

# For You, or For "You"?: Everyday LGBTQ+ Encounters with TikTok

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Online communities provide spaces for people who are vulnerable and underserved to seek support and build community, such as LGBTQ+ people. Today, some online community spaces are mediated by algorithms. Scholarship has found that algorithms have become deeply embedded in the systems that mediate our routine engagements with the world. Yet, little is known about how these systems impact those who are most vulnerable in society. In this paper, we focus on people's everyday experiences with one algorithmic system, the short video sharing application TikTok. TikTok recently received press that it was suppressing and oppressing the identities of its growing LGBTQ+ user population through algorithmic and human moderation of LGBTQ+ creators and content related to LGBTQ+ identity. Through an interview study with 16 LGBTQ+ TikTok users, we explore people's everyday engagements and encounters with the platform. We find that TikTok's For You Page algorithm constructs contradictory identity spaces that at once support LGBTQ+ identity work and reaffirm LGBTQ+ identity, while also transgressing and violating the identities of individual users. We also find that people are developing self-organized practices in response to these transgressions and violations. We discuss the implications of algorithmic systems on people's identity work, and introduce the concept of algorithmic exclusion, and explore how people are building resilience following moments of algorithmic exclusion.

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

Additional Key Words and Phrases: TikTok; LGBTQ; Identity Work; Algorithms; Exclusion; Resilience; Algorithmic Exclusion

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## 1 INTRODUCTION

Marginalization, as presently conceived, relates to how certain groups of people are relegated to the fringes of society and denied their place within it [131]. One of the primary societal mechanisms through which people are marginalized is centered around people's identity, or self-concept [51], and people are often pushed to the periphery of society based on various identities, such as one's gender expression, race or ethnicity, sexual orientation, ability, or socioeconomic status [122, 131]. Marginalized people experience barriers every day in living their lives and being themselves because their identities expose them to marginalization, which becomes normalized and institutionalized over time [33, 138]. Today, people have access to a broad range of Information and Communication Technologies (ICTs), such as social media platforms, which can empower them to live their lives

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and be themselves where they may otherwise struggle with self-expression [43, 61]. While scholars have shown that people use social media and online community spaces to reflect upon and negotiate their identities [44, 116, 117], as well as to seek out and provide social support [31, 96], people with marginalized identities continue to experience exclusion [110, 133] and harassment [14] in digital spaces.

To further examine the relationship between marginalization and sociotechnical systems, in this paper we focus on one historically marginalized population, individuals who identity as Lesbian, Gay, Bisexual, Transgender, and Queer (LGBTQ+), as well as their other identities (such as race or ethnicity). While scholars in the fields of Human Computer Interaction (HCI) and Computer Supported Cooperative Work (CSCW) have explored the various traumas involved with LGBTQ+ people's "coming out" experiences—where individuals articulate to themselves and others a part of their identity that they had not yet recognized or had concealed [43]—here, we focus on the everyday experiences of being LGBTQ+. For people who identity as LGBTQ+, routinely enacting that identity, acting out that identity, and visibly recognizing that identity in others, can be a challenge in everyday life [43]. For example, people can be immersed in homophobic, transphobic, or otherwise prejudiced environments [50, 104], and their identities may be further suppressed and oppressed through formal institutions such as mass entertainment media [111].

While we know that LGBTQ+ people have found community online [32, 43, 56, 60], there is also a systematic push to silence LGBTQ+ identities in sociotechnical spaces [43, 60, 70, 109]. This is best exemplified by Tumblr's recent move to ban adult content from the site, which has silenced LGBTQ+ individuals who relied on the site to explore their gender and sexual identities by classifying even safe-for-work LGBTQ+ content as 'adult' [60]. While scholars are starting to explore how LGBTQ+ voices and identities are being suppressed in online community and social media spaces, here, we pay explicit attention on LGBTQ+ people's experiences with algorithmic systems.

Algorithms have become deeply—and invisibly—embedded in the systems that mediate our routine engagements with the world [89, 90]. Scholars have found that algorithms routinely influence our behavior without our knowledge [8, 22], signaling a need to better understand people's routine experiences with algorithms. In this paper, we pay specific attention to people's everyday experiences with one algorithmic system—TikTok—which recently received press that it was suppressing and oppressing the identities of its growing LGBTQ+ population through a combination of algorithmic and human intervention [9, 15, 70, 109]. TikTok, or Douyin, as it is known in China, is a short video creation and sharing application by the company ByteDance. The application is used for making and sharing short (15 to 60 second) videos. TikTok does not require an account to view videos, but an account must be created in order to create video content, view and write comments, like videos, or engage with the more personalized aspects of the application, particularly its For You Page (FYP) algorithm. To our knowledge, there is no existing work on people's day to day experiences with TikTok, particularly with its FYP algorithm. This paper aims to address this gap.

We conducted an interview study with 16 LGBTQ+ TikTok users, where we explore their everyday engagements and encounters with the platform. To frame this exploration, we develop a conceptual lens that brings together the concepts of identity, identity work, infrastructure, and algorithmic identity, to describe these experiences and encounters. We find that TikTok's FYP algorithm constructs contradictory identity spaces that at once support LGBTQ+ identity work and reaffirm LGBTQ+ identity, while also transgressing and violating individual user identity intersections. We also find that LGBTQ+ users are developing self-organized practices in response to these transgressions and violations. We discuss the implications of algorithmic systems on people's identity work, developing the concept of algorithmic exclusion. We also explore how people are building resilience following moments of algorithmic exclusion.

## 2 RELATED LITERATURE

Our study focuses on the experiences LGBTQ+ people have within algorithmic systems. To situate our contribution, we start by defining the concept of identity for our work, and unpacking the relationship between people's identity and personal security. Here, we highlight the relationships between people's ability to routinely enact and present their identity and their sense of personal security. We draw on the concept of infrastructure to articulate the relationship between identity and personal security because it is an analytical lens through which to understand how human and non-human entities are entangled and embedded in larger, often society-scale systems. We provide the context for LGBTQ+ representation and how infrastructure can be biased against that identity more broadly, such as through stereotypes and misrepresentation, which can create insecurity. Algorithmic systems, which are the focus of this work, have become digital infrastructure that mediate our routine engagements with the world that also normalize certain identities and identity expressions, which can have deep—and invisible—implications on people's ability to routinely enact and/or perform an LGBTQ+ identity. Finally, we situate this work in the context of the algorithmic platform under investigation here—TikTok.

### 2.1 A Lack of Security in Routinely Enacting and Visualizing LGBTQ+ Identity

We conceptualize self-identity as a person's self-concept, which is how individuals think about and view themselves socially or physically [51]. Self-identity is a representation of who we believe we are and how we want others to see us. While traditional constructions of self-identity relate to a person's individuality [45], for many, self-identity is a collective construct developed through perceived membership in various social groups [129]. Thus, self-identity can be defined across a range of categorical identities, such as race, gender expression, and sexuality. A strong conceptualization of self-identity can give people a deep sense of security in their daily lives [72]. The sense of security brought about by routines is best articulated by Giddens [52], who describes how people have a secure mental state when routines are continuous and predictable; he defines this state as *ontological security*. In this view, the ability to both routinely enact and assume an identity while also seeing aspects of one's identity visually represented in others provides individuals a sense of security about their existence.

In order to enact their routines, or their everyday patterns of action [48], people often rely on infrastructure. Infrastructure is traditionally perceived as "the underlying foundation or basic framework" of a system or organization [73]. A society relies on infrastructure to support routine activities. For example, roadways and highways enable people to routinely travel to and engage in activities ranging from grocery shopping to socializing with friends and family. As computing systems emerged and became habitually used across social settings, information systems scholars began to argue that technical systems are also infrastructure. This perspective was advocated by Hanseth and Lyytinen [64], who developed the concept of *information infrastructure*. They contend that information and networked technologies (e.g., personal computers, databases, and social media) have become embedded and entangled in information delivery and other technology-enabled societal practices [64]. For example, organizations now rely on a diverse range of information and networked technologies to maintain routine operation, such as databases, the internet, email, enterprise resource management systems, and more. Thus, information infrastructure has become an installed base upon which other systems are built; it actively supports people's routines, such as the ability to communicate with others and exchange information across a variety of contexts.

Star and Ruhleder [127] showed how infrastructure is sociotechnical, rather than the traditional view of it being either physical or technical. They describe how infrastructure is interwoven with corresponding social practices [127]—what Lee, Dourish, and Mark [80] refer to as human

infrastructure. Lee and colleagues define this term as the “arrangements of organizations and actors that must be brought into alignment in order for work to be accomplished” [80]. Moreover, they describe how forms of human infrastructure is “the underlying foundation of a system constituted by the patterns of relationships of people, through various networks and social arrangements” [80]. Much like physical and technical infrastructure, human infrastructure is critical in enabling the routine functioning of society. Human infrastructure is not to be conflated with social networks; while human infrastructure may comprise known ties like family or friends, it also consists of unknown ties that we may never encounter but upon which we rely. For example, there are people who work to animate the electric and network infrastructures that mediate our ability to engage in daily routines. We often do not know these people but their work is vital to our ability to engage in our daily routines. Thus, human infrastructure is critical in enabling the routine functions of a society.

Oftentimes infrastructure is invisible, operating in the background and supporting our ability to engage in routines without paying it much thought [127]. When infrastructure fails—what Star and Ruhleder [127] dub an “infrastructural breakdown”—it becomes visible and draws our attention. When the systems of roads and highways we use to routinely travel to and from work are under maintenance, we become aware of the physical infrastructure as well as the members of the system of human infrastructure, such as repair and maintenance crews, who are working to resolve these breakdowns.

For some populations, however, infrastructure can be chronically visible through its routine disruption of people’s lives. Infrastructure is embedded with logics that have invisible power in guiding and shaping our daily practices. For example, the logics which guide the placement of roadways and bridges have created inequities in these infrastructures that have disproportionate impact on minority communities, as these roadways are often built through their neighborhoods. This leads to an important point—infrastructure is designed, implemented, maintained, and shaped by people [16]. People are not value-neutral and their biases can become embedded in the infrastructure [139] that mediate people’s routine lives and serve as a source of disruption.

The logics embedded within infrastructure can especially burden the lives of people with marginalized identities; they can be habitual sources of anxiety and insecurity. For the purposes of this paper, we focus primarily on the experiences of LGBTQ+ people. For LGBTQ+ people, enacting that identity, acting out that identity, and seeing that identity in others, can be a challenge in everyday life. The normative logics that uphold the infrastructures that LGBTQ+ individuals inhabit everyday can be prejudiced against and invalidate their identities [49, 69, 111].

LGBTQ+ identity has historically been influenced by harmful normative representations that have flooded and subsequently dominated the infrastructures that constitute society, such as the legal system [140], health systems [40], entertainment media channels [111], and domestic and educational contexts [49]. The spaces that LGBTQ+ people inhabit are often immersed in homophobia—that is, prejudice against homosexual people [45]. Beyond living in domestic environments with people who can be hostile towards their identities, for decades, LGBTQ+ individuals globally have fought for equal rights and, for example, only recently were same-sex marriages legalized and recognized institutionally in the United States [67, 98]. Until 1973, homosexuality was considered immoral and was a diagnosable disorder in the United States [40]. For decades, media networks, and especially film media, were disallowed from creating content that visually represented LGBTQ+ romantic couples. Today, while there are more visual representations of LGBTQ+ people in popular media, these visual representations tend to skew in favor of cisgender gays and lesbians, while transgender, asexual and bisexual individuals, among other LGBTQ+ identities still struggle for positive representation and acceptance both within the larger LGBTQ+ community and more broadly in entertainment media [133]. Moreover, these visual representations are often

ill-conceived or problematic, generating normative stereotypes across media ranging from film to video games that are not aligned with LGBTQ+ individual's lived experiences [43, 111]. These threats can be experienced as identity crises [45]: the representations and norms that permeate infrastructure that people draw on to enact their identities come in conflict with their personal realities.

When people's identity routines are threatened, they often work to resolve those threats to reestablish ontological security and continue to authentically enact their identities. The process through which people remedy threats to, or reconstruct, or reaffirm their identities is a part of a larger process of identity work [20]. It is important to note that not all identity work occurs in response to threats to, or disruptions of, routine identity presentation; rather, identity work is a continual process individuals take part in over time. Snow and McAdam [125] define identity work as a process through which people engage in "forming, repairing, maintaining, strengthening, or revising" their identities. Moreover, identity work can also take place during acts of identity play, whereby people assume temporary identities or observe potential future identities as a means for understanding one's own self-identity [72]. For example, an individual might roleplay as a Democrat and a Republican, or observe discourses engaged in by Republicans and Democrats, as a means of reflexively figuring out their political identity. Importantly, identity work is often prompted when people experience difference or are routinely "othered" in their daily lives [132].

## 2.2 Digital Infrastructures for Routine LGBTQ+ Identity Work and Visibility

While identity work and identity reaffirmation can be especially threatened in physical world contexts, scholars have explored the extent to which digital infrastructures support identity work and community building for different identities. Prior work exploring the uses of digital infrastructures for social support has focused on the ways platform affordances — their design attributes — allow individuals to use such spaces to develop social support across many identity intersections [60], and converse around aspects of self-presentation and identity while maintaining strategic anonymity as a measure of safety [44, 116]. Within the CHI and CSCW community, previous studies have examined the roles that digital infrastructure and their affordances play in enabling people who are experiencing homelessness [79, 96, 108], transitioning to college [31, 124], working through relationship breakups [112], dealing with intimate partner violence [4, 38], and coming out as LGBTQ+ [30] to find social support and develop community.

Social media and online community infrastructures allows individuals to engage in identity work and identity play while also highlighting the existing tensions within such spaces, such as the presence of friends and family on Facebook, which can make disclosure of gender transition challenging [59], or how when fathers sharing information about their children can become stigmatized [2]. These studies demonstrate how, while beneficial for social support, social media can also cause undue stress for individuals wishing to do identity work. However, some scholarship has focused on how individuals use anonymity or indirectness to disclose potentially stigmatized information around identity and experience of self [3]. Dym and colleagues [43] introduce a concept of selective visibility, where the design of online platforms does not directly afford social support for identity work, such as transformative fandom spaces, but allows individuals to find and create community infrastructures where they can engage with aspects of themselves which they may not be able to safely explore in other spaces[113].

Scholarship on the LGBTQ+ community specifically has focused on the creation and use of digital infrastructures such as blogs [60], vlogs [32, 56], websites specifically for the LGBTQ+ community [68], and creative works within transformative fandom[43] as methods for creating social support for identity work. Vanessa Kitzie [77] determined that platform affordances of visibility, anonymity, and association can both enable and constrain LGBTQ+ people's identity work. This echoes findings



by Carrasco and Kerne [25] around the specific privacy concerns LGBTQ+ people must contend with in order to fully utilize social media platforms. This body of research shows how LGBTQ+ people leverage the existing online infrastructures of blogging platforms, video streaming platforms, and social media more broadly to engage in identity work, as well as create their own spaces for community support. It follows that the digital infrastructures of ICTs can provide a much-needed space for social support and identity work. When these spaces are not available in an offline context, they can, at times, serve as the only place where such identity work and exploration can take place.

