Platforms as Cultural Infrastructures: Identity-Making Practices of WeChat and KakaoTalk in the Diaspora

JANE YEAHIN PYO*
University of Massachusetts Amherst, USA

JINGYI GU University of Pennsylvania, USA

As "all-in-one" apps, WeChat and KakaoTalk dominate the national markets of China and South Korea by assuming infrastructural roles. Chinese and Koreans find these apps unavoidable in their everyday lives as they integrate and mediate everyday socioeconomic activities. Yet, what do these apps mean for diasporic users? How do diasporic users regard these platforms in transnational contexts, especially about their cultural identities? Conducting cross-cultural focused group interviews with diasporic Chinese and Korean community members who live in the United States, we suggest the concept of "cultural infrastructure" to articulate the cultural penetration of these platforms. We argue that these apps are cultural infrastructures that are fundamentally tied to and inevitable for diasporic users' identity-making practices, affording them digital tools to maintain the imaginations of their communities, and reinforcing their sense of belonging. By grafting themselves onto existing cultural norms and creating new ones, it is the personal connections, cultural referents and symbols, and cultural practices associated with WeChat and KakaoTalk that make these apps meaningful for diasporic users.

Keywords: digital media, platform, apps, diaspora, identity, culture, infrastructure, WeChat, KakaoTalk

Digital platforms have been so pervasive in our everyday lives that it is arguably no longer meaningful to separate our lives from them. In certain parts of the world, various social media apps deeply permeate people's everyday lives: WeChat in China and KakaoTalk in South Korea. These apps expand from instant messaging apps to "all-in-one" platforms, enabling monetary transactions, sending gifts, calling taxis, and GPS navigation. These "all-in-one apps" are "super-sticky" in the sense that users do not have to move back and forth from multiple apps for different functions (Chen, Mao, & Qiu, 2018); they can simply use the same user information, log-on settings, bank accounts, and payment systems connected to their WeChat and KakaoTalk accounts. These apps are also "super-sticky" in the sense that their user bases are so large that people living in China and South Korea cannot possibly imagine leaving these apps and using

Jane Yeahin Pyo: jpyo@umass.edu Jingyi Gu: jingyi.gu@asc.upenn.edu Date submitted: 2022-12-28

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alternatives as their primary channels of communication and socioeconomic activities. KakaoTalk has a user base of 45 million, estimated to be about 88% of the population (Choi, 2021), whereas WeChat has a worldwide user base of 12.6 billion (by 2021), with most in China (Oberlo, 2023).

Existing platform studies literature sheds light on how platforms originating from Silicon Valley, such as Google or Facebook, operate as infrastructures in societies in terms of their scale, ubiquity, and the inevitability of use (Plantin, Lagoze, Edwards, & Sandvig, 2018). Scholars have focused on unpacking how these platforms' underlying logic has fundamentally transformed public values and social processes at both private and global levels (Van Dijck & Poell, 2013; Van Dijck, Poell, & de Waal, 2018). On the other side of the globe, rapid development and a growing presence of native digital platforms in technologically developed countries like China and South Korea called for locally grounded perspectives in platform studies. A growing area of scholarly work has revealed that all-in-one apps such as WeChat and KakaoTalk dominate the national market of China and South Korea as products of their specific cultural, economic, and regulatory contexts. These platforms dominate each society by assuming infrastructural roles, thus creating counter-forces of "platform imperialism" (Jin, 2017) represented by the global expansion of the Silicon Valley platforms within this region. Their local experiences, therefore, offer an account of the diverse social contexts of technical processes and a more nuanced understanding of the imbrication of platformization and infrastructuralization within global societies. With these locally dominant platforms also expanding their global reach, relatively little research has addressed the global implications of platforms that have been largely conceptualized as regional, especially amid the increasing globalization and transnational flows of migration.

We start our inquiry by centering on the cultural dimension of these "all-in-one apps," WeChat and KakaoTalk, to draw a comparative analysis of how diasporic users reconfigure their cultural identities and a sense of belonging by maintaining, compromising, and negotiating their app usages in transnational settings. Our focus is "not intended to solidify the nation-state as a preordained category by uncritically mapping differences between platforms onto the category of national state, but to identify locally specific historical, cultural, and technical characteristics" (Davis & Xiao, 2021, p. 105), and trace how those specific characteristics become significant in the transnational context. Because users choose to use these apps outside of their countries, bringing these apps to the global stage as they move, it encourages a transnational study that reconceptualizes regional boundaries and cultural identities. How do users of the diasporic community—dislocated from their homelands but still connected culturally, socially, and economically with these apps—perceive and use these apps? What functions of these apps do users keep using, albeit in compromised forms, and why? What are the incentives for using the platforms in transnational and global contexts—not explained by technological and political-economic perspectives?

To answer these questions, we adopted a qualitative approach by conducting focused group interviews with 32 young Chinese and Korean users of WeChat and KakaoTalk who live in the United States. We conducted four FGIs in the participants' native languages for each platform, with each group consisting of four users. Our examination reveals that in transnational settings, these apps are not only infrastructural in that they mediate socioeconomic activities, but also are infrastructural for they have deeply penetrated the cultural realm and generate cultural affinity. Despite being abroad—hence, no longer enjoying the

socioeconomic conveniences the all-in-one apps afford—users remained attached to the apps, even in compromised and negotiated forms for cultural reasons. We argue that what makes these apps sticky is their ability to afford practices of forming diasporic identities and communities as well as cultivating shared cultural imaginaries. We theorize that these all-in-one apps as "cultural infrastructures," affording tangible, material, and visible identifiers to diasporic users to graft their sense of belonging and reaffirm their cultural identity in transnational settings.

