



Exploring Communal Gratitude in Online Communities

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Online communities are increasingly important in forming and maintaining relationships but have also faced criticism for toxic or depression-inducing content. Motivated by research showing that grateful reflection can lead to enhanced well-being, this paper explores how we might design online communities centered on gratitude through a qualitative study with 15 participants. To elicit insights on how people view expressing gratitude in online communities, we built a simple gratitude-centered online community, Gratitude, designed to be similar in nature to many online communities, where users create short posts (notes of gratitude in response to prompts) that other members can browse, react to, and comment on. Participants were first interviewed and then used the Gratitude platform for three weeks, during which they filled out surveys after each prompt. We found that while participants had concerns or questions about the value of expressing gratitude publicly and the risks associated with doing so, they also described experiencing many benefits, such as providing one with a platform for sharing; inspiring reflection and positivity; fostering connection and empathy; and contributing to a cycle of gratitude and vulnerability. Participants raised several areas for design related to better support for interaction and connection, privacy and authenticity, and motivation and engagement. We conclude by discussing implications for future research on the design of prosocial online communities centering cycles of positivity and authentic individual reflection in communal interactions.

CCS Concepts: • Human-centered computing → Empirical studies in HCI.

Additional Key Words and Phrases: Online communities, Social media, Gratitude, Mental health and well-being

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1 Introduction

Online communities have grown increasingly important as people form new connections, maintain friendships, and facilitate social interaction across long distances [71]. However, despite many

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demonstrated benefits [20, 101], social media sites have also been criticized for decreasing real-life social communication, increasing depression [42, 56], spreading misinformation [73], and fostering toxic, anti-social interactions [74]. Prior research has shown that engaging in grateful reflection can enhance well-being and prosocial behaviors that strengthen community bonds [5, 26, 28, 35]. Within online communities, particularly those based on volunteering, it has been observed that expressing and receiving gratitude strengthens a feeling of connection, which in turn influences active participation and overall well-being of members [116]. Additionally, a growing body of research on communal gratitude has led to the development of a 'gratitude cycle' framework, which models how showing gratitude towards community members for their kind actions can initiate a positive cycle of altruistic behavior and further expressions of gratitude [61].

In this paper, we ask: *How might we best design prosocial online communities centered on gratitude?* What insights might we gain about whether centering interactions around positive activities, such as gratitude practices, can foster prosocial online communities, and what challenges must be overcome to do so? How might we leverage the 'gratitude cycle' to design positive online communities that cultivate mental health and connection? Can we create an online community for those who want to engage with others online without the negativity common in social media platforms today? Or for those looking to enhance their mental well-being through practicing gratitude with others?

To explore this, we conducted a two-phase design-based study with 15 participants. Each participant first participated in a 45-60 minute semi-structured interview and then used a communal gratitude platform over a 3-week long period, during which they optionally posted gratitude notes in response to diverse prompts and filled out surveys on their experience. We chose to build a new platform rather than use existing social media platforms to explore a context in which content and interactions center on gratitude and where norms are more likely to reduce antisocial behaviors. The platform was designed to be similar to the general dynamic of many existing online communities, with users creating short posts (i.e., notes of gratitude) that other members could browse, react to, and comment on. However, as will be seen later, even subtle differences such as having prompt-based content and forgoing user profiles helped to promote authenticity and positivity. Our analysis centered on the following research questions: **(RQ1)** What concerns do individuals have around sharing expressions of gratitude with larger communities in online contexts similar to that of social media, and **(RQ2)** How do individuals benefit from sharing or engaging with expressions of gratitude in online community contexts similar to social media but centered on gratitude?

We found that participants are motivated to join a gratitude-focused community due to the benefits and value of engaging in a positive and uplifting environment. Although publicly sharing gratitude in online communities can raise concerns around authenticity, privacy, misinterpretation, harmful comparison, and motivation, we also found significant benefits. These include providing opportunities to share, deriving positivity, inspiring reflection and empathy, and facilitating connection and empathy. We also identified multiple positive cycles at work around expressing gratitude, being more vulnerable in sharing, experiencing joy, and encouraging others. Participants raised several areas for design related to better support for interaction and connection, privacy and authenticity, and motivation for participation. We conclude by discussing implications for future research on designing prosocial online communities centering cycles of positivity and authentic individual reflection in communal interactions.

Our paper makes the following contributions to the design of online communities: (1) a simple gratitude-centered online community that allowed us to elicit more ecologically valid perspectives through a field deployment, (2) a qualitative study eliciting concerns and benefits around expressing and engaging with gratitude in online communities, and (3) design implications for building online communities for communal gratitude as well as broader implications for the design of online communities centered on cycles of positivity and authentic reflection.

2 Related Work

2.1 Prosocial and Antisocial Behaviors in Online Communities

The explosive growth of online communities has created intellectual, social, and cultural value for their members [90], as well as economic benefits for commercial brands [79]. Active participation and contribution of users are crucial for the success of online communities [51, 72]. However, this has also given rise to anti-social behaviors, including but not limited to trolling [8, 38, 82], harassment [34, 104, 105], and cyberbullying [4, 113]. These behaviors can harm individuals' psychological well-being [7, 68, 76], leading to further antisocial behaviors [17, 18]. A thread of research focuses on understanding the motivations behind antisocial behaviors [59, 91, 96, 103] and how to reduce them through methods such as moderation [13–15, 43, 49, 57], prediction [83], governance [30, 84, 118], and deep listening [53, 54].

A large body of research also focuses on prosocial behaviors such as altruism [31, 60, 100], reciprocity [6, 33], and gratitude [45, 52], which tend to be interrelated [66]. Prosocial behaviors can help users gain social support from other community members [108], which can translate into real-world support [81]. In HCI, a rich vein of work has investigated how prosocial behaviors exist in specific community types, such as altruism in gaming communities [69], reciprocity in online health communities [112, 114], and social learning in social media [25, 62]. A few studies have explored how to promote prosocial behaviors in online communities through platform designs [2, 87]. In this paper, we are interested in how centering an online community on positive, value-driven activities such as gratitude might help design prosocial online communities. We chose to focus on gratitude as a starting point for this exploration because gratitude can be both a personal practice and something that is intrinsically relational when it is expressed to others, making it particularly suitable for online community contexts.

