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Mobile communication and refugees: An analytical review of academic literature

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Abstract

Over the past decade, an expanding literature has explored the ways in which refugees rely on mobile communication technologies to stay in touch with a wider community and to access relevant information and services in their new places. Nevertheless, challenges linked to (a lack of) digital literacy and accessibility among refugees, and associated risks of technology use can negatively affect their empowerment and participation in a "mediatized" society. In light of the mutually shaping processes emerging between technology and society, this article provides an overview of studies focusing on the relationship between mobile communication practices and refugee lives under different circumstances. Using the concept of affordances as an analytic tool, this article looks into ways in which existing studies address the possibilities and vulnerabilities of mobile communications, the social conditions, and the agency of refugees in engaging with mobile technologies in the different temporal and spatial dimensions of their migration trajectories. Future studies should explore more collective processes and the power dynamics involved in the appropriation of mobile technologies by different migration actors.

1 | INTRODUCTION

The past decade has seen an expanding literature that recognizes the role of digital technologies in refugee lives. There is emerging evidence that mobile phones became essential tools for accessing information and resources that can help refugees navigate their migration journeys (Dekker, Engbersen, Klaver, & Vonk, 2018) and the complexities of life during resettlement (Alencar, 2017; Kaufmann, 2018). It is estimated for instance that 68% of refugees living in urban centers have access to an internet-enabled phone, with the vast majority prioritizing mobile ownership and connectivity as crucial for their safety (United Nations Higher Commissioner of Refugees, 2016). Academic responses to these trends have contributed greatly to the emergence of a new field of research called *Digital Migration Studies* (for an overview, see Leurs & Smets, 2018; Leurs & Ponzanesi, 2018; Smets, Leurs, Georgiou, Witteborn, & Gajjala, 2020). This field has been critical in shedding light on how ICTs and mobile technologies, in particular, are impacting refugees' lived experiences of displacement in light of the so-called "European refugee crisis" in 2015 and beyond.

In spite of an increased interest in the study of forced migrations and digital technologies, refugee populations remain comparatively under-represented in the literature on media and migration studies (Leurs & Smets, 2018). Overall, research on communication practices that involve mobile phones tends to focus on other migrant groups rather than on refugees (Leung, 2018). Previous studies highlighted several possible explanations for this gap, including the unpredictability of migration crises and their associated emergencies and risks, as well as the irregularity and uncertainty of refugee processes (Beduschi, 2018). At the same time, the current literature has focused mostly on refugees' use of mobile technologies in Global North countries (Leurs & Smets, 2018). Notable exceptions include scholarship on the appropriation of mobile phones among forced migrants in border spaces or refugee camps in Turkey (Smets, 2018, 2019), Kenya, Jordan (Twigt, 2018; Wall, Campbell, & Janbek, 2017), as well as in resettlement and displacement contexts in Brazil (Alencar, 2020), Ethiopia (Leurs, 2014), and a few others. Although this growing body of work still has critical gaps and shortcomings, it warrants a review of its own. A recent scoping review article by Mancini et al. (2019) focusing on the role of mobile phones for refugees' experiences is the only relevant contribution to this strand of the literature. Among the main findings, the authors highlight the interdisciplinary nature of the surveyed contributions and provide evidence that mobile technologies pose both opportunities and risks to refugees' human rights. Despite the significance of its results, this scoping review concludes that the literature on the topic is still fragmented and not consistent, making it difficult to establish a direct connection among the findings.

Given these limitations and the diversity of refugees' migration experiences, the paper at hand focuses on providing an analytical overview of studies that highlight refugees' relationships to mobile phones. To critically examine existing literature, I build on a socio-technical perspective, whereby technologies are regarded as "shaped by and shaping the practices humans use in interaction with, around and through them" (Hutchby, 2001, p. 144, as cited in Witteborn, 2018). Taking this as a point of departure for this review article, it is possible to make sense of the relationship between technology and its users as interdependent processes, combined in such a way as to enhance or emphasize the opportunities and constraints of each other and another. Before proceeding to examine this relationship in refugee contexts, this paper will first present the theoretical approach used in the analysis of the literature review, followed by a description of the methodology employed for the selection of articles.