Some digital infrastructures are considered to be more LGBTQ+ friendly than others, to the point where they become queer-coded, meaning that although they are not explicitly designed for LGBTQ+ community, they have come to implicitly support engagement by members of the LGBTQ+ community. For example, Haimson and colleagues [60] discuss how certain platforms, such as Tumblr, can be considered queer by both researchers and users alike because they provide space for LGBTQ+ identity work. Recent platform policy changes on Tumblr, however, have effectively pushed away many users from the platform [60]. Further, applications and websites specifically designed for the LGBTQ+ community, such as dating applications or online support groups, create visibility and provide spaces for social support and identity work. Location-based social networking sites such as Grindr or SCRUFF, as well as other LGBTQ+ dating apps, offer space for community visibility and connection, especially when such spaces may not be physically available or where safety is a concern [13, 66]. However, such digital platforms present their own set of challenges. Dating applications, for instance, have been shown to contribute to a sense of loneliness and isolation [42] and can introduce privacy concerns in more rural locations [66]. As Dym and colleagues [43] note, there is limited designated digital space exclusively for the LGBTQ+ community. These studies illustrate how LGBTQ+ digital spaces can be altered through platform policy and user-generated norms, or how available spaces may not constitute viable avenues for social support or identity work.

### 2.3 Algorithms and Normative Identity Construction

While users of digital infrastructures, especially online community spaces, often have agency in moderating the norms that come to mediate people's routine experiences [39], in this paper, we focus on those systems where people's routine experiences are mediated by and through algorithms. Algorithms, though often black boxed, are infrastructures that have become deeply entangled with people's routine interactions with the world [89, 90]. We can find algorithms embedded in the digital infrastructures we encounter and use in our daily lives ranging from traditional news media [55] and search engines [11, 18, 99], to social media platforms [36]. Yet, the invisible logics embedded in algorithms can have deleterious impacts on our routines. Previous work has examined how algorithms potentially can influence us in ways we cannot see [8] and can challenge social media users to actively shift their routine behaviors toward making themselves more visible [22].

Similar to how physical infrastructures such as single-gender public restrooms can perpetuate harmful logics that impact individuals who identify outside of gender binaries, algorithms can also exhibit similar behavior. To frame this exploration, we drawn on the concept of *algorithmic identity*, developed by John Cheney-Lippold [26]. He argues that our digital identities are presently constructed through algorithms that process data to measure certain features about us, such as our gender, age, or race. The information used to measure and identify us is made up of myriad data points as realized through our online activities, including our browser history, purchasing behavior, and social networks, and this data is used to identify us and target us, such as through advertisements. For example, when we peruse Facebook or check our email, the advertisements we see reflect the digital identity categories that algorithmic systems have assigned us. Cheney-Lippold [26] draws explicit attention to how these categories are "you," but not *you*, meaning that users are

being placed into categories based on data that may not accurately reflect their life experiences or their self-identify. Similarly, Cheney-Lippold writes that “gender” is not the same as *gender*, in that “gender” is a datafied version of ourselves used for marketing rather than our actual gender presentation. As a result, LGBTQ+ people might struggle in their identity work or in enacting an LGBTQ+ identity when algorithmic infrastructures routinely perpetuate heteronormative logics and/or deprive users of the right and agency to choose how they identify themselves.

Prior work has shown that algorithms are political artifacts which are shaped by societal norms, as well as the individual’s or company’s politics within which they are designed [22, 53, 139]. These technological artifacts can include biases and reinforce social norms or stereotypes. For example, Engin Bozdog examines the potentials for bias in algorithmic filtering and personalization, noting that the technical systems and the algorithms governing what information is presented can carry the bias of their designers [18]. Studies within the algorithmic fairness community have demonstrated the ways algorithms can be biased based on race [78, 101], gender [62], and age [1]. Other studies have focused on the ways algorithms can enforce stereotypes. Safiya Noble, looking at Google, demonstrates how its search algorithm reinforces racist stereotypes about Black women and girls, over-sexualizing them while also reducing them to racial caricatures rooted in the United States’ white supremacist past [100]. Further work has examined how auto-complete forms on Google can reinforce homophobic or racist stereotypes [7]; and how Reddit’s post sorting and popularity algorithm can reinforce toxic masculinity during periods of high-traffic misogynistic engagement with the platform [95].

Moreover, the CHI and CSCW community has explored how technical systems enforce particular normative presentations of self which disproportionately harm marginalized individuals by invalidating their identity expression in a push for ‘authenticity’ or collapsing non-normative gender identities into binary categories for the purposes of advertising [12, 61]. Scholars have also started to explore how algorithms produce and reinforce societal norms. Some focus on search algorithms. For instance, Kay and colleagues [75] examine several image database search results for professional occupations, finding that search results have stereotype exaggeration and tend to portray the minority gender of particular roles in unprofessional ways (e.g., the “sexy” woman scientist). They conclude people will believe the search results are good if they agree with the existing stereotype, thus showing how algorithmic search can re-enforce preexisting perceptions a person may have about the profession [75]. Similarly, Otterbacher and colleagues [103] examined the gender stereotypes in Bing Image Search results for the search query “person”, finding offline gender biases are re-created through algorithmic search. Other studies into the ways in which algorithms produce and reinforce societal norms have focused on societal perceptions of normative gender. For example, Scheuerman and colleagues [114] focus on algorithmic facial classification systems around gender norms, finding that many individuals’ non-normative self-expression of gender can be in direct conflict with the underlying infrastructure of commercial facial analysis systems. Further work by Scheuerman and colleagues [115] focuses on how identity is operationalized within technical infrastructures (in this case the training databases for facial analysis algorithms), finding that racial and gender identities are treated as fixed and apolitical within these technical infrastructures, ignoring the sociocultural constructions of both race and gender. This body of work demonstrates how societal norms and prejudices around race and gender identity can be reinforced by algorithms; however these studies all focus on technical infrastructures that can potentially produce and reinforce societal norms.

To our knowledge, less is known about how people experience and encounter algorithms in their routine lives. Theoretical scholars of algorithms have encouraged empirical work examining people’s experiences interacting with algorithmic systems [141]. Previous work on people’s everyday experiences with algorithmic systems has focused on the participants’ imaginaries — how they

make people feel — as a means of understanding the social power algorithmic systems hold [23]. Several scholars have focused on the development of evolving and malleable folk theories around algorithmic systems in order to: better understand their outcomes and effects, such as how they guide an individual's behavior and self-presentation practices [35, 36]; to account for news information discovery [130]; and to understand the way affordances can manipulate Facebook's News Feed [46]. Other studies have focused on individual experiences with algorithmic systems through examining the information sharing practices around visibility on Instagram [29], individual's awareness of news feed personalization [47, 106, 107], and the ways algorithms can influence self-presentation on various dating applications [41, 134]. Additionally, we know that health insurance and loan systems that rely on algorithms to make decisions "learn" to make decisions that are gendered and racialized, often privileging white men [21]. Understanding people's experiences with and within algorithmic systems is becoming increasingly important, especially when we consider the ubiquity of these systems and their capacity to create habitual insecurity in people's lives. This problem is particularly acute for people who are already marginalized given that such systems might be reinforcing the exclusionary norms and logics of power that have permeated society. This leads to the question: How might people whose identities are marginalized by algorithmic systems experience these systems, and what practices might they be developing to counter how such systems oppress and suppress their identities?

In this paper, we contribute to these emergent discourses by explicitly focusing on the everyday experiences of LGBTQ+ users on the application TikTok, which has received press that has criticized it for oppressing and suppressing people's identities through both algorithmic and human interventions [9, 15, 70, 109]. To our knowledge, there is no existing work on people's day-to-day experiences with TikTok, particularly with its For You Page algorithm, and this paper aims to address this gap.

## 2.4 Viral Dances, Quick Comedy, and Personalized Content Delivery: The Case of TikTok

TikTok is a video creation and sharing application used for making short (15 to 60 second) videos. TikTok does not require an account to view videos but an account must be created in order to create video content, or engage with the more personalized aspects of the application, such as the For You Page algorithm. Users are offered video editing filters, similar to the ones popularized by Snapchat and Instagram, as well the ability to dub sound onto video. User-provided hashtags help to categorize the video and disseminate it to other users via: two side-by-side screens available for viewing content; the Following page; including only videos made by creators people are following; or the personalized For You Page. Once a user's video is ready to be shared, creators can add captions and tag the content with free-form hashtags, which serve organizational and content-related purposes. Once uploaded, the user has a choice to control where the video goes: to their followers only, or to a global audience. TikTok's For You Page is unique in that users have no control over the content they will encounter on the page; rather, the 'for you' page is "full of things [users] seem to have demonstrated [they] want to watch, no matter what [they] actually say [they] want to watch" [71]. The recommendation algorithm learns from users' behaviors and further personalizes the content it delivers with every video a user watches and/or likes, every user they follow, and every hashtag they engage with through content creation and/or click engagement. The For You Page will contain videos of people a user follows, but not exclusively. Unlike Instagram or Snapchat, or even TikTok's spiritual predecessor, Vine, TikTok completely removes a user's ability to control what content they see on the For You Page. While this increases the discoverability of user generated content, it also strips the user of a level of control over what they might be seeing at any given time on their For You Page.



Previous studies on TikTok examine the intersections of technological creativity and individual user creativity through user experience [144] and have drawn attention to "AI powered content creation, dissemination and interaction technologies" [91]. Other studies have examined the linkages and interactions between user generated-content and social interaction on TikTok [84], as well as the co-attention to the user and video modalities needed to create user recommendations on micro-video sharing platforms such as TikTok [83]. Others have focused on the more creative aspects of TikTok. Qiyang Zhou [143] discusses the potentiality of TikTok as a platform for creative practice. McRoberts and colleagues [97] suggest that applications like TikTok afford children opportunities to create collaboratively with friends. "TikTok liberates young people to play without adhering to the visual styles, narratives and online cultures of the past" argues Ethan Bresnick [19]. Badillo-Urquiola and colleagues [6] conducted participatory design sessions with young users of TikTok to determine their perceptions of how TikTok (and similar apps) promoted their online safety. Other work focuses on the use of TikTok to communicate various forms of information beyond entertainment such as university communication to future students [105], self-expression [102], subversion of TikTok's popular trends as a counter cultural presentation of self through parody [92], for more interactive political communication than on other platforms [121] and for microblogging [81].

There have, however, been some concerns regarding TikTok, including the platform's failure to protect children's privacy [34]. Wang and colleagues [136] discuss community on TikTok, commenting that due to its low threshold for engagement and loose organization, the community which forms there is unstable. Wang and colleagues' [136] work demonstrates the ease with which individuals can join TikTok and engage with the platform's content. The low threshold for entry is part of what makes the app enticing to children and teenagers. TikTok's Community Guidelines<sup>1</sup> and Terms of Service<sup>2</sup> state users must be over 13 years old to use the platform, and children and teenagers under the age of 18 are a large portion of the TikTok's userbase [71].

Within the CHI and CSCW community, previous work has touched on the platform's capacity to livestream outdoor environments [87], for preserving cultural practices and sharing knowledge [85, 86], as well as for general entertainment and "keeping up with fashion" [88]. Finally, others have focused on the platform's use of humor to drive engagement with creative content [135]. To date, there has been little work within the CHI and CSCW literature around user's everyday experiences everyday user experiences with TikTok, particularly with its For You Page algorithm. Following several articles in popular press regarding the systemic and algorithmic removal of LGBTQ+ content from TikTok's For You Page (e.g. [15, 70, 109]), we chose to examine the experiences of LGBTQ+ individuals on TikTok.

In our study, we argue that TikTok's For You Page algorithm constructs contradictory identity spaces that at once support LGBTQ+ identity work and reaffirm LGBTQ+ identity, while also transgressing and violating individual user identity intersections. We also explicate the self-organized practices TikTok users employ in response to these violations and transgressions.

### 3 RESEARCH METHODS

This paper focuses on LGBTQ+ people's uses of TikTok and examines the experiences LGBTQ+ people have with TikTok's For You Page (FYP) algorithm as a place for identity work and play. This study received approval from Syracuse University's Institutional Review Board. Prior to beginning the interview, the first author read participants an oral consent form. All respondents granted their consent which allowed us to record the interviews, and they agreed to continued contact with

<sup>1</sup><https://www.tiktok.com/community-guidelines?lang=en>

<sup>2</sup><https://www.tiktok.com/legal/terms-of-use>

the first author to receive copies of their interview transcripts and updates on the project. The interviews took place prior to and during the first two weeks of social distancing, an outcome of the COVID-19 pandemic's impact on New York State. Due to the fact that the authors were under strict social distancing orders due to the virus' impact on New York State, only one of our interviews was conducted in person, with the remaining conducted over video chat and the telephone.

### 3.1 Participant Recruitment

Directly recruiting individuals from TikTok proved challenging, as the privacy controls on TikTok allow users to limit the number of direct messages they receive from people they are not following. Following nearly six-weeks of embedding herself into the space to determine community norms and common video tropes, the first author made two, one minute long recruitment videos directly soliciting responses on TikTok, where she introduced herself and the project's general goals. These two videos were tagged with various queer-related hashtags: #lgbtq, #queer, #gay, #trans, #nb, #lesbian, and #tiktok—to ensure the recruitment videos would gain visibility. These tags were identified based on the first author's initial exploration on and of the platform. The first author directly contacted anyone who responded to the video stating they were interested in participating via direct message on TikTok. Additionally, on March 1, 2020, the first author used her personal TikTok account to directly message individuals appearing in her For You Page (FYP) feed with clear indicators in their profiles of both LGBTQ+ identity and their age. These solicitations were short introductions of the authors, the project, and the university affiliation of the research. In order to broaden the scope of our recruitment, a short recruitment survey based upon eligibility criteria around participant age, queer identity and TikTok use was created and shared via social media on Twitter and Tumblr, as the first author's social network is extensively connected with the LGBTQ+ community on both platforms. To broaden its reach, the recruitment tweet was tagged using the hashtags: #lgbtq, #tiktok and #queer. Following the conclusion of each interview, we used a snowball sampling approach [10], asking informants to recommend people we should speak to about potential participation in our study. By using multiple recruitment techniques, it was our intent to avoid sampling bias. This approach has been used in other CHI and CSCW studies [58].