2.2 Gratitude, Mental Health, and Group Dynamics

Gratitude has been defined in various ways [27, 67, 80, 109], but is generally conceptualized as a positive emotion leading to prosocial behaviors [26, 64]. This emotion can take the form of an acute, intense, and relatively brief physiological reaction following the receipt of kindness [80], which motivates individuals to reciprocate [64, 98]. Additionally, many researchers define gratitude as a trait [63, 110], a life orientation towards appreciating others and the world [109]. Studies have shown that individuals with higher levels of trait gratitude experience feelings of gratitude more frequently and intensely in their daily lives [65, 115]. A wide range of studies have demonstrated its benefits for individuals' mental health [19, 77, 102], such as reducing stress [58] and promoting happiness [48]. While most research has focused on the individual benefits of gratitude [47, 70, 107], there is a growing interest in exploring its social nature, particularly in the context of groups [99].

As gratitude has been recognized as an inherently social emotion [12, 94] that can help strengthen social bonds [1, 3], there has been a growing call to examine its social nature [117]. Studies have shown that gratitude in groups can amplify positive emotional effects [93] by encouraging individuals to pass on kindness to others [16]. Several concepts have been proposed to explain gratitude dynamics in groups, including group-context gratitude where individuals practice gratitude while aware of others doing the same [22], collective gratitude as a shared emotion among members of an organization [32], and joint gratitude as a collective action [21]. Recently, a "gratitude cycle" framework has been proposed to present how gratitude is organically expressed and acknowledged within existing online communities [61]. Other studies show that engaging community members in acknowledging volunteers can benefit the community as a whole [37].

Our study aims to build on and integrate this literature towards understanding how to design a gratitude-centered online community. Specifically, we want to explore online communities in

which content creation centers on writing notes of gratitude, where community connection comes from interactions with these gratitude notes, and where people experience emotions of gratitude and develop or strengthen the trait of gratitude. We seek to build on the concept of group-context gratitude to characterize gratitude practices in online communities, consider how one might encourage shared gratitude in the community, and explore the role of gratitude as a collective action.

2.3 Digital Tools to Promote Practices of Gratitude

Gratitude interventions, in which participants engage in regular gratitude [23, 89], are commonly used to promote gratitude [29]. Compared to older paper-based interventions [75], recent studies have focused on digital interventions that use text messages [78], augmented reality [11], social media [66], and speech assistants [39]. Expressing gratitude through digital technology can bring happiness [44] and produce fewer negative emotional effects than face-to-face communication [92]. Gratitude has also been extensively studied in workplace appreciation systems for recognizing employees and motivating individuals or teams [10, 41, 50, 95]. In the post-COVID-19 world, digital gratitude intervention techniques have been utilized to help colleagues in remote work environments build positive connections [97, 111].

With the increased use of social media, a few researchers have also explored the relationship between gratitude interventions and SNSs (social networking sites) [36]. Koay et al. first reported the positive effects of using social media in gratitude interventions on Instagram [46], while Sciara et al. investigated how grateful interactions on Facebook can be observed, learned and imitated to amplify the spread of gratitude [85]. Research has shown that simply witnessing expressions of gratitude can enhance the life satisfaction and happiness of observers [106].

In our paper, similar to the above-mentioned studies on SNSs, we define online gratitude expression as the public sharing of content related to gratitude emotions. However, our work differs from these studies in two main aspects. First, existing studies build on a thread of work in psychology on ‘gratitude interventions,’ focusing on supporting individuals in improving their well-being through engaging individually in gratitude practices. In contrast, our study explores not only individual impacts but also effects on community relationships and dynamics. Second, while participants in existing studies engage with gratitude content within established SNSs that include various types of content, our interest lies in designing new online communities with unique interfaces and interaction dynamics specifically for the expression and sharing of gratitude. For example, the focus of the platform shifts from user profiles and followers to gratitude-centered content, with all content and interactions revolving around gratitude. This is facilitated by prompt-based mechanisms that naturally limit negative content and integrate personal reflection with community sharing. We hope that by exploring these designs, we can gain insights into how to better design online communities that promote gratitude interactions.

3 GRATITUDE: A SIMPLE GRATITUDE-CENTERED ONLINE COMMUNITY FOR STUDYING VIEWS ON COMMUNAL GRATITUDE

To elicit richer and more ecologically valid perspectives on expressing gratitude in online communities, we built a simple platform, Gratitude, where people can share gratitude notes and read and interact with expressions of gratitude from others in the community. We designed Gratitude to be analogous to the standard dynamics of online communities today, where people can make short posts to communities, browse, and react to posts that others made. We wanted to understand to what extent a standard dynamic could support communal gratitude and in what ways participants viewed it as limiting. We built Gratitude using the Angular framework with Google Firebase for the backend database. Users sign into the platform with their Google account.

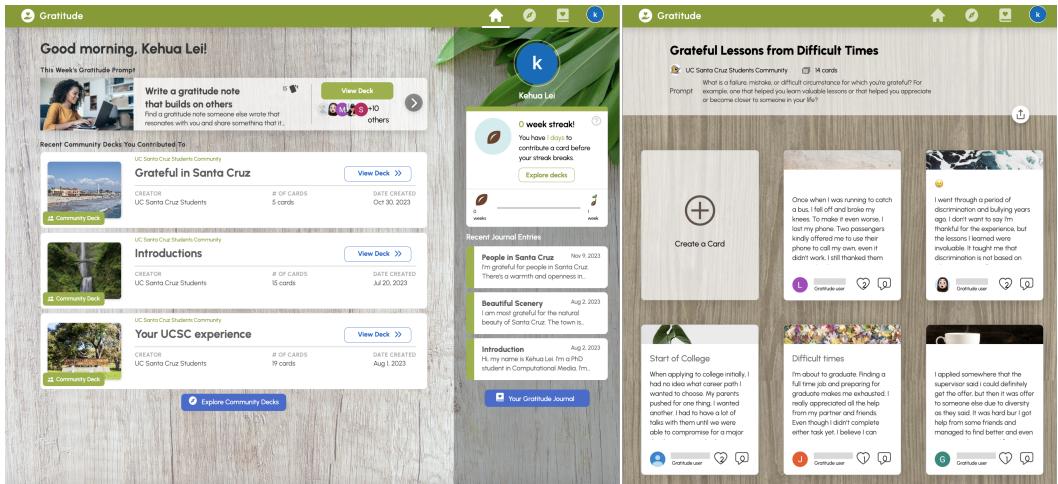


Fig. 1. (Left) Users see weekly gratitude prompts, community decks they can contribute to, and journal entries of past gratitude notes. (Right) Community decks consist of gratitude notes that users can browse and react to.

In Gratitude, users are given prompts they can respond to that correspond to ‘community decks’. When they post a note, it is non-anonymous, as their Google account name is displayed alongside it. Responding to a prompt will add an entry in their personal gratitude journal as well as in the community deck. Each user can only add one entry per prompt. All community members can navigate to these decks to browse responses and interact with emojis or comments. Due to the absence of personal profiles and private messaging, responding to prompts and reacting to posts are the primary ways of interaction on the platform. Users can also view their past notes in their ‘gratitude journal’ and can see their ‘gratitude streak’, i.e., how many consecutive weeks they have been writing gratitude notes (**Figure 1**).