Literature Review

All-in-One Apps as Infrastructures

How do digital platforms come to occupy a central position in our society and everyday lives? More specifically, how do particular platforms come to create dominance—to the extent that leaving apps such as WeChat and KakaoTalk is like leaving Chinese and Korean society (Plantin & de Seta, 2019)?

the Existina literature suggests concomitant process of platformization infrastructuralization as the strategy. On the one hand, platformization is a process that entails decentralization of software and recentralization of data as the digital platforms extend themselves to the rest of the web to make external web data "platform ready" (Helmond, 2015). Reaching beyond the web, digital platforms extend their network of partners to create institutional dependencies, fundamentally restructuring the economic terrain to produce a structure that pushes different market sectors to create technological and economic dependencies on platforms (Helmond, Nieborg, & van der Vlist, 2019). Digital platforms, in this way, accumulate more power by exerting control over various markets and businesses, expanding their areas of sovereignty beyond technical operations. On the other hand, in terms of their scale, ubiquity, and inevitability of use in social life, digital platforms have attained the status of infrastructures (Plantin et al., 2018). The boundary between infrastructures and digital platforms becomes blurry as digital platforms branch out their power to various sectors in society—both private and public—and exert force by interweaving these sectors with the structure and the logic of digital platforms (Van Dijck et al., 2018).

This—the wide expansion and deep penetration of digital platforms—is particularly the case for "all-in-one apps" that allow users to engage in different activities without switching between different applications. Much attention has been paid to WeChat and KakaoTalk and their dominance in China and Korea because of the ways in which these apps have become "super-sticky" with their aggressive expansions from a text messaging app to an all-encompassing intermediary that mediates various social and economic activities such as banking, making payment, and transportation. In the Chinese context, WeChat was initially a text and audio messaging application launched in 2011. Under China's technonationalist agenda (Qiu, 2010), it rapidly developed into an all-inclusive platform that incorporates the social networking function, the digital wallet and finance service WeChat Pay, and access to infrastructural systems of public and private services for administrative or business needs. In the South Korean context, KakakoTalk similarly started as an instant messaging application but aggressively scaled up and expanded its business. Now, it has 114 subsidiaries such as KakaoCommerce, KakaoGame, KakaoPay, KakaoEntertainment (music streaming, webtoon), KakaoMobility (map service, navigation, taxi-hailing), and KakaoBank (KakaoTalk, 2021).

These apps are now infrastructures in their respective societies because of the multiple functions entangled with them, a complex and intricate web of reliance created and maintained through their technological and economic extensions. In other words, borrowing Steinberg's (2020) concept, these apps are "super apps" that demonstrate the extent of platformization in China and South Korea. To simply hail a taxi, for instance, users use these apps to be matched with a driver; then, they make payment via the app's e-wallet function. On both ends of the market, the consumers and the providers of goods and services rely on these digital apps as quintessential intermediating bodies, creating an inescapable reliance. Especially from the consumers' perspectives, the level of efficiency and convenience these infrastructural apps provide—on top of the inevitability of the use—is one of the reasons they cannot escape them. The "stickiness" of these platforms is closely tied to the socioeconomic benefits that domestic users can enjoy, afforded by the platform companies' business and governmental connections in their countries.

In that sense, the infrastructural status of all-in-one apps such as WeChat and KakaoTalk has been explained through the domestic conditions of each nation, such as the market structure, political-economic relations between cooperating institutions, and governmental regulation. For instance, Chinese domestic users are "stuck" to WeChat because WeChat Pay is so prevalent and widespread in mainland China as privately owned and -run platforms complement the not-so-efficient state-operated economic and technological infrastructures (Plantin & de Seta, 2019). Similarly, Korean domestic users are hooked to KakaoTalk because they can easily select an item curated on the app marketplace and purchase it with KakaPay. Likewise, the benefits of using the apps are undergirded by the geographical location these apps operate in and are imbricated on the domestic conditions of their homelands. Locality matters because digital platforms operate within the boundaries of specific regions, each with its own walled ecosystem (Steinberg & Li, 2017). The uses of digital platforms, likewise, are shaped by social forces that govern territories, such as technological, economic, and cultural contexts.

Identity and Sense of Belonging in the Digital Context

With the rise of the Internet, scholars have long focused on the way that people create "virtual communities" (Rheingold, 2000). The Internet has provided ways for people to find others with similar interests and tendencies and interact with them, fostering a sense of belonging to a community. Scholars also have paid attention to the ways that people use various social networking sites (SNS) to maintain and strengthen connectivity and sociality (boyd & Ellison, 2007; Livingstone, 2008; Van Dijck, 2013). To boyd (2011), social networking sites are "simultaneously a space and a collection of people" (p. 41) that fundamentally reshape the sense of the community and introduce new possible cultural practices and norms to maintain connections. Microblogging sites also allow people with common interests to build communities and strengthen solidarity by commenting on each other's posts (Gruzd, Jacobson, Wellman, & Mai, 2016).

