotion, can help users determine whether they are attracted to them. If the other party is interested in the user, the tone of the other party is positive, showing a state of great care and interest. These emotions can be sensed through voice.

In addition to the real feeling of voice communication, users can also perceive the synchronicity. In text chat, users can choose not to reply to some messages right away because they can pretend not to have seen them. But with Soul's

voice communication, there is no way for users to delay responding to each other's questions or pretend to be someone else. Because synchronicity reduces the ability to impersonate someone else because voice communication requires an immediate response and it is difficult to maintain long-term impersonation. Synchronicity of voice communication also allows users to quickly reject someone who makes excessive demands. Participant 15 also mentioned that she would hang up when she met users she didn't like.

"If someone keeps mentioning that he wants to see my photos during the voice dating process, I don't want to continue the conversation with him."(P15)

4.3 The Role of Voice-Based Community Interactions

Online dating users form communities on third-party social networking sites where they share and discuss their experiences [20, 38]. Soul users will also form communities with different themes and several common theme rooms for group chat rooms are: speed dating room, casual chat room and topic chat room. There are two main differences between online communities and group chat room: The Soul community is built within the app and users communicate with each other through voice. In the following narrative, we will follow the habits of Soul users and change the community to group chat room. We will present our findings in three areas: Interactive ways of group chat rooms with different themes, Speed dating room, The role of host in group chat room.

4.3.1 Interactive ways of group chat rooms with different themes. While familiar online communities are usually built around a topic, group chat rooms in Soul are built around a purpose, consisting of users who share the same purpose. Before explaining the common group chat rooms in Soul, we can see how group chat rooms are operated in Figure 3. There are four main parts in a group chat room. The first part is the topic of the group chat room. Users can find the group chat room related to their purpose according to different topics. The second part is the host(the top user in the interface), the host is to establish the group chat room, the host can decide the topic of the group chat room and decide to give users the mic right; The third part is the user who owns the mic right, the user who owns the mic right can click the microphone in the lower right corner of the interface to communicate; The last part is the users who do not have microphone rights. Due to the restriction of only 10 people in a group chat room with microphone rights, other users can only communicate through the chat box on the left.

The general interaction process of casual chat room is set by the host. For example, in Figure 1 (b), users can discuss at will in the casual chat room, and new members can also open the mic to join the discussion at any time. The atmosphere in a casual chat room is generally relaxed, and the topics are not limited to the topics set at the beginning by the host. Users are almost free to talk about whatever they want. In a casual chat room, how a user speaks and how funny it is is an important measure of attractiveness, not so much the voice timbre.

"In casual chat rooms, I think it is acceptable if the voice is not bad, and interesting words are more attractive. Compared with speed dating rooms, casual chat room people are relatively few, chat time will be longer."(P18)

Topic chat room is a room with more specific and profound topics on the basis of casual chat room. Topic chat room can be of different topics. For example, about career sharing, users can share their career development experience with each other; Emotional rooms, where users share their emotional experiences or puzzles with each other. One of our participants often enters the topic chat room of the movie theme, which is then called the movie room. In the movie room, users will regularly discuss some topics about the movie and also take out some movie clips for appreciation. The whole conversation is almost all about the movie. Compared with casual chat room, topic chat room has relatively obvious topic.



Fig. 3. The interface of Group chat room, which contains: (a) the topic of Group chat room; (b) text chat area; (c) the top user is host, and the rest users are divided into users with and without mic right. The discrimination method is to see whether there is a microphone sign on the right, and the number of group chat rooms is displayed at the bottom. (d) some function buttons, which are display animation (for entertainment), send gifts and apply for mic right.

In the topic chat room, we found a very interesting phenomenon. Usually, users of online dating will want to add each other's accounts on third-party social platforms after they get to know each other. For example: Instagram, Wechat, etc. However, in our research on topic chat room, we find that users in topic chat room are more inclined to make friends and chat in Soul. P1 shared that some familiar members of the movie room have a group on Wechat, but they rarely chat in the Wechat group and do not add each other's social accounts.