In our study, we created six prompts designed to facilitate reflection and expressions of gratitude in diverse ways. We started by brainstorming over 50 prompts, most of which were inspired by existing gratitude exercises and relevant literature. From these, we ultimately selected six prompt topics with the goal of maximizing diversity in various dimensions (see **Table 1**), particularly in prompt topics and levels of vulnerability. When arranging the order of the prompts, we considered that it might be difficult for participants to start with more vulnerable topics. Therefore, we used our research team’s subjective assessment to arrange the prompts, starting with less vulnerable ones, which centered on the shared community. The six prompts were released over 3 weeks (roughly every 3-4 days).

4 Methods

To understand how people view expressing gratitude in online communities, we conducted a two-phase qualitative study in which we conducted semi-structured interviews on people’s initial perceptions followed by a field deployment of the Gratitude platform (**Section 3**) which involved using it over a three-week long period and filling out surveys after each prompt.

This study was approved by the Institutional Review Board of the first author’s university. The study was seen as posing no harm to the participants. We also used an informed consent process,

Table 1. Prompts used in the second phase of the study.

No.	Prompt Title	Prompt Content
1	Your campus experience	What are you most grateful for about your campus or your campus experience?
2	Someone you are grateful for at campus (or elsewhere)	Who is someone you're grateful for at campus (or elsewhere) and why?
3	Hobby	Write about a hobby you love and are grateful for. How does it make you feel and what memories or people make it special? How has it influenced your well-being, growth, or relationship with others?
4	Learning to value yourself	Think about an experience or person that taught you to appreciate and value yourself more. What did you learn to appreciate about yourself? Bonus points for sharing something that might encourage others too.
5	Grateful Lessons from Difficult Times	What is a failure, mistake, or difficult circumstance for which you're grateful? For example, one that helped you learn valuable lessons or that helped you appreciate or become closer to someone in your life?
6	Write a gratitude note that builds on others	Find a gratitude note someone else wrote that resonates with you and share something that it makes you to be grateful for.

as explained later in the paper. Participation was voluntary and participants could withdraw from the study at any times.

4.1 Recruitment and Participants

We recruited 15 participants via campus mailing lists and social media. To capture a wide array of perspectives, we selected participants who were diverse in frequency of social media usage and regular habits of practicing gratitude (see **Table 2** in the Appendix). All participants were undergraduate or graduate students from the same university. 73% were female and 13% were ethnic minorities. The study was IRB-approved, and participants received a \$20 gift card as compensation. Before participating, each participant signed a consent form to confirm they fully understood the study's content, goals, potential risks, and their rights, including the right to withdraw at any time.

4.2 Semi-Structured Interviews

Our semi-structured interviews were 45-60 minutes long and conducted via Zoom in July and August 2023. It started with understanding participants' definitions of gratitude, their social media usage habits, and their involvement in online communities. It then focused on their experiences publicly sharing and receiving gratitude (e.g., "Have you ever shared expressions of Gratitude online? What were your goals and motivations for publicly expressing gratitude?"), as well as their views on a gratitude-centered online community (e.g., "If there were an online community centered around gratitude, do you think this would change any of your previous thoughts about publicly expressing gratitude? Why or why not?"). The questions were informed by an initial pilot study (our work-in-progress poster is not cited to preserve anonymity). We found that most participants define gratitude as an intrinsic trait that enables them to recognize and appreciate the people and things around them that are worthy of gratitude, as an action to express their appreciation for the kindness of others, or as a combination of both. However, we ultimately did not find a significant connection between participants' definitions of gratitude and the study results.

4.3 Platform Use and Surveys

After participating in interviews, participants used the Gratitude platform for three weeks as detailed in **Section 3**. The six prompts were released on Tuesdays and Fridays of the three-week period, accompanied by email notifications to all participants. Each email included a link to a

corresponding post-prompt survey. Participants were informed of the prompt release schedule but were not given the actual text content of the prompts in advance. Two days following the release of the next prompt, the research team sent reminder emails to those who hadn't yet responded. Participants were not required to write a note in response to the prompt or to view and interact with notes shared by others, and could simply say they chose not to write a note and why. Post-prompt surveys were filled out after responding to each prompt and before the next prompt was released. A final exit survey was sent out at the end of the three weeks.

Each post-prompt survey had two sections: one focused on their experience responding to the current prompt, and one focused on their experience reading and interacting with notes during the time between the previous prompt and the current one. By doing this, participants had 3-4 days to read and interact with notes before the survey asked about their experiences with the previous prompt. Prompts 3-6 included specific questions tailored to the prompt (e.g., for a prompt on "Grateful Lessons from Difficult Times", we asked "Did you feel at ease sharing your expression of gratitude that touched upon your vulnerable side on the platform? Could you elaborate on your reasoning?"). We asked them how strongly they agreed (on a 5-point Likert scale) with experiencing comfort in genuine responses, being more aware of gratitude, valuing reading others' responses, and enjoying the community context for reflection. We asked them to what extent they connected to others' gratitude notes, benefited from reading them, felt a community connection, and felt inspired to express gratitude.

The exit survey asked what participants liked and disliked about their experience, their interest in participating in a gratitude-centered online community, how they compared Gratitude with other social media platforms, shifts in their views on sharing gratitude online, and suggestions for platform improvement. A few 5-point Likert questions asked about their overall experience sharing and browsing gratitude notes (e.g., "I found myself feeling more grateful during this period", "I am interested but can't remember to read others' posts").

4.4 Qualitative Analysis

The interviews were recorded, transcribed, and analyzed along with the survey responses through an inductive thematic analysis process. The first five authors started by open-coding the interview transcripts and surveys and clustering together similar codes to identify higher-level themes, e.g., through affinity diagramming [86]. In each of these cases, the first author open-coded the first set of interviews or surveys and provided this as an example to guide the other four authors who independently open-coded the remaining transcripts or surveys. These themes were then discussed and refined with the last author to develop a codebook that the first five authors then used to recode all the data in multiple iterations, with discrepancies or newly observed codes discussed and resolved in meetings.

The following two sections present our findings to our two Research Questions (RQs). We begin by describing people's concerns and limitations around sharing expressions of gratitude publicly (**Section 5**) followed by the benefits they experienced (**Section 6**). In **Section 5**, if a quote is not presented as related to platform use, it is from the interviews. In **Section 6**, all quotes are from post-prompt surveys unless specified. **Figure 2** shows how these concerns and benefits relate to different aspects of participation and visualize the various cycles of positivity that result from public expression of gratitude.