We developed eligibility criteria for participation in this study. Specifically, eligibility was determined based on the following criteria: participants must be (1) 18 years of age or older; (2) a regular TikTok user; and (3) identify as LGBTQ+. We wanted to speak to LGBTQ+ identifying individuals following a series of articles in popular press implying that TikTok was not a very queer-friendly space [15, 70, 109]. This ran in contradiction to the first author's ethnographic observations of TikTok as a platform and her own For Your Page curated feed. Further, some preliminary discussions with TikTok users implied that following Tumblr's adult content ban, which targeted safe for work LGBTQ+ content for removal using an algorithmic system [60], many Tumblr users left for other community spaces, including TikTok.

Using this recruitment strategy, we identified and contacted 45 potential informants, and we successfully recruited 16 eligible participants for interviews. We recruited 2 informants from the TikTok recruitment videos (P9 and P15), and 4 informants being recruited through direct solicitation via TikTok direct messaging (P5, P12, and P13) and Instagram direct messaging (P14). Nine informants were recruited via the recruitment form circulated on Twitter and Tumblr by the first author (P2, P3, P4, P6, P7, P8, P10, P11, and P16). One informant participated in an exploratory interview and was recruited in person (P1).

### 3.2 Interviews

Following the qualitative methodology outlined by Strauss and Corbin [128] and Yin [142], we conducted 16 in-depth semi-structured interviews between February 20 and April 4, 2020. Interviews

lasted between 70 minutes and 2 hours (averaging at 90 minutes). The first interview (P1) was conducted in person, in a closed office at Syracuse University. The subsequent interviews were conducted using the technology that was most comfortable to our informants, including phone and Zoom. Participation was voluntary, and participants did not receive any compensation for their participation. We initially estimated the interviews would take approximately 60 minutes, and informed our participants when that time was reached. However, most participants indicated they wished to continue past the given hour. Importantly, as more states went into mandatory social distancing and university students (P1, P2, P4, P5, P6, P9, P10, P11, and P15) were sent home, care was taken prior to each interview to determine if the informant was in a space where they felt safe to discuss sensitive topics around LGBTQ+ identity freely. This question was added to our pre-interview discussion on March 15th, 2022, after completing our first six interviews. We asked all subsequent participants this question prior to receiving their oral consent to participate in the interview.

We structured the interview questions such that informants could guide us through their understandings of TikTok as a platform. These semi-structured interviews were designed to serve as life histories [137], where informants were asked questions about their lives, as well as their experiences with coming out, enacting an LGBTQ+ identity, and in finding community spaces, and using TikTok. More specifically, we asked our informants to discuss how they came into their gender and sexual identity, and how they would define each. When inquiring about community, we asked informants to provide their own definition and then reflect on various places and spaces where they had experienced community, as well as their motivations for joining or departing from these places or spaces over time. In discussing TikTok, we asked our informants to describe TikTok's algorithm, affordances, and the communities they encountered on the application. In addition, we asked participants probing questions regarding their routine use of social media community spaces, any challenges or obstacles informants faced, and how TikTok has impacted these routines.

With participant consent, the interviews were audio recorded and transcribed for analysis. Following the interview, the first author asked the participants recruited by the social media recruitment form to be added to informant's TikTok account with the understanding that the first author was going to create TikTok videos to engage in a community-based discussion of the study's results. The participants recruited via TikTok were already connected with the first author through the recruitment process. To date, many of the participants continue to remain in regular contact with the first author via email, Twitter, TikTok, and Instagram. In addition to this continued relationship, we used content that the participants created and shared with the first author to validate our informant's experiences on TikTok. The first author produced several TikTok videos around potential findings (2 videos), theoretical framing approaches (1 video), general discussion of the results (1 video), and ongoing thoughts based on findings (1 video). These videos, published to the first author's personal TikTok Account, integrated sounds and memes that were popular at the time of production. As we had previously gained permission from our participants to follow their TikTok accounts, and many of our participants had followed us back, we were able to ensure that the content produced would appear in their FYP feeds and/or on their Following page. Several participants and other community members commented on the videos or through direct messages on other platforms such as Instagram and Twitter. We also examined news reports and social media discussions to further synthesize our interview data.

### 3.3 Data Analysis

In analyzing our data, we used an approach based on grounded theory [28]. Grounded theory has been adopted and is commonly used by HCI scholars [39, 74, 86, 119]. We used MAXQDA, a qualitative data analysis program to code the interview transcripts. The first author conducted a

preliminary round of open coding and memoing of the 16 interviews, meeting with the second author to discuss emergent codes every other day throughout the analysis process. During these interactive and collaborative sessions, emergent codes were discussed, particularly around our participants' experiences with TikTok as being contradictory and multi-faceted, as well as their experiences finding community both on and off of TikTok. Codes like "algorithmic experience" and sub-codes such as "initial collaboration" and "continued collaboration" characterize our informant's direct experiences with personalizing the content they saw on their FYP. Under these codes, we also situated any and all discussion of TikTok's affordances and the affordances' relationship to tailoring content which appears on our participants' For You Pages. These codes were gathered under the general code of "algorithmic experience", along with another emergent theme, which captured participants' descriptions of feeling as though certain aspects of themselves were being "silenced." This emergent theme also describes and the related ways by which our participants described being silenced, such as having content removed from TikTok. Codes also emerged around the "resistance strategies" that our participants developed in order to push back against what they felt were various transgressions and violations by TikTok; an example of a resistance strategy would be reposting content that has been removed. Other codes emerged around the joy our participants felt at "finding others like me" and being afforded a space for "creative identity work." Despite the inherent joy of finding others like themselves on TikTok, our participants also spoke of various transgressions and violations they perceived as taking place on TikTok, such as discomfort with the application "figuring them out", the ways in which there seemed to be a "normative queer identity" that they were repeatedly exposed to that "silences other identity intersections." By collapsing and assessing the codes, we merged them into a coherent story regarding our participants' experiences on TikTok, and produced three categories as reported in the results section: Perceptions of the Inner Workings of TikTok, Identity Work and Identity Affirmation, and Transgressions and Violations. The collapse of the codes into these three categories touch on the main topics our participants discuss in their interviews, and they speak to the contradictory nature of our participants' general experiences on the platform.

### 3.4 Participants

Of our 16 participants, 15 hail from the United States and 1 from England. They are between 18 and 37 years old. Eleven of our informants self-identified as Caucasian, 1 identified as Hispanic/Latina, 1 as both Black and Haitian-American, 1 as Black and White mixed race, 1 as South Asian and White mixed race, and 1 as a member of a Mid-Atlantic Indigenous nation. They were diverse in terms of gender expression, with 9 self-identifying as cisgender female, 3 identifying as non-binary, 1 identifying as genderqueer or non-binary, 1 identifying as male and non-binary, 1 identifying as genderfluid, and 1 identifying as two spirit. Our informants were also diverse in terms of sexuality, with 2 identifying as gay, 4 identifying as bisexual, 1 identifying as both demisexual and biromantic, 7 identifying as lesbian, and 2 identifying as queer. Ten use she/her pronouns, 4 use they/them pronouns, 1 uses he/him pronouns, and 1 alternates between she/her and they/them. Of our informants, 7 are currently seeking undergraduate degrees, 1 is a master's student, and 1 is a doctoral student. The remaining are working professionally across diverse industries, including automotive mechanics and big tech. See Table 1 for a detailed breakdown.

### 3.5 Limitations

There are several limitations to this study. First, it was challenging for the first author's recruitment videos to gain a far reach within the broader LGBTQ+ community on TikTok. Participants had to self-select into the study on TikTok itself, and we had to identify and recruit participants across multiple social media networks outside of the one in question. A second limitation came

#	Age	Gender and Pronouns	Sexuality	Race/Ethnicity
P1	23	Female - She/Her	Lesbian	White
P2	25	Female - She/Her	Lesbian	White
P3	22	Female - She/Her	Lesbian	White
P4	22	Female - She/Her	Lesbian	White
P5	19	Non-Binary - They/Them	Bisexual	Black/White
P6	21	Female - She/her	Bisexual	Black/Haitian
P7	18	Non-Binary - She/Her	Lesbian	White
P8	23	Genderqueer - She/Her	Gay	South Asian/White
P9	22	Female - They/Them	Lesbian	Hispanic/Latina
P10	20	Non-Binary - They/Them	Queer	White
P11	21	Female - She/Her	Lesbian	White
P12	37	Female - She/Her	Bisexual	White
P13	35	Genderqueer/Non-Binary - They/Them	Demisexual/Biromantic	White
P14	26	Male/Non-Binary - He/Him	Gay	White
P15	27	Female - She/Her	Queer	White
P16	21	Two Spirit - She/Her or They/Them	Lesbian	Native American

Table 1. List of study participants.

in generating trust on TikTok regarding the study, as some initial responses to the recruitment call expressed skepticism in the legitimacy of such research. Thus, when they were contacted by the first author with a more in-depth pitch of the project, including the consent form, these users declined to participate or did not respond to the initial or follow up contact. Third, our participants skew white, cisgender female, and lesbian; as this is how the first author identifies. To mitigate this limitation, we continued to recruit participants of other racial, gender, and sexual identities as social distancing policies spread across the United States and Europe. Fourthly, as discussed previously, this study was done during the beginnings of what is now an ongoing period of quarantine and physical distancing due to the COVID-19 pandemic. While we have taken care in our analysis to note when participants discussed how the pandemic has changed their use of TikTok, we do not believe LGBTQ+ people's experiences on the application changed following physical distancing orders. Fifth, we were unable to speak to anyone under the age of 18, which limited our ability to interview a large portion of TikTok's userbase. Finally, our participant sample is limited in that we have only interviewed a small number of mostly white LGBTQ+ individuals. We find it important to note that our study may be missing the voices of non-white content creators and consumers of TikTok and that there is evidence in popular press that non-white creators are as impacted by TikTok's policy as non-normative white creators [9]. However our results offer insight into the day to day interactions between humans and algorithms, and can help to inform the contradictory nature such interactions create.

### 3.6 Research Positionality Statement

Care was taken in this study to ensure that our positionality would not potentially impact the research. The first author is a white, cisgender, lesbian woman, and the second author is an Iraqi-American, cisgender, heterosexual man. The first author served as the only point of contact with our participants, while the second author helped with data analysis and reporting after the interviews concluded. It should be noted that the first author has prior work experience creating short-form video content for the LGBTQ+ community on YouTube and therefore was not entirely unknown



to some of the study's participants. While this allowed for the establishment of trust with the first author as she conducted the interviews, steps were taken to mitigate this potential for this familiarity to color participants' responses: the first author did not engage with any mention of her previous creative work beyond acknowledgment of it. We continued to honor the trust we fostered by maintaining continued relationships with our participants on TikTok and other social media platforms, as well as by regularly checking in during the analysis and writing process through a series of TikTok videos that the first author created. Our participants were also provided with contact information for mental health services, per our IRB protocol.

## 4 RESULTS

Our results are structured as follows. Firstly, we describe our participants' perceptions of how TikTok works through their experience using the system. We then discuss how TikTok affords our participants an opportunity to engage in identity work and identity affirmation work. Following this, we describe the contradictions that emerge when using this platform, primarily through the perceived transgressions and violations exhibited by the platform and the For You Page algorithm which inhibit identity work and identity affirmation work. Finally, we discuss the strategies our informants engage in and observe to push back against these transgressions and violations by the platform.

### 4.1 User Perceptions of the Inner Workings of TikTok: The For You Algorithm

Our informants described their first interactions with TikTok as a platform following account creation, as somewhat disjointed. Often, participants found the content shown on the For You Page (FYP) to be wildly divergent from their personal content desires and contradictory to what they were told their experience would be like by family members, friends, romantic partners, or internet acquaintances who were established users of the platform. When an account is created TikTok prompts, but does not require, new users to select several categorical interests (such as "outdoors" or "makeup") in order to receive what TikTok presents as "personalized video recommendations". This offer for personalization implies an outcome that runs counter to our participants' initial experiences with the application. Several participants expressed initial confusion with the FYP algorithm, more generally, how TikTok functions as a platform. Participant 16, a 21-year-old indigenous two spirit lesbian, describes her initial encounter with the FYP as confusing:

"Yeah, it didn't know what I wanted... so a lot of stuff I was being shown was like, very Jake Paul, Logan Paul-esque... I was like, why is anybody on this? I was confused."

Participant 10, a 20-year-old white non-binary queer person expressed a similar confusion regarding the platform:

"I was...confused as to how it worked; I didn't really understand like where things were."

The new user offers "help," according to Participant 13, a 35-year-old white demisexual and biromantic non-binary person, to the FYP algorithm to begin constructing a digital "them" to "figure out what you want to watch" based on those initial categorical responses. Yet despite this help, our participants' initial experiences on TikTok were not aligned with the experiences of established peers on the platform. This was particularly evident around issues of identity, and representation of people like them (e.g., queer people, people of color, disabled people) in the content the FYP delivered without the trace data used to further tailor content specifically for "them" [26].

Several of our participants noted that while they were indeed interested in these categories, this was not what they were looking for on the app. Several participants joined based on funny TikTok compilation videos they had seen on Facebook, Instagram or Twitter (P3, P4, P5, P6, P7, P8, P16,

P13, P15). Others stated they joined because they had friends, partners, or family on TikTok (P1, P2, P9, P10, P11), or for professional reasons (P12, P14). Citing friends' experiences on the app, or the lack of the funny videos they had seen in compilation videos on other platforms, 10 out of our 16 participants turned to friends or family for assistance in improving the content of their FYP.

Participant 16 stopped using TikTok following her first encounter with the unfiltered FYP until friends encouraged her to rejoin and provided her with suggestions of who to follow to receive the content she wished to see. Participant 16 explains:

"And then my friends would start sending me funny ones. They were like, no, you just need to follow these accounts. And then you'll start seeing stuff that you like. [...] [S]o I followed some similar accounts [to] what my friends were and then sure enough... I was like, oh, this is really funny. Oh, shit, I've been on this damn app for two hours."

Participant 16 combined the videos her friends shared with her and the following affordance to further refine her FYP to the point where her initial distaste of TikTok shifted into comfortable and continued use. As per Cheney-Lippold [26], Participant 16 was using these affordances to create a digital "Participant 16." This practice was common amongst our participants. Participant 4, a 22-year-old white cisgender female lesbian, used her friends' accounts to start to refine her FYP:

"I started following what my friends [were] following and then saw... different people that they followed in the LGBT community and so that started to shape out my For You Page."

Three participants (P3, P8, P13) sought out popular YouTubers with whom they were already familiar to follow on TikTok as a means of controlling the content they initially received. Participant 8, a 23-year-old mixed-race (South Asian and white) genderqueer gay person, explains:

"I started out by following a load of people that I knew from YouTube that always make me laugh. I was like, Okay, if I follow them, then supposedly I'll get recommended stuff that is to my sense of humor."