"Some people will set up Wechat groups, but they will not chat in Wechat groups. They will not add friend accounts to each other after they set up Wechat groups."(P1)

Topic chat room has a kind of cohesion. Users in topic chat room tend to make friends in virtual social circles. Even though some members of group chat rooms go to third-party platforms to build a community, most of their communication is still taking place in the Soul group chat room.

4.3.2 Speed dating room—Quickly identify a potential partner. Unlike casual chat room and topic chat room, the flow of user interaction in speed dating room is generally fixed. The process goes something like this: The host controls the room, and mic right is usually reserved for women. Women with Mic Right take turns saying what they're looking for in a potential partner, and other users are free to apply for matches (and fight for opportunities when there's a large number of users). In this process, the voice timbre of the user applying for the match is important, because users often judge each other by their voice. The speed-dating room is like a scaled-down version of Soul, since users have only one goal: to find a potential partner. To put it simply, a speed dating room allows users to find potential partners in a short period of time through the organization of host.

Users perceive the speed dating room is the most fun of all the group chat rooms, and in addition to its fun, its speed of making friends is the most impressive. The shortest time the researchers encountered in the speed-dating room was less than 10 seconds. Here's what happened: as soon as the female mic right users spoke about what they were looking for in a potential partner, a male user applied and said what he was looking for. Coincidentally, the named female user liked the boy's voice so much that they were a match. The two went from not knowing each other to noticing each other and leaving the room in less than 10 seconds. This speed of making friends in online dating app is very fast! We believe that the preference of Soul users for voice timbre plays a role.

Therefore, voice timbre is still an important factor in speed dating room. Because the speed of making friends in a speed dating room is very short, and the speaking style and personality are difficult to be shown in a very short time, then users can only produce the first impression through the voice timbre, and often good voice timbre will gain more attention:

"All the girls or boys in the speed-dating room will have requirements. Generally, ninety percent of them hope that the other party has a pleasant voice timbre."(P9)

As we can see from the example we just observed, speed dating is like a mini and efficient online dating app. In essence, a speed-dating room is a community built into the Soul app, but it creates a level of dating efficiency that even online dating apps lack. We believe that in the speed dating room, in addition to users' preferences for voice timbre, the host also plays a key role. So in the next section, we'll focus on sharing our findings about the host.

4.3.3 Host—The "catalyst" for group chat room. The presence of a host is an identity that has never existed in traditional online dating apps or even online communities on third-party platforms. One of the special features of Soul group chat rooms is that there are online communities with different topics, namely group chat rooms, inside Soul. There are hosts for each group chat, because the host is the creator of the group chat. We found that the host is not only the founder of the group chat room, but also the importance of the host in two aspects from our interviews and observations: promoting the efficiency of speed dating room and helping to establish a long-term dating circle.

The first is that the host can help promote speed dating room efficient dating. The speed dating room usually has the largest number of users, and the goal is more specific: to quickly find a potential partner. In order to organize such a group of people to make fast friends, the host acts as an organizer in the speed dating room, helping to screen suitable users and promote fast dating.

"The host needs to drive the atmosphere and organize discourse in all aspects."(P9)

Secondly, the host can help establish a long-term circle of friends. Users get to know each other by visiting the same group room regularly, sharing their work experiences by voice, and getting to know each other when they visit the room for a day or two. In general, when a host builds a room, a fixed number of members will come to the host's room, and then they gradually become familiar with each other and form a social circle. The host will set up a group chat room on a regular basis, which provides a basis for establishing a long-term friend circle.

"There is a user who is the owner of the group chat room. By chance, I entered his group chat room because his voice timbre is very pleasant. He opened the room every day. At that time, The other two girls included me entered his group chat room on time every day."(P9)

In group chat rooms on other topics, the host also plays a role in promoting friendship. Most of the time, a group room in a chat topic will have 4-5 people talking through the voice about a topic, depending on the title of the room established by the host in the first place. Unlike the orderly speed dating room, chat room is a more casual state, the user may have been in a more lively atmosphere. Often at this time, if a new user comes into the group chat room, the new member is generally not easy to integrate into the topic of everyone. Therefore, when a new user enters a group chat room, the host will usually invite the new user to open the mic and hope that the new members can participate in their discussion. The new members will have the opportunity to participate in the topic, and then it is easy to find potential partners or friends with the same topic.