2 | THE SOCIO-TECHNICAL PERSPECTIVE AND AFFORDANCE THEORY

This article adopts a socio-technical perspective to highlight the mutually constitutive processes emerging between technologies and society. This perspective takes into account the properties of technologies, the social processes that integrate technological developments and uses, as well as everyday practices and interactions that shape technology and society (Witteborn, 2018, p. 24). Particularly relevant for a socio-technical understanding of the interaction between human and technology is the notion of "affordances," defined by Gibson (1982) as the possibilities of

agentic action in relation to a particular object (Gibson, 1982). According to Hutchby (2001), technologies are regarded as objects or *artifacts* (e.g., manufactured objects) with their affordances being conceptualized in both *functional* and *relational* terms (p. 448). Affordances are *functional* because the properties of technologies can enable and constrain the ability of users when performing certain interactions or activities. In this sense, the properties (affordances) of a technological artifact can shape the conditions of possibility associated with an action, or "what is possible to do with the artefact" (Hutchby, 2001, p. 453), while not determining users' actions and behaviors in relation to the artifact. On the other hand, the *relational* aspect states that the affordances of technologies can be different for users depending on their contexts and situations. For instance, users interpret and enact the functionalities of technologies in relation to their goals, experiences, and needs, which can in turn be hindered or fostered by spatial, temporal, and social structures that constitute different contexts of action (Díaz Andrade & Doolin, 2019, p. 149).

In their study on the role of smartphones in refugees' journeys, Gillespie, Osseiran, and Cheesman (2018) highlight the importance of focusing on refugees' digital practices across *time* and *space* in order to assess the dynamic and fluid nature of technological affordances, as well as the agency that refugees can exercise in diverse contexts of exile. Although media and migration scholars have shown an increased interest in applying the notion of affordances to understand the possibilities of action offered by mobile phones on refugees across different settings (Dahya & Dryden-Peterson, 2017; Gillespie et al., 2018; Kaufmann, 2018; Twigt, 2018; Urdan, Leurs, & Alencar, 2020; Witteborn, 2018), the relatively low dissemination of articles on this specific concept does not allow for its use as a criterion to collect scientific contributions. In this review article, the concept of affordances is adopted as an analytic tool to examine the ways in which existing studies address the possibilities and vulnerabilities of mobile communications, the social conditions, and the agency of refugees in engaging with mobile technologies in the different temporal and spatial dimensions of their migration trajectories.

3 | METHODS

A comprehensible article search of relevant databases covering a broad range of disciplines within the social sciences and humanities was conducted (e.g., Google Scholar, EBSCO, Scopus, and Web of Science). Words used to search these databases included combinations of "refugees," "asylum seekers," "forced migration," "mobile technologies," "mobile phones," "smartphones," and "refugee experience." The articles were also drawn from the research social networks ResearchGate and Academia.edu. While this review concentrated primarily on articles that were published in English on the topic of mobile phones and refugees, it also included studies that focused on digital technologies in general, but which mobile phones were present in the refugees' experiences. This literature review outline was inductively developed and kept as open as possible. In total, 60 articles were collected and revised. The great majority of the articles revised adopted qualitative research methodologies.

The most studied phases and contexts of forced migration were refugee journeys (nine articles), protracted displacement (19 articles), and resettlement (30 articles). Only one article focused on the pre-migration, and two studies addressed the role of mobile phones before, during, and after the refugees' journey. The article on the pre-migration stage was excluded from the analysis, as it did not form a direct dialogue with the findings from the other studies revised. In the refugee experience literature, the physical transition and journey from refugees' home country to a safer country refer to the period of transit. In transit, refugees are also defined as people living in camps or other temporary locations in transit and asylum countries. When refugees find themselves in a long-lasting state of "limbo" with little prospect for repatriation, resettlement, or local integration, they experience a situation of protracted displacement (Etzold, 2017). Finally, resettlement takes place when refugees are living in a safe, developed host country (Bhugra & Jones, 2005). These academic categorizations are used in this article for the sole purpose of situating the literature on mobile phones and refugees in the temporal and spatial edges of the experience of forced migration. In

other words, it is acknowledged that the choices and expectations of refugees go beyond physical and geographic borders and constitute new experiences for refugees before, during, and after migration (Brun, 2016).