5 Concerns around expressing gratitude in an online community

Participants expressed diverse concerns about expressing gratitude in an online community, including issues of value and significance, vulnerability and risk, unintended consequences on others, and the challenge of maintaining motivation.

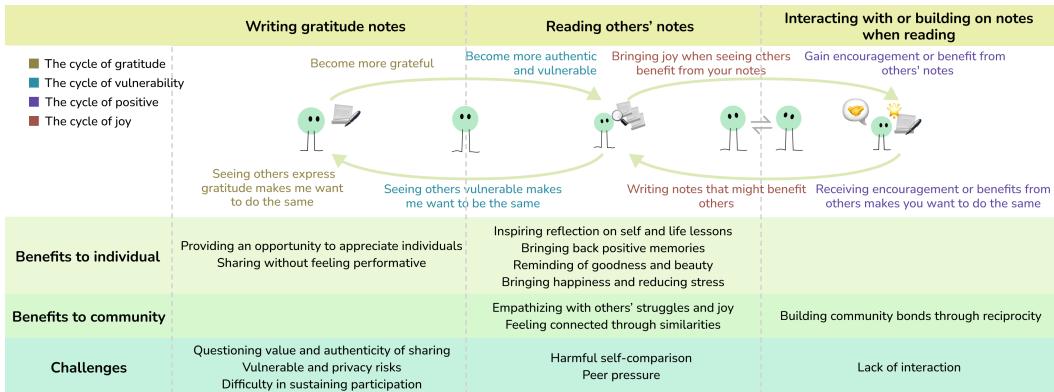


Fig. 2. This figure shows the positivity-reinforcing cycles we identified in Gratitude, centered on gratitude, benefits to individuals, benefits to the community, and concerns or limitations. These are shown in connection to writing notes, reading notes, and interacting with or building on notes when reading.

5.1 Expressing Gratitude Publicly Raises Questions of Value and Significance

5.1.1 *The value sharing gratitude notes publicly is unclear.* Some participants questioned the value of “[putting] in such a time and effort to [share]” (P4): “I’ve never really felt the need to express it to others... I’ve always practiced it by myself” (P7). They also questioned its value for others:

“If I say thank you publicly. Most people don’t care or most people are not interested. [I’m] not saying that people are bad people [or] they’re not carrying, but everyone has their own life to live and their own priorities and needs to focus on.” (P10)

This was exacerbated by the lack of interactions participants observed on their posts: “Since there is scarcely interaction on this platform, I am unsure how it differs from a personal Gratitude diary.” (P13)

5.1.2 *Public gratitude can create performative motivations and impressions.* The unclear value of publicly expressing gratitude led some participants to question the motivations and intentions behind public expressions of gratitude. Participants emphasized the importance of authenticity, with one saying “gratitude has to be genuine or it’s not gratitude” (P2). They concerned that public gratitude stories might seem “performative” and “fake.” They described a “toxic” environment on social media platforms in which many people are “pretending to [do/be] something [while] not really enjoy it” (P14) simply to “draw attention” (P11) on the internet. One elaborated:

“influencers [who say], ‘oh, I’m so grateful for like this and that.’ I feel like a lot of times that’s not that genuine. [Those] who aren’t influencers... I think they generally don’t really express gratitude because of like a fear of not coming off as genuine.” (P11)

5.1.3 *Public gratitude can trend towards generic and less heartfelt notes.* Limitations in the length and format of online expressions also mean that public gratitude notes can become generic. Reflecting on their experience using the Gratitude platform, one person expressed,

“it does come out rather generic and non specific so it gets lost in the language somewhat...part of it might be it is just a really short space for specific answers and people just have to resort to very general language.” (P15)

Readers also found this to be an issue. Participants felt that some of the notes they read were “very generalized, lacking details and context” (P8), and that writers “weren’t very emotionally engaging” (P15), which led them to “lose motivation to interact with others.” (P8)

5.2 Expressing Gratitude Publicly Opens One to Vulnerability and Risk

5.2.1 *Others may misinterpret or misjudge the expressed gratitude.* People also “*did not like the public aspect of it*” (P7) due to “*people’s judgment*” (P7). As discussed in **Section 5.1.2**, people were concerned that public expressions of gratitude could be perceived as performative. Besides, Misinterpretations can also arise when gratitude is expressed towards specific individuals. For example, after posting a note to share someone they felt grateful for, one said, “*I knew I wanted to post about one of my friends but wasn’t sure who and which one to highlight. I felt bad about not choosing a specific person over another*” (P1). Similarly, when reading others’ notes and choosing one to resonate with, another said, “*if that person didn’t mention my notes, I had the feeling that my notes weren’t appreciated, and I didn’t want anyone else to feel that way by reading my note.*” (P8).

Participants also noted the need to carefully consider the wording of their notes: “*the words you write down are processed through your own perspective. You need to think about the words and expressions carefully*” (P9). During the interviews, they described text-based communication as lacking the rich social cues of face-to-face interaction: “*you can’t really see their expressions and emotions... in text*” (P7). Even though emojis are now commonly used, “*the meaning of emojis is so much different than what they’re meant to be... it’s really hard to express your emotions properly*” (P11).

5.2.2 *Privacy concerns exist due to inherent risks from public notes.* The public nature of sharing gratitude online also raises privacy concerns. Participants view expressions of gratitude as “*personal*,” “*emotional*,” and “*vulnerable*.” Therefore, many prefer non-digital, face-to-face, or private methods for practicing gratitude. When expressing gratitude to specific individuals, privacy concerns also expand to the recipient. For instance, one participant felt uneasy after publicly sharing a story about a family member in a note, saying, “*I did [feel uncomfortable] in terms of privacy for that family member I wrote about*” (P1). The long-lasting and widely accessible nature of online content also adds to these privacy worries, with one participant saying in the interview, “*I don’t want people to actually remember my stories. I just want to encourage them or light them up, so oral expressions might be enough*” (P9).

5.3 Expressing Gratitude Publicly May Have Unintended Consequences on Others

5.3.1 *People may feel pressure.* Public expressions of gratitude can create unintended pressure on recipients. One participant shared an example, saying, “*if someone thanks you so much for donating a hundred books, then you’d be like next time maybe I should donate 200 books... so I think there’s a little bit of like peer pressure related to social media*” (P11). This is an interesting perspective as it shows how public acknowledgments of gratitude may shape a positive public image for the recipient that results in expectations from the public and a sense of obligation in recipients.

5.3.2 *People may engage in harmful self-comparison.* Another unintended consequence is the potential impact on individuals facing particularly dark or difficult times who might not feel that they have anything to be grateful for. Comparing their own situation to others who are seemingly leading better, more joyful lives could make them “*feel more worse about themselves*” (P4). One participant described his/her concern: “*Some others when they experience very depressing moments in their life, they’ll be feeling being very separate from this good [and] happy environment*” (P13).

