

Separate Online Networks During Life Transitions: Support, Identity, and Challenges in Social Media and Online Communities

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Some life transitions can be difficult to discuss on social media, especially with networks of known ties, due to challenges such as stigmatization. Separate online networks can provide alternative spaces to discuss life transitions. To understand why and how people turn to separate networks, we interviewed 28 participants who had recently experienced life transitions. While prior research tends to focus on one life transition in isolation, this work examines social media sharing behaviors across a wide variety of life transitions. We describe how people often turn to separate networks during life transitions due to challenges faced in networks of known ties, yet encounter new challenges such as difficulty locating these networks. We describe support from *waiting contributors* and *virtual friends*. Finally, we provide insight into how online separate networks can be better designed through enhancing search functionality, promoting contribution, and providing context-sensitive templates for sharing in online spaces.

CCS Concepts: • **Human-centered computing** → **Empirical studies in HCI**; **Empirical studies in collaborative and social computing**.

Additional Key Words and Phrases: life transitions, identity, online networks, online communities, social media

ACM Reference Format:

Ben Zefeng Zhang, Tianxiao Liu, Shanley Corvite, Nazanin Andalibi, and Oliver L. Haimson. 2018. Separate Online Networks During Life Transitions: Support, Identity, and Challenges in Social Media and Online Communities . 1, 1 (July 2018), 30 pages. <https://doi.org/10.1145/1122445.1122456>

1 INTRODUCTION

When people undergo major life events and transitions (e.g., divorce, residential move, job change, death of a loved one), their lives and identities often change substantially. Thus, people seek ways to reestablish routines and reconstruct identities. Broadly, a transition usually results in “changed relationships, routines, assumptions, and roles” and a transition is a transition “only if it is so defined by the person experiencing it” [10]. In the current study, we consider major life transitions

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XXXX-XXXX/2018/7-ART \$15.00

<https://doi.org/10.1145/1122445.1122456>

as events that result in major upheaval in the lives of participants. Life transitions often have psychological impacts [19]; during life transitions, people often adjust their inner reorientation and self-definition as they incorporate changes into their lives. In many cases, life transitions lead to new routines, roles, and identities [10]. For instance, when starting graduate school, students often spend considerable time establishing relationships with peers and faculty members, identifying health and safety resources, and transitioning into new identity roles such as being a teacher or research assistant.

Scholarship in HCI and CSCW has long examined the role of social technologies, particularly social media, in facilitating people's major life transitions through support and resources [62, 63]. In recent years, studies have focused on sensitive life events [5, 21, 28, 49, 77] and identity-based transitions [1, 50, 72, 91]. Across those studies, scholars tend to focus on one or a few life events at a time [1, 66, 69]. Rather than focusing on a singular life event, this study bridges this gap by examining people's social media sharing behaviors across a wide variety of major life events, especially those that are sensitive and involve substantial identity change. Examining a wide range of life transitions together in one study has great value; it enables us to understand how concepts uncovered in previous work may apply across different types of life transition experiences. We acknowledge the complexity of studying life transitions, some of which involve extended processes while others revolve around one time events; which may be positive, negative, or include elements of both; and which may or may not involve substantial identity change [52]. We designed our study with these complexities in mind, and were attuned to similarities and differences between participants' life transitions.

Studying multiple types of life transitions at once also provided insight into how previous research results uncovered in the context of one type of life transition may apply more broadly, facilitating more conceptual clarity and consistency across studies in various contexts. That is, researchers often motivate studies related to particular life transitions by explaining why a given transition is important [1, 5, 50, 72, 91]; while these explorations have been key in developing understandings of phenomena like support and identity, they were limited by inability to shed light on whether findings would be common across other life transitions. This study begins to address the limitation of focusing on one life transition at a time and provides new understandings of participants' experiences by examining life transitions holistically.

Expanding on prior work, which has generally focused on one life transition at a time, we provide a conceptual distinction between "networks of known ties" vs. "separate networks" and an empirical examination of how people interact with these networks online during a wide range of life transitions. Here, we make the distinction between "networks of known ties" and "separate networks" because, during interviews, participants described the important differences between the two types of networks and the ways they used each in unique ways during life transitions. Many scholars have also examined the role of different social networks in life transitions [23, 48, 94, 111]. For instance, drawing from Granovetter [45], Burke and Kraut used the concept of "strong tie" – relations such as trusted friends and family – to describe where people receive emotional support after job loss [23]. Yet it may be that those whom one inhabits familiar online spaces with on a regular basis, regardless of traditional tie strength, influence life event disclosure decisions. That is, everyday online networks that include both strong ties and weak ties (acquaintances) may fail to meet people's needs or even create obstacles to sharing when they undergo life changes. Drawing from Andalibi [2], we define *networks of known ties* as both strong and weak ties to describe the network that people typically draw in during their everyday use of social media, where they engage with others with whom they have pre-existing ties and who are known (i.e., not anonymous) to them. Correspondingly, we define *separate networks* as networks that are different from and exist apart from one's primary network of known ties. Prior research has shown that networks of known

ties can create challenges [48, 53] and hinder online self-disclosures [5, 91], but that they also hold potential for positive change such as through feeling less alone within one's known network or stigma reduction [2]. Even so, disclosing about difficult life events on social media to networks of known ties remains a challenge. In fact, many people turn to separate networks. Building on prior work regarding social networks and life transitions, we also specifically analyze the role of identity and identity change in mediating people's experiences among separate networks.

To understand people's experiences with separate networks during life transitions, we conducted 28 interviews with people from the U.S. and Canada who had experienced major life events/transitions¹ within the past two years. We asked questions about people's online sharing experiences with both networks of known ties and separate networks, their experience in separate networks, and the role of identity relative to people's experiences in separate networks. In this study, we address the following research questions:

RQ1: What challenges do people face in online networks of known ties, and how do these challenges influence decisions to participate in separate networks online when experiencing a wide range of life transitions?

RQ2: How do social support and relationships take place and evolve in these online separate networks?

RQ3: How do identity and identity change relate to people's experiences in online separate networks related to a wide range of life transitions?

Studying multiple types of life transitions at once provides important insights into how previous research results uncovered in the context of one type of life transition (e.g., [5, 48]) can apply more broadly. We found that people face challenges such as superficial online support and proscribed positive online self-presentations in the presence of known ties online, which can hinder self-disclosure during life transitions. Online separate networks, which include groups of people we call *waiting contributors* and *virtual friends*, provide valuable support to members of those networks, yet introduce emergent challenges such as access to specific separate networks and negative interactions with others within the separate network. Finally, we provide design recommendations for better designing separate online networks to facilitate life transitions. Our contributions are as follows:

- We focus on a range of life transitions to analyze the use of online separate networks during identity changes. This work extends prior work that often focused on singular life transitions, and provides additional insights by examining life transitions holistically.
- We provide definitions of networks of known ties and separate networks and extend similar concepts found in the context of one life transition to account for multiple life transitions.
- We summarize people's social media-related challenges in both networks of known ties and separate networks and offer an empirical description of why and how people use separate networks across multiple types of life transitions.
- We discuss the importance of separate networks in facilitating life transitions, and provide novel design recommendations to promote connection with separate networks to improve people's online experiences across a wide range of life transitions.

¹Hereafter referred to simply as "life events" or "life transitions" rather than "life events/transitions." Some life transitions involve multiple stages and take long periods of time to complete (e.g., divorce, gender transition), while others take place on a particular day yet also involve longer identity change processes (e.g., pregnancy, job loss). We use "life transitions" as an umbrella term to encompass life experiences involving both moments and processes of change.

2 RELATED WORK

2.1 Life transitions

Scholars in different domains have studied “transition,” and its definition varies according to disciplinary focus. Kralik and colleagues’ canonical work defines transition as “a process of convoluted passage during which people redefine their sense of self and redevelop self-agency in response to disruptive life events [60].” Broadly, a transition usually results in “changed relationships, routines, assumptions, and roles” and involves how people respond to change over time [60]. A transition is a transition “only if it is so defined by the person experiencing it” [10]. In the current study, we consider major life transitions as events that result in major upheaval in participants’ lives. Life transitions also often have psychological impacts [19]; during life transitions, people often adjust their inner reorientation and self-definition as they incorporate changes into their lives. In many cases, life transitions lead to new routines, roles, and identities [10]. Across different transition experiences, a commonality is the dislocation, disorientation and disruption and a need for people to find new ways of living that incorporates the changes one has experienced [60]. We acknowledge the complexity of studying and categorizing life transitions. Thus, rather than attempting to implement a new categorization, in this study we use Haimson and colleagues’ *Major Life Events Taxonomy* [51] to categorize major life events that participants in our study experienced so that we could holistically examine different types of major life events.