The following sections provide an overview of the affordances offered by mobile technologies in the contemporary context of refugee processes, while examining the constraining and enabling socio-technical structures that constitute the possibilities of action offered by the phones among refugees at different migration stages and across a range of contexts.

4 | MOBILE MEDIA APPROPRIATIONS IN REFUGEE JOURNEYS

The use of smartphones by refugees *en route* is emphasized by current studies to be of critical importance for planning migration routes and reducing the costs of travel (Dekker et al., 2018; Fiedler, 2018; Gillespie et al., 2016; Gillespie et al., 2018; Gough & Gough, 2019; Schaub, 2012, p. 128). In Zijlstra and Van Liempt's (2017) trajectory ethnographic study, it was found that information obtained through mobile mapping applications can increase the mobility of Afghan, Iranian, and Syrian refugees, as they use GPS and other technology to cross borders while relying less on the assistance of smugglers. Interviews with Syrians revealed that they had great dependence on these applications during their flight to Europe, with many refugees referring to these tools as "my best friend" or "the most essential" ones to have on your phone (Alencar, Kondova, & Ribbens, 2018).

Therefore, the location-based affordances of the smartphone emerged as vital for refugees to progress in their journey, or in the case of an emergency situation. In the studies of Alencar et al. (2018) and Zijlstra and Van Liempt (2017), for instance, refugees highlight the importance of mobile applications to check their location and to orient themselves toward their next destinations, whereas in Gillespie et al.'s (2018), the communicative affordances of phones assist refugees in ensuring their safety and survival through the guidance of coastguards during the perilous sea-crossing between Izmir (Turkey) and Greece. In certain moments, however, they need to negotiate online (in)visibility depending on the borders and actors expected to be encountered. This fosters a change in refugees' digital practices and dependence on the subversive affordances of their smartphones in order to avoid being detected, arrested, detained, and deported (Gillespie et al., 2018, p. 7). On this point, there is extensive evidence that the use of GPS applications can be used by state officials, traffickers, and smugglers to track refugees' movements (Latonero & Kift, 2018; Leurs & Smets, 2018; Wall et al., 2017). In a more specific case, Newell, Gomez, and Guajardo (2016) revealed that using mobile phones also poses risks to Mexican refugees at the border, as they are extorted by thieves, human traffickers, and corrupt police forces to disclose information about their list of phone contacts.

Another possibility afforded by smartphones concerns the expansion of migration networks that can facilitate the organization of migration journeys (Dekker et al., 2018; Fiedler, 2019; Zijlstra & Van Liempt, 2017; Schaub, 2012). Refugees draw greatly on social networks to gain knowledge about asylum procedures in Europe, even before leaving their home countries, facilitating decision-making processes regarding host country destinations (Fiedler, 2019; Gillespie et al., 2018). Dekker et al. (2018) and Fiedler (2018) note that social media communication with groups of fellow migrants is a source of information and empowerment for refugees who can rely on the experiences of others who traveled to a certain route and went through registration processes at European borders. Some informants in Gillespie et al.'s (2018) research said they received tips from other fellow refugees in social media groups about the way they should behave and appear when dealing with state actors: "wear hair gel and dress smartly at borders" (p. 7). In the context of trans-Saharan migration journey, Schaub (2012) states that social ties and networks through mobile phones can provide migrants with a scope of services, such as work opportunities, routes, transportation arrangements, and accommodations, as well as insurance mechanisms for those in need of protection and financial assistance (Zijlstra & Van Liempt, 2017).

