

# **Navigating the Smartphone Era in Times of War**

Ukrainian Civilians' Smartphone Usage in the Aftermath of the  
Russian Invasion into Ukraine in 2022

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## **Abstract**

The study examines the role of smartphones as both a media technology and media practice in the context of the war between Ukraine and Russia starting in 2022. Focusing on Ukrainian civilians, who constitute one of the most networked societies, the research explores the extent and quality of smartphone technology's pervasiveness, evolving social dynamics and experiences shaped by smartphone-mediated communication, and the implications of smartphone-mediated involvement for civilians' experiences of the war. The research employs a case study approach, with the Russian-Ukrainian war serving as the specific case. Key themes emerged from the findings: ubiquity and pervasiveness, immediacy and immersion, media mix and the digital divide, infrastructure dependencies, and smartphone-mediated trust and participation.

The study reveals that smartphones have become integral to Ukrainian communication culture and an everyday necessity during the war. Ukrainian civilians heavily rely on smartphones for critical communication and coordination, blurring the boundaries between the physical and digital worlds. Connectivity plays a crucial role, enabling real-time information exchange and facilitating communication and connection during the war. Trust dynamics are influenced as well. Smartphones also enable participation through various forms such as joining digital warrior groups or documenting personal experiences, contributing to collective memory and shaping personal and collective narratives of the war.

In conclusion, smartphones have transformed the lives of Ukrainian civilians in the context of the Russian-Ukrainian war, becoming essential tools for communication, coordination, and accessing critical information. The study emphasizes the need for inclusive access, collective action, and cooperation to overcome challenges and ensure effective smartphone utilization during war. It also highlights the relational nature of witnessing, the link between participation and memory, and the potential risks associated with smartphone-mediated involvement.

Keywords: Smartphone technology, Ukrainian civilians, Russian-Ukrainian war

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## Introduction

The year 2022 proved to be a momentous one for both Ukraine and myself, as a Ukrainian citizen and a student of media and communication in Sweden. It was the year of the full-scale Russian invasion of Ukraine on February 24th, which marked a turning point in my understanding of the interconnectedness of media technology and social change. Prior to this event, my interests had never been particularly attuned to the latest developments in technology. However, the invasion spurred my curiosity and prompted me to investigate the profound impact of media technology such as a smartphone has on contemporary society in the situation of the biggest social stability disruption – a war.

As a Ukrainian with family in a war-torn country, the invasion was not merely an academic interest but a personal event. I vividly recall waking up early on February 24th 2022, and reading a Viber message from my mother on my smartphone with the words "WE HAVE WAR!". Before calling her back, I instinctively opened my mobile browser and accessed Ukrainska Pravda, one of the largest digital media outlets in the country, to gain a broad perspective of the situation. As I perused the online newspaper, my eyes were drawn to the stark, contrasting hues of black, red, and bold capslock letters that conveyed the gravity of the situation: "UKRAINE DECLARED MARTIAL LAW", "Zelensky ordered to impose maximum damage to the occupiers", "Mobile networks operate but disruptions may occur, when needed – give a call", "PUTIN HAS STARTED A WAR", "Russia attacked Ukraine. ONLINE", "Russians crossed the border of 5 Ukraine's regions and Crimea", "UPDATED. First war victims: wounded, killed". Clicking on one of the lines, I anxiously scanned the article for news of my parents' region, which fortunately was not among those being attacked. After calling my mother, I clung to my smartphone in the course of the next couple of months becoming increasingly aware of not just its significance during the crisis, but of its ability to transform modern warfare – in a way that was never experienced before.