As such, contemporary apps and platforms afford various forms of self-presentation, allowing users to express their identities. However, the way that identity is expressed, shaped, maintained, or negotiated in digital space is never an individual process; rather, it is always relational (Blum-Ross & Livingstone, 2017; boyd, 2008, 2011). Indeed, digital platforms put emphasis on interactivity and virtual

networking and show explicit commitment to community building. Powered by the networks that create collective habits and connectivity (Chun, 2016) and architectural designs and analytics that foster user interactions (Blum-Ross & Livingstone, 2017; Coles & West, 2016), users create new sets of norms, cultural referents, and sociocultural practices (Ferris & Duguay, 2020). Feeling like a part of the community and strengthening their emotional connections, users build common histories and expectations about the community they belong to (Gruzd et al., 2016). Hence, group identification and membership are central to understanding WeChat and KakaoTalk and their roles in allowing people to imagine they belong to a community and share a common identity with others—"imagined community," as Benedict Anderson (2006) conceptualized.

Leveraging on the concept of "imagined community," we pay attention to the ways in which digital platforms play a role in constructing an image of community, identity, and membership. We build on this concept and draw on the recent ways that scholars have examined expressions of identity and routinized practices assumed to resonate with an imagined community. For instance, Ferris and Duguay (2020) suggest the concept of "digital imaginary" to illustrate how queer women form a "loosely connected public" who share an understanding of cultural referents and digital practices associated with their identity as women seeking women on Tinder. Similarly, Chen (2021) proposes the concept of "cultural imaginary" to describe the shared imaginary through the example of Tantan, a Chinese mobile dating app. Diasporic users participate in verifying each other's "authenticity" in their cultural identities by integrating their shared understanding of sociocultural norms and cultural references with digital practices of curating their profile photos.

In our study, similar to Tinder and Tantan, we see WeChat and KakaoTalk as being critical in forming an "imagined community" for Chinese and Korean users. Their status as infrastructural all-in-one apps plays a crucial role; for one, with such deep-and-wide social penetration, these apps provide constant and continuous connectivity with fellow Chinese/Koreans. For instance, Jin and Yoon (2016) articulate that a specific cultural landscape—the KakaoTalk-scape—emerges with KakaoTalk, where young people rearticulate their identities, socialities, and playfulness. Yoon (2016) also explores how young Koreans regard KakaoTalk as an intimate and interactive communication tool that enhances a sense of diasporic belonging. Simultaneously, by mediating everyday socioeconomic activities, these "super apps" (Steinberg, 2020) apps provide the basis for new sociocultural norms, habits, and practices to be formed. Hence, these apps feature in users' digital cultural imaginaries, allowing people to construct their image of their community and strengthen their sense of belonging.

Yet, the focus of our study is how these apps function as building an "imagined community" for diasporic users in the transnational setting. Particularly, what happens when users move abroad? The transnational flows of globalization demand people move across countries, and they "often 'bring' these digital tools with them so that connections with the homeland are maintained" (Zhao, 2019, p. 37). Hence, the layer of diaspora complicates the ways in which we understand infrastructural apps, identity, and sense of belonging to a community. The next section addresses the issues of diasporic users and how we conceptualize these apps as cultural infrastructures.

Conceptualizing Digital Platforms as Cultural Infrastructures for Diasporic Users

In the transnational context where the flows of globalization demand people move across countries, diasporic users often turn to digital platforms to understand who they are and where they belong. For instance, while physically being dislocated and disconnected from their homelands, diasporic users use various social media platforms to maintain affective ties with their homeland (Hiller & Franz, 2004; Zhao, 2019). They also use such platforms to build new connections with others who share similar cultural backgrounds or diasporic experiences (Mao & Qian, 2015). Among digital platforms, ethnic media platforms—often regarded as media with content in ethnic languages and created by and for ethnics in diasporic settings (Shi, 2009)—are particularly crucial to diasporic identity. Scholars find that ethnic media platforms influence the identity construction of migrant users by strengthening their cultural connectivity with their homelands' popular cultures and reinforcing their sense of belonging (Yin, 2015). Transnational users using homeland-based platforms also establish social networks across their homelands and the new territories (Zhang & Wang, 2019). These platforms function as shared cultural referents as well; diasporic users draw on these platforms' architectural traits to reinforce what counts as being "authentic" in their cultural identities (Chen, 2021; Jin & Yoon, 2016).

Throughout this study, we situate infrastructural, "super-sticky" (Chen et al., 2018) all-in-one apps like WeChat and KakaoTalk within the concept of cultural infrastructures. Building on the discussions on infrastructuralization of platforms (de Kloet, Poell, Zeng, & Chow, 2019; Plantin & de Seta, 2019; Plantin et al., 2018) and joining them with key debates around the role of digital platforms in identity and community, we understand digital platforms, all-in-one apps in particular, to be functioning not only as sociotechnical infrastructures that restructure core political-economic relations but also as "cultural infrastructures" for transnational users for their imaginaries of their communities. As cultural infrastructures, they provide visible, tangible, and materialized forms and practices through which users imagine, (re)affirm, and establish their cultural identity and sense of belonging to a community.

The infrastructural status of all-in-one apps—digital platforms that penetrate society socially, economically, and technologically—becomes a point of contention in the transnational setting. That is because the sociotechnical benefits of these apps, such as making easy transactions, navigating conveniently around the country, and easily creating bank accounts and sending money, become unattainable. The dislocation of people and technology requires us to understand how these apps act as a true control tower, not just merely in terms of their technological and economic dominance but also in terms of their abilities to engineer and maintain cultural norms and collective identities.