In CHI and CSCW, studies of transitions have focused on the role of technology in facilitating people’s major life events and transitions. Those works have documented various transitions and contexts. Such events include residential displacement [59, 62, 86], homelessness [63], changing health conditions [68], parenthood [15, 20, 74], serious illness [13, 101] and job changes [23]. In addition, scholars also paid special attention to sensitive life events; some are identity based transitions such as domestic abuse [28], relationship breakups [49], pregnancy loss [5], infertility [77], and the death of loved ones [21]. In recent years, a growing body of research has been examining the use of social technologies among identity-based transitions [1, 50, 72, 91], which ranges from gender transition [50], disadvantaged college students’ identity transition [72], and veterans transitioning from the military back to civilian society [91].

Across those studies, researchers found that social technologies can be beneficial such as facilitating social support [1, 2] during major life changes. However, they can also impose both social and technical challenges when people undergo life transitions [5, 9, 21, 31, 32, 34, 48, 55, 77]. Such challenges can be centered around privacy [55, 77], self-presentation [31, 48], online disclosure [5, 34], and potential harassment [32]. In addition, prior studies tend to focus on one or a few life events at a time [1, 66, 69]. To our knowledge, few studies have examined people’s social media sharing behaviors in online social networks related to a variety of major life events. This research aims to address this gap.

2.2 Separate networks

Prior research has not established a consistent way of defining the different social online networks that people interact with. For instance, Burke and Kraut used the concept of “strong tie”—relations such as trusted friends and family—to describe where people receive emotional support after job loss [23]. Here, we draw from Andalibi and use the concept of networks of known ties, including both weak and strong ties [45] to describe the network that people typically draw in during their everyday use of social media.

However, due to complex challenges people face within networks of known ties that potentially constrain self-disclosures [5, 91], many people find it difficult to share certain events, particularly those that are negative or stigmatized, with their networks of known ties [5, 48, 53]. Instead, they

turn to online networks separate from their networks of known ties to find others with similar experiences [9, 27, 88]. Separate networks have not been consistently defined by prior research. Researchers have examined separate online networks such as private online groups (e.g. Facebook groups [76]), online forums or communities (e.g. subreddits [95]), and secondary social media accounts (e.g. 'fake Instagram accounts' [97, 109]). These networks center around a certain topic or experience, a community of like-minded people or individuals with similar identities [24, 47]. Topics can be specific health issues [24], hobbies [44], and major life milestones (e.g. pregnancy [47]). Separate networks can be sites for exchanging information [110] and other social support such as emotional support and empathy [78], creating a safe environment for disclosure and discussion [8, 108]. In a recent paper [27], Cherubini et al. called for specific analytical attention to how separate networks are used by people who experienced life-changing events. Our study extends existing literature related to both networks of known ties and separate networks. Specifically, prior work tends to focus on one life event at a time [5, 48, 53], and we know little about whether those results could be applied to other life transitions. Thus, we extend prior work by examining people's online behaviors and experiences across multiple life events.

In these separate online communities, people behave differently, some actively participating while others lurking. Prior researchers found that, in most online communities, the minority of members create the majority of content [102]. The silent majority, known as lurkers, primarily consume content without actively posting or commenting in online communities. In addition, previous work demonstrated that all members of online communities, both lurkers and active posters, read more content than they post [37]. Many studies view such lurking behaviors negatively, arguing that they hinder the sustainability of online communities, as online communities depend on timely interactions and constant updating of content [33, 73, 106]. Yet, other studies considered lurking to be a valuable form of participation [38, 75]. For example, Preece et al. proposed that there are various forms of participation, and lurking is one of them. They found that lurkers lurk for various reasons, such as needing to learn more about the group before posting and believing that they were being helpful by not posting [79]. These reasons suggest that lurkers are not selfish free-riders. In this study, when we talk about separate online communities, we also include and value lurkers' experiences, motivations behind their behaviors, and their relationships with online communities, aiming to add new insights to this debated field from a new perspective.

Another type of separate networks that emerge but differ from online communities is virtual friends, which we define as previously unconnected individuals that one later connects and develops long-term personal relationships with through online interactions rather than face-to-face contact. Prior research examined virtual friendships on specific platforms or online forums, such as communities related to travel [62] and gaming [25, 105], but few have systematically looked into virtual friends across different social media platforms [93]. Shklovski et al. investigate how connections across platforms are mitigated across different platforms [93]. Carter [25] demonstrated that people's decisions about committing to forming a relationship with an online stranger depend on mutual trust and whether both sides enjoyed the conversations. In Carter's study, even though the participants valued their virtual friendships, they were aware that meeting virtual friends offline could be destructive [25]. With such perception, trust is the major motivator that encourages people to transfer their friendships from online to offline. Walther's hyperpersonal model shows that computer-mediated communication can allow for limited cues, relative anonymity, and repeated interactions, generating trust and facilitating relationship development [104]. Due to these benefits of computer-mediated communication, online relationships can become so deep that they often develop into offline meetings [92]. Our study contributes to prior work a more in-depth understanding of virtual friends in the context of separate networks related to life transitions and identifies factors that motivate people to form virtual friendships.

2.3 Identity

To understand what influences people's decision to interact with a specific network, we look at identity and identity change. When considering and constructing identity, people often define themselves in relation to, and compare themselves with, others [96]. Additionally, major life events can impact identity via one's view of themselves, the world around them, and their role in the world [11, 36]. Identity differs for each person and can be presented in many ways both on- and off-line [40, 67]. As Donath describes, it can be difficult to grasp the complexity of identity, especially in the online world where individuals can depict multiple personas [33]. People can show different aspects of their identity or various faceted identities in order to interact with specific groups of people [40, 43]. Social media also provide multiple affordances (e.g., anonymity [6, 9]) that allow users to portray their identity to present themselves the way they choose [31, 48].

Prior research has explored how identity and identity change influences people's participation and attachment to individuals and groups in social networks [43, 82, 83]. This participation and attachment can begin through interacting with individuals within a group or through interacting with a group as a whole in which a common identity is typically shared [82]. In networks of known ties, people may not necessarily surround themselves with other who share similar identities, characteristics, or experiences. There may be instances where individuals do not feel connected to others within that community, which can contribute to involvement in separate networks containing similar others – individuals who share similar characteristics, identities, or experiences as themselves [1, 9, 61].

For people who seek to find and communicate with separate networks online, they may look for specific groups that contain similar others. These groups can allow individuals to tailor how they choose to present themselves. Schwämmlein and Wodzicki discuss how self-presentation leads to different ways of interacting in different settings [89]. Haimson explains the importance of online network separation in facilitating identity change [48]. Active identity management online highlights the significance of identity in life transitions and identity's influence in people's decision to join different online networks to connect and find support from similar others based on how they define themselves across multiple identities or aspects of their identities. Our study extends existing literature [48, 85, 87, 89, 90] by investigating, across a wide range of life transitions, how people's identities or identity change can influence decisions to join separate communities to connect with similar others and the benefits that individuals experience in these communities.

3 METHODS

We conducted 28 semi-structured interviews with people who experienced major life transitions within the past two years. We chose the two-year timespan because a longer timespan would cause recall difficulties, while a shorter timespan could leave out valuable experiences [58]. This study was approved by our university's ethics review board.

3.1 Recruitment

Participants were recruited in two different ways. First, a screening survey was shared throughout our personal social media to reach a wide audience. The screening survey asked individuals to recall major life events that they experienced in the past two years, which audiences they shared these events with, and what social media platforms they use during major life transitions. Our recruitment materials targeted people willing to discuss "experiences using social media during major life transitions" – thus leaving what "major life transitions" means up to potential participants themselves, in line with Anderson et al.'s [10] definition. In order to be eligible, participants must be 18 years of age, have experienced a life event or transition in the past two years that had a major

impact on them, and discussed or shared it on social media in some way. After reviewing submissions, we selected participants who met all eligibility requirements to take part in an interview through video chat. Participants were then compensated with a \$30 gift card after completing the interview. We collected 17 participants from sharing the screening survey on different platforms such as Facebook, Twitter, Instagram, and Slack. To further increase participant diversity, an additional 11 participants were recruited through User Interviews², a platform used to recruit participants for user research. Eligible participants were chosen with the same criteria as the first method of recruitment and then compensated after completing the interview.