5.4 Expressing Gratitude Publicly is Difficult to Continuously Sustain

5.4.1 *Lack of urgency or need makes it easy to forget when busy.* Finally, participants described the challenge of remembering to participate after posted their notes. Even if “*you know there’s value in it, but sometimes you might feel too lazy to commit without being compelled to do so. The*

challenging part is to persist" (P12). In the modern busy world, people may "*not be able to have enough time to spend participating in a gratitude-centric online community*" (P10). In the exit survey, 53% of participants described being interested in reading others' notes but couldn't remember to do so (Figure 3a).

6 Benefits to engaging with gratitude in online communities

Despite their concerns, participants also noted several benefits, such as obtaining a platform for sharing, gaining positivity, facilitating connection and empathy, and contributing to various positivity-reinforcing cycles. Even those who were initially hesitant to share expressions of gratitude publicly during initial interviews described a shift in their views after using the platform, with one saying "[my] perspective tilted a bit after the study, I find [a gratitude-centered online community] interesting now" (P4). Participants responded to the prompts at a high rate, with nearly all sharing gratitude stories for each one. However, interactions with others' posts, such as through emoji reactions and comments, remained low. As the study progressed, the prompts became more sensitive, and participants shared increasingly personal and vulnerable stories. These observations set the stage for the benefits discussed in the following sections, particularly how participants were influenced by others' gratitude notes and became more willing to share personal stories.

6.1 Communal Gratitude Provides a Platform and Opportunity for Sharing

6.1.1 *For expressing gratitude to those you didn't have an opportunity to tell.* A gratitude-centered online community "gives people the opportunity to express their appreciation for others" (P10). Some participants indicated in interviews that they lacked experiences of publicly expressing gratitude "because there just wasn't any like context or any situation where it would ... make sense to bring it up"

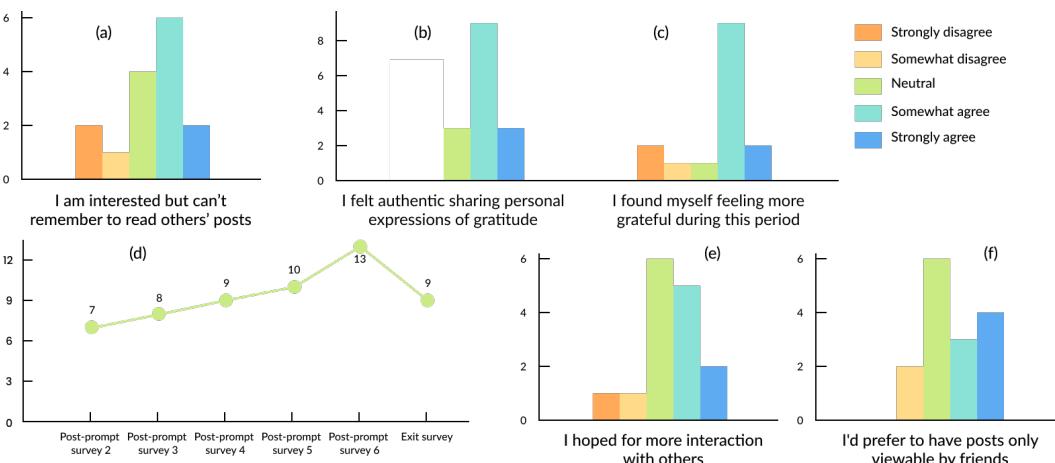


Fig. 3. (a) Responses to "I am interested but can't remember to read others' posts" from the exit survey. (b) Responses to whether they felt authentic sharing personal expressions of gratitude. (c) Whether participants felt more grateful during the second phase of the study. (d) The number of participants who selected "somewhat agree" or "strongly agree" in response to "I felt a sense of community or connection with others since the last prompt" from per-prompt surveys 2-6, and those who chose the same options for "I experienced feelings of connection with other participants during the study" from the exit survey. (e) Responses to the statement "I hoped for more interaction with others" from the exit survey. (f) Responses to the statement "I'd prefer to have posts only viewable by friends" from the exit survey.

(P7). After using Gratitude, one participant said, “*I’ve always been grateful for the people around me, but lacked a proper platform and opportunity for me to seriously express this. This platform creates that opportunity*” (P8).

6.1.2 For providing a purpose to share gratitude without feelings of performativity or insincerity. People also described Gratitude as helping to cultivate an environment for more authentic self-expression. Participants felt that Gratitude was “*a lot more genuine*” (P2) and “*purer than other social media platforms*” (P4). *It did not give them the impression that people were “showing off in the name of gratitude”* (P4) (**Figure 3b**). They felt “*less pressure*” (P11) when sharing gratitude publicly since the community is “*more focused*” (P1). One said:

“I didn’t feel uncomfortable for sharing my own story. I guess everybody would have similar experience or feelings but may not be brave enough to speak out. Having this kind of platform … can relieve our stress and be more honest.” (P9)

6.1.3 For regaining power and encouragement in complex experiences. One participant also described how the platform and particular prompts she responded to gave her an opportunity to regain power and encouragement over complex experiences:

“I shared many things that I may never post on other social media platforms. This platform helps me to recall many things that I have complex feelings inside, like the most worthy failure, or how I learned to evaluate myself… These are things which once made me feel extremely depressed. The Gratitude provided me a platform to regain my power and encouragement by sharing these to others.” (P9)

6.2 Communal Gratitude Allows People to Gain Positivity from Reading Others’ Notes

6.2.1 Reading others’ notes can bring back similar positive memories. Another benefit of reading gratitude notes is that they can remind people of “*similar experiences and past happiness*” (P9), with one expressing, “*Other people’s notes often evoke memories and emotions, reminding me of similar experiences or cherished individuals for whom I hold a deep sense of gratitude*” (P6).

6.2.2 Reading others’ notes can remind one of goodness and beauty. Reading other’s notes also provides a shared lens for participants to view the world, “*reminding [them] of the beauty of life*” (P12) in overlooked places. They found “*there are many answers that I was not expecting and it helped me think a bit outside of my immediate environment*” (P7). After browsing through others’s notes that mentioned “*how stunning and healing the scenic is on campus*”, one shared, “*I was suddenly reminded that the beauty of life is everywhere—just in my everyday routine*” (P13).

6.2.3 Reading others’ notes can bring happiness and reduce stress. Some participants noted the positive impacts of reading others’ gratitude stories on their mental well-being. They shared that “*reading about other stories can light up your whole day and make you feel happy*” (P9), and that it “*instills a sense of trust and calmness in me*” (P12).