That is, alongside the sociotechnical and economic penetration, these apps' cultural dominance is pivotal to their status as cultural infrastructures. We see that WeChat and KakaoTalk have so deeply penetrated the cultural realm that diasporic users inevitably use these apps outside China and Korea to be considered valid members of their cultural communities that transcend the geographical boundaries of their homelands. Hence, even though users are unable to use all the sociotechnical affordances of these apps—finance, transportation, e-commerce, banking, and many more—diasporic users "stick" to using these apps because these apps are tied to their cultural identities and sense of belonging.

In this transnational context, we ask these research questions that explore the blurry boundary between local versus global and the extent to which these platforms function as "cultural infrastructures," affording ways of imagining and mediating cultural identities and connectivity not just at the interpersonal level but also at the community and societal level: How do users employ the regionally specialized, infrastructural all-in-one apps in the transnational setting? What motivates the diasporic users to continue using these apps—that is, what do the apps mean to the diasporic users when the sociotechnical benefits are no longer afforded? How do diasporic users of these platforms navigate the balance between technical and economic conveniences and cultural belonging? How do these apps afford the practices of building diasporic cultural identities?

Methodology

To examine the diasporic uses of WeChat and KakaoTalk, we conducted focus group interviews with Chinese and Korean users living in the United States. The FGI method emphasizes the social dynamic between the participants; as the research was especially about all-in-one platforms that combine multiple functions, lively discussions about particular functions of the apps they deemed essential outside the domestic context revealed how users integrate these apps as cultural infrastructures that generate cultural affinity.

Four interviews, consisting of four participants, were conducted for each platform (a total of eight FGIs with 32 participants) via Zoom. Each native-speaking researcher moderated the interviews. The participants were college students attending either undergraduate or graduate school in the United States. For Korean participants, the age varied between 18 and 35, and the years they lived in the United States varied from 2 to 12 years. All Chinese participants are Chinese citizens varying in age from 18 to 29, with the number of years living in the United States ranging from 1 to 8. The interviews were semistructured, examining their motivations and habits with these apps when living in a transient stage of life as transnational subjects. We paid attention to the role and the meaning of the all-in-one apps in a transnational context.

Because the interviews were conducted in Korean and Chinese, the data analysis process was in several steps. First, the researchers transcribed the interviews in their native languages and shared their notes and initial thoughts to identify emerging themes. The interview transcripts were translated into English to compare and recognize overlapping themes. We then coded for categories of crossnational and cross-platform similarities and differences. Each researcher provided the national contexts to fill in the knowledge gap.

Findings and Discussions

Based on the interviews with Chinese and Korean students, we identified three main themes that surfaced, all suggesting WeChat and KakaoTalk's status as cultural infrastructures that allow users to perform and carry out identity-making rituals and cultural practices in the diasporic condition. The first theme regards to the interpersonal level at which these apps function. We discuss how the participants considered these apps as central to their quintessential identities as Chinese/Korean. Serving as shared

cultural referents, participants described these apps as identity markers that validate their diasporic identities and membership. Then, we discuss the apps at the socioeconomic level, illustrating the participants' negotiations and compromises of using these apps outside their home countries. Because of their diasporic situations, participants could not use the benefits and functions of the all-in-one apps. However, we find how practicing cultural norms tied to and associated with these app-based socioeconomic activities are critical reasons for clinging to the app. Last, from the comparative studies perspective, we discuss the variances between WeChat and KakaoTalk's diasporic usage as identified among the participants and explore how these comparisons emerge because of the different political-economic and sociotechnical backgrounds in which these apps operate.

WeChat and KakaoTalk as Identity Markers: The Default Platforms for Social and Communication Practices

For both Chinese and Korean research participants, WeChat and KakaoTalk were concretized and materialized markers that authenticate their cultural identities. Through these apps, they carried out social, communicative practices that allowed them to feel connected and imagine themselves as still part of their friends and family circles back home, such as holding daily conversations or staying informed about their people's newest information. Without these apps, the participants explained, they would not be able to maintain daily, intimate, and affectionate interactions with people back home. For instance, Jiawei (28), who has been living in the United States for five years, described her group chatroom with two close friends based in China as "truly meaningful," as she could engage in their conversations regardless of the time difference. Afforded by the apps' networked sociality (Van Dijck, 2013), participants maintained the image of the community they belong to and strengthened their sense of belonging.

App architectures such as profile photos are enriched with cultural meanings and are indicators of a user's identity (Chen, 2021; Ferris & Duguay, 2020). Likewise, several architectural traits of KakaoTalk, such as creating an album of profile photos and putting up status messages afforded ways for participants to stay updated with the lives of their acquaintances. Korean participants explained the cultural meanings and practices associated with profile photos in KakaoTalk, which was that they regarded the profile photos and status messages as carefully curated social media posts. Jaejun (27) explained his habit of "spying" on others' profiles to stay updated on people's major life events, such as weddings or childbirth: "This person is getting married, I would find out, [because] they would change their profile photo into their wedding photos." Despite his physical distance, he could stay connected, feel included, and be informed because he understood the cultural referents: he knew the meaning for profile photos and status messages as a public announcement or a representation of one's status. This invoked "digital imaginaries" (Ferris & Duguay, 2020), which consist of user practices that integrate platform architectures and designs with cultural referents that signal membership to a shared, imagined community.