Despite the importance of online networks and the wide range of resources they offer to refugees, studies highlight problems regarding the lack of credible information emerging from social media ties, as refugees on the move experience a condition of "information precarity" (Wall et al., 2017). For instance, there have been several accounts of refugees being subject to online fraud like one Syrian informant in Alencar et al.'s (2018, p. 838) study who reported being stolen 3,000 dollars by a fake "Lebanon embassy" contact on Facebook who falsely promised to help him obtain a European visa. Mouaz, an Iraqi informant, said: "I don't trust any news or information people tell me. I trust no-one. Only my Mother" (Gillespie et al., 2018, p. 8). In light of these events, Borkert, Fisher, and Yafi (2018) emphasize the agency of Arab refugees in negotiating the validity of informational sources, as well as in developing digital strategies to protect their identities online and information accessed and shared about intended routes and destinations. Many said they engaged in closed Facebook groups, or used avatars and pseudonyms on Facebook to avoid surveillance from the government of their home country and other hostile groups.

Fragile and unpredictable mobile access and connectivity do not prevent refugees from keeping their families and friends updated about their journeys. Maintenance of links to their loved ones is also made possible through the "mobile polymedia affordances" of calling and texting (Gillespie et al., 2016; Kutscher & Kreß, 2018), with many refugees reporting as essential for *financing their journey* while providing *emotional support* (Alencar et al., 2018). In some cases, however, Syrians preferred to avoid contacting home until they reached their final destination. During the journey, the diversion affordances of the phone helped refugees to relieve boredom and to document memories of their experiences.

5 | MOBILE-MEDIATED EXPERIENCES OF PROTRACTED DISPLACEMENT

The stress of living in a "limbo" for refugees creates a sense of frustration and hopelessness as a result of long and uncertain asylum and resettlement processes (Witteborn, 2015). A predominant theme found among the studies analyzed concerns the intersections between affects, emotions, and mobile media practices by refugees living in prolonged conditions of uncertainty (Harney, 2013; Wall et al., 2017). This academic interest is foregrounded in the increasingly important role mobile technologies play in refugees' interpersonal connections (Diminescu, 2020), in particular with family and friends who have stayed in their home country or moved to a different place. For Iraqi refugees living in households in Jordan (Twigt, 2018), or refugee women waiting in refugee camps Greece (Greene, 2019), communication with transnational intimates through smartphones help them make do with offline material hardship and regain a sense of ontological security (Leurs, 2014). In the case of Syrians living in Zaatari refugee camp in Jordan, being able to call family and friends also allow them to achieve some well-being, and to share feelings of happiness and sadness when remembering important moments of their lives back in Syria (Wall et al., 2017, p. 251).

At the same time, scholars highlight the relevance of the integrated functionalities of new mobile technologies in enabling refugees to sustain multiple levels of digital intimacy. Greene (2019) noted, for instance, that the visual and aural affordances of voice and video chat are often the preferred media form in the context of refugee women's everyday practices of doing family. The possibility to share various types of archives (e.g., videos, photos, cards, etc.) with distant family members through the smartphone and at different moments can create a sense of shared history among refugees, enhancing digital togetherness (Leurs, 2014; Twigt, 2018). Yet, precarious mobile connectivity in the contexts of displacement can be an obstacle to refugees' ability to maintain transnational family relationships (Greene, 2019). Although most people had mobile phones, their access to stable and reliable mobile network was restricted by local communication infrastructures, limited financial resources, and the difficulty of getting phone contracts due to their uncertain legal status (Fiedler, 2018; Wall et al., 2017; Witteborn, 2015). New insights from fieldwork in Jordanian and Turkish camps and in different locations sheltering Venezuelans in Northwestern Brazil revealed that refugees shared mobile phones and SIM cards as creative ways to cope with information precarity of camp and/or street life, demonstrating the agency and resilience of refugees in these contexts (Alencar, 2020; Maitland & Xu, 2015; Smets, 2018; Wall et al., 2017). Moreover, the practice of sharing mobile phones was linked to gender and power dynamics (Smets, 2018). Wall et al. (2017) observed that within family groups, the men often own or

carry the phone in their pockets, whereas women depend on them to search for mobile-based assistance and to make calls (p. 246).