The unique and interesting dynamic between a war and the smartphone, which has become a dominant media technology of the 21st century, prompted me to start investigating the broader implications that the usage of a smartphone as media practice has in conflict zones. There exists a rich diversity of theoretical approaches in exploring the complex interplay between technology, society and change, with varying degrees of emphasis on technological

determinism versus social constructivism. Alongside these theoretical debates, a considerable body of academic literature has scrutinized the relationships between traditional forms of media, such as print journalism and television, and social disruptions such as natural disasters, protests, wars. The advent of an iPhone as a personal, portable, multimedia device in 2007 and its impact on the media environment has garnered increasing attention in analyzing both peacetime situations such as urban mobility or education and crisis situations such as political mobilizations, revolutions or uprisings. However, little research has been conducted on the role of smartphones as media practice during a full-scale or total war with such a big smartphone and high-speed mobile internet penetration as exemplified by the Russian invasion into Ukraine in 2022 – particularly on the experiences of civilians directly affected by it.

The Russian invasion of Ukraine in 2022 is a good case to study the broader implications of smartphone usage as a media practice in conflict zones as it represents a novel and striking example of the intersection between smartphone as a media technology and warfare, unprecedented both in its scale and the geographic and historical contexts in which it occurs. The widespread adoption of smartphones and access to high-speed internet is a key factor in this development. In 2014, when Russia annexed Crimea, only 14% of Ukrainians owned a smartphone, and merely 4% had access to high-speed internet; by 2022, these figures had risen dramatically, with over 70% of the population now owning a smartphone and more than 80% having access to high-speed internet (The Economist, 2022). These technological advances are further compounded by Ukraine's comparatively high level of internet connectivity, with 75% of Ukrainians utilizing the internet, in contrast to, for example, just 30% of Syrians in 2015 (ibid). Given this unprecedented scale of smartphone-war interconnection, the Russian-Ukrainian full-scale war offers a perfect case study for scholarly inquiry.

In 2020, television served as the primary source of news for 66% of Ukrainians, with social media platforms such as Facebook, YouTube, Instagram, and Twitter being accessed by 48% of the population, and single or aggregated online news resources (digital versions of printed press) by 24%. At that time, messaging apps like Telegram, WhatsApp, and Viber were only used as news sources by 14% of Ukrainians. However, in 2022, during the initial year of the full-scale invasion, there was a substantial increase in the usage of messaging apps as a source of news, with 45% of Ukrainians relying on them. Social media came first with 59%, leaving television behind to settle in third – after social media and instant messengers apps – with 40%

(Detector Media, 2023). These statistics illustrate the rapid shift in media consumption patterns from mainly television during peacetime to primarily social media and instant messaging apps during wartime, indicating the necessity of analyzing the impact of smartphones supplied with mobile internet, social media and messaging apps – at the time of a full-scale war.

Why did Ukrainians begin to primarily receive their news through messaging apps (Telegram, WhatsApp, Viber etc) and social media installed on their private, portable, connected smartphones as the full-scale war unfolded? How has the experience of warfare through the smartphone screen altered their perception of the war's "scale or pace or pattern" (McLuhan, 1964: 8) and the way it was eventually fought? Given that the majority of Ukrainians own a smartphone and are highly interconnected through high-speed internet, what are the new qualities that this pervasive, ubiquitous, multimedia technology brings into human affairs during a total war?

Let us consider some of the first days where a smartphone began to influence the dynamics of the war. At the onset of the Russian invasion of Ukraine, fake news circulated that President Volodymyr Zelensky had fled the country. Given the precarious situation of a nation under attack from multiple directions, the potential impact of such misinformation was significant. Moreover, removing Zelensky in one way or another from Ukraine's capital was Russia's plan<sup>1</sup>. However, on February 25th 2022, Zelensky and other high-ranking officials appeared in a dimly-lit, live Facebook video using his personal smartphone outside Kyiv's government quarter, where he confirmed their presence and declared "We are all here"<sup>2</sup>. This effectively halted the spread of fake news, conveyed the message that Ukraine would not capitulate, and rallied local and international support – both among political leaders and wider international publics.