3.2 Participant characteristics

A total of 28 individuals participated in our study (see Table 1). Participants were aged 18 - 73 (average = 33.1). 46% (13) were women, (14) 50% were men, and 11% (3) disclosed that they were transgender and/or non-binary. 50% (14) were White, 18% (5) were Asian, 14% (4) were Black, 14% (4) were Latinx, 4% (1) were Native American, and 4% (1) were mixed. Participants reported having gone through a diverse range of life transitions covering categories including relocation, death, career, education, health, and identity change. In terms of the audiences that participants shared with online, 79% shared with close friends or family, 79% shared in 1-1 settings, 75% shared with separate audiences or networks, and 50% shared with broad audiences. The percentages for audiences shared add up to greater than 100% because some participants shared with multiple audience types.

3.3 Data collection

From February to May 2020, we conducted 28 semi-structured interviews. Semi-structured interviews are well-suited for our research questions because they allow the conversation to evolve to topics most salient for the participants. On average, the interviews lasted for 59 minutes (range: 29-82 minutes). Two interviewers conducted interviews via video chat, with one leading conversations and the other taking notes and asking follow-up questions. Before each interview, interviewers introduced the study's goals, ensured the confidentiality of the study, and asked the participant for consent to record the conversations' audio. Interviewers began by asking about life transitions and social media use broadly, impacts of social media on life and identity, sharing behaviors related to each of the life transitions they had experienced, and their perceptions of authenticity on social media. Follow-up questions included participants' reasoning and thought processes behind their behaviors, observations of others' posts on social media, and expectations for improvements of social media. Sample questions included: Can you briefly describe the life events you experienced in the past two years that had a major impact on you? Of the life events/transitions you just mentioned, which ones did you share? Which did you not share? Who is your audience/network on [social media site used]? How did you determine which social media sites to share content about the major life event(s) you experienced? [if relevant] What was it like to share about your life transition with an audience separate from your typical network? [if relevant] What was it like to separate your content between several different social media sites or online spaces? To what extent do you feel like your identity changed when you experienced this life transition? In what ways did it change? All the audio recordings were transcribed for data analysis. We report themes related to networks of known ties and separate networks as well as identity and identity change in this paper.

²<https://www.userinterviews.com/>

Table 1. Summary of participant demographics and life transitions sharing behavior online

<i>ID</i>	<i>Age</i>	<i>Race</i>	<i>Gender</i>	<i>Audiences Shared With</i>
P1	65+	White	M	networks of known ties & separate networks
P2	18-24	Asian	F	networks of known ties & separate networks
P3	18-24	Black	Non-binary	networks of known ties & separate networks
P4	25-34	White	M,Trans	networks of known ties & separate networks
P5	25-34	Asian	F	networks of known ties & separate networks
P6	25-34	White	F	networks of known ties & separate networks
P7	18-24	White	M,Trans	networks of known ties & separate networks
P8	25-34	White	F	networks of known ties & separate networks
P9	25-34	Mixed	F	networks of known ties & separate networks
P10	18-24	Mixed	F	networks of known ties & separate networks
P11	18-24	White	M	networks of known ties & separate networks
P12	18-24	Latino	M	networks of known ties
P13	25-34	White	M	networks of known ties
P14	25-34	Asian	M	networks of known ties
P15	25-34	Black	F	networks of known ties & separate networks
P16	18-24	Asian	F	networks of known ties
P17	18-24	Latino	M	networks of known ties
P18	25-34	White	M	networks of known ties & separate networks
P19	65+	White	M	networks of known ties & separate networks
P20	25-34	Latino	M	networks of known ties & separate networks
P21	55-64	Native American	F	networks of known ties
P22	25-34	White	M	networks of known ties & separate networks
P23	35-44	Black	M	networks of known ties & separate networks
P24	45-54	White	M	networks of known ties & separate networks
P25	45-54	White	F	separate networks
P26	25-34	White	F	networks of known ties & separate networks
P27	25-34	White	F	networks of known ties & separate networks
P28	35-44	Black	F	networks of known ties

3.4 Data analysis

We conducted iterative and inductive analysis of the 28 interview transcripts using open coding and memoing informed by qualitative content analysis [17, 29]. First, the research team separately conducted line-by-line analysis of the first five interviews, looking for patterns and identifying salient codes from the data. We categorized life events that participants reported based on the categories in *Major Life Events Taxonomy* [51] (see Table 2). Based on our line-by-line open coding analysis and frequent discussions about emerging codes, we collaboratively developed a codebook. Three authors then organized our codes using axial coding and generated the themes we report on in the Results section: life transitions experienced and shared; online separate networks; identity's role in online communities; and emergent challenges. We reached a point of saturation after no new codes emerged from our interviews, a consensus made by the research team. Throughout the analysis, the research team met twice a week to collaboratively discuss and refine codes and themes.

Table 2. Summary of major life transitions each participant experienced

Participant ID	Type of Transitions	Life Transitions Participants Experienced
P1	Relocation, Financial, Career	moved to a different state, major financial difficulty, started a new job different type of work
P2	Relocation	moved to a different state
P3	Education, Relocation, Career, Relationships	graduated college, moved to a different city within same state, started new job, ended serious romantic relationship, began serious romantic relationship
P4	Education, Career, Relocation	started graduate school, graduated graduate school, moved to a different state, started a new job
P5	Lifestyle Change	change in responsibilities in personal life
P6	Career, Relocation, Death	became a business owner / entrepreneur, moved to a different state, started a new job, promotion, death of a loved one
P7	Relocation, Identity	moved, gender transition
P8	Family relationships	gave birth / became a parent
P9	Relocation, Career, Health, Death	moved to a different town/city within same state, started a new job, pregnancy, death of a loved one
P10	Education, Relationships, Lifestyle Change, Career	graduated high school, started college, change in responsibilities in personal life, recovery from mental health struggles, began serious romantic relationship, started first job
P11	Relationships, Education, Societal	ended serious romantic relationship, started college, pandemic
P12	Relation, Family relationships	moved within same town/city, new pet, major travel
P13	Education, Career, Death, Relocation, Health, Lifestyle Change	left school (without graduating), unable to find work, death of parent, moved to a different state, mental health struggles or diagnosis, change in political beliefs
P14	Education	education
P15	Relationships, Identity, Relocation	marriage, another major identity shift, moved
P16	Societal, Death, Education	pandemic, death of a friend, death of a loved one, started college
P17	Education, Relocation	started college, moved
P18	Family relationships, Career, Societal	gave birth / became a parent, involuntary job loss (e.g., fired), pandemic
P19	Career, Societal	retirement, pandemic
P20	Relocation, Relationships, Health	relocation, relationships, major surgery
P21	Lifestyle Change, Education	change in responsibilities in personal life, started college (other)
P22	Societal, Death, Health, Family relationship, Relocation, Career	pandemic, death of a loved one, serious physical illness diagnosis (other), family relationships, moved to a different state, voluntary job loss, unable to find work
P23	Death, Health, Career	death of a parent, major surgery, involuntary job loss
P24	Identity, Relocation, Career	came out as LGBTQ+, divorce, moved, started a new job
P25	Career, Societal, Financial	started a new job, pandemic, major financial difficulty
P26	Career, Health, Legal, Death, Career	started a new job, recovery from addiction, went to jail or prison, death of a loved one, involuntary job loss
P27	Health, Career	major surgery, unable to find work
P28	Relocation, financial	moved to a different state, major financial difficulty

4 RESULTS

4.1 Life transitions experienced and shared

4.1.1 Life Transitions and social media sharing behavior. During the interviews, participants described a wide range of major life transitions that they had experienced within the past two years. For some participants, multiple transitions occurred simultaneously. For instance, when people start college, they often also move to a new location and perhaps establish new relationships. Drawing from a comprehensive taxonomy of life events [51], we categorized participants' experiences into 12 broad categories of major life events (see Table 2). The process of creating the 12 life transition categories is detailed in a different paper [51], and involves a rigorous analysis that is beyond the scope of the current paper. Categories are loosely informed by Tausig's 1982 taxonomy [100] but emerged from analyzing qualitative survey data ($n = 554$). All events may occur for oneself or for close family member or friend.