6.2.4 Reading others’ notes can inspire reflection on self and life lessons. Participants found that reading others’ notes can help them “*reflect on past experiences*” (P15). They felt that the notes “*open a new horizon for me to reflect on the same topic*” (P13). One said,

“it’s more about a reflection… maybe it can be framed as I’m grateful that it made me reflect on past experience of prejudice, bullying, and thinking about what the bullies think, and also my own cruelty to others sometimes.” (P15)

6.3 Communal Gratitude Facilitated Connection, Empathy, and Community

6.3.1 *Reading others' notes helped people empathize with others' struggles.* The authentic notes shared by participants, particularly those revealing vulnerabilities, fostered empathy. Participants realized that “everyone has their struggles, and how everyone has the strength to overcome their struggles.” (P10) and that “no one is perfect and everyone faces challenges. This realization helps me be more tolerant and empathetic when someone acts in a way I don’t comprehend” (P11).

6.3.2 *Reading others' notes brought people to feel others' happiness.* Engaging with others' notes not only built empathy in struggles but also allowed them to experience the joy of others, with one saying, “I think it's nice that they have such experience and I'm happy for them” (P4). Reading stories about others' campus life made them feel “the pleasure and pride of being a part of the school through them and their thoughts” (P5). They also found “people's stories about their hobbies pretty interesting and fascinating. I can feel the same excitement and joy from them” (P9).

6.3.3 *Reading and building on others' notes revealed similarities and created feelings of community.* A common theme among participants was that communal gratitude connected them as they read and built on notes that resonated with them. This sense of connection was particularly strong when they discovered common ground with others: “When I found someone who shared much of my thought on a specific hobby, I felt a sense of community at that moment—we seem to know each other better now” (P13). Similarities made participants feel “resonated and connected” (P14), “more comfortable in the online community” (P1) and deepened their understanding of communal gratitude: “this fact that everyone has similar experience highlights how important it is for us to help each other” (P10). This was further amplified by the prompt encouraging participants to build on each others' notes. Participants felt “happy knowing that other people resonated with what other's posted as well” (P7), leaving them “more connected to them and also just put me in a positive mood” (P1).

6.4 Communal Gratitude Creates Positivity Cycles around Expressing Gratitude, Being Vulnerable, Gaining Positivity, and Encouraging Others

6.4.1 *Seeing others express gratefulness inspires a desire to express gratitude.* One participant described how seeing “other people's attitude and experience inspire me to get more gratitude feelings” (P6) while another said that “I did feel at ease talking about my gratitude, because I saw the other people who had done the same which inspired me” (P11).

By the end of the study, participants overwhelming described themselves as feeling more grateful during this period (**Figure 3c**), and described how they planned to continue a practice of expressing gratitude: “I will consider the everyday “treasure hunt” as something I have been reminded of... it is the practice I would like to see in my life” (P13). They also described developing a deeper understanding of gratitude: “We're writing thank-you letters to departing interns at work. Previously, I might have seen this as just another task to complete. But now, with my enhanced sense of gratitude, I truly appreciate the value in doing it and find greater joy in the process. I used to believe I understood gratitude, but I've come to realize there's much more depth to it than I initially thought.” (P12)

6.4.2 *Seeing others be vulnerable inspires vulnerability.* Despite the concerns about sharing vulnerability publicly, reading personal stories felt “heartwarming” (P1), and “gives me some more confidence to share something more deep” (P13). They “appreciated how heartfelt and genuine everyone's notes of gratitude were” (P10), and “stunned to see how much effort everyone put into their responses” (P5). The authenticity of others' notes “made me want to be more vulnerable with mine” (P1).

Survey results showed that participants' sense of connection grew as we released prompts that encouraged them to share more personal and vulnerable experiences, as seen in responses to post-prompt surveys 4-6 in **Figure 3d** (these ask about interactions from prompts 3-5).

6.4.3 *Seeing others benefit from your note brings you satisfaction and a sense of accomplishment.* In the study's second phase, we released a prompt, encouraging participants to share one note that particularly resonated with them. We observed a positive cycle of receiving benefits from gratitude notes. Participants said that when their note was read by others who shared how it benefited them, it also brought joy to the writers themselves. One said, "*I felt excited... I saw feedbacks on mine which made me feel soooooo great!*" (P9). Another said, "*I thought it was really cool that 2 participants resonated with my posts and built on my responses for the notes. It felt very validating!*" (P1). Others described a similar "*a sense of accomplishment*" (P4) and a "*feeling of joy and satisfaction*" (P14).

6.4.4 *Receiving encouragement from others inspires you to do the same.* Having experienced the positive impact of notes from others, participants were motivated to "*give support back, just to let them know they're not alone*" (P13), to "*click like for many of them*" (P6). Participants found that they "*got encouragement from [others], and I think I should encourage them back*" (P9).

7 Discussion

Our findings reveal many benefits of a gratitude-centered online community. It can provide a platform for sharing, help one regain power over complex experiences, inspire reflection, remind oneself of positive experiences and goodness in the world, and reduce stress. It can also promote empathy with others and foster connection in the community. It can foster positive cycles of gratitude, vulnerability, joy, and a desire to encourage others. At the same time, our findings highlighted challenges that need to be addressed, including questions of purpose and significance, authenticity and vulnerability, and motivation and sustainability. In this section, we reflect on the implications of our findings for designing a communal gratitude platform. We also discuss two broader directions we see as promising for future research: centering cycles of positivity in designing online communities and social media and centering authentic individual reflection that then gives rise to community interactions.

7.1 Supporting Interaction, Authenticity, and Motivation for Communal Gratitude

7.1.1 *Actively facilitate interaction, connection, and impact.* People need to have an authentic purpose for sharing to participate in a communal gratitude platform. While we found many impacts that sharing can have on others, on the community, and even on yourself (Section 6.1), people may not be aware of this potential impact. Because of this, designs for communal gratitude platforms should show users the impact that sharing can have. This could range from simple messaging to presenting new users with impactful notes earlier on to gratitude recommender systems that surface notes likely to resonate with particular users.

A lack of interaction on publicly shared notes also reinforces the skepticism users have regarding the impact of sharing notes with a community (Section 5.1.1). 46.7% of participants expressed a desire for more interaction with others (Figure 3e), with one saying "*I would like to see values and positive feedback/reaction for my gesture of gratitude so that I can continue to build stronger relationships with people with a purpose to do so*" (P5). Our last prompt addressed this by directly asking people to build on the prompts of others in writing their gratitude notes. Future work should further explore the possibility of prompts that directly facilitate interaction and "*that highlight and celebrate particularly impactful or relatable gratitude notes, making them more accessible and inviting for comments*" (P12). This would help to foster connection, interaction, and a feeling of purpose.