Aside from network issues, studies illustrate how "the multimodal nature of new technologies" could lead to emotional stress among refugees. Witteborn's (2015) research conducted with people from different countries seeking asylum in Germany revealed that communicating with families online for some meant they had to express animated voices or contain their facial expressions, whereas others turned off the camera to avoid transpiring their intense feelings of frustration for not meeting family sociocultural and economic expectations (p. 359). These findings resonate with Harney's (2013) observations of asylum seekers in Naples, Italy and the pressure they felt to be always reachable on their phones and attentive to different concerns and demands from families back home (e.g., helping family members who were sick or sending money home). For Eritrean refugees in Belloni's (2019) research, the fact that they have not yet established a dignified life in Rome to be able to help their families in Eritrea was a reason for shame and guilt, which made them temporally disrupt long-distance communication with their loved ones despite being connected through their phones.

Although fear is not a moral emotion like shame, it can affect mobile-based communication practices among refugees (Witteborn, 2014). For example, asylum migrants in Germany reported using disposable SIM cards or not using social media in order to avoid surveillance from their home governments. Similarly, Sreenivasan, Bien-Aimé, and Connolly-Ahern (2017) indicate that Sri Lanka Tamil refugees in Indian camps fear of being surveilled when using mobile phones. The "surveillance affordances" of the smartphone can also be seen in the context of transnational family connections. Leurs' (2014) research with stranded Somali youths in Ethiopia found that the use of the smartphone can empower them through communication with their parents living in Europe and other countries in the Global North, but at the same time, it may restrict youth's autonomy, as parents are able to call them whenever they need and find out where they are (p. 15).

Conceptualizations of smartphone affordances in protracted displacement contexts are complexified by scholars through specific forms of affect that point to a spectrum of temporal mobility and immobility (Greene, 2019; Smets, 2019). Based on the findings of two studies with Syrians in different contexts of forced migration, Smets (2019) proposes the notion of affective immobility to explain the deliberate choices refugees make to be disconnected from the flow of new textual and visual information, while performing nostalgic and imaginary engagements with technologies (p. 5). According to the author, the fact that refugees may attach themselves to photos, messages, or songs from the past and archived in their smartphones can be interpreted as an attempt to foster a sense of immobility and timelessness that help them deal with the harsh reality of camp life. In Twigt's (2018) study, the diversion affordances of the smartphone in the form of entertainment contents allow Iraqi refugees to escape from present-day war events on TV. Similarly, the smartphone also nurtures a sense of mobility toward the future through creative engagements. For instance, taking photos and recording videos of nature environments enable refugee women in protracted camp situation to affectively orient themselves to other places where they can feel part of "something material and enduring" (Greene, 2019, p. 15). In the context of Iraqi refugees' experiences of waiting, smartphones serve as orientation devices for learning English and acquiring practical skills that prompt them to imagine new lives elsewhere, creating a sense of hope for the future (Twigt, 2018).

A number of studies suggested that mobile media affordances enable refugees to present themselves to others in more desirable ways. The possibility of crafting Facebook profiles and proposing ideal selves helps informants to become perceptible beyond the labels of "asylum seekers" or "refugees," which they often tended not to identify with (Witteborn, 2015). Leurs (2014), for example, observed that Somali youth's performance of pretending to live abroad serve as strategies to develop connections outside Ethiopia that could potentially help them leave Addis Ababa. At the same time, the affordances of meta-voice—the ability to engage in continuous online interactions while contributing knowledge to existing contents online—are particularly relevant for refugees in situations of uncertainty and insecurity (Witteborn, 2018). The "imagined affordance of sociality" through meta-voice enabled refugees to access and circulate relevant information about health and legal procedures, while fostering a "sense of convivality" (Witteborn, 2018, p. 28). In addition, the use of social networks by Somali refugee women living in Kenyan

camps allowed them to obtain information about higher education through engagement in transnational communication with family and friends attending post-secondary school. This resulted in a gradual transformation of social and educational structures for Somali women in the camps and those who stayed in Somalia, challenging the current status quo that constrains them to pursue higher education (Dahya & Dryden-Peterson, 2017). Finally, studies highlight that social networks accessed primarily through mobile phones gave asylum seekers and detainees visibility in the public space that allowed for positioning themselves legally and politically to defend their own rights (Coddington & Mountz, 2014; Leung, Lamb, & Emrys, 2009; Rae, Holman, & Nethery, 2018; Witteborn, 2018). Stavinoha (2019) conceptualizes these mediated practices of claims-making and political agency among refugees as "communicative acts of citizenship," with the potential to both reinforce and challenge oppressive and exclusionary policies in different contexts of protracted displacement.