Participants generally perceived some transitions as positive experiences (e.g., engagement, giving birth/becoming a parent), some as negative experiences (e.g., mental health struggles, going to jail or prison), and others as more complex events that included both positive and negative experiences (e.g., change in religious/spiritual beliefs or practices, voluntary job loss). We acknowledge the complexity and variability of life transitions and that different people may perceive the same life transition differently. As such, we do not provide normative statements about what is “positive” and “negative.” Rather, we use these terms to describe life transitions based on *participants’* own perceptions.

Across the life transitions participants experienced, we found that participants generally shared on social media with broad audiences only those events that are perceived to be positive, as also found in previous research [81]. They were less likely to share about difficult and stigmatized major life events publicly. For instance, in the relationships category, participants shared much more positive events, such as marriage or engagement over difficult life events, such as divorce and breakups.

4.1.2 Networks of known ties vs. separate networks. When participants experienced major life events, they relied on both networks of known ties and separate networks to facilitate the transition process.

We asked participants questions to better understand whom they considered networks of known ties and separate networks on social media to consist of. Their answers confirm findings from prior work [2, 45]. The most common description participants provided for networks of known ties included close friends and/or family on social media as well as people like co-workers and acquaintances. Regarding separate networks, the most common examples participants provided were closed/secret/private groups on a site like Facebook, or a different social media site (e.g., Reddit) rather than their networks of known ties. Additionally, we found that participants usually shared positive major life event announcements such as graduation, relocation, marriage, and giving birth with networks of known ties. On the other hand, participants used separate networks to disclose difficult and stigmatized events such as mental health struggles, physical illness diagnoses, realizing an LGBTQ+ identity, pregnancy loss, and divorce. This result led us to further examine the challenges participants face when using networks of known ties during major life events.

4.1.3 Challenges from networks of known ties. In the context of life transitions, participants highlighted several major challenges regarding networks of known ties. These include superficial online support (an audience-related factor), negative life impacts (a self-related factor), and expected positive online self-presentations (a platform-related factor).

Superficial online support. Participants frequently described what they perceived as superficial online support from people in their networks of known ties, which confirms findings from prior work [3, 5]. For instance, when P11 ended a serious relationship, he tried to ask for support on social media. Unfortunately, no one followed up with or talked to him after posting. He elaborated:

Whenever I’ve seen people’s posts about life crisis on social media, it’s very superficial. Like, “oh I’m here for you”. A lot of the time, it feels like people are trying to look like they’re good people, and they’re not actually trying to help the person who’s having the crisis. So I think that for the most part, posting on social media whenever you’re going through a crisis is pointless.

P28 relocated from New York City to Georgia due to almost being homeless, and she shared similar sentiments. She considered such superficial online support “performative:” *Like the people want a performance. They say the thing that they feel like they’re supposed to say in certain situations, and they don’t really think about what people are telling [them].* The superficial support can also be

manifested in the form of temporary support. Some participants stated that they received social support in the early stages of a life transition; however, as the transitions continued, they expressed the loss of such support. P23, who had experienced the death of his mother, surgeries, and job loss, shared his observations:

People who do post those kinds of sad sob stories pretty routinely get fewer and fewer people commenting on them. So maybe at first, it'll be a lot to the point like "Oh my god, I'm so sorry to hear all this stuff." And then as time goes on, ...people stop commenting, and they're just like, "that person's kind of weird. I'm not going to talk to them on social media."

Statements like these demonstrate how some participants are frustrated by the superficial online support from their networks of known ties or that observed within their networks as received by others. Although transition is often conceptualized as a singular experience, when viewed as a process, transitions can be long-lasting and different transitions can happen simultaneously, which usually requires long-term support.

Additionally, to some participants, the superficial support creates a kind of negative reinforcement and discourages people from seeking social support online. P22 experienced life transitions including the death of his grandmother, a residential move, a close tie's mental illness diagnosis, and unemployment. After posting about life transitions on social media with his networks of known ties, he later decided to remove the content. He explains:

I started getting so many comments from people saying that they're sorry to hear stuff, and it just didn't feel right that I was posting it. I kind of went through this whole thing in my head. So I pulled it all down and I kind of stuck to that mentality of not posting about those major events.

Participants' responses demonstrated their fear and concern over unwanted responses, specifically superficial comments on social media during life transitions. These are what Andalibi and Forte refer to as audience-related concerns in the Disclosure Decision Making framework [5].

Negative life impacts. In addition, many participants experienced and believed sharing life events among networks of known ties may impact their lives negatively. These include both experienced and perceived negative life impacts.

Several participants reported traumatic experiences regarding networks of known ties. For instance, P3 ended her friendship because of rumors after posting on Snapchat. She later decided to stop making posts publicly.

I've just seen so many people get in trouble over social media posts with friendships, relationships, all that... I think that was the last time I ever made a public post on social media.

P25 became more careful about sharing on networks of known ties as she learnt that her sister encountered online harassment after sharing about her children:

[My sister] had somebody stalking and threatening her, and [they] knew all the information because they had seen her children's names, knew pretty much where they lived. And that was a scary event for her... Because of all of that, I'm a little bit private and careful.

Additionally, several participants raised concerns regarding perceived negative impacts, especially toward people who are close to them.

Similarly, P24, a father who came out as gay, made the decision not to share about his coming out experience with networks of known ties due to such audience-related factor. Instead, he relied on closed groups on Twitter during his life transition. He explained:

I do have friends there [on Facebook] that I knew I could talk to, but a lot of those are also people who know me in real life. You know, so it's close friends and family, where Twitter is people I haven't met, I'm probably not going to meet, and we were able to talk about things, without that personal risk of them running into my son, and being like, "Hey, your dad's a freak." I don't want that.

These examples show that participants' self-related concerns, sometimes informed by other concerns related to audiences and responses, become non-disclosure reasons for them on networks of known ties.

Positive online self-presentations. Consistent with prior research [57, 81, 97], most participants reported challenges derived from feeling obligated to present themselves positively. P7 lamented that people from their Facebook network only share positive life events such as pregnancy. P16, who decided not to share the news about the death of her grandparents, elaborated:

Like most other people, social media is a place to show the good things that happen in your life and all the happy parts of it. So I guess that kind of influenced my decision not to share that as well.

Prior research has shown that emphasizing positive self-presentations is a norm on social media [57]. Such norms can be attributed to factors including positivity bias (people's preference for positive information) [56] and social desirability bias, which often pushes people to showcase positive social selves [46, 97]. In the context of life transitions, participants in our study faced both issues. Participants also raised concerns that overly positive self-presentation during life transitions could motivate people to withhold information about certain critical life events, and lead to upward social comparison [103]. Such behaviors could also cause negative psychological impact for both direct and indirect stakeholders. Now that we have shown some of the ways challenges from networks of known ties hinder participants during life transitions, we next describe how participants adopted and started sharing among online separate networks.

4.2 Online separate networks

Asking participants about their experiences with separate online networks allowed us to understand what support, interactions, and audiences people face within separate networks, as well as their motivations for sharing with separate networks. While participants' experiences are highly diverse and many experienced a wide range of life events simultaneously, we identified some commonalities that their separate networks share. Most participants turned to online communities centered around the specific life event they were going through ($n = 22$), and some ($n = 5$) turned to networks that were not relevant to the life event they were going through but relevant to their identities. We adopted the Social Support Behavioral Code to identify and categorize the support provided by separate networks [30]. Out of the five types of support (informational, instrumental, esteem, network, and emotional support), informational and network support were the most salient support types that participants mentioned in interviews. In addition, participants ($n = 4$) sought support not only for life events they themselves experienced but also for life events their loved ones experienced (and thus, that also impacted them). Moreover, some participants ($n = 9$) established one-to-one friendships with individuals from these communities. Here we consider such individuals as "virtual friends," and we examine the interactions with virtual friends in the context of online communities.