7.1.2 *Center authenticity by giving people control over privacy.* While one might assume that a "communal" gratitude platform would center on publicly shared notes, we believe that it should allow participants to keep their notes private or choose only to share their notes with close friends. As discussed in our findings, a communal gratitude platform can only thrive if people feel like

they can be authentic rather than performative (**Section 5.1.2**) and if they feel in control of any vulnerability and risk (**Section 5.2.1**).

Sharing within a communal gratitude platform should not be due to platform restrictions but rather a user's own desire to do so (e.g., to contribute to others and the community as described previously). A communal gratitude platform needs to excel at protecting privacy risks and cultivating a safe environment so that users feel safe sharing authentically.

Communal gratitude platforms should also consider other ways to support authenticity. Participants noted that expressing gratitude in face-to-face contexts is naturally richer and more meaningful: *"I feel like there are more and richer non-digital ways to say thank you. If it's in person, there can be more embodied expressions, such as hugging, shaking hands, bowing, even spinning and bouncing."* It would be interesting to explore how to support richer, more expressive forms of gratitude or to connect the online experience with in-person ones.

7.1.3 Implement motivators and situate them in appropriate motivating contexts. Participants described the likely challenges they would have persisting in habits of gratitude even when they know its benefits and have a desire to do so (**Section 5.4**). Because of this, it is important to design reminders and notifications, motivators, and other interventions for supporting behavioral change. For example, people should know when others have read or built on their post or written a relevant post. A gratitude streak for interacting with others' posts could also be helpful in addition to the one for writing posts. The platform could support relationships like accountability partners or groups that intentionally support each other in building habits of gratitude.

Finally, we note that motivation also arises from the context and framing for application use. We see a gratitude-centered community as being particularly impactful when framed around supporting mental health and well-being. This would add additional motivation and purpose for writing regular gratitude notes. One participant alluded to this: *"If someone is going through a struggle, hardships, or any other mental health challenges, this platform would serve them the best where this platform would be task-centered where they would respond and react to post to regain their sense of identity as to who they are and what really defines their individuality"* (P5).

7.2 Centering Cycles of Positivity in Designing Online Communities and Social Media

As described in the Introduction, this study was partially motivated by research demonstrating that showing gratitude to community members can initiate a positive cycle of altruistic behavior and expressions of gratitude [61], a 'gratitude cycle'. However, our study found not only one but multiple positivity-reinforcing cycles. First, we found that seeing others express gratitude (even if it is not directed at you) inspired people also to express gratitude (**Section 6.4.1**). Second, we found that seeing others be vulnerable in their sharing inspired people also to be more vulnerable (**Section 6.4.2**). Third, we found that when people saw others derive joy or benefits from gratitude notes you wrote, that also provided you with joy (**Section 6.4.3**). Fourth, being on the receiving end of encouragement (when others wrote about how your gratitude note benefited them) inspired you to also express to others how their notes benefited you (**Section 6.4.4**).

These observations suggest that appropriately designed online communities might be able to leverage diverse cycles of positivity toward becoming rich sites of positivity, authenticity, and gratitude. In this study and in the literature cited, these cycles of positivity arose organically. However, one could also imagine intentionally designing the environment to promote these cycles. For instance, gratitude notes reflecting on personal learnings from specific issues could be used or built on by others in community discussions. Prompts could elicit content helpful for other users, encourage the sharing of more meaningful and resonant experiences, or actively facilitate building on gratitude notes others have written (**Section 7.1.1**). Users could be allowed to save

notes that bring them positive energy and recommended notes that are more likely to help. The platform could also directly communicate to users the impact of sharing, especially needed given the literature suggesting that those who express gratitude often undervalue the positive impact of doing so [55].

All of these would help address the need for more interactions (**Section 7.1.1**) and the lack of clarity around the purpose for sharing gratitude notes publicly (**Section 5.1.1**). Namely, these create a purpose for sharing and interaction tied to contributing to cycles of positivity and communal gratitude that can help others and yourself.

7.3 Centering Authentic Individual Reflection That Leads to Community Interactions

Sharing gratitude online can feel unnatural, inauthentic, and performative (**Section 5.1.2**), and it can be difficult to be vulnerable since it opens one to misinterpretation or privacy invasions (**Section 5.2.1**). However, we found that participants can be remarkably authentic and vulnerable, that this contributed to a positive cycle of authenticity and vulnerability (**Section 6.4.2**), and that this provided diverse individual and community benefits (**Section 6.1-6.3**). The prompt-based format of Gratitude centered individual reflection as the core activity rather than performative sharing. They freed people to be authentic when they feared being perceived as having performative motivations (**Section 6.1**). *What might it look like to design a social media platform where community interactions are not the center but rather arise from authentic individual reflection?*

In most social media platforms, notes are written primarily with a public audience in mind, leading to strong dynamics of self-presentation and performative motivations and perceptions [24, 88], further fueled by the advertisement and influencer-centered business models of most social media platforms. The result is that social media platforms can paradoxically be very individually centered, with users focused on curating their profile, followers, and algorithmic self [40, 119].

In contrast, consider a social media platform centered on authentic individual reflection. Centering individual reflection might paradoxically enable more organic and authentic community interactions when they occur, fostering authentic sharing, listening, and reciprocity in the community. Individuals in such a platform could keep their notes private or limited to their friends if desired, with community interactions emerging from these private notes when individuals choose to share them to benefit others. As described in **Section 7.2** on centering cycles of positivity, the platform could encourage sharing by showing users the impact of a note on others. For example, if one were to write a note on appreciating the beauty in nature, the application could show you how that could be used to lift up “unsung heroes” like park rangers who contribute to the community.

Due to the focus on authentic reflection, such a platform might want to go without typical features like personal profiles and follower systems to reduce the emphasis on curating one’s self-image. Similarly, it might want to emphasize communal reflection and growth rather than the identity or collected posts of any individual writer. This may even mean avoiding native support for directly mentioning others in gratitude notes as this might increase performativity and stress that people may feel unappreciated if you don’t mention them in your notes (**Section 5.2.1**). As one participant illustrated when she took a screenshot of a note to send to someone, this does not prevent the platform from being used to foster appreciation for others.

Based on the considerations above, designing a new platform might be more suitable for nurturing authentic expressions and sharing of gratitude. However, there is potential in exploring how incorporating elements of a gratitude-focused community into existing social media platforms might provide new insights. For example, integrating prompts with common commenting features could guide users to reflect on posts from a positive perspective. When replying to a post on Twitter, a gratitude prompt could encourage users to think about the post in a grateful manner and share their personal experience by retweeting.