"Basically, in order to seek politeness, the first reaction of everyone is not to interrupt rashly, but to listen for a while and then interrupt. [...] If the host is in, he may invite users to speak if he finds a new partner coming in. Then at this time, users are not good to refuse, so that its retention rate will be higher. So actually the host I feel quite necessary."(P5)

In addition, most of the hosts in the Soul group chat room also need to have a good timbre of voice, because the host needs to say a lot of words to organize and manage. If the host has a good voice, it can attract users to stay in the room, and the choice between users is higher.

"Many people will stay in the room because of the voice timbre of the host. The good voice timbre of the host can attract more people to enter the room."(P9)

4.4 Moderation and Negative Experiences

Although the use of voice to make friends is a curious and interesting thing, Soul doesn't escape the problem that most online dating apps have: the fatigue of making friends. Many participants used online dating apps because they were bored at that time. They wanted to use online dating apps to make friends and relieve their loneliness and boredom at that time. Although Online dating apps can provide users with opportunities to meet new friends, users often get tired when they use them frequently over a period of time. This fatigue often comes from themselves, because they can always meet potential partners they like more on Soul, they will show greed and expect that the next potential partner they meet will be better and more suitable for them. We can find such phenomenon from the answers of participants P6:

"It's a bit tiring online dating, because you will meet so many people. You feel like you're always going to meet someone better, and you feel like you're always picking and choosing, which can make you tired."(P6)

4.4.1 stigma and voice. Soul is an online dating app that uses voice to make friends. On Soul, a user's voice is almost a business card of the user, and other potential partners will have different initial impressions based on their voice. As mentioned in our analysis of voice above, users with good voice have a big advantage on Soul. They have more opportunities to meet potential partners. But we can not ignore that many people actually do not have a very good voice, and even some people's voice sounds very unrefined. The actual experience on Soul may not be very good for

people with mediocre or ugly voices. Users with non-standard accents were discriminated against on Soul. Participants mentioned the issue of accent, and they generally thought that if they heard someone who didn't speak very standard Mandarin, they tended to think of them as less educated:

"Because I was in a speed dating room. I often meet people who require standard Mandarin."(P9)

"For example, if he/she does not speak standard Mandarin and then speaks with a strange tone, I will not have the desire to make friends with him/her."(P5)

Such discrimination is caused by the rapid development of short videos in China in recent years, and there are many people with poor education and poor Mandarin on short video platforms. They are good at using spoof videos to grandstand and gain attention, leaving a bad impression on many people, so people often associate low education with poor Mandarin. Then let's consider the reality, does bad Mandarin necessarily mean that the person is poorly educated? Does that necessarily mean the person has a bad personality? In many cases, some discrimination on online dating apps is also worth our thinking and research.

4.4.2 Conformity phenomena and voice. Although Soul is an online dating app based on voice, this way of making friends with voice brings great fun, but it is also due to the mechanism of voice, Soul users seem to excessively pursue the timbre of voice, which leads to people pay too much attention to voice timbre. Because of the popularity of certain timbre, such as bass, people tend to change their sound to be more like those popular timbre, but this deliberate imitation of sound can have negative effects. One of the female participants said she had encountered male users who deliberately lowered their voices to be closer to the bass type. Participants shared that some boys' tones were perceived as offensive and contrived when they deliberately lowered their voices.

"I think some boys speak a little affectation. But I don't know how to put it there are some people who start out just trying to attract people maybe or something. Because some girls, they just hang up when they don't like it. So some boys may talk deeper and more magnetic at the beginning to attract people. When we get to the end of the conversation, he relaxes. The voice may not be as good, or as magnetic."(P5)

Seeking popularity is a normal phenomenon, especially in online dating apps, but each of us needs to pay attention to our own uniqueness, because each user has his or her own flash point, it is not necessary to pursue the same thing, let oneself be homogenized [13].