4.2.1 Receiving network support. Many participants ($n = 22$) described receiving network support (finding a sense of belonging from a community of people with similar experiences [30]) in separate online communities. For example, P25 said "[The community] was empowering, because sometimes you feel like you're the only one going through something... You know that's not the case but you feel that way." P25 experienced divorce and found women around her age who were dealing with

similar situations in an online community called CafeMom. As she mentioned, even though she knew that she was not the only one in the situation, she did not feel that way until she met similar others. People whose loved ones experienced life transitions also found network support from online communities valuable. P22's brother was recently diagnosed with a mental health disorder, and he perceived this to be something difficult to share with networks of known ties: *"A lot of stuff is so stigmatized that people don't want to talk about it. It's more widespread than anybody realizes but because it's so stigmatized, nobody wants to talk about outwardly, myself included."* Instead, he turned to a community focused specifically on that disorder. He elaborated:

They've experienced the same thing, so I realized that it wasn't about me....My brother's got the same problem as millions of other people. It was cool to see that other people have the same life stories.

Participants also joined separate online networks that were not directly related to the life events they were going through but rather related to their identities. For instance, P4, who moved to Boston and wanted to connect with the LGBTQ community there, said,

[When] I think about Boston, I'm like, 'Of course there are queer people,' but then seeing [in the community], 'Wow, there are these huge groups of people who are really vocal and willing to get together' was really comforting for me.

Being able to interact with similar people provided comfort, especially for those dealing with stigmatized life transitions such as mental health struggles. People generally avoid publicly sharing sensitive life events, such as pregnancy loss [5], as it can be difficult to find similar others in networks of known ties. However, online communities provide a space for open discussions, allowing people to see the prevalence of the situation. As P8 described,

I was in one [online community] after we had a miscarriage and there were a lot of people who were going through exactly the same thing. In my personal life I didn't have a lot of friends who were in the exact same situation, so it was really nice to be able to speak to people openly and anonymously about what I was going through and express the same anxieties that we were all sharing at the same time.

"I am not the only one" is a phrase that many participants mentioned that summarized their experiences. In these examples, we see how finding peers with similar experiences in online communities can give people comfort and help them feel less alone during times of change.

4.2.2 Receiving informational support. Network support can be accompanied by informational support that helps solve or eliminate problems, such as providing information or advice [30]. Many participants actively posted questions in online communities centered around major life events they were experiencing. For instance: P4 had concerns about medical treatment for a specific medical condition (*"What's the difference between a PET scan and an MRI?"*). Other participants, such as P8, tended to ask more detailed and context-dependent questions (*"What is it like to have given birth in a hospital recently [during the pandemic]?"*). People also asked for personal recommendations. P27 posted to find medical resources (*"Do you know any surgeons or any doctors you can talk to that are local to me that you would recommend?"*). Some participants asked questions not for themselves but for others they cared about. P21, for example, relied on community members' advice to find an apartment for her daughter before her daughter went to college (*"Has anybody had any experience at this apartment complex, any security issue?"*).

Participants generally associated informational help from online communities with objectivity and impartiality. As P15 stated, *"With family and friends, I would be talking more about my emotions. Whereas in the group, I was talking about factual things, just looking for factual support details."* P8 had a similar observation,

Advantage is, if you ask a question [in online communities], it's a neutral opinion. It's somebody who's a sounding board. A panel of people who you don't know in real life is probably going to give you a lot more impartial opinions. They're going to be more balanced than a friend or family member.

Quotes like these demonstrate that online communities provide unique informational support that networks of known ties do not typically offer during major life events, as anonymity and lack of personal history allow for what participants considered unbiased opinions. A smaller group of participants ($n = 4$) mentioned that resources provided by online communities also differ from those on official search engines or agencies when they seek information to deal with life transitions. P21 joined an online parent group of her daughter's school when her daughter started college. P21 had safety concerns over her daughter's apartment, and the information she received from the apartment company was limited, so she used the group as a resource for decision making. As she explained:

[It is helpful] to be able to talk to somebody who's actually used the security. Being able to have that parents' group to pull on those resources is good to help influence those choices, where otherwise you wouldn't be able to have as good of a practical experience to draw on decisions.

From these responses, we can see that the resources provided by online communities tend to be informal (P8: *"It provides a more informal resource."*) and often based on practical personal experience (P21: *"Things like that are just practical."*). However, this does not necessarily mean that such resources are less helpful than the formal ones from official websites or professionals. In the context of life transitions, the majority of participants ($n = 21$) explicitly acknowledged the value of online communities as a source of informational help (P21: *"That was just really an invaluable resource for us."*) These examples demonstrate the importance of firsthand experiences from similar others in readjustment to life transitions, highlighting the value of online communities during uncertain times.

4.2.3 *"Lurkers" and reciprocal help.* Prior research has examined lurking behaviors within online communities and found that most users do not have incentive to actively add more value to the network through posting or commenting [39, 99]. However, participants described a more complex picture of the positions they took in online communities. While participants generally lurk in online groups, they were willing to help others when they encountered questions that they could answer. In P8's words,

I like to stick around in case something comes up where people need something that I knew about... Who knows? I might need support later. For now, I just would like to lurk in case I could help people.

Like P8, many other participants lurk to wait for the opportunity to help people. This also holds true when people become more familiar with the situation, growing from a novice to an expert (echoing prior works [39]). For instance, although P21 no longer needed to stay in the parent group of her daughter's university after her daughter had become familiar with the school, she still decided to stay in the group:

There were things that I knew the answer to for people after. There's been things people are able to help me with. Now both sides are getting something, so it's a two way street.

For some, even after they had passed through a life transition and moved on with their lives, they remained in the online community in case they could help others. As P27, who had experienced serious physical health issues, stated,

I don't plan on leaving these groups. If there's a post that resonates with me or I can answer their question or help with them, I would definitely comment on that. If there would be a way to help out, I would be open to that and sharing the name of my surgeon [as] he had a success story with me.

For those who have gained support from online communities, many perceive the interactions to be a two-way street, a virtuous circle that they would like to contribute to. These people often already have certain experiences with the life events, so their suggestions are particularly useful for newcomers. Meanwhile, for some, the action of helping others by itself is healing and therapeutic – “They don't realize that me helping them helps me.” (P26), echoing the helper therapy principle [84]. Newcomers to a community build up knowledge and experience while becoming attuned to community norms. In this way, “turkers,” though seemingly making no contributions, actually do add value to online communities.

4.2.4 Virtual friends. Virtual friends are those with whom one does not have pre-existing ties and establish personal relationships with as part of a separate online community. Interactions with virtual friends are different from those with broader online communities in that they are one-to-one, more intimate, and often extend into personal life. For example, P26 met a girl who had identical experience like her—experiencing recovery from addiction and death of her boyfriend—in an online community for people with addiction. She described their friendship,

It's so odd to find comfort in strangers. Because everybody in my life, my families, they don't have the same experiences. They don't know how to go about it. [But] she knows what I'm talking about.

Although no participant had met their virtual friends in person before they talked to each other online, they universally mentioned that the similar experiences between them immediately create a sense of intimacy. In P26's words, “It's like I'm talking to myself, so I instantly [felt] comfortable [with her]. Because with her, she's dealt with it firsthand. She's more understanding.”

P23 was a football coach and had a similar experience when he was recovering from a surgery,

He's a coach in New York. When I shared about having my surgery, he sent me a direct message. It was really long and it was a good message. He had been through it and just offered me some advice on rehab. And we never had any connection other than that he sent me that message.

In these cases, online friends that people considered as part of their separate networks became part of their networks of known ties over time. Furthermore, these friendships are not restricted to social media—rather, they extend into other parts of personal life. Like P4 said,

The [specific health condition] community on Twitter was such a huge support for me that I found so many close friends that I'd never met in real life. And over time, we ended up getting together in person, like me flying to someone's wedding and someone else coming on a trip to meet in Colorado.

Friendship development was common among participants, many of whom planned to meet their virtual friends in person at some point. As P26 shared, “I'm going to be meeting her next month. It is something that I'm really looking forward to because I've spoken so much to her. I want to put an actual physical face [to] her.” These responses demonstrate that relationships with virtual friends developed from identity/experience-based relationships to bonds between close friends.