Similarly, to Chinese participants, WeChat's Moments—a social networking page that allows users to post photos or texts of their personal lives—was a way to "peek into" the lives of people back home. Zihao (24) and Yijun (21) described browsing Moments as "not-being left behind in all my peers' lives in China," as they got the most up-to-date and "real personal life" information about people in their social networks. Besides information about their personal contacts, Hong (27) also constantly checked Moments

to get information about her local hometown that her friends shared, such as "what is the most popular restaurant in town, where to get the seasonal food that is unique to my region, and what are the hottest social and cultural events." This helped her deal with being homesick and reassured her connection to a cultural community, albeit the physical distance.

Situated in the diasporic context, participants' ways of reinforcing their cultural identities and connections—through communicative practices, such as holding daily conversations or peeking into their friends' lives back home—were afforded by the apps' centralized ecosystem and ubiquitous use: that is, their status as both technological and cultural infrastructure. As all-in-one apps, these apps provide multiple modalities of communication, ranging from one-on-one texting to group chats, voice calls, and video calls. These apps' compatibility with different mobile operating systems made them more accessible and widely used than other apps like Apple's iMessage, especially as both countries pride their own national-branded devices as a result of government efforts to decolonize information and communication technology (ICT) industry (Jin, 2017). Moreover, as the most ubiquitous app in each country, they were essential, perhaps the only method to communicate with senior members of their families. Participants for each app gave an account of how their grandparents, who are much less tech-savvy, learned to use the apps only to make toll-free video calls to them, hinting at these apps' cultural penetration that surpasses generation gaps and operating system differences.

Because these apps were considered the "default" mode of communication to diasporic Chinese and Koreans, using these apps indicated the authenticity of their identity in the local diasporic community. To Zhiqi (20), it made them "feel weird if some Chinese] say they don't use WeChat." "I would even feel like they are 'trying too hard' to be not Chinese," they added, alluding to how WeChat was a visible marker that authenticated one's cultural identity. Korean participants also revealed how KakaoTalk was a marker of "real Koreanness." Thus, intentionally not using KakaoTalk translated as a conscious effort to cut ties with the Korean community. Hyungwon (29) stated this strongly, questioning, "It's a sign that you want to cut ties completely. Is there any other possible interpretation?" Hyungwon's interpretation is revealing: Not only was he equating the use of KakaoTalk with authentic Korean identity, but he also regarded not using KakaoTalk as actively disconnecting cultural ties. To him, KakaoTalk is an undeniable, inevitable cultural infrastructure, and thus, not using KakaoTalk meant an active disavowal of one's cultural membership.

Conversely, the use of the two ethnic digital platforms created mutual and instantaneous trust among diasporic members. Exploring the notion of trustworthiness among diasporic Chinese communities, Zhang and Wang (2019) demonstrate that regular use of WeChat constructed and reinforced a trusting interpersonal relationship. Similarly, Wanhui (28) described her experience of feeling "unspoken trust" toward WeChat users she had just met, which allowed her to confidently join group chats to trade secondhand furniture or buy ethnic food. These apps also made it easier for participants to transition from professional to more intimate, personal relationships when necessary. Sejung (24) compared KakaoTalk chats to the "stiff and formal" conversations she held via emails: "On KakaoTalk, we talk about our personal lives, sharing our experiences of settling down in the U.S. Conversations become intimate; it gives that *sticky feeling* among Koreans (emphasis added)." The "sticky feeling" was the sense of sympathy formed and accelerated by KakaoTalk. "Nine out of ten

[Koreans] share their KakaoTalk account when I email them in English," Sejung added, accentuating how KakaoTalk affords an infrastructural base to form an instant sense of solidarity and trust in diasporic settings because it is so intricately tied to Korean identity.

Negotiated and Compromised Uses of All-in-One Apps: The Trade-Off Between Cultural Norms and Socioeconomic Conveniences

Platforms are "expressions and creators of their regional cultures, which are embedded in their affordances and reflected in the ways that users interact with them" (Davis & Xiao, 2021, p. 114). They are not separate from the local context in which they operate, simultaneously grafting themselves onto existing cultural practices and creating new ones. Apps like WeChat and KakaoTalk, which are natively born in regions they are predominantly used in, are particularly savvy in integrating cultural norms into their platform affordances and providing ways to materialize these norms into technology-mediated socioeconomic practices. Moreover, with their infrastructural status, these all-in-one apps especially afford users with great efficiency, ease, and convenience in carrying out socioeconomic practices. Then, what happens when users are in diasporic settings? Would the infrastructural traits of WeChat and KakaoTalk still be meaningful when the users are abroad—thus, no longer enjoying the benefits of these infrastructural apps?

Seulgi, Jaejun, and Yoonyoung discussed their negotiated uses of KakaoTalk, especially about sending "Gifticons" for birthdays, weddings, and funerals. Gifticon is a virtual voucher listed in Kakao Gift shop, from everyday products such as coffee or clothing to more luxurious goods like jewelry; there are more than 6,000 different stores affiliated with the Gifticon market. Launching the first mobile-only bank in South Korea called KakaoBank, KakaoTalk also makes it easier for its users to wire money directly to another user or purchase gifts with Kakao Pay (payment system) for celebration days.