6 | THE ROLE OF MOBILE PHONES FOR REFUGEE RESETTLEMENT

The use of mobile technologies among refugees experiencing resettlement has been associated with social inclusion and opportunities to enhance access to relevant information that can nurture their daily lives. However, scholars claim that low levels of digital literacy among refugees, as well as socioeconomic, linguistic and cultural barriers can hinder their abilities to use ICTs for managing information efficiently (O'Mara, 2012), with significant implications for their social participation (Alencar, 2017; Gifford & Wilding, 2013). Alam and Imran's (2015) study, for instance, revealed that issues related to income, mobility, and availability greatly constrained ICT usage among different refugee migrant groups in Australia, especially for the newly arrived who experienced major barriers to internet access and use due to affordability, language, and literacy issues. Similarly, Bacishoga, Hooper, and Johnston (2016) showed that cost, access, and perceived utility of mobile phones by refugees in South Africa shaped their adoption of these technologies.

Arguing against normative understandings of refugees as victims of digital exclusion or "digitally unprepared," McCaffrey and Taha (2019) with their study based on Middle Eastern newcomers in New Jersey, USA, emphasize the high level of mobile phone penetration in refugees' households and that host societies and institutions lack adaptability to these tech-savvy users. Typically, services aimed at refugees do not profoundly engage with their literacies and needs or involve them in the design and implementation processes (Kaufmann, 2018; Leung, 2018). This also relates to stereotypical views of refugees as "vulnerable" individuals who lack autonomy to rebuild their lives. Humpage, Fozdar, Marlowe, and Hartley (2019) claim that the fact that refugees have been exposed to traumatic experiences or have limited support in settlement contexts does not mean they are "indelibly vulnerable" (p. 11). The importance to consider refugees' mobile media literacies is highlighted by Bruinenberg, Sprenger, Omerović, and Leurs (2019) in their intervention study with Syrian youths in the Netherlands. Results demonstrated the ability of young refugees to negotiate life through war, forced displacement, and settlement in a new place using their smartphones. Other examples can be found in the study of O'Mara (2014), which showed how young refugees' engagements in creative artistic productions mediated by mobile technologies enhanced their ability of self-expression, learning the host country's language and culture, and collaborating with peers. Overall, studies highlight that mobile phones have the potential to foster learning and skill developments among refugees inside and outside educational settings (Bradley, Lindström, & Hashemi, 2017).

In the context of refugee health, mobile technologies can be used as an integrative part of face-to-face interventions. Considering the affordability and accessibility of mobile phones, scholars demonstrated that mental health apps and short messaging service (SMS) became complementary methods for monitoring mental health conditions among refugees (Sandoval, Torous, & Keshavan, 2017; Tomita, Kandolo, Susser, & Burns, 2016). In the case of a young Eritrean refugee (Mr. A) who recently resettled in the United States after living 9 years in a refugee camp, the mobile phone enabled him to monitor and learn about his condition, as well as to engage in potential recovery scenarios without fearing stigma (Sandoval et al., 2017). On the other hand, the practical potentials of smartphone