4.3 Identity's role in online communities

4.3.1 Life transitions and identity change. As people encounter major life transitions, their identity can be impacted significantly. The majority ($n = 22$) of participants stated that their identity changed

in some way with events such as coming out as LGBTQ+, the death of a family or friend. P10 felt that entering a new relationship changed her identity because it was a relationship that “*has been very good for [her]*,” and she has “*definitely become a better listener*.” Additionally, for P15, when asked if she felt her identity changed as a result of her recent marriage, answered:

Yes. I felt like being married and joining this gigantic family is still an ongoing transition for me just because my nuclear family is super small... Becoming part of that identity, I think, has been most salient to me on social media just because you can see how many people have that last name and are Facebook-friending me. “Oh. I’m in this family now.” I think that was what helped me really visually see this.

These identity changes demonstrate the potential effects of life transitions upon individuals. Additionally, as people face difficulties when sharing their major life experiences across different online audiences, their identity can play a role in which audiences they interact with moving forward. To facilitate these experiences, individuals often present their identities differently across different online social networks [9]. We further investigate how participants described their experiences in interacting with separate networks based on their faceted identities or parts of their identities.

4.3.2 Facilitating identity in different separate networks. Being involved in multiple online networks was prevalent among participants. When interacting with different networks, it is important for some individuals to facilitate different identities or aspects of their identities [43]. For example, P7 socially transitioned as a transgender man by changing their name and pronoun. As P7 described, “*Discord is another place where nobody knows about my dead name... at all*.” For P7, their name is significant to how they identify themselves, and their experience demonstrates the usage of separating one’s identities in different networks. Additionally, P15, a graduate student who identified herself as a crime victim described,

Specifically, when I was dealing with everything else, it felt like grad school was really piling on top for me, so I ended up joining a closed grad school group for women of color. I did join a support group for other people who have been victims of crime before just so that I could hear their stories.

Being a graduate student, a woman of color, and a crime victim are all salient parts of P15’s identity, and she joined online groups fitted to these specific identities. Participants’ experiences demonstrate the usage of different separate networks that they joined in relation to their identity or different parts of their identities.

4.3.3 Separate networks with similar others. Individuals configured their online networks to suit their identities or aspects of their identities. This meant that participants would join groups that contained similar others. For example, P3 elaborated:

With Facebook, I specifically joined groups for people who are experiencing the same thing as me. So the group I’m most active in is a non-binary group for non-binary Black people. So we are all going through it. We are all around the same age and dealing with a lot of the same things.

Additionally, P18 who recently had his second child, said:

I mean, I’m part of the neighborhood dad’s network group in our area. So like, for like childhood related things, you know, it’s connecting things, you know, it’s connecting with other young fathers or fathers of young children to see what they’re doing. A lot of my individual friends right now don’t have kids yet... So reaching out to people with kids to develop relationships from that perspective.

Joining specific groups that are tailored to participants' identities allowed conversations and relationships to form amongst individuals are experiencing similar situations. Additionally, these separate networks gave individuals consolation and a stronger connection from groups where individuals can relate to one another's experiences.

4.4 Emergent challenges

Despite the positive experiences that may stem from joining, sharing, and interacting with separate networks for major life transitions, individuals can still face challenges in these networks. In some instances, it is difficult for social media users to discover separate networks that are specific to their experiences or needs. Additionally, sometimes social media users experience direct or indirect negative interactions with others as they are unfamiliar with the rules and norms within the separate network.

4.4.1 Finding separate networks. For many individuals, it can be difficult to find online communities related to particular life transitions on social media platforms that do not make it explicitly clear that these separate networks are available. P27 describes,

But if I'm not a person who is that tech savvy, or kind of knows about [groups], I don't know that I would know to go on Facebook and just search for, you know gallbladder disease or something like that or support groups for lyme disease... I think those are things people search in like Google, but do they think to search for that on a social media platform? ...So maybe just even just more awareness that those groups are out there and you can kind of form a connection that way with others.

Specific separate networks that are tailored to an individual's needs or experiences can be difficult to find. P15 also provides a possible approach to this issue in which, "...if there were something that was a little bit more streamlined, I think people would be able to better find the groups that they were interested in looking for."

In addition, participants raised issues regarding the online support groups' sustainability. Those separate networks might have very short lifespans due to factors including member activity and community rules, which hinders people from receiving sustainable online social support and leads them to keep seeking other relevant separate networks during life transitions. P15 added:

Sometimes I thought I'd find support, but the group had not been active in a couple of years or something. Or, I would join something and then some moderators would get banned or something, or the group would shut down, so I have to just keep looking for a place to find that support.

As these quotes demonstrate, it is important for individuals going through major events who seek support outside of their networks of known ties to be able to easily find active groups that can help facilitate their experiences, but this need is not always met.

4.4.2 Navigating among unfamiliar digital terrains. When sharing with separate networks on social media platforms that afford anonymity [8, 9], users can freely share their experiences without having their content attached to their personal selves. However, not all online spaces may clearly display rules or norms to their users about sharing one's personal experiences [26, 35, 70]. For instance, Chandrasekharan et al. [26] identified three types of norms on Reddit, including micro norms, which are not usually explicit and are specific to particular communities. Without understanding the rules or norms in a space, especially the less explicit ones, sharing or presenting one's experiences in a separate network can potentially negatively impact themselves or another person within that same network's feelings or experiences. Everyone experiences events differently, and it can be

burdensome to share within a group without knowing how one's disclosures may impact others or themselves. As P8 describes,

A disadvantage is you don't know the nuances, you don't know what someone's situation is like and it is an anonymous world where people are in very different situations... And also I think there's a little bit of a lack of sensitivity sometimes when it's totally anonymous.

Due to unfamiliarity with the rules and norms in those unfamiliar digital terrains, individuals can sometimes receive negative feedback from strangers when sharing with online communities. P11 publicly creates content on YouTube and mentioned that he has had “*a few pretty negative experiences from [anonymous users on] YouTube a few times, from posting things that [I've] created.*” These responses demonstrate that despite its positive aspects [8], anonymity can sometimes lead to insensitivity, and thus negatively impact sharing experiences in separate networks.

To tackle issues like insensitivity amongst some users in separate networks, some participants suggested “templates” for these separate networks that describe what is expected of members of an online community as well as rules or norms. For example, P9 who was going through troubles with immediate family, found Al-Anon to be particularly useful. P9 described,

There were a set of rules or boundaries or guidelines to follow... I think that, that's what I liked about it too is that I knew that there was going to be a format, there was going to be a routine to it and there was going to be a way that people were expected to share and that it would limit the comments.

Separate networks without a set of rules or structure can make it difficult for newcomers to get accustomed to a separate network that they decide to join [61]. Therefore, potentially implementing a template for these groups may better facilitate interactions amongst members.

5 DISCUSSION

When people face major life changes, transition work often spans multiple online spaces. Haimson developed the theory “social transition machinery” [48] in the context of gender transition to describe how “different social media sites and networks remain separate yet work together to enable people to carry out different types of transition work and draw from different types of support networks.” In studying pregnancy loss disclosure outcomes within networks of known ties, Andalibi [2] showed how tie strength does not necessarily lead to more helpful interactions following a disclosure; in fact, loose acquaintances with whom one may not have been in touch with for years can become supportive actors due to the shared experience. Our study uses these theories to examine people's experiences with separate networks and provide new insights into the relationships between networks' life transition disclosures. More specifically, we discuss how separate networks facilitate people's readjustment to various life transitions by allowing them to interact with people who share similar identities or experiences. We next describe how separate networks include groups of people we call *waiting contributors* and *virtual friends*, both providing valuable support to members of those networks. We also highlight that the boundaries between separate and known networks are dynamic and fluid. That is, one's separate networks have the potential to evolve overtime and become their known networks. We further discuss how people's identities influence their participation in online separate networks and group membership during major life transitions.

Our results suggest that separate online networks provide informational, network support and emotional support for people facing life transitions, which aligns with previous studies' findings [7, 78, 110]. However, what is different between our study and prior research [24, 44, 47] is that, instead of focusing on specific types of life transitions that people go through personally, we extend the scope of analysis to include a wide range of life transitions as well as life transitions that

people's loved ones experienced. With the diverse life events that participants and their loved ones experienced, we add breadth to prior studies [5, 24, 44, 47, 53] by discovering that people seek support from separate online networks in the face of various life events, not limited to the ones having negative impacts or the ones requiring significant amount of readjustment.