Participant 11 and Participant 4 both discussed how the TikTok users their friends recommended were creators that identified as, or were friendly to, LGBTQ+ people. Participant 8's YouTubers, in their words, were also LGBTQ+ content creators. After following these accounts, P4, P8 and P11's For You Pages started to shift toward showing more LGBTQ+ content. This led to an emergent perception within our participants that the FYP algorithm must be "trained" in order to provide desired content. Put another way, engaging with content helped our participants construct "themselves" out of trace data via the FYP. Participants expressed deep and confident understandings of how to shift and alter their FYP based on engagement with various affordances on TikTok itself, such as following specific accounts, liking videos, and sending them to friends and family.

*4.1.1 Using Affordances to construct "you" for the For You Page.* Our participants universally expressed awareness that the FYP uses an algorithm to deliver content, and they expressed very well-developed understandings as to how the FYP algorithm was meant to work and how to manipulate it into providing desired content. These findings demonstrate that our participants believe the FYP algorithm reacts to affordance engagement. Participant 8 describes the process:

"I...liked the things I found funny...I imagine that's what a lot of people do. And then it...gets whittled down more and more to that kind of content...something sort of relate[d] to that [content] ends up being recommended to you."

Engaging with content by liking it on TikTok was mentioned by all of our participants as a way to influence the FYP algorithm over time and push it toward providing desired content. Use of the "like" feature was universally understood by our participants as the primary way to shape the content appearing on their FYP. Participant 2, a 25-year-old white cisgender lesbian, suggested

that the FYP had to be “trained” in order to provide desired content and that liking content was one way to “get my For You Page where I wanted it to be.” Participant 13 explained that, by liking content, the FYP algorithm could be “rigged” to display more refined results. Liking content provides content-related engagement with particular categories of content on TikTok, which helps the FYP algorithm to construct a data version of our participants. These findings suggest our participants’ believe that they have a clear understanding of how to continually refine the FYP algorithm by liking content.

Some participants noted a additional detail about posts they were liking. Participant 14, a 26-year-old white gay non-binary man, added a further caveat that the posts he liked had to include hashtags as well:

“The way TikTok’s algorithm works from my understanding...if you like a certain post with certain hashtags they start to show more of that content.”

Hashtags were another tool way that participants understood they could leverage to manipulate and shape their FYP and the content they saw. Through direct engagement with hashtags, participants indicated that they could manipulate and shift what they saw on their FYP.

Another way our participants discussed influencing the FYP algorithm was through sharing content. Oftentimes our participants discussed sending videos to friends and loved ones in order to communicate various affective sentiments, such as support, solidarity, or love. In doing so, however, they also discussed their perceptions of how sharing content, and having content shared with them, shaped their FYP algorithm. Participant 3, a 22-year-old white cisgender lesbian, described the process as the following:

“[T]hey’re taking what I’m [...] sharing and sending to my friends and stuff and being like oh well she likes this content let’s feed her more of it.”

This sentiment was echoed by Participant 9, a 22-year-old Latina cisgender lesbian:

“I found through like my own personal experience when people share TikToks with you from like, sending it like on iMessage or something like that, and you click on that link, and then it takes you to...your actual TikTok page and then takes you to that video that adds whatever that video is into...the algorithm.”

11 out of our 16 participants discussed sharing videos with friends, and having friends share videos back with them. These eleven discussed how these videos improved their FYP, helping to steer them to the content they wanted. Our participants have clearly developed and well-thought out understandings of how affordance use on TikTok, and how the social aspects of TikTok (e.g. sharing content) shape their FYP algorithm. This process is continual, according to all of our participants, and has to be maintained over time though continued engagement.

**4.1.2 Continued Refinement and the building of a more sophisticated “You”.** Our Participants describe gradual shifts in their FYP algorithm over time, mostly an evolution from more hobby-related content (such as do-it-yourself videos or cosplay videos) to content created by LGBTQ+ people who share those same interests. Participant 9 described the development of her FYP over time:

“[A] lot of the stuff that came up in the early part of me like using TikTok was history related... Like, anime related, animal related... and then the inevitable scrolling of there’s a queer person on my screen.”

Participant 2, a 25-year-old white cisgender lesbian described a slightly more in-depth refinement, which she believed was complicated by her rural American mid-west location:

“When I first got it, I guess by my location, my For You Page was all messed up. There was a lot conservative Trump Supporters. [...] There was some cool stuff in there –

because I enjoy rural farm humor. [I]t took me a while to get my For You Page to where I wanted it to be..."

This shift in our participant's experiences on the FYP over time demonstrates how the FYP is constructing categorical versions of them based on their engagement, as well as presenting content which intersects across multiple potential aspects of their identities. For example, location was a reoccurring theme for 9 of our participants (P1, P2, P3, P4, P9, P10, P11, P13, P15) around continued refinement of the FYP. Participants described seeing content directly related to where they live, which shifted if they traveled, as well as increasing amounts of content directly related to their sexualities and gender identities once they first encountered and engaged LGBTQ+ content via TikTok's affordances on their FYP. The subsequent section discusses our participant's encounters with LGBTQ+ content on their For You Pages, as well as the space the FYP allows for identity work and identity play in terms of both visual representation and creative avenues.

## 4.2 Identity Work and Affirmation: TikTok for You

As our participants further refined their FYP they described either deliberately seeking out LGBTQ+ content to follow (P4, P6, P8, P12, P15), or described seemingly serendipitous encounters with LGBTQ+ content (P3, P9, P14) which then helped to further connect them to more LGBTQ+ content creators. This, in turn, helped our participants learn more about and actively embrace aspects of themselves which they had previously considered to be invisible. Identity work, the process by which individuals make sense of or change one's identity, can be a collaborative process [125] and a creative process for play [72]. On TikTok, the collaborative and creative process around identity work is mediated through the FYP algorithm. As we detail below, participants reported new feelings of confidence in certain aspects of their identities by "finding people like them", and a sense of community with other LGBTQ+ people they encountered on the app as manifest through their individual creativity and expression.

**4.2.1 Finding People Like Me.** Our Informants described how TikTok has created a space where they can see parts of themselves that are often invisible in other spaces. For example, Participant 13 discussed how TikTok helped them to reconcile their role as a non-binary mother:

"Before TikTok was just like, you're a mom. And you're non-binary. How do you resolve the two? One of them is very like...a binary thing and like what I've figured out myself and I started to try and teach others is that a parent is a title and a role that you choose for yourself and has nothing to do with your gender. And once I figured that out, it help[ed] a lot. It resolved a lot of the stress in my head of being like, why am I okay with being a mom, but not okay with like being feminine? I don't know. And I figured it out."

Seeing visual representations of people who are similar to you is useful to identity work. It can lead to a more explicit realization of one's self-concept [43, 72]. Seeing one's self in media allows more space for deliberation and self-evaluation compared to other depictions of one's own self-concept.

Our informants also discussed how TikTok provides a space that individuals can turn to for identity support and validation. Participant 9 commented on TikTok's ability to create access to a supportive community:

"[I]t's given so much more like accessibility... Those environments and those communities that people are able to now actively participate with them without trying to find discussion boards or forum boards... even with the discourse and you know, the growing pains like the queer community has on TikTok, it's a great place for you to find a community that you're a part of."

Being a part of a community that is supportive and welcoming is also demonstrated through the LGBTQ+ community's transformative content creation around specific audio clips. Participant 15, a 27-year-old white cisgender queer woman, described an early experience she had on the app with a trending audio clip:

“[O]ne of the biggest trends that I saw... was the “this girl straight this girl’s not” ... [W]atching the genuine reactions of support and like, people can’t – you can’t fake hearing something for the first time and your reaction is like, just pure love. Yeah, it was just really cool to see that... I would just like scroll that down for forever and I will just look at all the videos of people coming out to their family and liking them.”

Coming out, to close family members, can be a traumatic experience for some LGBTQ+ people, and often they turn to digital infrastructures for trauma recovery [43]. Seeing repeated representation of successful coming out stories is both affirming of LGBTQ+ identity and provides individuals with chances to see other aspects of their identity, which they may only just be realizing or struggling to accept about themselves. Seeing one's self, and being able to reflect on the various identity performances of people who identify similarly to our informants was collectively recognized by our participants as an important aspect their of experiences on TikTok.

Other Participants discussed how being on TikTok, and being continually exposed to the identity performances of others, allowed them to relax into and validate their LGBTQ+ identities. The combination of validation and repeated exposure leads to pride in who one is, argues Participant 5, a 19-year-old mixed (Black/white) race nonbinary bisexual person, describing their FYP:

“[P]eople who fit into my algorithm have – they’re very – they’re prideful for their identities. Of LGBTQ+ identity. Definitely of trans identities, I know that fits into that, but I just want to point that out. Of Black identities. People are prideful of who they are – and I enjoy those kinds of videos.”

Our informants described repeated exposure to positive and visible representations of their own identities was as ‘validating’ and ‘feeling seen.’. Our participants repeatedly expressed being grateful for the LGBTQ+ content the FYP algorithm delivered them. Specifically, in these cases, their algorithmic identities aligned with their internalized self-concept, and several participants (P5, P12, P13, and P15) directly tied TikTok use to increases in their confidence, their identities, and their ability to be their authentic selves both on and off of TikTok.

**4.2.2 Creativity as Identity Work.** Creativity and expression are forms of identity work [43, 72]. People enact different identities through playful videos on TikTok; participating in video challenges (e.g. outfit changes for various situations or characters) or by using trending sounds specifically related to LGBTQ+ identity (e.g. femme lesbians using a sound featuring a techno beat and the repeated phrase: “No One Knows I’m a Lesbian” to promote femme visibility). This process of creating visible representation through performance helps to normalize and make visible different identities. Over half of our participants (P5, P6, P9, P11, P12, P13, P14, P15, and P16) discussed making videos for various other identity intersections, hobbies or interest-related subjects. Several of our participants, however, discussed making LGBTQ+ content specifically for the LGBTQ+ community around LGBTQ+ visibility, both in terms of representing themselves, but also representing statements of solidarity and support. Participant 16 discussed how creating content related to her own identity, through its performance, was important as it would allow others to see themselves in her.

“So I think anybody... that put some... material out there for people to look at and go, I’m not alone. There’s a group people that are similar to me... they had such a diverse cast... that had different gender expressions, different ethnicities, different sexual



orientations. I think it's so important when people with the ability to put something like that out that is different for everybody to look at. TikTok is interesting [in] how there are so many little sub-communities on it."

Creative content, and creating content for the community, helps others to find their place within the numerous sub-communities that exist within the LGBTQ+ community. To this end, Participant 12 discussed how she created a video with a statement of solidarity and support following an encounter in a grocery store with a younger teenager who complimented her rainbow watchband:

"I put up a video... I was in the grocery store and it was really packed... This young girl that looked like about 13... She had a cute little haircut was sticking very close to her mom... and she kind of like came up and like waited for her mom to walk away a little bit... And she leaned in, like she was gonna grab something off the shelf and she went, "I really like your watch band" and ran away. And I was like, baby girl."

Participant 12's video of her expression of solidarity and support was a creative venue to express her own identity as a bisexual woman, as well as validation for this young person she'd encountered.

Other participants discussed making educational videos for their LGBTQ+ followers on how to "get their content to go." Participant 13's professional knowledge of algorithms led them to create a series of videos for their followers on how to create further visibility for their own content:

"[A] lot of people will ask me like... how do you keep keeping your videos to go? And like, I can get my videos on average to do better than some like accounts with 50 thousand followers. And it's because of that inside knowledge of knowing how algorithms spin things up and down... I made it for them... For sanity sake, we're just going to turn this into a video like series that y'all can use for your own information."

Participant 13 used knowledge gained outside of the LGBTQ+ community to create a series of videos around the functionality of the FYP algorithm, helping to educate their followers on how to get their own creative content to become more visible. This series of videos is both an act of identity work, as a non-binary person has created them, but the series also serves as means by which more members of the community can further their own, visible, identity work through enhanced knowledge of the algorithmic system which governs the FYP.

### 4.3 Transgressions and Violations: TikTok For "You"

Despite the positive attitudes our informants expressed toward the space TikTok afforded them to engage in identity work, many also identified problems they felt with the space. As we will elaborate, these perceived transgressions and violations of TikTok and the FYP algorithm are seen through our participants' discomfort at TikTok's "figuring out" their LGBTQ+ identity, the ways in which the For You Page is perceived to present only certain kinds of queer identities, and the ways our participants perceived the injection of unwanted content onto their For You Page as violating. Lack of explicit user control over the TikTok's FYP delivers has led our participants to develop strategies for "correcting" the FYP when they are presented with content they do not like, or when they are silenced by content moderation actions that TikTok has taken.

**4.3.1 *Being Figured Out and Being Seen.*** In many conversations, our informants discussed their experiences on TikTok as though they were "being seen." Participants generally considered this to be a good thing, as it afforded a space for identity work and provided our participants with an audience for their creative outputs. In being seen, however, our informants also questioned how, exactly, TikTok was figuring them out and delivering content via the FYP that was so explicitly tailored to their content interests. Many of our participants (P1, P2, P3, P4, P9, P10, P12, P13, P15), considered this to be a transgression, not necessarily a bad aspect of TikTok, but not an inherently

good one, either. Participant 12 commented on how eerily similar the experiences people on her FYP were describing were to her own life:

“[T]he first few times that happened, it freaked me the fuck out. I was like, wait a minute. I actually tried to figure out if I knew that person, or if we like went to the same college, or lived in the same area because like, how the fuck did you know that?”

Participant 12 later related her feelings of uncanny back to a lack of awareness of queer experiences that she later came to realize were somewhat universal. Participant 7, an 18-year-old white non-binary lesbian, reiterated the feeling of discomfort with how their FYP constantly knows what content they wanted to see:

“TikTok... just continually knows what content you want and gives it to you. And you’re like, that’s a little scary. But also, I really like... seeing all this content and not having to search it out... It’s nice, but it’s a little scary.”

Discomfort with the TikTok’s FYP algorithm’s ability to deliver content based on who our participants were and what they wanted to see was a common sentiment for many of our participants (P1, P2, P3, P4, P9, P10, P12, P13, P15).

Despite feelings of discomfort with being seen as LGBTQ+ by TikTok and being placed into what Participant 13 called “pools” (algorithmic identity categories) for LGBTQ+ individuals by the FYP algorithm, our participants expressed a general level of resignation toward the ways TikTok was using their personal data to construct algorithmic identities. Participant 11, a 21-year-old white cisgender lesbian, described her feelings of resignation with her FYP being completely different than her former partner’s. TikTok had “put a pin” on her in a way that was noticeably different than her partner’s when they shared videos with each other:

“I think there’s a part of me that’s been instilled from previous generations that like bucks against that, like, oh, you can’t use my content to make decisions about what I’m going to see. But then at the same time, I’d much rather if I’m going to look at the For You Page, I’d much rather [it] be tailored to what I’m interested in than not. That’s the whole point.”