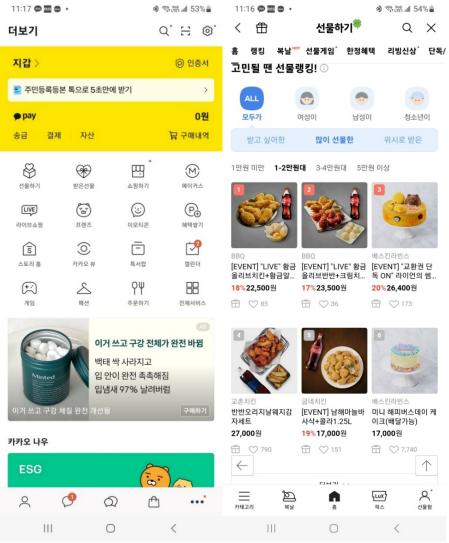


Figure 1. On left, KakaoTalk interface: Different services available with KakaoTalk: Gifting, Shopping, Sending Money, Games, and etc. (KakaoTalk, 2023); On right, KakaoTalk Gifticon Market and Shopping Page, with different available brands (KakaoTalk, 2023).

Yet, it was not an easy task for the participants as Gifticon and KakaoPay functions require that users be registered with a verifiable Korean phone number. However, some were still eager to carry out this practice, even though this meant not being able to enjoy the benefits of quick, easy, and efficient transactions afforded by KakaoTalk as an all-in-one app. To Minji's regret that she can no longer send Gifticons for her friend's birthday because she changed her account verification to her new U.S. number, Seulgi and Minyoung provided their "tips."

Seulgi: I figured out that you can do a wire transfer [as a payment method]. I couldn't make direct payment [via KakaoPay] too, so I tried wire transfer, and it works. [Minji: Really? I should try that.]

Yoonyoung: I keep my Korean number and don't connect my American phone number [with my KakaoTalk account] . . . I keep paying monthly [mobile service] fees in Korea . . . But I think one benefit [of not disconnecting my Korean number] is that I can send chug-e-geum (money given for celebratory occasions). I live abroad, but I can still send this to show respect, so that's good.

As this conversation illustrates, for diasporic Koreans, the cultural norm of sending e-gifts, e-vouchers, and money via KakaoTalk requires compromises and sacrifices. Seulgi took additional steps such as making wire transfers, giving up the benefit of easy transactions initially afforded by KakaoTalk's all-inone function. Others—in fact, at least one participant in all four Korean focus group interviews mentioned that they had not changed their user verification—chose to pay a monthly fee for their Korean phone services in addition to their U.S. ones to remain registered as "verified Korean number users" and keep sending gifts and money. Despite the inconveniences and unnecessary costs, these practices were part of the participants' identity as Koreans—it was the "right thing to do" (Woohyun, 34) and "a duly practice" (Sun-a, 29). That is, for diasporic users, maintaining the cultural norms constructed and afforded by KakaoTalk was what made them "stick" to the app more than the socioeconomic and technological benefits it provided.

In the Chinese case, sending money and gifts for celebratory or mournful occasions are also epitomes of cultural traditions incorporated into WeChat (Plantin & de Seta, 2019). Particularly, WeChat integrates WeChat Pay into in-chat functions in the form of the Red Packet function, platformizing the longexisting Chinese tradition that has evolved from giving "lucky money" to youth during the Lunar New Year to the more general monetary gifting practice of using Red Packets for representing best wishes and courteous gestures at celebratory events. Scholarly inquiries about the social and economic implications of WeChat's digital inventions within Chinese society point out that the development of the Red Packet function is one of WeChat's most successful strategies in integrating itself into the sphere of financial services (Xu, 2021) and adding "new cultural meanings and social utility" (Chen et al., 2018, p. 12) to a ritualized socioeconomic activity that has been endowed with cultural significance. The infrastructuralization of WeChat in China is partly attributed to the economic convenience it provides by combining financial transactions with interpersonal communications and business-to-consumer services. Because of WeChat's infrastructural status, the usage of digital Red Packets has also expanded into more social scenarios, including managing engagement with latent social ties and fostering conviviality within group settings (Ju, Sandel, & Thinyane, 2019; Xu, 2021; Zeng Skovhøj, 2021), thus reinforcing its criticality in personal networking and relationship building within Chinese culture. With WeChat's Red Packet function being one of its most culturally distinctive technical designs that have engendered popular social activities making up the fabric of relationships at personal, familial, and community levels, its usage within diasporic settings is characterized by compromising on economic convenience while keeping up with cultural norms.

Through WeChat, the diasporic Chinese community accesses a uniquely Chinese social and cultural sphere (Yang, 2003). Hong (27) described participating in sending and receiving digital Red

Packets on WeChat as one of the only events she could participate during the New Year's celebration after eight years of being apart from her family. It rekindled the joy of the family oriented and reunionthemed holiday that she used to enjoy, allowing her to be immersed in the festive atmosphere and feel connected to the Chinese culture: "I feel like I am still part of the celebration of this culturally important festival." The majority of our interviewees (14 out of 16) also recounted Red Packet as being the only financial function they still regularly used outside of China. The cultural implications embedded in Red Packet made participants hang onto the app, albeit lacking practical benefits. "I have a very small amount of money flow into my WeChat Pay account, mostly from getting Red Packets. I cannot use this money elsewhere, so I only keep it for sending Red Packets to other Chinese people who appreciate it as a friendly gesture," mentioned Wenxi (19), a Chinese sophomore. What Wenxi said is representative of diasporic users' negotiated and comprised engagement with WeChat's all-in-one affordances, wherein employing Red Packet and maintaining an account balance in Chinese Yuan in WeChat Pay become solely for socializing with their Chinese social ties and reaffirming their cultural identity. Apart from small interpersonal monetary transactions involved within the circulation of digital Red Packets, other WeChat Pay adjacent functions such as Quick Pay, QR Code Payments, and other native in-app payments are no longer of use for most diasporic users.