4.4.3 General matching accuracy. Although a questionnaire about individuals is filled out when users sign up and Soul's voice match helps match them with potential mates. However, in the actual process of voice matching, some users will still encounter a lot of differences from their expectations. According to the researcher's several actual voice matching experiences, the user finally matched was not exactly the one the researcher expected. For example, during voice matching, researcher have encountered users with impolite speaking styles, or with users whose interests are completely unrelated, with nothing to talk about. Therefore, improving the matching accuracy is a good way to improve the online dating environment.

5 DISCUSSION

In this section, we first use our findings to illustrate what voice dating can bring to today's overly homogenous online dating apps. What is the trend of online dating with the non-visual features of voice dating? We will discuss whether this trend is a positive one. Then, we continue to discuss the significance of the speed-dating room. In addition to accelerating the process of making friends, what role can a speed-dating room play by using its mechanism? Finally, we

will return to the overall design of Soul. Based on some designs of Soul, we put forward some design ideas for future online dating apps, which may provide more feasibility studies for online dating.

5.1 Affordances of Voice in Online Dating

There was a time when online dating apps were designed to be homogenous, seemingly unable to jump out of the dating process offered by Tinder. Discover profile has almost become the first step for all online dating users to make friends [42]. The excessive emphasis on profiles makes the first thing that users pay attention to potential partners is their appearance, which also distorts the environment of online dating.

At the same time, homogenization is also manifested in the geo-social dating function. More and more online dating apps allow users to find other users close to their location, which provides convenience for some users seeking casual sex [3, 4].

Online dating apps help users find and discuss with people who may have similar interests or lifestyles [16]. Even though users desire to establish intimate relationships, they will also encounter dishonest and deceptive self-disclosure by their interactive partners [14]. From these aspects, the geo-social dating environment of traditional online dating needs to be improved.

Soul voice dating can provide a comfortable dating environment for online dating. In Findings, we also mention that Soul's weakening of profiles allows users to focus more on the non-visual aspects of the other person, which helps to keep users away from casual sex seekers. At the same time, voice dating allows users to evaluate whether a potential partner is making false self-disclosure through in-depth voice communication with them.

5.2 How Prioritizing Non-Visual Features Changes Online Dating

In many people's minds, Tinder is regarded as an online dating app that can seek sexual partners by default, so similar phenomenon seems to exist in many other online dating apps [42]. Human-computer interaction researchers are also very interested in the technical research on how to alleviate this phenomenon, but the existing solutions have not been universally recognized [23, 39]. We believe that there are many complicated reasons why Tinder and other online dating apps are used by many people to seek sexual partners by default, but one of the important reasons is the dating mode of these apps. "Discover profiles – swipe left and swipe right" seems to become a fixed mode for selecting potential partners [19]. We can call this mode a Fast Friends procedure [31]. In this mode, Dating users place their emphasis on other users' photos, or appearances. At the same time, due to the convenience of Fast Friends Procedure and the visual impact of other users' photos, people tend to focus on sex and ignore their internal morality [22]. Soul's non-visual Features ameliorate this somewhat. In the process of voice communication, people can temporarily abandon their appearance and focus on the content of the conversation.

5.3 Implications of Group Speed Dating Room

Online groups are quite common in communication apps. People usually join various types of groups, such as work group, study group and fitness group. Soul has also helped online dating build online groups, the group chat room we've been talking about.

Among many group chat rooms with various themes, the speed-dating room is the most prominent in its nature of dating, because host is a key group dynamics in the speed-dating room. Like many offline fraternities, the host in the speed dating room organizes and coordinates the conversations and matches of each user. According to some common online dating apps, the success of two users' pairing is related to the matching mechanism and the connection between

two users is without the intervention of other users. However, in the speed dating room, host becomes a connection factor between the successful matching of two users.

In addition, in terms of user structure, women in the speed dating room have more options than men, mainly because there are fewer female users in the speed-dating room and female users can choose their preferences among several male users. In some online dating apps, Female users do not have such an opportunity for them to evaluate and select several potential partners at the same time, which may lead female users to encounter male users' attempt to engage in verbal sexual harassment before communicating with each other [33].