This sentiment was echoed by others (P1, P2, P3, P4, P9, P10, P12, P13, P15), all of whom mentioned that TikTok’s identification of their gender or sexuality, where they lived, or aspects about themselves they did not publicize on TikTok (e.g. Participant 13’s being a parent), did not sit well with them. Through engagement with the FYP algorithm, the discomfort our participants expressed exemplifies how you and the digital “you” may not be the same in algorithmic systems [26]. Yet this uncomfortable feeling was something our participants expressed acceptance of in exchange for the space TikTok’s FYP afforded them to do their identity work and enjoy a feeling of community with alike strangers.

**4.3.2 Constructing Normative Queer Identity: Silencing Identities That Don’t Fit “The Norm”.** As Dym and colleagues [43] previously noted, normative social and cultural representations of self can shape identity and identity performance which can, in turn, force individuals to perform and enforce particular performances of identity within social spaces as well as prohibit individuals from acting against hegemonic societal identity norms. Our participants expressed concern that specific normative intersections of LGBTQ+ identity are becoming more visible and thus more normalized through the FYP algorithm. While, this concern was generally considered a transgression by many of our participants, for others these norms became a violation, where the FYP algorithm was perceived to be violating aspects of their real life identities; that is, the algorithm’s decisions had progressed from something which could be tolerated to something more violating and invalidating of their identities.

Eight out of our 16 participants (P1, P2, P5, P6, P9, P11, P13, P16) discussed how their interactions with the FYP were making them feel like certain aspects of themselves were marginal and not visible. For example, Participant 1 discussed a common problem of conflation she saw on TikTok:

“For me, being a femme, and being a switch/top femme, that was always really annoying the conflation between femme/bottom [and] stud/top. I’ve actually seen maybe three TikToks that have been about femme tops being like ‘this isn’t how it is, look at me, here I am, I’m a real person I’m not just a femme/bottom.’ But again, it’s very minimal and I do not think it’s reaching the broader community.”

Participant 1’s observations that people like her are not visible and their content not reaching broader audiences is an example of a violation, where her identity as a femme/top lesbian is perceived to be actively minimized by TikTok’s FYP algorithm.

This was particularly true for our participants of color. Participant 6, a 21-year-old Black cisgender bisexual woman discussed how her FYP delivered content mostly by white LGBTQ+ people:

“Sadly, there’s a lot of creators of color or LGBTQ creators that are not really featured even though there’s so many – the majority of [my] feed is white people... which there is nothing wrong with that obviously... Like yeah there’s so many others using the app; you guys need some Black people up here.”

Participant 6’s experiences with the FYP algorithm made her feel as though TikTok was not prioritizing creators of color and LGBTQ+ people. We characterized this too as a violation as there is no recourse for such feelings. As outlined in Section 4.1, our participants generally perceived that they have some control over their FYP, such as the ability to manipulate the FYP to deliver desired content. This lack of ability to discover alike others and content connected to their specific identity intersections made our participants feel silenced, and that the FYP algorithm’s digital construction of them was seeing only selective parts of them.

Moreover, our participants also noted TikTok’s FYP algorithm seemed to be enforcing stereotypical presentations of LGBTQ+ identity, as well as playing into harmful societal norms around body size, ability, and sexuality. Participant 2 noted that the content on her FYP presented her with content of people like “her” who were nothing like her.

Honestly before I met [partner], I acted like a douche because I thought that’s what girls are attracted to because of Tumblr and because of TikTok. [Butches] kinda act all big and bad and kinda douchey [...] that’s not who I am...[...] for those popular videos, it’s always the same thing.

TikTok’s continual presentation of specific identity intersections, as Participant 1, Participant 2, Participant 5 and Participant 6 all note, made our participants feel as though their identities are not as worthy of being seen by others within the community they imagine themselves a part of on TikTok. The over-reliance on stereotypes also felt like a violation to our participants, as it was silencing who they are and replacing their identities with a stereotype.

Further noted in our interviews was the belief that particular parts of participants’ identities are being silenced through moderated activity. Participants commented on various silencing actions, starting with the over-reliance on stereotypes discussed above before moving on to other forms of silencing, such as censorship or content removal, what which they perceived as ‘shadow banning’ – where content is prevented from achieving more than a certain number of views—or through malicious actions from other members of the community. Participant 16 discussed how one of her videos was removed:

“I had a video taken down where... I went from one outfit to another, and I guess somebody reported it. I’m not sure; it didn’t tell me exactly what part of the guideline it violated... they don’t tell you what part it violates.”

Participant 15 told a story of a non-binary user that she follows, whose account had not only had content removed, but had been banned entirely from TikTok:

“They are very funny, and they have been... shut down by TikTok... it was their fourth account because they keep making content that TikTok does not like and that pushes the boundaries a little bit on their community guidelines.”

Many of our participants (P1, P2, P3, P5, P6, P8, P11, P15 and P16) commented on their own experiences or observations around the perception that TikTok was censoring or actively removing content from people in the LGBTQ+ community. We characterize content removal as a violation as it was silencing voices that would not otherwise be heard.

Along with content removal, our participants also discussed how members of the TikTok community will sometimes maliciously report LGBTQ+ content as a means of silencing users. Participant 3 discussed how sometimes she sees LGBTQ+ people on TikTok’s live-streaming service be actively silenced:

“Like not necessarily sensitive but like if somebody’s asking a question like ‘is it okay to be gay’ and... they’re telling their coming-out story and then all of a sudden they get banned on live... somebody in the community that’s watching that live going ‘That’s not appropriate you should not be talking about that’ and then they report them?”

Although a few of our participants (P1, P3, P13) discussed TikTok’s live feature, actions taken by humans to remove and silence queer voices was more broadly discussed by all of our participants. Reporting content as violating TikTok’s community guidelines in order to get it removed is an example of how the larger TikTok community actively silences queer voices for community support, such as Participant 3’s story, but also prevents community policing more broadly around undesirable behaviors within the community as observed by other participants (P1, P13, P16). These silencing actions are perceived as violations by our participants against the LGBTQ+ community on TikTok, as they are actively silence LGBTQ+ users by preventing or removing their voices from the broader community discourse.

**4.3.3 Resistance to Silencing.** Despite these reports of silencing, our participants discussed their ways of resisting and pushing back against the forces they perceived to be silencing their actions. When Participant 16’s video was taken down, she reported that she “just re-uploaded it and it wasn’t taken back down.” Reposting content is an example of resilience, a refusal to be silenced by TikTok. Simply being able to repost content makes the violation of having it removed in the first place seem less impactful, more like transgressions than true violations. However, there is also a sense of confusion with removed content also led our participants to observe other behaviors. Participant 5 discussed their encounters with and awareness of TikTok’s content removal decisions, which emerged by watching videos the creators posted that recapped what had happened. They explain:

“Sometimes I’ll have seen the video and then they say that, but I think that’s rare. Or, sometimes, they do a recap on what the video was about. Or just put the video back up and say TikTok took this down I’m putting this back up.”

Recapping content or reposting it to draw attention to the fact that the content was removed are both examples of resistance of the dominance of TikTok’s system. These forms of resistance also highlight participants’ observations that the community guidelines are unevenly enforced. These ways of pushing back against the perceived transgressions and violations of TikTok’s FYP enforcing

normative queer identity though making aspects of themselves feel invisible and through silencing them through content moderation and the removal of content.

**4.3.4 *Unwanted Interjections of Content.*** Our participants also discussed how sometimes content will appear in their FYP algorithm which they do not wish to see, expressing various ideas about why this content appeared. More specifically, they tended to express distrust of TikTok in these negative encounters. Participant 6 explained that she would often encounter Katelyn Bennett, a conservative activist on her FYP. At first, these videos would appear on her feed with people dueting Bennett, that is, posting her video along side a video of themselves reacting to the content in the first video.

“Okay I don’t know she’s a social experiment or something but... she’s basically been parading around recently saying how abortion is bad and women shouldn’t vote... Mostly I get videos making fun of her but I have gotten one of her videos – like actually her.”

This unwanted encounter with a conservative activist’s content is an example of a perceived violation by TikTok’s For You Algorithm, where the algorithm provided content which was not only destabilizing for Participant 6, but also put her at risk of seeing content from a person whose beliefs could directly invalidate her identity not only as an LGBTQ+ person, but as a Black person as well. Participant 16 described a similar violation by the FYP:

“Something I’m struggling a lot with so there’s a huge pagan witch community on TikTok. I’m not a practitioner myself, at all, but there’s a huge common theme of appropriation of native cultures on there.”

As a Native American, Participant 16 was presented with content by the FYP which overlapped with content she enjoyed (such as videos of indigenous practices) but was not what she wanted to see. Participant 16’s way of countering this unwanted interjection of content which she considered to be appropriative of her culture was to create a short video:

“And [I] made couple quick little videos like hey, don’t smudge; like hey, this is Palo Santo or white sage, they’re endangered. It’s a closed practice. And the backlash is, at times a little scary.”

Creating is considered a way of speaking things into being [72]. The harassment Participant 16 received as a result of her video was both violating and destabilizing for her. TikTok users called her by racial slurs and confronted her with white supremacist attitudes, all because she tried to resist the unwanted content on her FYP by explaining why the content was problematic.

Other participants (P7, P11, P12, P13) described their strategies of pushing back as being more affordance-based. Participant 12 described a recent conversation she observed on TikTok around the presence of more heteronormative content that was appearing on many of LGBTQ+ people’s For You Pages:

“every other person that I follow was like did you just start getting a bunch of straight shit in your FYP. Where did that come from? Why are there straight boys like with their shirts off humping stuff on my feed? [...] A very quick way to fix that which I tried to comment on... literally go to the LGBTQ plus hashtag... just smash like on about 30 posts and it immediately fixed itself.”

Active correction of the FYP algorithm through deliberately excessive use of the ‘like’ affordance, as well as engagement with LGBTQ+ specific hashtags is a practice of resistance against the enforcement of more heteronormative content being injected into Participant 12’s FYP algorithm. Participant 7 describes using TikTok’s ‘not interested’ affordance to remove content from her feed:



“And so usually if it’s... something I don’t like and I don’t like experiencing or watching. I say I’m not interested, then it doesn’t show me anything else that’s like that little niche, like genre of anything, which is nice.”

Our participants describe actions they have taken to deliberately shift the FYP algorithm when it presents them with content they do not wish to see. By using affordances, TikTok users once again demonstrate their beliefs about how FYP content is delivered and how to manipulate this process. What is more, our participants understand TikTok’s transgressive or violating injections of content to be actions entirely out of their control, rather than choices informed by previous actions our participants had taken. Their use of affordances to ‘correct’ their For You Pages shows how selective the application of the imaginary of the FYP is to our participants [23].

## 5 DISCUSSION

As algorithms continue to become deeply embedded in the systems that mediate our routine engagements with the world, it becomes increasingly important to understand people’s everyday experiences with algorithmic systems. Our study illustrates the growing need for continued analytic and scholarly attention to people’s experiences with algorithmic systems, especially when considering how these systems might be suppressing and oppressing the identities of people whose identities are already marginalized.

Our study contributes a deep understanding of people’s everyday experiences with algorithmic systems and the relationship of these systems to identity work, highlighting the inherent contradictions that emerge when identities are categorically assigned by and through algorithms. In returning to Cheney-Lippold [26], TikTok’s FYP algorithm was at once For You, in that the datafied representations were adhering to people’s internalized self-concept, whereas in other cases it was For “You”, relegating other intersections of people’s identities to the margins.

To build upon our findings, and prior to concluding, we discuss the implications of algorithmic systems, developing the concept of Algorithmic Exclusion. We then describe the self-organized practices people develop in response to algorithmic exclusion as a kind of resilience whereby people are pushing back against the heteronormative structures introduced or reinforced by algorithmic systems. Finally, we conclude with a brief discussion of our member checking strategy using short-form videos to solicit feedback and community discussing on TikTok.

### 5.1 Algorithmic Exclusion

With so much focus on the concept of inclusion in research into underrepresented and marginalized groups, exclusion is often presented as its foil. However, efforts at inclusion can often come with exclusionary effects [63]. For example, urban renewal projects can lead to increases in property values in minority neighborhoods, which, in turn, leads to gentrification and the loss of that neighborhood space for minority communities. Moreover, exclusion is a systemic practice across multiple levels of society which has disparate impacts on the most marginalized individuals in society [76]. For our work, we define exclusion as the mechanism through which the harms of societal power are enacted on one or more marginalized groups across space and time. Online, exclusionary practice is often connected to normative conflicts which are replicated, reinforced, or exacerbated by the sociotechnical system wherein the exclusionary interaction takes place [133]. Following our observations on TikTok, we propose an additional layer to this mechanism in **algorithmic exclusion**, which we define as *the ways in which algorithms construct and reconstruct exclusionary structures within a bounded sociotechnical system, or more broadly across societal structures*.

One of the ways this power is enforced is through societal norms [65]. Donna Haraway, in developing the concept of the informatics of domination, articulates how Western traditions, such as patriarchy and colonialism, have enabled the development of problematic taxonomies, or binary demarcations, that are re-enforced through language and information. These traditions create power differentials in society, such as man/woman, normal/abnormal, heterosexual/homosexual, and white/Black [65]. In this view, the informatics of domination is used as a means of questioning what is considered normative and non-normative in society, as well as how and these hegemonic norms influence how people think about themselves and conceive of their self-concept. For example, LGBTQ+ people may have non-normative gender expression or identify as bisexual, making acceptance of their gender or sexual identity challenging. This can, in turn, challenges the sense of order and continuity in one's routine presentation of self.

Our participants' observations as reported in our results section indicate that TikTok's FYP algorithm categorically constructs and shapes the kinds of identity that are visible through its content delivery system and prioritization of certain kinds of identity routines. Our ontological security comes from the salience of our routines around who we are [52]. When people do not see their identities represented, their identity routines are made unstable, which can, in turn lead to insecurity and anxiety about their self-identity [117]. The exclusionary structures perpetuated by algorithms create a sense of *ontological insecurity*, as people are only seeing parts of themselves represented while other parts of their identities are being excluded. We saw this in the ways our participants' experiences of community and how they saw intersections of their identities visually represented. In the sections that follow, we will explore two primary features of algorithmic exclusion as related to community and identity.

*5.1.1 Algorithms can define "your" community versus your community.* There is a growing body of work how people's understandings of technological systems, such as algorithms, are in a constant state of flux [35, 46, 47]. A consistent theme in our results is our participants' discussion of the presence of a "community" on TikTok for them and people like them. To frame this exploration, we draw on the work of Benedict Anderson [5] who conceptualizes community as a mental state relative to how connected people feel to others. Anderson studied nationalism among citizens who are unlikely to interact with each other, but share a sense of unity and identity. He uses the term "imagined community" to describe how people living in modern civilizations imagine a connection to other citizens, despite the impossibility of interacting with everyone in their society [5].