The next day, on February 26th 2022, the Ukraine's minister for digital transformation Mykhailo Fedorov, used his private mobile smartphone and more specifically, his Twitter account, to request Starlink from Elon Musk: "While you try to colonize Mars – Russia try to occupy Ukraine! While your rockets successfully land from space – Russian rockets attack

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<sup>1</sup> Khurshudyan, I. and Sonne, P. (2022) *Battle for kyiv: Ukrainian valor, Russian blunders combined to save the capital*, *The Washington Post*. WP Company. Available at: <https://www.washingtonpost.com/national-security/interactive/2022/kyiv-battle-ukraine-survival/> (Accessed: April 27, 2023).

<sup>2</sup> Zelensky, V. (2022). Volodymyr Zelensky. [Facebook] 25 February 2022. Available at: <https://www.facebook.com/watch/?v=624877852076446> (Accessed 27 April 2023).

Ukrainian civil people! We ask you to provide Ukraine with Starlink stations and to address sane Russians to stand”<sup>3</sup>. The reaction from the tech billionaire came in 10 hours, also via the tweet: “Starlink service is now active in Ukraine. More terminals en route”<sup>4</sup>. In that way, Ukrainian military, paramedic, volunteers and regional administrations got supplies and network connections to Starlink within just a week-time after the tweet.

The battle of Hostomel airport, 30km away from Ukraine’s capital Kyiv, also exemplifies the increasing role of a smartphone during the early days of the full-scale invasion. The Russian forces intended to conduct a swift landing operation with 18 IL-airplanes carrying 4000 soldiers, heavy weaponry and artillery with the objective of linking up with the advancing Russian troops from the North. Although the Ukrainian forces were heavily outnumbered and outgunned, they were able to turn the tide when both the civilians on the ground and those observing the situation from multi-story buildings’ balconies began calling in the Ukrainian artillery<sup>5</sup>. Furthermore, the Ukrainian military also used WhatsApp to communicate with each other once the Russian forces jammed their radio connection<sup>6</sup>. This demonstrates the blurring of the lines between civilians and military technology, with civilians actively entering the war effort and military forces resorting to civilian infrastructure as a backup plan. The battle of Hostomel airport, which was a critical juncture in the early days of the full-scale invasion, not only determined the fate of Ukraine’s capital but also arguably the fate of Ukraine as a whole in February-March 2022.

Based on the insights, the thesis has been developed as an academic inquiry with the aim to explore the characteristics of a media ecology centered around smartphones during the Russian-Ukrainian war, following the full-scale invasion of 2022, and examine the impact on Ukrainian civilians’ experiences of communication and their perceptions of the war, their surroundings and themselves within this newly actualized media ecology. The ongoing Russian invasion of Ukraine in 2022 has affected the entire Ukrainian population with widespread

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<sup>3</sup> Fedorov, M. (2022). Mykhailo Fedorov. [Twitter] 26 February 2022. Available at: <https://twitter.com/FedorovMykhailo/status/1497543633293266944> (Accessed 27 April 2023).

<sup>4</sup> Musk, E. (2022). Elon Musk. [Twitter] 26 February 2022. Available: <https://twitter.com/elonmusk/status/1497701484003213317> (Accessed 27 April 2023).

<sup>5</sup> Omelianchuk, O. and Stryzhova, O. (2023) *Defeated Russians near Hostomel and survived. How the North was defended. Special project.*, Radio Svoboda. Radio Svoboda. Available at: <https://www.radiosvoboda.org/a/oborona-pivnoch-gostomel-sumy-zsu/32285985.html> (Accessed: April 27, 2023).