Figure 2. WeChat's in-chat Red Packet for gifting money to individuals or groups (WeChat, 2023).

Compared with the convenience of conducting various transactions through WeChat enabled by its socioeconomic ubiquity and infrastructural status in China, the cultural meanings, practices, and norms associated with WeChat were what made it "sticky." That is, to those in the diasporic context, "WeChat as an infrastructure" connotes a different meaning: it is a cultural infrastructure through which diasporic users can maintain identity-making practices and reinforce their sense of belonging to a community that shares an understanding of cultural meanings embedded within socioeconomic activities, regardless of certain restrictions on the practical level.

Differences in the Cultural Infrastructure: Existing Media Landscapes and the Transnational Information Sphere

Although WeChat and KakaoTalk share similarities in their all-in-one functionalities and infrastructural status, there are differences in their affordances and the media and information landscape they are embedded in, thus leading to varying practices within diasporic users' engagement with these platforms. For example, to many of our Chinese participants, WeChat served as a channel for consuming media information personalized and tailored to their diasporic situation. Moments, the social media function of WeChat, works along with its other pillar function, Official Account, through which media content is disseminated, shared, and aggregated in the form of articles, videos, and interactive miniprograms. The Official Account function transformed WeChat into an "informational and service bazaar" (Chen et al., 2018, p. 49) with increasing commercial and public criticality in Chinese society by developing into Service Account and Subscription Account. The former is widely employed by government agencies and business entities to digitalize their citizen- and customer-facing services; the latter enables organizations and individuals to register as content creators and produce and publish publicly accessible media information.

The seamless integration between Moment and Official Account functions added another aspect to WeChat's role as a cultural infrastructure for diasporic users: affording and facilitating an ethnotransnational media and information sphere where diasporic users could consume content crucial to their identity and connection with their homeland. In examining the production and distribution of Chinese diasporic media with WeChat Official Accounts in Australia, Yang (2022) proposes that WeChat-based media content production builds upon the existing ethnic angle while also being subject to the transnational reach of media governance in China. We also found an "ethnotransnational" configuration within diasporic users' consumption of information through WeChat. Eleven of our 16 Chinese participants mentioned that WeChat was one of the primary sources of news and media content they habitually turned to for its all-encompassing information feed. On WeChat, participants easily found different types of information critical to their diaspora lifestyle from their subscribed Official Accounts, ranging from policies related to international travels to discussions about events for specific cultural practices (such as Chinese holidays) and the availability of traditional food in the regions they reside. Yi (22) described the infrastructural role of WeChat in his daily consumption of information, which is tailored toward his identity:

I don't read news from big-name American or Chinese media outlets. I just go on WeChat to see what's on my subscription feed from the Official Accounts for Chinese living in North America. I find the most useful information in my interest there.

In other words, WeChat has become the go-to platform for many diasporic Chinese to consume media content that is not only related to their ethnic identity but also their transnational connections.

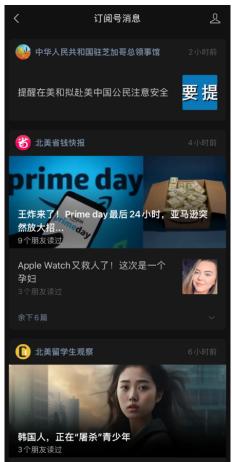


Figure 3. WeChat's interface for the feed of Subscription Accounts media and information content (WeChat, 2023).

Korean participants, on the other hand, rarely mentioned KakaoTalk as their primary news and information channel. While KakaoTalk also has a similar social media function to Moments called Kakao Story and "Business Channel" accounts that regularly send information to them, participants did not regard it as an essential source of information; in fact, it was rarely the case that participants used KakaoTalk to access news articles from news organizations. We posit that such differences emerge because there is a competing all-in-one app in terms of information access, which creates a different media landscape. For instance, while Daum Kakao (the parent company of KakaoTalk) has dominated the social messaging app market, it is far lagging behind Naver in the news distribution market. As a native all-in-one app digital platform that incorporates a search engine and news aggregation functions, Naver far outweighs Kakao as the dominant online news distributor (Lee, 2022). That is, KakaoTalk does not centralize access to news

and information. This resulted in different forms of news and information consumption practices as Korean participants relied less on KakaoTalk to get public or official information, such as reading news articles or using the in-app search function. The existing competing app created a different media and information landscape from China, which consequently led to a different configuration of digital platforms as cultural infrastructures.

As such, all-in-one apps' infrastructural status—with its criticality and ubiquity—is not limited to socioeconomic activities; it is also reflected in its transformation of the public and personal information landscape by incorporating and centralizing content production, circulation, and consumption into its system. Yet, the two apps did not work uniformly, as both the app affordances and the media and information context in which they were born differed, leading to the divergences in diasporic users' relations with each app. WeChat, on the one hand, centralized the distribution of news and information through the integration of Moments and Official Accounts, and hence, it functioned as a point of access to both public and personalized news and information. China's controlled media landscape may also have played a role in centralizing news and information access around WeChat. KakaoTalk, on the other hand, functioned less as an information channel for diasporic Koreans because of the presence of a more powerful competitor in the local media landscape.