In our study, participants imagine community with and feel connected to like-minded strangers based on shared collective experiences [5, 57] that the FYP algorithm has shown to them. Some users, in turn, create content for an imagined audience of people similar to themselves [82], trusting the algorithm to deliver their content to people who wish to see it, and thus contributing to the overall sense of community they share with these imagined others. These feelings of community are brought to the fore in moments of uncanny, such as Participant 12's growing comprehension of the universal experiences of growing up LGBTQ+ and in moments of acceptance, such as Participant 3's and 15's engagement with multiple iterations of identity validating stories of coming out. Yet when an algorithm is creating common ties between the data-derived version of a person and other data-derived people like "them," this imagined community can also be exclusionary in how it silences certain aspects of people's identities. This is seen through Participant 16's encounters with the Pagan community's appropriation of appropriating her native culture, or with Participant 5 and 6's awareness of the lack of fat or Black people on their For You Pages. On TikTok, "community" is derived not from the actual collective experience and language of our participants, but rather through the common ties between their datafied and categorical selves [26]. While finding "your" community can produce feelings of validation and connection to alike others, it can also exclude by

silencing non-normative identities, and it can potentially cause harms to the "community" people are connected to. This contradictory understanding is also seen in certain identity performances that are made visible and invisible by algorithms within sociotechnical systems such as TikTok.

*5.1.2 Algorithms define "your" self-concept vs. your self-concept.* Algorithmic exclusion has severe implications for how people define and present themselves. To better frame this articulation, we first return to traditional conceptualizations of identity. Identity is often conceptualized in two primary ways: identity as self-concept [51] and identity as performance [24, 54]. First, and as we previously defined for the purposes of our work, identity as self-concept refers to how individuals think about and view themselves socially or physically [51]. This relates to people's internalized view of themselves. Moreover, identity as a performance [24, 54] asserts that our identity also matches elements of our social context. This perspective suggests that we develop our identities in relation to extant rules and norms within the social settings in which we are embedded [17, 94]. This social interactionist view of identity underscores how much we as individuals are products of our relations with others and with society as a whole.

Sociotechnical systems, primarily identity-based platforms like Facebook, are often designed around a social interactionist view. Scholars have explored how people who use social media, for example, are cognizant of their audiences [94]. From research on impression management in social media, we know that people commonly present different information depending on the audience [94, 123] and that they engage in a variety of self-presentation strategies [118]. This research highlights how people's identity performances are often mediated by their imagined audience on any given platform [94]. For example, in the context of people coming into a new identity, such as a transgender identity, the presence of family and friends can serve as both a source of stress or support [61]. Yet, in other cases, studies have underscored how people are strategically using multiple ICTs, or different affordances within any given platform, to engage in identity work and perform identities while staying true to their self-concept [37, 43].

Our work builds on this previous work in a key way: we find that algorithms can play a significant role in promoting and thus making visible certain kinds of identity performances while silencing and thus excluding other identity performances. In this view, algorithmic systems can enforce or recreate exclusionary structures when they promote and popularize certain performances at the same time that they silence others. In other words, algorithms create exclusionary structures around the myriad ways in which people may see themselves and want to articulate themselves to others, especially when those parts of themselves are not visible or made invisible on a platform.

In sum, algorithmic platforms like TikTok may suggest that affordances they offer allow users to create and participate in communities according to their own understandings of themselves, but in actuality, the platforms have predetermined the types of performances that are allowed and thus considered meaningful.

## 5.2 Resilience: Against Algorithmic Exclusion

Many of our participants described the practices they performed as an effort to push back against feelings of algorithmic exclusion. We believe these practices are a kind of resilience. Resilience is broadly defined as the ability of human and/or technical systems to bounce back from threat or vulnerability [27]. Southwick and colleagues [126] note that there is no one definition of resilience and that definitions of resilience must emerge from any given field site or dataset. Based on our findings, we adopt a practice-based perspective on resilience, understanding it as the patterns of action people develop in response to threat or vulnerability [93]. Here, Resilience is the reestablishment of routine and the recreation of ontological security following moments of algorithmic exclusion.

Previous work in CSCW and HCI has predominately used the concept of resilience to explore how people overcome crisis events, such as natural disasters and war [58, 93]. Specifically, studies have explored the relationship between disaster recovery and the uses of ICTs like social media and online communities [58, 120]. To a lesser extent, scholars have started to explore how people draw on technology to build resilience when disruption becomes routine. For example, Bryan Semaan [117] explores how people improvise and creatively adapt to internal or exogenous threats and vulnerabilities when disruption becomes an everyday experience, such as when people are members of marginalized populations. Here, we shift our emphasis of resilience from how people draw on ICTs to build resilience to the emergent practices people develop to push back against the vulnerabilities associated with algorithmic exclusion.

In our study, we see resilience our participants' practices of reposting, recapping, and recreating removed accounts as a form of redundancy against deplatforming efforts; seeking to adjust their FYP through affordances after unwanted content is interjected into the space; as well as in their creative endeavors to speak out about the toxic community norms and behavior. These resilience practices can be seen in the ways our participants respond to both perceived transgression and perceived violations, which we explore in the next two sections.

*5.2.1 Resilience Against Transgressions.* Our participants discussed their resilience strategies against unwanted interjections of content as more affordance based. TikTok provides individuals the ability to say that they're "not interested" in particular content, and some of our respondents, participants 7, 10, and 11 in particular, used this feature to help them curate their feed. Participant 13 took this process a step further—they described using the not interested feature and then searching for the person who created the unwanted content and blocking their account. Participants 6 and 12 discussed how they would engage with particular hashtags to get unwanted content go away. These tactics are intuitively learned through interaction with the platform, and our participants use them to push back against what they perceive to be disruption in their routines, in this case the content they routinely see on their For You Pages.

Another tactic our participants described can be characterized as a transgression or as a violation, depending on how our participants discussed it. Many of our participants described seeing content removed by LGBTQ+ creators, or had their own content removed. The resilience strategies of recreating removed accounts, reposting or recapping removed content were all either observed or used by our participants. Participant 16, for instance, simply reposted a video of hers that was taken down. That TikTok's affordances allow users to create and recreate content so easily has a minimizing effect on our participant's perceptions of the transgression they may experience when their content is removed. Being able to repost content and not face the same transgression of having it taken down for violating vague community guidelines points to how TikTok's infrastructure almost encourages the recreation of removed content. It also points to malicious actions by TikTok users to actively deplatform LGBTQ+ people who become visible on the platform. This presents risk for LGBTQ+ people in their identity expression. And while it is easy enough to structure resilience around recreation of content, there are few ways for users to respond to the deeper violations of the algorithmic system which we discuss below.

*5.2.2 Resilience Against Violations.* Pushing back against perceived violations of TikTok was more complicated for our participants, as it often came with further unpleasant engagement, or direct invalidation of their identities. For example, participant 16's experiences with harassment by the pagan community, which focused on her Native American identity and followed her creation of a video explaining why a practice she observed was appropriating her culture; or participant 3's experiences witnessing live streams being taken down because users were discussing if it was okay to be gay. These invalidating acts can disrupt people's routines and cause feelings of insecurity, but

they can also cause moments of resistance. Here resilience efforts promoted direct action, such as Participant 16's decision to make her rebuttal video in the first place, alongside the further conversations she had with people after posting the video. Further, our participants (P1, P2, P11, P12, and P15 in particular) discussed their frustrations with the normative identity presentations they observed on TikTok, discussing how "this isn't me" and "this isn't how it is" when it came to stereotypes of lesbian identity and presentation in particular. Yet these examples show how the burden of representation falls the marginalized to educate the uneducated, correct the stereotype, or to repost the content if it was taken down through community moderation or deplatforming efforts by bad actors. Resilience in this case comes from trying to recreate feelings of ontological security, be it through the rejection of hegemonic norms or through the creation of materials meant to educate the community as to why certain behaviors are not acceptable within an exclusionary algorithmic system.

### 5.3 Member Checking and Community Engagement Through Short Form Video

During our data analysis, we produced several short form videos on TikTok using popular sounds and video style trends and we tagged them with various LGBTQ+ identity related hashtags (e.g., #lgbtq, #lesbian, #trans, etc.) to ensure they would be seen. While this method was fruitful for communicating with members of the first author's primary network on TikTok, and by extension many of the participants of the study, these videos did not travel beyond this network, with few getting more than 100 views. One participant (P13) used TikTok's duet feature to showcase the video that was created to discuss preliminary findings, and several others commented on videos with their sentiments on the findings (P9, P13, along with 3 other non-participants). This strategy for member checking is useful in certain circumstances, such as when the researcher and participant are connected on the same platform. However, on TikTok, where content is randomly delivered by the FYP algorithm, this form of member checking should be used to augment more traditional forms of continued participant engagement, such as through email, and should not serve as the sole form of community engagement following research. Distilling complicated academic concepts easily digestible short form video, however, places fewer less demands on participants' time and allows them to voice (dis)agreement with the findings with considerably lower effort than traditional means may allow. This is a space for future research and investigation within the CHI and CSCW communities.

## 6 CONCLUSIONS AND FUTURE RESEARCH

Our study presents a nuanced account of people's everyday experiences with the algorithmic system TikTok. We found that TikTok's For You Page algorithm constructs contradictory identity spaces that are both supportive and also exclusionary. There is still a lot of work left to be done. For example, potential avenues for future work could examine content creators more closely, to gain a better understanding of their resilience strategies in the face of disruption. This work may address the content producing and identity routines of both human and technical actors on TikTok, future work may also address the impact of stereotypes on LGBTQ+ visibility, such as the harms that these stereotypes may cause, or the tendency of normative stereotypes to reduce the visibility of non-normative gender identities and sexualities. Because sociotechnical systems are constructed and reconstructed by the social and cultural norms of society, the continued study of people's day to day experiences with such systems provides fruitful insight into the functions of these systems, as well as how they structure and restructure these societal norms.

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## REFERENCES

- [1] Salem Hamed Abdurrahim, Salina Abdul Samad, and Aqilah Baseri Huddin. 2018. Review on the effects of age, gender, and race demographics on automatic face recognition. *The Visual Computer* 34, 11 (2018), 1617–1630.
- [2] Tawfiq Ammari and Sarita Schoenebeck. 2015. Understanding and Supporting Fathers and Fatherhood on Social Media Sites. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems* (Seoul, Republic of Korea) (CHI '15). ACM, New York, NY, USA, 1905–1914. <https://doi.org/10.1145/2702123.2702205>
- [3] Nazanin Andalibi and Andrea Forte. 2018. Announcing Pregnancy Loss on Facebook: A Decision-Making Framework for Stigmatized Disclosures on Identified Social Network Sites. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems* (Montreal QC, Canada) (CHI '18). ACM, New York, NY, USA, 1–14. <https://doi.org/10.1145/3173574.3173732>
- [4] Nazanin Andalibi, Oliver L. Haimson, Munmun De Choudhury, and Andrea Forte. 2018. Social Support, Reciprocity, and Anonymity in Responses to Sexual Abuse Disclosures on Social Media. *ACM Trans. Comput.-Hum. Interact.* 25, 5, Article 28 (Oct. 2018), 35 pages. <https://doi.org/10.1145/3234942>
- [5] Benedict Anderson. 2006. *Imagined communities: Reflections on the origin and spread of nationalism*. Verso books.
- [6] Karla Badillo-Urquiola, Diva Smriti, Brenna McNally, Evan Golub, Elizabeth Bonsignore, and Pamela J. Wisniewski. 2019. Stranger Danger! Social Media App Features Co-Designed with Children to Keep Them Safe Online. In *Proceedings of the 18th ACM International Conference on Interaction Design and Children* (Boise, ID, USA) (IDC '19). Association for Computing Machinery, New York, NY, USA, 394–406. <https://doi.org/10.1145/3311927.3323133>
- [7] Paul Baker and Amanda Potts. 2013. 'Why do white people have thin lips?' Google and the perpetuation of stereotypes via auto-complete search forms. *Critical Discourse Studies* 10, 2 (2013), 187–204.
- [8] David Beer. 2009. Power through the algorithm? Participatory web cultures and the technological unconscious. *New Media & Society* 11, 6 (2009), 985–1002.
- [9] Sam Biddle, Paulo Victor Ribeiro, and Tatiana Dias. 2020. Invisible Censorship: TikTok Told Moderators to Suppress Posts by "Ugly" People and the Poor to Attract New Users. *The Intercept* (2020).
- [10] Patrick Biernacki and Dan Waldorf. 1981. Snowball sampling: Problems and techniques of chain referral sampling. *Sociological methods & research* 10, 2 (1981), 141–163.
- [11] Paško Bilić. 2016. Search algorithms, hidden labour and information control. *Big Data & Society* 3, 1 (2016), 2053951716652159.
- [12] Rena Bivens and Oliver L Haimson. 2016. Baking gender into social media design: How platforms shape categories for users and advertisers. *Social Media & Society* 2, 4 (2016), 2056305116672486.
- [13] Courtney Blackwell, Jeremy Birnholtz, and Charles Abbott. 2015. Seeing and being seen: Co-situation and impression formation using Grindr, a location-aware gay dating app. *New media & society* 17, 7 (2015), 1117–1136.
- [14] Lindsay Blackwell, Jill Dimond, Sarita Schoenebeck, and Cliff Lampe. 2017. Classification and Its Consequences for Online Harassment: Design Insights from HeartMob. *Proc. ACM Hum.-Comput. Interact.* 1, CSCW, Article 24 (Dec. 2017), 19 pages. <https://doi.org/10.1145/3134659>
- [15] Elena Botella. 2019. TikTok Admits It Suppressed Videos by Disabled, Queer, and Fat Creators. *Slate* (2019).
- [16] Geoffrey Bowker. 1994. Information mythology: The world of/as information. *Information acumen: The understanding and use of knowledge in modern business* (1994), 231–247.
- [17] danah m boyd and Nicole B Ellison. 2007. Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication* 13, 1 (2007), 210–230.
- [18] Engin Bozdag. 2013. Bias in algorithmic filtering and personalization. *Ethics and Information Technology* 15, 3 (2013), 209–227.
- [19] Ethan Bresnick. 2019. Intensified Play: Cinematic study of TikTok mobile app. (04 2019).
- [20] William Bridges. 2004. *Transitions: Making sense of life's changes*.
- [21] Meredith Broussard. 2018. *Artificial Unintelligence: How Computers Misunderstand the World*. MIT Press.
- [22] Taina Bucher. 2012. Want to be on the top? Algorithmic power and the threat of invisibility on Facebook. *New Media & Society* 14, 7 (2012), 1164–1180.