Furthermore, out of 28 participants, 24 experienced more than one life event in the past two years and many life events happened at the same time (see Table 2). Simultaneous life events intertwine with and mutually influence one another, making participants' readjustment process more complicated and difficult than if facing only one life event. For example, as described in our Results, for P18, the pandemic and the birth of his second child made it more stressful to be laid off from work, and his readjustment to his job loss also included dealing with the pandemic and taking care of his second child. Successful readjustment to his job loss also eventually helped P18 to better adjust to the pandemic and his role as a father of two kids. While prior research that focused on particular types of life transitions in isolation undoubtedly also included participants who were experiencing many different types of life events at once, isolating one type of event in research may have missed some of this complexity. By asking about and then analyzing data regarding participants' experiences with multiple life events, we gain a more complete picture of their online behaviors.

It is also noteworthy that, for those who go to separate online networks to help their loved ones readjust to life transitions, the network and informational support that separate online networks provide help both the people in the network and their loved ones who are experiencing the life transitions. For instance, the information P21 received from her separate online networks helped her adjust to becoming an empty nester and helped her daughter transition smoothly to college life. Therefore, the impacts of separate online networks go beyond the individual life transitions they center on and those who are inside that online network.

We provide a holistic perspective to analyzing people's experiences with separate online networks during multiple life transitions, and contribute new insights to prior research by describing how separate online networks may influence people on a larger scope than previous researchers estimated, especially when it comes to those experiencing multiple life events simultaneously.

5.1 Waiting contributors: capturing the value of "lurkers"

Much prior research regarded lurkers as free riders and argued that they have negative influences on online communities [73]. On the other hand, others acknowledge the importance of lurkers and the value of their contributions [37, 39, 98], such as propagating knowledge to those outside of online communities or using information gained from online communities in their personal life or external organizations [14]. Our study substantiates prior work stating that the value of lurkers cannot be neglected and that they increase the reach and influence of online communities [98, 99]. Furthermore, we offer a new perspective of viewing members of online communities that takes into account not only their behaviors, but also how these behaviors shift over time, as well as their intentions and the reasons behind their behaviors. These insights contribute a more in-depth understanding of the existing concept of lurkers. The current study corroborates previous work by demonstrating that participation in online communities is an adjustable process that develops over time [22]. Furthermore, we contribute new insights to this study, finding that such adaptable process is not limited to Wikipedia users but applies to general separate online networks as well. Like their active, committed counterparts, lurkers can also potentially make significant contributions within their online communities when they feel the time is right.

Prior research [107] viewed conversations being dominated by a minority group of participants as a sign of participation inequalities, but they did not consider that many of those who did not initiate conversations may have been actively reading content and participating in less visible

ways. Willet contrasted “active lurkers” (those who make direct contact with posters or propagate information gained from posters) with “passive lurkers” (those who merely read content) [14], and Takahashi further categorized lurkers according to their actions outside of online communities and the communities’ influence on them [98]. Yet, we need to be mindful that these studies were conducted approximately two decades ago when many platforms for separate online networks, such as Discord and Reddit, had not been built yet. With the creation of various online platforms allowing people to find and build separate online networks, today’s online user activities have become more complex than the dichotomous “passive versus active” paradigm [42]. Our study corroborates this complexity. Some seemingly passive lurkers are actually actively reading content and waiting for a chance to participate and contribute. It is inaccurate to define them simply as passive lurkers as many do not intend to free-ride. Categorizing lurkers merely based on their current actions neglects their intentions, potential future contributions, and potential value to their communities. Thus, instead of categorizing lurkers based on their current actions and influences, we offer a new perspective to view lurkers in the context of life transitions. We conceptualize lurkers based on their individual situations and the stage of life transitions they currently inhabit. Here, we propose the term *waiting contributors* to describe lurkers who are actively waiting to make contributions and hoping to answer questions and help others at some point in the future, regardless of whether they are currently passively or actively lurking in online communities. In addition, participants in our study shared that they lurked not due to fear of criticism or of misleading community members, like researchers identified in knowledge-sharing communities in organizations [12]. Rather, in the context of life transitions, people explained their reasons for lurking more positively. We further divide waiting contributors into two types according to their reasons for lurking:

- **Contributors limited by differences in individual experiences:** Although online community members generally share similar life transitions, every individual’s situation is unique in some ways. As we demonstrated in the results, questions being asked in participants’ online communities are personalized and context-specific. This type of waiting contributor is waiting to encounter questions related to their own experiences, at which point they can become actively engaged in online communities.
- **Contributors who need time to grow:** These are people who are still in early stages of their life transition and need time to grow before contributing. Once they feel experienced enough with the situation or topic and confident to help others, they are more willing to post, comment, and support others.

Participants’ responses illustrate that the action of lurking does not necessarily define a person as a lurker. Rather, it only indicates a person’s current stage with respect to interaction and engagement. We need to adapt our way of viewing lurkers when it comes to separate networks related to life transitions. Waiting contributors are not simply lurking, they are waiting to participate. Once past the waiting stage, they then become actual contributors. The new term *waiting contributor* allows online communities to view lurkers more positively and with more empathy. Such positive perceptions in return encourage *waiting contributors* to gain confidence and seek chances to participate. Online communities designers and moderators should endeavor to help waiting contributors move to the collaborative stage by giving them enough time to grow, or providing questions and topics suitable for newcomers, to stimulate discussion.

5.2 Virtual friends and the permeability between separate networks and networks of known ties

We found that, in online communities, when users find peers with highly similar — or sometimes almost identical — experiences, they tend to form attachment with that person that is more

in-depth and personal than their attachment to the community as a whole. Mutual trust is the primary motivator for the commitment to virtual friendships, with reputation, performance, pre-commitment, and broad situational factors (such as close-knittedness of a community) being the foundation of trust [54]. Carter [25] proposed freedom, commitment, and intimacy to be the core elements of virtual friendships. Both studies focused on how the quality of interactions impacts relationships but did not examine the influence of life experiences on virtual friendships.

We discover an additional motivator for virtual friendships: the experience of highly similar life transitions. All participants who committed to virtual friendships initiated conversations with their virtual friends because they both experienced highly similar or almost identical life transitions. Interactions between virtual friends are one-to-one, life transition-focused, and with a high level of self-disclosure. Specifically, when such interactions happen between individuals that are matched through mental health peer support technologies, prior researchers find that individuals become each other's peer supporters in both mental health and other parts of lives [4]. In the current study, the concept of virtual friends is similar to but different from peer supporters in that it not only applies to mental illness but a wide range of life transitions. In addition, virtual friends are not necessarily peers who are in the same stage of a life transition. Instead, virtual friendships can develop between experts and novices or any two individuals at different stages of a life transition. Interestingly, people are more willing to share feelings and thoughts with virtual friends that they would not disclose to known ties because virtual friends have similar experiences and therefore can better empathize and give more useful advice.

Moreover, many people are not satisfied with limiting their virtual friendships to online communications. We found that virtual friends from separate networks sometimes became part of networks of known ties in personal life, and people commonly hope to develop their virtual friendships into in-person friendships. Such intimate relationships sometimes continued even after life disruptions ended with conversations expanded to include a wide range of topics. These features of virtual friends distinguish them from separate networks, as they require more time and emotional commitment but also offer more mental and informational support in return. From virtual friendships, we can see that the delineation between networks of known ties and separate networks is not fixed. The boundary between online and offline networks is not set in stone either; rather, it is dynamic and subject to change during and after times of life change. Future research should further examine how to better facilitate establishing virtual friendships and the shift from virtual friends to close ties both during and after life transitions.

5.3 Identity's role in life transitions and online communities

A person's identity can be completely or partially altered by a life transition they experience by changing their perceptions of themselves or the world around them [11, 36]. Participants such as P10 and P15 described how their identities were changed in some capacity after experiencing major life events. Thus, identity and identity change can influence whom individuals choose to interact with on social media, such as separate networks that contain others with similar identities, based on the life transitions they encounter. Corroborating prior work (e.g., [64, 65]), our results indicate that becoming part of online communities with similar others can ease the life transitions people go through by providing a comfortable and supportive space.

Faceted identity refers to the fact that each person has multiple identities or "different sides of identity that are expressed in different situations" [43]. Thus, it is important for people to find spaces and communities that allow them to freely express their various identity facets. This paper extends prior research [64, 65] by providing a deeper understanding of how people may facilitate life transition experiences across multiple identities using online communities, specifically communities that are separate from their networks of known ties.