5.4 Implications for Design

The Soul voice matching design allows online dating users to gain insight into the non-visual aspects of a potential partner. Among these non-visual aspects, perceiving emotion and reaction is a good way to help promote an online dating atmosphere. Research shows that in important relationships. Intimacy in a relationship is related to the feeling of being understood by the partner, which requires feeling the emotion of the other [6], revealing the feelings to the partner and receiving the response from the potential partner, which is interpreted as understanding and care [17].

In our findings, speed dating room, as a fast dating mode, can help users quickly find suitable potential partners. Users do not rely solely on matching mechanisms and interact with other users in many unique ways in group chat rooms. Online dating can refer to the model of such online groups in its design. It can help users connect other users and diversify the ways of online dating.

We also mentioned that Soul's voice communication is synchronous in our findings, and this applies to any other voice communication as well. Synchronous is primarily targeted at text communication in some online dating apps, and we thought that introducing voice communication or voice message design in online dating would be beneficial for communication between online dating users.

6 CONCLUSION

We have conducted an interview study to explore why people choose the voice based online dating app and how people interact during the voice dating process. Soul users can easily pick up on each other's reactions and emotions during voice communication, helping them find potential mates. Users can also make friends in different ways through group chat rooms with different themes. The different dating processes in Soul help users find potential partners. Our findings suggest that using voice communication as a way of communication between potential partners in online dating helps to promote deeper mutual understanding between both partners, and we hope that future research can focus on other new forms of communication in online dating apps.

REFERENCES

- [1] Marjolijn L. Antheunis, Alexander P. Schouten, and Joseph B. Walther. 2020. The hyperpersonal effect in online dating: Effects of text-based CMC vs. videoconferencing before meeting face-to-face. *Media Psychology* 23, 6 (2020), 820–839.
- [2] Baidu Baike. 2021. Soul. Retrieved September 2021 from [https://baike.baidu.com/item/soul/19832271?fr=aladdin#reference-\[21\]-20525405-wrap](https://baike.baidu.com/item/soul/19832271?fr=aladdin#reference-[21]-20525405-wrap)
- [3] Gabriel Bonilla-Zorita, Mark D. Griffiths, and Daria J. Kuss. 2020. Online dating and problematic use: A systematic review. *International Journal of Mental Health and Addiction* (2020), 1–34.
- [4] Bronwyn Carlson. 2020. Love and hate at the cultural interface: Indigenous Australians and dating apps. *Journal of Sociology* 56, 2 (2020), 133–150.
- [5] Juliet Corbin and Anselm Strauss. 2014. *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Sage publications.
- [6] Steve Ed. Duck, Dale F. Hay, Stevan E. Hobfoll, William Ed. Ickes, and Barbara M. Montgomery. 1988. *Handbook of personal relationships: Theory, research and interventions*. John Wiley & Sons.
- [7] Nicole Ellison, Rebecca Heino, and Jennifer Gibbs. 2006. Managing impressions online: Self-presentation processes in the online dating environment. *Journal of computer-mediated communication* 11, 2 (2006), 415–441.