- [23] Taina Bucher. 2017. The algorithmic imaginary: exploring the ordinary affects of Facebook algorithms. *Information, Communication & Society* 20, 1 (2017), 30–44.
- [24] Judith Butler. 2011. *Gender trouble: Feminism and the subversion of identity*. Routledge.
- [25] Matthew Carrasco and Andruud Kerne. 2018. Queer Visibility: Supporting LGBT+ Selective Visibility on Social Media. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems* (Montreal QC, Canada) (CHI '18). ACM, New York, NY, USA, 1–12. <https://doi.org/10.1145/3173574.3173824>
- [26] John Cheney-Lippold. 2018. *We are data: Algorithms and the making of our digital selves*. NYU Press.
- [27] Louise Kloos Comfort. 2007. *Shared risk: Complex systems in seismic response*. Emerald Group Publishing.
- [28] Juliet Corbin, Anselm L Strauss, and Anselm Strauss. 2015. *Basics of Qualitative Research*. sage.
- [29] Kelley Cotter. 2019. Playing the visibility game: How digital influencers and algorithms negotiate influence on Instagram. *New Media & Society* 21, 4 (2019), 895–913.
- [30] Shelley L Craig and Lauren McInroy. 2014. You can form a part of yourself online: The influence of new media on identity development and coming out for LGBTQ youth. *Journal of Gay & Lesbian Mental Health* 18, 1 (2014), 95–109.
- [31] Jonathon Cummings, J Lee, and Robert Kraut. 2006. Communication technology and friendship during the transition from high school to college. *Computers, phones, and the Internet: Domesticating information technology* (2006), 265–278.
- [32] Avery Dame. 2013. “I’m your hero? Like me?”: The role of ‘expert’ in the trans male vlog. *Journal of Language and Sexuality* 2, 1 (2013), 40–69.
- [33] Jeroen JH Dekker. 1990. The fragile relation between normality and marginality. Marginalization and institutionalization in the history of education. *Pedagogica Historica* 26, 2 (1990), 12–29.
- [34] Bipin C. Desai. 2019. Privacy in the Age of Information (and Algorithms). In *Proceedings of the 23rd International Database Applications Engineering Symposium* (Athens, Greece) (IDEAS '19). Association for Computing Machinery, New York, NY, USA, Article 17, 12 pages. <https://doi.org/10.1145/3331076.3331089>
- [35] Michael Ann DeVito, Jeremy Birnholtz, Jeffery T. Hancock, Megan French, and Sunny Liu. 2018. How People Form Folk Theories of Social Media Feeds and What It Means for How We Study Self-Presentation. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems* (Montreal QC, Canada) (CHI '18). Association for Computing Machinery, New York, NY, USA, 1–12. <https://doi.org/10.1145/3173574.3173694>
- [36] Michael Ann DeVito, Darren Gergle, and Jeremy Birnholtz. 2017. “Algorithms Ruin Everything”: #RIPTwitter, Folk Theories, and Resistance to Algorithmic Change in Social Media. In *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems* (Denver, Colorado, USA) (CHI '17). Association for Computing Machinery, New York, NY, USA, 3163–3174. <https://doi.org/10.1145/3025453.3025659>
- [37] Michael Ann DeVito, Ashley Marie Walker, and Jeremy Birnholtz. 2018. ‘Too Gay for Facebook’: Presenting LGBTQ+ Identity Throughout the Personal Social Media Ecosystem. *Proc. ACM Hum.-Comput. Interact.* 2, CSCW, Article 44 (Nov. 2018), 23 pages. <https://doi.org/10.1145/3274313>
- [38] Jill P Dimond, Casey Fiesler, and Amy S Bruckman. 2011. Domestic violence and information communication technologies. *Interacting with Computers* 23, 5 (2011), 413–421.
- [39] Bryan Dosono and Bryan Semaan. 2019. Moderation Practices as Emotional Labor in Sustaining Online Communities: The Case of AAPI Identity Work on Reddit. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*. ACM, 142.
- [40] Jack Drescher. 2015. Out of DSM: Depathologizing homosexuality. *Behavioral Sciences* 5, 4 (2015), 565–575.
- [41] Stefanie Duguay. 2017. *Identity modulation in networked publics: Queer women’s participation and representation on Tinder, Instagram, and Vine*. Ph.D. Dissertation. Queensland University of Technology.
- [42] Stefanie Duguay. 2019. “There’s no one new around you”: Queer Women’s Experiences of Scarcity in Geospatial Partner-Seeking on Tinder. In *The Geographies of Digital Sexuality*. Springer, 93–114.
- [43] Brianna Dym, Jed R. Brubaker, Casey Fiesler, and Bryan Semaan. 2019. “Coming Out Okay”: Community Narratives for LGBTQ Identity Recovery Work. *Proc. ACM Hum.-Comput. Interact.* 3, CSCW, Article 154 (Nov. 2019), 28 pages. <https://doi.org/10.1145/3359256>
- [44] Nicole B Ellison, Lindsay Blackwell, Cliff Lampe, and Penny Trieu. 2016. “The Question Exists, but You Don’t Exist With It”: Strategic Anonymity in the Social Lives of Adolescents. *Social Media & Society* 2, 4 (2016), 2056305116670673.
- [45] Erik H Erikson. 1994. *Identity and the Life Cycle*. WW Norton & Company.
- [46] Motahhare Eslami, Karrie Karahalios, Christian Sandvig, Kristen Vaccaro, Aimee Rickman, Kevin Hamilton, and Alex Kirlik. 2016. First I “like” It, Then I Hide It: Folk Theories of Social Feeds. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems* (San Jose, California, USA) (CHI '16). Association for Computing Machinery, New York, NY, USA, 2371–2382. <https://doi.org/10.1145/2858036.2858494>
- [47] Motahhare Eslami, Aimee Rickman, Kristen Vaccaro, Amirhossein Aleyasen, Andy Vuong, Karrie Karahalios, Kevin Hamilton, and Christian Sandvig. 2015. “I Always Assumed That I Wasn’t Really That Close to [Her]”: Reasoning about Invisible Algorithms in News Feeds. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems* (Seoul, Republic of Korea) (CHI '15). Association for Computing Machinery, New York, NY, USA,

- 153–162. <https://doi.org/10.1145/2702123.2702556>
- [48] Martha S Feldman and Brian T Pentland. 2003. Reconceptualizing organizational routines as a source of flexibility and change. *Administrative science quarterly* 48, 1 (2003), 94–118.
- [49] Tania Ferfolja. 2007. Schooling cultures: Institutionalizing heteronormativity and heterosexism. *International Journal of Inclusive Education* 11, 2 (2007), 147–162.
- [50] Byrne Fone. 2000. *Homophobia: A history*. Macmillan.
- [51] Viktor Gecas. 1982. The self-concept. *Annual Review of Sociology* 8, 1 (1982), 1–33.
- [52] Anthony Giddens. 1991. *Modernity and self-identity: Self and society in the late modern age*. Stanford university press.
- [53] Tarleton Gillespie. 2010. The politics of 'platforms'. *New Media & Society* 12, 3 (2010), 347–364.
- [54] Erving Goffman et al. 1978. *The presentation of self in everyday life*. Harmondsworth London.
- [55] Luke Goode. 2009. Social news, citizen journalism and democracy. *New Media & Society* 11, 8 (2009), 1287–1305.
- [56] Michael Green, Ania Bobrowicz, and Chee Siang Ang. 2015. The lesbian, gay, bisexual and transgender community online: discussions of bullying and self-disclosure in YouTube videos. *Behaviour & Information Technology* 34, 7 (2015), 704–712.
- [57] Anatoliy Gruzd, Barry Wellman, and Yuri Takhteyev. 2011. Imagining Twitter as an imagined community. *American Behavioral Scientist* 55, 10 (2011), 1294–1318.
- [58] Christine Hagar and Caroline Haythornthwaite. 2005. Crisis, farming and community. *Journal of Community Informatics* 3 (2005), 41.
- [59] Oliver L. Haimson, Jed R. Brubaker, Lynn Dombrowski, and Gillian R. Hayes. 2015. Disclosure, Stress, and Support During Gender Transition on Facebook. In *Proceedings of the 18th ACM Conference on Computer Supported Cooperative Work Social Computing* (Vancouver, BC, Canada) (CSCW '15). ACM, New York, NY, USA, 1176–1190. <https://doi.org/10.1145/2675133.2675152>
- [60] Oliver L Haimson, Avery Dame-Griff, Elias Capello, and Zahari Richter. 2019. Tumblr was a trans technology: the meaning, importance, history, and future of trans technologies. *Feminist Media Studies* (2019), 1–17.
- [61] Oliver L Haimson and Anna Lauren Hoffmann. 2016. Constructing and enforcing" authentic" identity online: Facebook, real names, and non-normative identities. *First Monday* 21, 6 (2016).
- [62] Melissa Hamilton. 2019. The sexist algorithm. *Behavioral Sciences & The Law* 37, 2 (2019), 145–157.
- [63] Lynn Hancock. 2006. Community safety and social exclusion. *Community Safety: Critical perspectives on policy and practice* (2006), 201–217.
- [64] Ole Hanseth and Kalle Lyytinen. 2010. Design theory for dynamic complexity in information infrastructures: the case of building internet. *Journal of Information Technology* 25, 1 (2010), 1–19.
- [65] Donna Haraway. 1994. A manifesto for cyborgs: Science, technology, and socialist feminism in the 1980s. *The postmodern turn: New perspectives on social theory* (1994), 82–115.
- [66] Jean Hardy and Silvia Lindtner. 2017. Constructing a Desiring User: Discourse, Rurality, and Design in Location-Based Social Networks. In *Proceedings of the 2017 ACM Conference on Computer Supported Cooperative Work and Social Computing* (Portland, Oregon, USA) (CSCW '17). Association for Computing Machinery, New York, NY, USA, 13–25. <https://doi.org/10.1145/2998181.2998347>
- [67] Peter Hart-Brinson. 2018. *The gay marriage generation: How the LGBTQ movement transformed American culture*. NYU Press.
- [68] Bettina Heinz, Li Gu, Ako Inuzuka, and Roger Zender. 2002. Under the rainbow flag: Webbing global gay identities. *International Journal of Sexuality and Gender Studies* 7, 2-3 (2002), 107–124.
- [69] Gregory M Herek. 2004. Beyond "homophobia": Thinking about sexual prejudice and stigma in the twenty-first century. *Sexuality Research & Social Policy* 1, 2 (2004), 6–24.
- [70] Alex Hern. 2019. TikTok's local moderation guidelines ban pro-LGBT content. *The Guardian* (2019).
- [71] John Herrman. March 10, 2019. How TikTok Is Rewriting the World. *The New York Times* (March 10, 2019).
- [72] Herminia Ibarra and Jennifer L Petriglieri. 2010. Identity work and play. *Journal of Organizational Change Management* (2010).
- [73] Infrastructure. n.d.. *Merriam-Webster.com dictionary*. Merriam-Webster.
- [74] Shagun Jhaver, Yoni Karpfen, and Judd Antin. 2018. Algorithmic anxiety and coping strategies of Airbnb hosts. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*. ACM, 421.
- [75] Matthew Kay, Cynthia Matuszek, and Sean A. Munson. 2015. Unequal Representation and Gender Stereotypes in Image Search Results for Occupations. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems* (Seoul, Republic of Korea) (CHI '15). Association for Computing Machinery, New York, NY, USA, 3819–3828. <https://doi.org/10.1145/2702123.2702520>
- [76] Sharful Islam Khan, Mohammed Iftekhher Hussain, Shaila Parveen, Mahbubul Islam Bhuiyan, Gorkey Gourab, Golam Faruk Sarker, Shohael Mahmud Arafat, and Joya Sikder. 2009. Living on the extreme margin: social exclusion of the transgender population (hijra) in Bangladesh. *Journal of health, population, and nutrition* 27, 4 (2009), 441.

- [77] Vanessa Kitzie. 2019. “That looks like me or something i can do”: Affordances and constraints in the online identity work of US LGBTQ+ millennials. *Journal of the Association for Information Science and Technology* 70, 12 (2019), 1340–1351.
- [78] Brendan F Klare, Mark J Burge, Joshua C Klontz, Richard W Vorder Bruegge, and Anil K Jain. 2012. Face recognition performance: Role of demographic information. *IEEE Transactions on Information Forensics and Security* 7, 6 (2012), 1789–1801.
- [79] Christopher A. Le Dantec, Robert G. Farrell, Jim E. Christensen, Mark Bailey, Jason B. Ellis, Wendy A. Kellogg, and W. Keith Edwards. 2011. Publics in Practice: Ubiquitous Computing at a Shelter for Homeless Mothers. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (Vancouver, BC, Canada) (CHI '11). Association for Computing Machinery, New York, NY, USA, 1687–1696. <https://doi.org/10.1145/1978942.1979189>
- [80] Charlotte P. Lee, Paul Dourish, and Gloria Mark. 2006. The Human Infrastructure of Cyberinfrastructure. In *Proceedings of the 2006 20th Anniversary Conference on Computer Supported Cooperative Work* (Banff, Alberta, Canada) (CSCW '06). Association for Computing Machinery, New York, NY, USA, 483–492. <https://doi.org/10.1145/1180875.1180950>
- [81] Jing Li. 2018. Studies on Douyin app Communication in Social Platforms: Take Relevant Douyin Short Videos and Posts on Microblog as Examples.
- [82] Eden Litt. 2012. Knock, knock. Who’s there? The imagined audience. *Journal of Broadcasting & Electronic Media* 56, 3 (2012), 330–345.
- [83] Shang Liu, Zenzhong Chen, Hongyi Liu, and Xinghai Hu. 2019. User-Video Co-Attention Network for Personalized Micro-video Recommendation. In *WWW '19: The World Wide Web Conference (WWW '19)*. ACM Press, New York, NY, 3020–3026. <https://doi.org/10.1145/3308558.3313513>
- [84] Yunfei Lu, Linuyn Yu, Peng Cui, Chengxi Zang, Renzhe Xu, Yihao Liu, Lei Li, and Wenwu Zhu. 2019. Uncovering the Co-driven Mechanism of Social and Content Links in User Churn Phenomena. In *KDD '19: Proceedings of the 25th ACM SIGKDD International Conference on Knowledge Discovery Data Mining (KDD '19)*. ACM Press, New York, NY, 3093–3101. <https://doi.org/10.1145/3292500.3330736>
- [85] Zhicong Lu. 2019. Live Streaming in China for Sharing Knowledge and Promoting Intangible Cultural Heritage. *Interactions* 27, 1 (Dec. 2019), 58–63. <https://doi.org/10.1145/3373145>
- [86] Zhicong Lu, Michelle Annett, Mingming Fan, and Daniel Wigdor. 2019. “I Feel It is My Responsibility to Stream”: Streaming and Engaging with Intangible Cultural Heritage through Livestreaming. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems* (Glasgow, Scotland Uk) (CHI '19). Association for Computing Machinery, New York, NY, USA, 1–14. <https://doi.org/10.1145/3290605.3300459>
- [87] Zhicong Lu, Michelle Annett, and Daniel Wigdor. 2019. Vicariously Experiencing It All Without Going Outside: A Study of Outdoor Livestreaming in China. *Proc. ACM Hum.-Comput. Interact.* 3, CSCW, Article 25 (Nov. 2019), 28 pages. <https://doi.org/10.1145/3359127>
- [88] Zhicong Lu and Xing Lu. 2019. Fifteen Seconds of Fame: A Qualitative Study of Douyin, A Short Video Sharing Mobile Application in China. In *Social Computing and Social Media. Design, Human Behavior and Analytics. HCII 2019. Lecture Notes in Computer Science* (1nd. ed.), Meiselwitz G. (Ed.). Vol. vol 11578. Springer, Cham, 285–298. [https://doi.org/10.1007/978-3-030-21902-4\\_17](https://doi.org/10.1007/978-3-030-21902-4_17)
- [89] Caitlin Lustig and Bonnie Nardi. 2015. Algorithmic authority: The case of Bitcoin. In *2015 48th Hawaii International Conference on System Sciences*. IEEE, 743–752.
- [90] Caitlin Lustig, Katie Pine, Bonnie Nardi, Lilly Irani, Min Kyung Lee, Dawn Nafus, and Christian Sandvig. 2016. Algorithmic Authority: The Ethics, Politics, and Economics of Algorithms That Interpret, Decide, and Manage. In *Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems* (San Jose, California, USA) (CHI EA '16). Association for Computing Machinery, New York, NY, USA, 1057–1062. <https://doi.org/10.1145/2851581.2886426>
- [91] Wei-Ying Ma. 2020. Democratizing Content Creation and Dissemination through AI Technology. In *WWW '20: Proceedings of The Web Conference 2020 (WWW '20)*. ACM Press, New York, NY, 3143. <https://doi.org/10.1145/3366423.3382669>
- [92] Sorcha Avalon Mackenzie and David Nichols. 2020. Finding ‘Places to Be Bad’ in Social Media: The Case of TikTok. In *Urban Australia and Post-Punk* (1nd. ed.), David Nichols and Sophie Perillo (Eds.). Palgrave Macmillan, New York, NY, 285–298. [https://doi.org/10.1007/978-981-32-9702-9\\_22](https://doi.org/10.1007/978-981-32-9702-9_22)
- [93] Gloria Mark and Bryan Semaan. 2008. Resilience in Collaboration: Technology as a Resource for New Patterns of Action. In *Proceedings of the 2008 ACM Conference on Computer Supported Cooperative Work* (San Diego, CA, USA) (CSCW '08). Association for Computing Machinery, New York, NY, USA, 137–146. <https://doi.org/10.1145/1460563.1460585>
- [94] Alice E Marwick and danah boyd. 2011. I tweet honestly, I tweet passionately: Twitter users, context collapse, and the imagined audience. *New Media & Society* 13, 1 (2011), 114–133.
- [95] Adrienne Massanari. 2017. # Gamergate and The Fapping: How Reddit’s algorithm, governance, and culture support toxic technocultures. *New Media & Society* 19, 3 (2017), 329–346.