devices are extensively covered in the literature on refugee resettlement. Administrative and locative functions of mobile technologies are described by a number of studies as useful tools for refugees to coordinate pathways through the bureaucracy (Glazebrook, 2004), orient themselves in the city (Kaufmann, 2018), and navigate a range of obstacles on their way to finding a new life (Alencar & Tsagkroni, 2019; Graf, 2018; Veronis, Tabler, & Ahmed, 2018). Syrians make active use of social media apps like Facebook, Youtube, WhatsApp, Google Maps, and Google Translate (AbuJarour, Bergert, Gundlach, Köster, & Krasnova, 2019; Alencar, 2017; Graf, 2018; Kaufmann, 2018). Before coming to Europe, they reported to have used smartphones for several years, but that after arrival they needed to re-appropriate their devices in order to become familiar with the local information landscapes in their new city (Kaufmann, 2018). The spatial logic of media practices is emphasized in Kaufmann's study as a relevant factor shaping refugees' local adaptation through their phones. For instance, most used apps cited in Kaufmann's interviews with Syrians were not designed for migrants or refugees.

At the same time, the attitude and behavior of the host society toward refugees play an important role in how newcomers adopt mobile phones (Alencar, 2017). Based on refugees' accounts, hostility acts from German people such as shouting at refugees when being asked for information about directions in the city (Graf, 2018, p. 153), or social discrimination experienced by North Korean refugee women in South Korea resulted in a greater reliance on mobile phones for assistance, and as a way to avoid direct interactions with the local community (Kang, Ling, & Chib, 2017). However, research also revealed that the desire to become part of the host culture can foster refugees' use of mobile phones for language and cultural learning (Alencar, 2017; Tudsri & Hebbani, 2015).

Researchers deliberately situate refugees' mobile phone practices in relation to power structures of governments in both home and host countries. The study of Marlowe (2019) with different refugee populations in New Zealand showed that refugees' tactical uses of social networks accessed through their phones enabled them to communicate locally and transnationally, while subversively challenging power structures and avoiding censorship from governments in their countries of origin. Leurs' (2017) research with young Syrian refugees in the Netherlands provides important implications for rethinking the affordances of smartphones when it comes to the support of refugees' fundamental rights (e.g., the right to information and expression). Smartphones are considered as "pocket archives" that allow refugees "to position themselves as political subjects of communication rights online" (p. 693). Simultaneously, relational analyses of host country's integration systems and refugees' engagements with smartphones highlight the relevance of support communities in developing "digital resilience tactics" to make do with neoliberal refugee policies and infrastructures in the Netherlands (Urdan et al., 2020).

Much of the current literature pays particular attention to the role mobile phones play in assisting refugees to maintain social connections (e.g., friends and family) and create new ties in the host society, which can facilitate their adaptation through access to different forms of capital (social, economic, cultural, affective, and political). A large intervention project allowing refugee women in Melbourne to make unlimited free calls to fixed-dial mobile phones concluded that mobile communication fostered their well-being through the formation of support networks (see Wollersheim, Koh, Walker, & Liamputtong, 2013; Walker, Koh, Wollersheim, & Liamputtong, 2015; Liamputtong, Koh, Wollersheim, & Walker, 2015; Koh, Walker, Wollersheim, & Liamputtong, 2018). In contrast to these findings, Mikal and Woodfield (2015) found that refugees living in the United States are more cautious about relying on the support from online communities due to both cultural differences and barriers to using mobile phones. Other studies showed, for instance, that refugees only trusted online sources that were recommended by their own personal networks, such as the case of job-finding applications (Graf, 2018). The connections formed via mobile apps were also perceived by refugees as hindering their opportunities to engage in face-to-face interactions with locals (Awad & Tossell, 2019), enhancing social exclusion in the offline world (Gifford & Wilding, 2013).

Specifically focusing on the paradoxical roles of mobile technologies in the context of transnational family relationships, different studies highlighted that mediated practices of doing family require time and emotional labor from resettled refugees (Awad & Tossell, 2019; Leurs, 2019; Smets, 2019). Similar to findings from studies in prolonged displacement settings (Witteborn, 2015), Syrian refugees also felt obliged to be constantly available to call their family, especially considering "the excellent coverage and stability of mobile connectivity in the Netherlands" (Awad &