- [8] Dean Esmay. 2004. Usenet Personals: Advice for Straights FAQ (1/3). Retrieved September, 2021 from [11.http://www.faqs.org/faqs/personals/straightfaq/part1](http://www.faqs.org/faqs/personals/straightfaq/part1)
- [9] Eli J Finkel, Paul W Eastwick, Benjamin R Karney, Harry T Reis, and Susan Sprecher. 2012. Online dating: A critical analysis from the perspective of psychological science. *Psychological Science in the Public interest* 13, 1 (2012), 3–66.
- [10] Andrew T Fiore and Judith S Donath. 2004. Online personals: An overview. In *CHI'04 extended abstracts on Human factors in computing systems*. 1395–1398.
- [11] Andrew T Fiore and Judith S Donath. 2005. Homophily in online dating: when do you like someone like yourself?. In *CHI'05 extended abstracts on Human factors in computing systems*. 1371–1374.
- [12] Samantha A Fowler and Lilly E Both. 2020. The role of personality and risk-taking on Tinder use. *Social Sciences & Humanities Open* 2, 1 (2020), 100067.
- [13] Jeana H Frost, Zoe Chance, Michael I Norton, and Dan Ariely. 2008. People are experience goods: Improving online dating with virtual dates. *Journal of Interactive Marketing* 22, 1 (2008), 51–61.
- [14] Kathryn Greene, Valerian J Derlega, and Alicia Mathews. 2006. Self-disclosure in personal relationships. *The Cambridge handbook of personal relationships* (2006), 409–427.
- [15] GP Ingram, M Isabela Enciso, Nathalia Eraso, Maria Jose García, and A Olivera-La Rosa. 2019. Looking for the right swipe: Gender differences in self-presentation on Tinder profiles. *Annu. Rev. Cyberther. Telemed* 149 (2019).
- [16] Shawn Knox, Steven Moghadam, Kenny Patrick, Anh Phan, and Kim-Kwang Raymond Choo. 2020. What's really 'Happning'? A forensic analysis of Android and iOS Happn dating apps. *Computers & security* 94 (2020), 101833.
- [17] Jean-Philippe Laurenceau, Lisa Feldman Barrett, and Paula R Pietromonaco. 1998. Intimacy as an interpersonal process: The importance of self-disclosure, partner disclosure, and perceived partner responsiveness in interpersonal exchanges. *Journal of personality and social psychology* 74, 5 (1998), 1238.
- [18] Adeline Y Lee and Amy S Bruckman. 2007. Judging you by the company you keep: dating on social networking sites. In *Proceedings of the 2007 international ACM conference on Supporting group work*. 371–378.
- [19] Leah E LeFebvre. 2018. Swiping me off my feet: Explicating relationship initiation on Tinder. *Journal of Social and Personal Relationships* 35, 9 (2018), 1205–1229.
- [20] Christina Masden and W Keith Edwards. 2015. Understanding the role of community in online dating. In *Proceedings of the 33rd annual ACM conference on human factors in computing systems*. 535–544.
- [21] Julia Naftulin. 2019. Dating apps are turning to message-free meetups and text-only profiles to battle online dating fatigue. Retrieved September, 2021 from <https://www.insider.com/dating-apps-the-league-bounce-old-school-methods-2019-12>
- [22] Julia Naftulin. 2019. Dating apps are turning to message-free meetups and text-only profiles to battle online dating fatigue. Retrieved September 2021 from <https://www-proquest-com.ucd.idm.oclc.org/docview/2420844770/fulltext/B70721F9FE2B40BFPQ/1?accountid=14507>
- [23] Josef Nguyen and Bonnie Ruberg. 2020. Challenges of designing consent: Consent mechanics in video games as models for interactive user agency. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems*. 1–13.
- [24] prinnie. 2018. Soul Product Analysis Report (in Chinese). Retrieved September 2021 from <http://www.woshipm.com/evaluating/1056606.html>
- [25] Artemio Ramirez, Erin M Summer, Christina Fleuriet, and Megan Cole. 2015. When online dating partners meet offline: The effect of modality switching on relational communication between online daters. *Journal of Computer-Mediated Communication* 20, 1 (2015), 99–114.
- [26] Steven V Rouse and Heather A Haas. 2003. Exploring the accuracies and inaccuracies of personality perception following Internet-mediated communication. *Journal of research in personality* 37, 5 (2003), 446–467.
- [27] Barış Sevi, Tuğçe Aral, and Terry Eskenazi. 2018. Exploring the hook-up app: Low sexual disgust and high sociosexuality predict motivation to use Tinder for casual sex. *Personality and Individual Differences* 133 (2018), 17–20.
- [28] Aaron Whitman Smith and Maeve Duggan. 2013. *Online dating & relationship*. Pew Research Center Washington, DC.
- [29] Gavin Smith. 2013. Dating Services in the US Industry Market Research Report from IBISWorld Has Been Updated. Retrieved September, 2021 from <http://www.prweb.com/releases/2013/3/prweb10537905.htm>
- [30] Susan Sprecher. 2014. Initial interactions online-text, online-audio, online-video, or face-to-face: Effects of modality on liking, closeness, and other interpersonal outcomes. *Computers in Human Behavior* 31 (2014), 190–197.
- [31] Susan Sprecher. 2021. Closeness and other affiliative outcomes generated from the Fast Friends procedure: A comparison with a small-talk task and unstructured self-disclosure and the moderating role of mode of communication. *Journal of Social and Personal Relationships* (2021), 0265407521996055.
- [32] Susan Sprecher and Pamela C Regan. 2002. Liking some things (in some people) more than others: Partner preferences in romantic relationships and friendships. *Journal of Social and Personal Relationships* 19, 4 (2002), 463–481.
- [33] Laura Thompson. 2018. “I can be your Tinder nightmare”: Harassment and misogyny in the online sexual marketplace. *Feminism & Psychology* 28, 1 (2018), 69–89.
- [34] Joseph B Walther. 1996. Computer-mediated communication: Impersonal, interpersonal, and hyperpersonal interaction. *Communication research* 23, 1 (1996), 3–43.
- [35] Janelle Ward. 2017. What are you doing on Tinder? Impression management on a matchmaking mobile app. *Information, Communication & Society* 20, 11 (2017), 1644–1659.