- [96] Michael Massimi, Jill P. Dimond, and Christopher A. Le Dantec. 2012. Finding a New Normal: The Role of Technology in Life Disruptions. In *Proceedings of the ACM 2012 Conference on Computer Supported Cooperative Work* (Seattle, Washington, USA) (CSCW '12). Association for Computing Machinery, New York, NY, USA, 719–728. <https://doi.org/10.1145/2145204.2145314>
- [97] Sarah McRobets, Ye Yuan, Kathleen Watson, and Svetlana Yarosh. 2019. Behind the Scenes: Design, Collaboration, and Video Creation with Youth. In *Proceedings of the 18th ACM International Conference on Interaction Design and Children* (IDC '19). ACM Press, New York, NY, 173–184. <https://doi.org/10.1145/3311927.3323134>
- [98] Leigh Moscovitz. 2013. *The battle over marriage: Gay rights activism through the media*. University of Illinois Press.
- [99] Lucas D Introna Helen Nissenbaum and Lucas D Introna. 2000. Shaping the web: Why the politics of search engines matters. *The Information Society* 16, 3 (2000), 169–185.
- [100] Safiya Umoja Noble. 2018. *Algorithms of oppression: How search engines reinforce racism*. New York University Press.
- [101] Ziad Obermeyer and Sendhil Mullainathan. 2019. Dissecting Racial Bias in an Algorithm That Guides Health Decisions for 70 Million People. In *Proceedings of the Conference on Fairness, Accountability, and Transparency* (Atlanta, GA, USA) (FAT\* '19). Association for Computing Machinery, New York, NY, USA, 89. <https://doi.org/10.1145/3287560.3287593>
- [102] Bahiyah Omar and Wang Dequan. 2020. Watch, Share or Create: The Influence of Personality Traits and User Motivation on TikTok Mobile Video Usage. *International Association of Online Engineering* (2020). <https://www.learntechlib.org/p/216454/>
- [103] Jahna Otterbacher, Jo Bates, and Paul Clough. 2017. Competent Men and Warm Women: Gender Stereotypes and Backlash in Image Search Results. In *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems* (Denver, Colorado, USA) (CHI '17). Association for Computing Machinery, New York, NY, USA, 6620–6631. <https://doi.org/10.1145/3025453.3025727>
- [104] CJ Pascoe. 2010. Dude, you're a fag. *The Structure of Schooling: Readings in the Sociology of Education* (2010), 391.
- [105] Amelia Pavlik. 2020. Use TikTok to engage with future students. *Enrollment Management Report* 24, 2 (2020), 6–7. <https://doi.org/10.1002/emt.30654>
- [106] Elia Powers. 2017. My news feed is filtered? Awareness of news personalization among college students. *Digital Journalism* 5, 10 (2017), 1315–1335.
- [107] Emilee Rader and Rebecca Gray. 2015. Understanding User Beliefs About Algorithmic Curation in the Facebook News Feed. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems* (Seoul, Republic of Korea) (CHI '15). Association for Computing Machinery, New York, NY, USA, 173–182. <https://doi.org/10.1145/2702123.2702174>
- [108] Jahmeilah Roberson and Bonnie Nardi. 2010. Survival Needs and Social Inclusion: Technology Use among the Homeless. In *Proceedings of the 2010 ACM Conference on Computer Supported Cooperative Work* (Savannah, Georgia, USA) (CSCW '10). Association for Computing Machinery, New York, NY, USA, 445–448. <https://doi.org/10.1145/1718918.1718993>
- [109] Adi Robertson. 2019. TikTok prevented disabled users' videos from showing up in feeds. *The Verge* (2019).
- [110] Belinda Robnett and Cynthia Feliciano. 2011. Patterns of racial-ethnic exclusion by internet daters. *Social Forces* 89, 3 (2011), 807–828.
- [111] Vito Russo. 1987. *The celluloid closet: Homosexuality in the movies*. Harper Collins.
- [112] Corina Sas and Steve Whittaker. 2013. Design for Forgetting: Disposing of Digital Possessions after a Breakup. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (Paris, France) (CHI '13). Association for Computing Machinery, New York, NY, USA, 1823–1832. <https://doi.org/10.1145/2470654.2466241>
- [113] Morgan Klaus Scheuerman, Stacy M. Branham, and Foad Hamidi. 2018. Safe Spaces and Safe Places: Unpacking Technology-Mediated Experiences of Safety and Harm with Transgender People. *Proc. ACM Hum.-Comput. Interact.* 2, CSCW, Article 155 (Nov. 2018), 27 pages. <https://doi.org/10.1145/3274424>
- [114] Morgan Klaus Scheuerman, Jacob M. Paul, and Jed R. Brubaker. 2019. How Computers See Gender: An Evaluation of Gender Classification in Commercial Facial Analysis Services. *Proc. ACM Hum.-Comput. Interact.* 3, CSCW, Article 144 (Nov. 2019), 33 pages. <https://doi.org/10.1145/3359246>
- [115] Morgan Klaus Scheuerman, Kandrea Wade, Caitlin Lustig, and Jed R. Brubaker. 2020. How We've Taught Algorithms to See Identity: Constructing Race and Gender in Image Databases for Facial Anal. *Proc. ACM Hum.-Comput. Interact.* 4, CSCW1, Article 58 (May 2020), 35 pages. <https://doi.org/10.1145/3392866>
- [116] Sarita Yardi Schoenebeck. 2013. The secret life of online moms: Anonymity and disinhibition on youbemom. com. In *Seventh International AAAI Conference on Weblogs and Social Media*.
- [117] Bryan Semaan. 2019. 'Routine Infrastructuring' as 'Building Everyday Resilience with Technology' When Disruption Becomes Ordinary. *Proceedings of the ACM on Human-Computer Interaction* 3, CSCW (2019), 1–24.
- [118] Bryan Semaan, Heather Faucett, Scott Robertson, Misa Maruyama, and Sara Douglas. 2015. Navigating Imagined Audiences: Motivations for Participating in the Online Public Sphere. In *Proceedings of the 18th ACM Conference on Computer Supported Cooperative Work Social Computing* (Vancouver, BC, Canada) (CSCW '15). Association for Computing Machinery, New York, NY, USA, 1158–1169. <https://doi.org/10.1145/2675133.2675187>



- [119] Bryan Semaan and Gloria Mark. 2011. Technology-mediated social arrangements to resolve breakdowns in infrastructure during ongoing disruption. *ACM Transactions on Computer-Human Interaction (TOCHI)* 18, 4 (2011).
- [120] Bryan Semaan and Gloria Mark. 2011. Technology-Mediated Social Arrangements to Resolve Breakdowns in Infrastructure during Ongoing Disruption. *ACM Trans. Comput.-Hum. Interact.* 18, 4, Article 21 (Dec. 2011), 21 pages. <https://doi.org/10.1145/2063231.2063235>
- [121] Juan Carlos Medina Serrano, Orestis Papakyriakopoulos, and Simon Hegelich. 2020. Dancing to the Partisan Beat: A First Analysis of Political Communication on TikTok. *arXiv preprint arXiv:2004.05478* (2020).
- [122] David Sibley. 1995. *Geographies of exclusion: Society and difference in the West*. Psychology Press.
- [123] Manya Sleeper, Rebecca Balebako, Sauvik Das, Amber Lynn McConahy, Jason Wiese, and Lorrie Faith Cranor. 2013. The Post That Wasn't: Exploring Self-Censorship on Facebook. In *Proceedings of the 2013 Conference on Computer Supported Cooperative Work* (San Antonio, Texas, USA) (CSCW '13). Association for Computing Machinery, New York, NY, USA, 793–802. <https://doi.org/10.1145/2441776.2441865>
- [124] Madeline E. Smith, Duyen T. Nguyen, Charles Lai, Gilly Leshed, and Eric P.S. Baumer. 2012. Going to College and Staying Connected: Communication between College Freshmen and Their Parents. In *Proceedings of the ACM 2012 Conference on Computer Supported Cooperative Work* (Seattle, Washington, USA) (CSCW '12). Association for Computing Machinery, New York, NY, USA, 789–798. <https://doi.org/10.1145/2145204.2145322>
- [125] David A Snow, Doug McAdam, et al. 2000. Identity work processes in the context of social movements: Clarifying the identity/movement nexus. *Self, Identity, and Social Movements* 13 (2000), 41–67.
- [126] Steven M Southwick, George A Bonanno, Ann S Masten, Catherine Panter-Brick, and Rachel Yehuda. 2014. Resilience definitions, theory, and challenges: interdisciplinary perspectives. *European journal of psychotraumatology* 5, 1 (2014), 25338.
- [127] Susan Leigh Star and Karen Ruhleder. 1996. Steps toward an ecology of infrastructure: Design and access for large information spaces. *Information systems research* 7, 1 (1996), 111–134.
- [128] Anselm Strauss and Juliet Corbin. 1990. *Basics of qualitative research*. Sage publications.
- [129] Henri Tajfel. 1974. Social identity and intergroup behaviour. *Information (International Social Science Council)* 13, 2 (1974), 65–93.
- [130] Benjamin Toff and Rasmus Kleis Nielsen. 2018. “I just Google it”: Folk theories of distributed discovery. *Journal of Communication* 68, 3 (2018), 636–657.
- [131] Dan Trudeau and Chris McMorran. 2011. The geographies of marginalization. *A companion to social geography* (2011), 437–453.
- [132] John Van Maanen. 2010. *Identity work and control in occupational communities*. Cambridge University Press.
- [133] Ashley Marie Walker and Michael Ann DeVito. 2020. “‘More Gay’ Fits in Better”: Intracommunity Power Dynamics and Harms in Online LGBTQ+ Spaces. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems* (Honolulu, HI, USA) (CHI '20). Association for Computing Machinery, New York, NY, USA, 1–15. <https://doi.org/10.1145/3313831.3376497>
- [134] Shuaishuai Wang. 2020. Calculating dating goals: data gaming and algorithmic sociality on Blued, a Chinese gay dating app. *Information, Communication & Society* 23, 2 (2020), 181–197.
- [135] Yunwen Wang. 2020. Humor and camera view on mobile short-form video apps influence user experience and technology-adoption intent, an example of TikTok (DouYin). *Computers in Human Behavior* 110, 106373 (2020). <https://doi.org/10.1016/j.chb.2020.106373>
- [136] Y. Wang, T. Gu, and S. Wang. 2019. Causes and Characteristics of Short Video Platform Internet Community Taking the TikTok Short Video Application as an Example. In *2019 IEEE International Conference on Consumer Electronics - Taiwan (ICCE-TW)*. 1–2.
- [137] Tom Wengraf. 2001. *Qualitative research interviewing: Biographic narrative and semi-structured methods*. Sage.
- [138] Vera Whisman. 2012. *Queer by choice: Lesbians, gay men, and the politics of identity*. Routledge.
- [139] Langdon Winner. 1980. Do artifacts have politics? *Daedalus* (1980), 121–136.
- [140] Aimee Wodda and Vanessa R Panfil. 2014. Don't talk to me about deception: The necessary erosion of the trans panic defense. *Alb. L. Rev.* 78 (2014), 927.
- [141] Allison Woodruff. 2019. 10 things you should know about algorithmic fairness. *Interactions* 26, 4 (2019), 47–51.
- [142] Robert K Yin. 2017. *Case study research and applications: Design and methods*. Sage publications.
- [143] Qiyang Zhou. 2019. *Understanding User Behaviors of Creative Practice on Short Video Sharing Platforms – A Case Study of TikTok and Bilibili*. Master's thesis. Cincinnati, OH, USA. [http://rave.ohiolink.edu/etdc/view?acc\\_num=ucin155421202112545](http://rave.ohiolink.edu/etdc/view?acc_num=ucin155421202112545)
- [144] Yue Zhuge. 2018. Video consumption, social networking, and influence. *Commun. ACM* 61, 11 (2018). <https://doi.org/10.1145/3239554>

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