In networks of known ties, people have the ability to communicate with both strong and weak ties. During major life events, particularly those that are not sensitive or stigmatized, people can reach out to those close friends and family to inform them of life events and seek support [41, 71]. However, people's identity can feel strained when interacting with communities that do not share the same experiences. Our findings demonstrate that people often do not feel comfortable going to these networks of friends and family that may not share similar characteristics such as identities or life transition experiences, leading them to seek communities outside which we define as separate networks. In these separate networks, the way people identify themselves have influenced them to join groups, or separate networks, that contain similar others. For those experiencing difficult or sensitive life events in particular, finding a community of people who are experiencing similar events can bring solace. In interacting with similar others, people can form connections, friendships, and relationships, demonstrating identity's role in bonding people together based on experiences or characteristics that they feel define who they are. Participating in these spaces can also facilitate sharing experiences with networks of known ties at a later time [5]. We extend previous literature on identity and identity change in regards to major life transitions and how identity-related experiences can contribute to decisions in joining separate networks and potentially easing major life event experiences. This paper further describes the influences of identity and identity change across multiple life transitions and how experiences in separate networks can make individuals feel more comfortable and welcomed in online spaces.

6 DESIGN RECOMMENDATIONS

We discuss ways that separate networks across social media sites can be designed to better support people during life transitions. We include ways to make online communities more easily visible to social media users, features that can be integrated into these communities such as indicating one's transition stage and promoting contribution, and the potential of templates for online community members to familiarize themselves with the online environment.

6.1 Streamlining the search for separate networks and similar others

Many participants in our study ($n = 7$) found it difficult to find specific online groups for themselves and to make connections with people facing similar life transitions. For individuals like P15, P24, and P27, finding specific online groups can be unmanageable, especially for people who are not technology savvy.

Previous research has noted that features of social networks can be particularly helpful in the search for support and resources. For example, Breslin et al. [18] described how making connections with each other and with communities online can be useful for finding specific individuals with expertise and relevant information. We expand on these concepts by describing how joining online communities with people who share similar identities and experiences, rather than only providing connections with similar others, can be beneficial in facilitating a life transition. There is not one sole approach to making separate networks more easily found; however, P15 noted that making the search for networks more "streamlined" can be helpful. A potential design feature that can be implemented into social media sites is a survey that asks users if they need resources and support from a separate network based on a specific life transition or event they have experienced and shared on social media. Based on people's responses, social media sites can provide users with resources such as a relevant online community. A survey can aid platforms in providing users with the necessary support that is relevant to their specific life events. Additionally, another survey can be implemented after an individual has joined a group that asks newcomers to indicate if they would like to build connections with individuals in that online network and what characteristics or identity facets that person should share. Surveying people about their needs, and facilitating

connections based on those needs, can make it easier for users to connect with similar others within online communities. However, care must be taken to protect users' privacy and sensitive data that they may disclose in these surveys, and this approach may not work on a social media site that users mistrust or one that has a history of not protecting users' confidentiality. Some social media platforms have started to explore and implement mentorship networks that can help ease the search for similar others. For example, Facebook introduced a Mentorship Program in Facebook Groups to build meaningful relationships to offer or find support³. Implementing similar features across social media sites can provide and enhance support and can allow users to easily find individuals with highly similar experiences and identities to ease life transition experiences.

6.2 Features indicating transition stage and promote contribution in separate networks

With the consistent advancement of information and communication technologies, many features can be integrated into current social media. For those specifically looking for a space to talk about or look for resources for a life transition, it is important to include features that can better facilitate people's life transitions.

First, including a feature that enables people to indicate where they are in the process of a life transition can allow better conversation and interaction amongst group members of a specific online network. Life transitions are experienced differently by every individual, but noting approximately where one is in the process or by indicating a person's current situation can bring similar others together. It can also give veterans opportunities to assist novices. These indications can be personally stated by individuals in their profile based on their level of comfortability of disclosure. Platforms can also give users the option to choose to stamp a timeline in which how long they have been experiencing the life transition or to define when it occurred. In addition, features can be included to give waiting contributors a chance to actively interact with online communities. Practitioners can integrate a feature asking users what topics they would like to talk about or questions they would like to answer, and users can receive notifications once relevant questions or discussions have occurred.

6.3 Features for navigating unfamiliar digital terrain

Joining and sharing in an online community can be difficult and unfamiliar for new community members. An online space's rules and norms can provide a better understanding of the online space when people join and can influence how people behave in relation to online communities [61]. Making community norms visible can prevent negative interactions amongst community members while enhancing people's online experience [70]. We build on this notion of norms visibility through our findings that suggest providing "templates" to online communities can be beneficial for engagement and support to help people better navigate unfamiliar digital terrain. Templates are examples that users can follow and use to engage and better familiarize themselves with an online community. Templates could take the form of partially-filled posts or messages that demonstrate how an individual can potentially structure their posts or messages. Online communities can also provide previous posts or messages as examples when sharing while making community guidelines visible on the side of the screen. These examples and guidelines can be implemented through pop-up suggestions while a new community member is writing a post or message, helping them to follow community rules while sharing. Templates could be tailored for each particular online community. Customization is important, especially when acknowledging the diversity of people's experiences. Creating templates can potentially reduce concerns mentioned previously such as the emotional and mental burden of figuring out what to say or how to phrase

³<https://socialgood.fb.com/mentorship/>

it, online toxicity, and a lack of sensitivity when sharing in networks by helping new members follow community guidelines and increasing flow of discussions amongst group members.

Life transitions are highly diverse and complex, so templates in online communities must enable substantial flexibility and adaptation. To design templates, platforms can use a life transitions taxonomy [51] to ask people about their major life events and then personalize their online experience by incorporating other elements, such as life transition stages and demographic information. We acknowledge that personalization can create unintended consequences such as privacy concerns and generalization of life transitions. Templates may potentially limit the support people can receive from online groups, as they may inadvertently restrict how people share and connect with others in their attempt to follow community norms. To mitigate this negative implication, sites could potentially leave notes or warnings on posts or messages that potentially oppose guidelines, and sites can give users the chance to edit their posts or messages. While this approach to address templates' potential negative implications is speculative, there is value in considering alternative methods [16, 80]. It is also important to note that all major life transitions are unique and can be experienced differently for each person. Therefore, in this instance, it is difficult to create templates that are tailored to every community's and individual's specific experience. However, providing templates can make it easier for both members and group admins to facilitate discussion and membership.

7 LIMITATIONS AND FUTURE WORK

Although this study documented a variety of life transitions based on 28 participants' experiences, we realize that those experiences are still relatively limited given the diversity and complexity of life events. We encourage researchers to keep expanding contexts and life events in social computing studies. In addition, we acknowledge potential sampling biases. To recruit participants with diverse backgrounds, we relied partially on the research team's online social networks in addition to a research recruitment platform. An additional bias to the interview sample is that people who are doing worse emotionally during life transitions might be excluded in the sample as they are less likely to respond to our interview requests. Moreover, despite diverse demographics, participants in our study all hailed from North America, and we acknowledge people's life transitions and social media behavior might be different in other cultures and regions. Finally, this paper mostly focused on participants' challenges related to social media; we are aware that other challenges including social, economic, and physiological challenges are equally important to explore. Future work can further investigate the role of different networks in life events and how these networks can facilitate and support people during major life transitions. Additionally, future work can examine unexplored challenges (e.g., social, economic, and health-related) using methods such as participatory design to inform equitable technology design. During life transitions, people experience challenges in both networks of known ties and separate networks. Thus, it is important to consider the benefits and disadvantages of different networks to create more supportive online communities for people in times of change.

8 CONCLUSION

We conducted an empirical study to understand people's sharing behaviors and social media related challenges within both networks of known ties and separate networks during a wide range of life transitions. We also examined how identity and identity change relate to people's experiences in separate online networks. Through our study, we conceptualized the definition of networks of known ties and separate networks and reaffirms that they can be applied to multiple life events in the context of life transitions. We identified challenges that people face in both types of online networks, and found that separate networks mitigate some challenges present in networks of known ties that

sometimes hinder self-disclosure. Yet, online separate networks introduce emergent challenges that people must contend with. We provide novel insights into how separate networks can be better designed through enhancing search function, integrating related features and providing context sensitive templates to facilitate life transitions.

ACKNOWLEDGMENTS

Thanks to the participants in this study for sharing their experiences with us, and to the anonymous reviewers for their helpful feedback.

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