- [36] Sophie F Waterloo, Susanne E Baumgartner, Jochen Peter, and Patti M Valkenburg. 2018. Norms of online expressions of emotion: Comparing Facebook, Twitter, Instagram, and WhatsApp. *new media & society* 20, 5 (2018), 1813–1831.
- [37] Barry Wellman. 1999. Net-surfers don't ride alone: Virtual communities as communities. *Networks in the global village* (1999).
- [38] Barry Wellman and Milena Gulia. 2018. Net-surfers don't ride alone: Virtual communities as communities. In *Networks in the global village*. Routledge, 331–366.
- [39] Matthew Wood, Gavin Wood, and Madeline Balaam. 2015. Talk about sex: Designing games to facilitate healthy discussions around sex. In *Proceedings of the 2015 Annual Symposium on Computer-Human Interaction in Play*. 795–798.
- [40] Yimuliaoran2018. 2018. Soul Experience Analysis Report (in Chinese). Retrieved September 2021 from <https://www.jianshu.com/p/b312209d899b>
- [41] Lotus Zhang, Lucy Jiang, Nicole Washington, Augustina Ao Liu, Jingyao Shao, Adam Fourney, Meredith Ringel Morris, and Leah Findlater. 2021. Social Media through Voice: Synthesized Voice Qualities and Self-presentation. *Proceedings of the ACM on Human-Computer Interaction* 5, CSCW1 (2021), 1–21.
- [42] Douglas Zytko, Nicholas Furlo, Bailey Carlin, and Matthew Archer. 2021. Computer-Mediated Consent to Sex: The Context of Tinder. *Proceedings of the ACM on Human-Computer Interaction* 5, CSCW1 (2021), 1–26.

A RESEARCH METHODS

A.1 Part One

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Morbi malesuada, quam in pulvinar varius, metus nunc fermentum urna, id sollicitudin purus odio sit amet enim. Aliquam ullamcorper eu ipsum vel mollis. Curabitur quis dictum nisl. Phasellus vel semper risus, et lacinia dolor. Integer ultricies commodo sem nec semper.

A.2 Part Two

Etiam commodo feugiat nisl pulvinar pellentesque. Etiam auctor sodales ligula, non varius nibh pulvinar semper. Suspendisse nec lectus non ipsum convallis congue hendrerit vitae sapien. Donec at laoreet eros. Vivamus non purus placerat, scelerisque diam eu, cursus ante. Etiam aliquam tortor auctor efficitur mattis.

B ONLINE RESOURCES

Nam id fermentum dui. Suspendisse sagittis tortor a nulla mollis, in pulvinar ex pretium. Sed interdum orci quis metus euismod, et sagittis enim maximus. Vestibulum gravida massa ut felis suscipit congue. Quisque mattis elit a risus ultrices commodo venenatis eget dui. Etiam sagittis eleifend elementum.

Nam interdum magna at lectus dignissim, ac dignissim lorem rhoncus. Maecenas eu arcu ac neque placerat aliquam. Nunc pulvinar massa et mattis lacinia.