Conclusion: All-in-One Apps as Cultural Infrastructures

What makes users "stick" to digital platforms and their applications? Existing literature examining the "super-sticky" apps (Chen et al., 2018) suggests their infrastructural status and sociotechnical penetration as one of the reasons (Plantin & de Seta, 2019). However, what happens when users move to another region or a country where the infrastructural reach of these apps does not apply? What makes the users still stick to these platforms when they can no longer enjoy the infrastructural benefits? Our research attempted to bring new questions to the platformization scholarship by focusing on the transnational or diasporic context.

We have drawn on our cross-cultural interviews to approach diasporic community members' uses of all-in-one apps that show socioeconomic dominance in their homelands. As we conducted our interviews, we found that it is the personal connections, cultural referents and symbols, and cultural practices associated with the apps that users could not let go, despite being in diasporic settings. Focusing on the cultural dimensions of digital platforms, we suggested the concept of "cultural infrastructure," articulating the cultural penetration of these platforms, such as the ways in which WeChat and KakaoTalk graft themselves onto existing cultural norms and create new ones. Leveraging on this concept, we sought to understand what makes these apps "super-sticky" after all. We argued that these apps are cultural infrastructures that are fundamentally tied to and inevitable for users' identity-making practices, affording them digital tools to keep imagining the community they belong to and reinforcing their sense of belonging.

We found that the role and reach of digital platforms in shaping these shared senses of cultural references and norms—the cultural imaginaries (Chen, 2021)—extend to transnational settings. For our participants, these apps provided essential means to stay connected with their families and friends, taking advantage of the ubiquity of the app use across generations and operating systems and what the apps

symbolize in each society. Considering these apps as the "default way of communication," our participants also used them to build new relationships, easily lending off unspoken trust. These apps became the verifiable identifiers of cultural membership, authenticating whether the person they met was "real Chinese" or "real Korean." However, some uses were not as easy to practice as before, such as sending money or gifts via WeChat and KakaoTalk, because participants were overseas. Compromised or negotiated uses of these apps emerged as participants sought ways to keep using the apps despite the inconveniences, unnecessary costs, and impracticality—all of which go against the benefits of all-in-one apps. Users continued these socioeconomic practices, which were now far more difficult to conduct because they were inseparable from cultural backgrounds and were barometers for the community's standard of what is "acceptable" and "right." As we illustrated, the cultural norms, rules, and practices created and mediated by these apps compelled them to keep using them. To the participants, these apps were cultural infrastructures through which they reminded themselves of who they are: living abroad, but Chinese and Korean in their cultural roots.

As a cultural infrastructure, digital platforms are an amalgamation of immaterial sociocultural norms and material technological affordances that integrate existing norms into digital practices. That is, digital platforms are based on shared imaginations and expectations about what communities of users do, what goals they share, and what values they prioritize (Van Dijck et al., 2018). Therefore, even when moving away from the countries in which these two platforms operate as a dominating sociotechnical system, users of WeChat and KakaoTalk still find themselves relying on these platforms to participate in socioeconomic and cultural practices, such as sending and receiving Red Packets or Gifticon, to conform to already-established cultural norms ingrained in and afforded by these technological structures. As in the way that digital platforms materialize digital or cultural imaginaries through profile photos, emojis, bios, or usernames (Chen, 2021; Ferris & Duguay, 2020), digital platforms, as cultural infrastructures, materialize diasporic cultural identities. They allow diasporic subjects to project their identities and communities onto the apps and their functions. Becoming a symbol of diasporic users' connection to their homelands, we argue, digital platforms afford users with technological tools to carry out identity-making practices and function as cultural infrastructures through which users reaffirm and reinforce their diasporic cultural identities amid globalization.

Although we found many similarities across Chinese and Korean diasporic users because of WeChat and KakaoTalk's path toward being the all-in-one app in each society by integrating multiple socioeconomic functions and showing unavoidable levels of cultural penetration, we also identified divergences. Chinese participants saw WeChat as a crucial channel through which they received public and useful news and information essential to their diasporic situations. In contrast, Korean participants rarely saw KakaoTalk as a means to access public or official news. These differences, we articulate, indicate the dynamic relationship between the local contexts in which the platforms were developed, domesticated, and infrastructuralized and how users incorporate the platforms into their everyday lives and understand and internalize the cultural norms and meanings associated with the platforms. To that end, our research also provides a way in which platform studies can conceptualize the multitude of different digital platforms in Asia, thinking about the heterogeneity and hybridity in the Asian context (Anderson, 2012). Moreover, our research responds to recent calls for examining both the convergence and divergence of digital platforms in different local contexts, incorporating a comparative lens and combining a thick description of the local and cultural complexities and specificities (Chan & Kwok, 2022; de Kloet et al., 2019). Our comparative research of the

diasporic communities, we hope, further poses new questions and agendas that complicate and deconstruct the local versus global dichotomy.

Methodologically, the interviews were conducted during the COVID-19 pandemic, between April and May 2021. Although it was not the peak period for China and Korea (local outbreaks started relatively early on in January 2020), both countries had, in effect, intense governmental restrictions on travel, affecting our research participants. This may have influenced the participants' relationship with these platforms, growing emotionally more dependent. Not only were these platforms the primary channels of communication with their loved ones and the providers of the most up-to-date information on the pandemic situation back home, but these apps also became essential for making new connections in the United States. Yet, we understand that this situation also reveals how each app creates not only sociotechnical dependencies but also cultural dependencies.

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