Tossell, 2019, p. 7). Syrians emphasized their desire to be disconnected from family and friends who stayed in Syria to avoid distress, as they constantly heard stories of despair and suffering from their loved ones and felt powerless for being unable to help (Awad & Tossell, 2019; Leurs, 2019). Scholars describe that Syrians develop specific strategies, such as communicating through text instead of phone or video calls (Awad & Tossell, 2019), or specific "ritualistic practices of *emotional labor*" such as "keeping up appearances" (Leurs, 2019, p. 5) to manage their feelings of frustration resulting from prolonged family separation. In the case of LGBTQ refugees living in Belgium, they need to negotiate their (sexual) identities to adapt their online social presence to entirely different social groups. For instance, they kept a low profile as a way to avoid "context collapse and collision" (Dhoest, 2019, p. 23), which may have negative consequences if they have to return to their country of origin.

7 | CONCLUSION

This article set out to explain how the development of the literature on refugees and mobile phones gives important theoretical and empirical insights to further our understanding of the mutually shaping processes emerging between technology and social practices in the different phases and contexts of the refugee experience. This review article used the notion of affordances as an analytical tool to examine the relationship between mobile communication practices and refugee lives under different circumstances. Despite the diversity of refugees' experiences, partial conclusions can be drawn from this article. First, the role played by mobile communication technologies in refugee mobility processes was often described in the literature as facilitating devices, or survival tools that make possible action in a variety of ways throughout the migration journey. Second, studies addressing refugees' use of mobile phones in situations of protracted displacement are more oriented toward the affective experiences and struggles of refugees living in "limbo" (Smets, 2018), while moving beyond the functional possibilities of these technologies, for instance, "in regard to navigating onward journeys" (Twigt, 2018, p. 1). Within resettlement contexts, current literature trends connect the affordances and possibilities of action provided by mobile phones to the different sociocultural, linguistic, economic, political, psychological, and affective challenges that refugees encounter when negotiating their conditions, needs, and interests locally and transnationally.

In line with Mancini et al.'s (2019) scoping review, this article has also shown that the majority of studies concentrate on the analysis of resettlement processes in Western countries. There is much less information about the appropriation of mobile technologies in other phases of the refugee experience and in developing regions. Overall, research on the use of smartphones by refugees is mostly focused on the recent Syrian refugee crisis, defined by scholars as "the first of its kind, in terms of scale, in a fully digital age" (Leurs & Ponzanesi, 2018, p. 5). Very little attention is paid to those populations subject to forced displacement but whose refugee status has not been established, such as asylum seekers (Witteborn, 2015, 2018), or to humanitarian and environmental migrants and refugees (Alencar, 2020), unaccompanied minors (Kutscher & Kreß, 2018), LGBTQI+ refugee communities (Dhoest, 2019), and their relations with mobile devices. In addition, no research has been found that surveyed the role of mobile phones for elderly refugee populations. Future studies should be undertaken to explore how mobile technologies interact with the experiences and needs of people seeking refugee in specific contexts, in particular, where these underexplored refugee groups can be considered.

Although this analytical review does not allow for a detailed description of the different refugees' migration experiences, it certainly offers relevant insights into the complexities and contradictions surrounding the use of mobile communication technologies by refugees. As discussed by Leurs and Smets (2018, p. 8), developing approaches that recognize the "often-paradoxical roles of digital connectivity" brings much-needed understandings of refugees' situations and contexts, while adding to the rapidly expanding field of digital migration studies. In adopting a socio-technical understanding of relationships, this review article contributes in several ways to shed new light on refugees' agency though mobile phones in both physical and digital spaces (Greene, 2019; Witteborn, 2015). At the same time, it provides a basis for the development of theoretical models that are better aligned with

technology appropriation processes shaping contemporary refugees' experiences. Further research should be carried out to explore more collective processes and the power dynamics involved in the appropriation of mobile technologies by different migration actors in contexts of forced displacement and resettlement within and beyond the west.

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ENDNOTE

¹In this review article, the term "refugee" is used in the broader context of forced displacement and migration to include the experiences of people whose official status as "refugee" has been established and are allowed to settle, as well as those who seek asylum elsewhere, or are in the process of applying for asylum.

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