Expanding Gratitude's design into existing social media platforms might bring about several advantages, such as reaching a broader audience, which in turn could amplify the positive effects of expressing and sharing gratitude by involving more people in the gratitude cycles. It could also foster a sense of community by encouraging users to engage in positive interactions. Nevertheless, challenges remain in preserving authenticity and avoiding performative behavior, especially on platforms driven by public engagement metrics like follower counts, likes, and shares. One way to address this is by introducing special tags for gratitude-related content, with metrics like likes and follower counts minimized or hidden for these posts, shifting the focus from gaining approval to fostering genuine expression and reflection.

Additionally, safeguards might be necessary to prevent the commercial nature of social media from diluting the genuine intent behind gratitude sharing. For instance, platforms could support this by restricting promotional content or discouraging commercialized behavior in gratitude-centered interactions, ensuring the space remains focused on authentic connections and reflection.

One concern identified in our findings that we have not yet covered was the potential for harmful self-comparison (**Section 5.3.2**). Just as research has shown that social media users can become depressed at constantly viewing the perfectly curated lives of others [9], a platform solely centered on gratitude might be actually counterproductive and feel inauthentic for someone going through a dark time. However, because people are no longer focused on presenting their personal image on the platform, the emphasis on individuality might be reduced, thereby alleviating harmful self-comparison. This still raises questions such as, "How might we embrace a broader spectrum of human emotions in a platform that centers authentic reflection?" "Can emotions as different as gratitude, sorrow, and even anger live together in a single online community in a productive way that advances individual and community flourishing?" Doing this well is a non-trivial challenge for the future.

8 Limitations

We acknowledge the limitations of our study. First, our approach required users to sign up using Google accounts, and they could not edit the displayed Google account names when posting a note, which limited their options for staying anonymous or pseudonymous. However, this limitation also presents a future research opportunity to compare our findings with a version of Gratitude that allows for completely anonymous participation, potentially alleviating concerns about vulnerability and risks (**Section 5.2**). Second, our study was conducted in a single context, on a campus within a narrow demographic group, and with a limited number of participants. While this helps us tap into a community that already shares experiences and hardships, it also limits the generalizability of our study. Although we believe our main findings around benefits and concerns hold across general populations, additional dynamics may emerge in different communities. For example, there may be different dynamics when there are more people from older generations who are not as accustomed to social media. Future replications of the study with Gratitude in different communities would therefore be valuable. Additionally, the study duration was limited. This might account for the lack of significant trends, such as shifts in interaction frequency, in our quantitative data analysis. Conducting longer-duration studies in the future would be meaningful. Although we were able to effectively gauge challenges and benefits to the community over a 3-week period of deployment of the platform, it would be interesting to conduct a longer-term study to observe how a gratitude-centered community might evolve over time in a more natural setting. Our study was a qualitative design-based study aimed at exploring the possibilities and contextual risks of a gratitude-centered online community, and future longitudinal work could explore generalizability through a more quantitative approach and with larger numbers of people. Additionally, future

research could explore the integration of gratitude-centered communities into existing social media platforms to understand the potential challenges and benefits of such designs.

9 Conclusion

In this paper, we built a gratitude-centered online community and used it to elicit concerns and benefits around communal gratitude and insights into the design of online communities centered on gratitude. We found that publicly expressing gratitude can raise concerns regarding authenticity, vulnerability, and privacy and might be challenging to sustain. Despite these challenges, communal gratitude also offers significant benefits. It gives a meaningful context to sharing, fosters positivity from reading others' gratitude notes, creates a cycle of gratitude, positivity, and vulnerability, and cultivates a sense of community. We reflected on these findings and their implications for designing gratitude-focused online communities along with two broader directions around designing social media platforms that center cycles of positivity and that center authentic individual reflection. Our findings and discussion help inform future work in designing prosocial online communities by focusing on positive activities.

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A Detailed tables

A.1 List of participants

The following participants table displays a list of all participants in the study, along with their social media usage and gratitude practices.

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Table 2. Summary of the interviewed participants' social media usage, regular practices of gratitude, and demographic information.

ID	Gender	Race/Origin	Social Media Use	Gratitude Practice	Gratitude Practice Frequency
1	Male	East Asian/ South Asian	Discord: Highly active	Daily gratitude journaling	Daily, or nearly every day
2	Female	East Asian/ South Asian	Twitter: Highly active, Reddit: Mainly browsing, Instagram: Occasionally posts	Occasional gratitude journaling	About once or twice a month
3	Male	East Asian/ South Asian	Discord: Highly active, Reddit: Mainly browsing, Instagram: Mainly browsing and occasionally posts, TikTok: Occasionally browses	Daily gratitude journaling	Daily, or nearly every day
4	Female	East Asian/ South Asian	Instagram: Occasionally posts and browses, Red: Occasionally browses	Daily acknowledgement of gratitude	Daily, or nearly every day
5	Female	East Asian/ South Asian	Discord: Highly active, Reddit: Highly active, TikTok: Mainly browsing, Instagram: moderately active, Snapchat: Moderately active	Occasional gratitude journaling	About once or twice a week
6	Female	East Asian/ South Asian	Red: Mainly browsing and occasionally posts, Instagram: Mainly browsing and occasionally posts	Occasional gratitude journaling, sharing gratitude posts on social media	Every 2-3 months
7	Male	Hispanic/Latino/ Spanish Origin	Discord: Highly active	None	Never
8	Female	East Asian/ South Asian	Instagram: Highly active, WeChat: Highly active	Sharing gratitude posts on social media	Every 2-3 months
9	Female	East Asian/ South Asian	WeChat: Highly active, Instagram: Occasionally browses, Twitter: Occasionally browses	Writing thank you notes	Daily, or nearly every day
10	Male	Southeast Asian	LinkedIn: Occasionally browses, Instagram: Occasionally browses, Reddit: Highly active	Writing thank you notes, giving gifts	About once or twice a week
11	Female	East Asian/ South Asian	Reddit: Occasionally browses, Instagram: Occasionally posts, TikTok: Occasionally browses	Daily gratitude journaling, giving gifts	Daily, or nearly every day
12	Female	East Asian/ South Asian	WeChat: Highly active, TikTok: Occasionally browses, Instagram: occasionally browses	None	Never
13	Female	East Asian/ South Asian	Facebook: Highly active, Instagram: Occasionally posts	Expressing gratitude in prayers	About once or twice a week
14	Female	Middle Eastern/ North African	Instagram: Occasionally posts, Twitter: Occasionally posts	None	Never
15	Male	East Asian/ South Asian	Instagram: Highly active, WeChat: Highly active, Twitter: Occasionally browses, Facebook: Occasionally posts	None	Never