<sup>6</sup> Axe, D. (2022) *Ukraine’s artillery did the most killing around Kyiv, ultimately saving the city from Russian occupation*, Forbes. Forbes Magazine. Available at: <https://www.forbes.com/sites/davidaxe/2022/12/26/ukraines-artillery-did-the-most-killing-around-kyiv-ultimately-saving-the-city-from-russian-occupation/?sh=3b5d66e3c8b4> (Accessed: April 27, 2023).



population displacement, significant infrastructure and economic damages, severe psychological and emotional implications creating a unique media environment for all citizens that co-shapes their social reality and the conduct of the war itself. Though there has been research conducted on the interrelations of smartphones and crises, the current case offers new possibilities that can shed light on broader implications that the usage of a smartphone can have in conflict zones. As such, this research seeks to address the following questions:

- What is the extent and quality of smartphone technology's pervasiveness in the context of the Russian-Ukrainian full-scale war?
- What are the evolving social dynamics and experiences among Ukrainian civilians shaped by smartphone-mediated communication in the context of the Russian-Ukrainian full-scale war?
- How are Ukrainian civilians involved in the dynamics of the Russian-Ukrainian full-scale war through the prism of smartphone technology, and what are the implications of their smartphone-mediated involvement for their experiences of the war?

The first chapter of this study examines the historical interplay between war and media, as well as academic debates on smartphones as media technologies that influence both peace and crisis times. It also highlights major theoretical and conceptual frameworks used in this research to analyze smartphones, which in turn inform the methodological research design and process outlined in the second chapter. The final chapter presents the research findings, which are based on case studies, ethnographic observations and in-depth interviews, and are organized into sections reflective of the most compelling themes emerging from the analysis. The research initially focused on sampling Ukrainian individuals who identified themselves as civilians and were living through February 24th 2022 in Ukraine, including internally displaced persons, journalists, volunteers, activists, and civil servants. However, as the research progressed, it became increasingly clear that the distinction between a civilian and a combatant during the smartphone-era can be obscured.

## **Literature review**

The literature review for this thesis is structured in five parts. The first section explores the historical perspective on war and media relations, and how these relations evolved over time. Section two deals with a smartphone as a new media technology and practice, and how it disrupted the existing mediascape. The third section deals with a smartphone within the context of a crisis such as a protest, uprising, war etc. whereas the fourth section discusses existing research on the smartphone use within the context of the Russian-Ukrainian war. Research gap follows. Section five inspects various theoretical concepts applicable for the research.

### **Media and war chronicles: historical perspective**

In order to give sufficient context for the research topic at hand, it is crucial to provide an overview of interplay between media and war throughout history. This will help to establish the background necessary for understanding the complex relationship between these two phenomena. Traditionally, researchers in media and communication were mainly concerned with content, but in the 1960s media theory introduced a new perspective that challenged this notion. This theory asserted that the "medium is the message" (McLuhan, 1964), meaning that the medium through which content is delivered is more significant than the content itself. This idea sparked a shift in the traditional understanding of media effects studies. In line with the new outlook on communication established in the 1960s, Harold Innis and Marshall McLuhan, the pioneers of medium theory, proposed their own typologies of society based on the dominant medium of the time. Innis (1951) offered to distinguish between "time-based" and "space-biased" media eras with time-biased media emphasizing the preservation of knowledge over time and space-biased media emphasizing the dissemination of knowledge over distance. Meanwhile, McLuhan (1962) proposed a typology of media eras such as the oral, written, print and electronic eras which he believed each had a profound impact on the way people perceived and interacted with the world around them. While typologies have greatly influenced the field of media studies, they often fail to differentiate between media environments during times of war and peace. This differentiation is vital for the purpose of this research, as it aims to explore the interplay between media and war specifically.

Thus, the title of the first ever media war belongs to the Crimean War of 1853-1856 (Carruthers 2000, Hoskins & O'Loughlin 2010, Kovarik 2015), as this war both embraced and nurtured innovations within public media, mass communication and technology. At the start of the war, British newspapers took advantage of the advancements of visual technology and incorporated first-ever photo-based engravings from the frontline in their publications. This move significantly increased their circulation to 300,000 readers (Kovarik, 2015: 208) and helped secure the penny press business model for the medium with the power to reach vast audiences and influence public opinion (Carruthers, 2000: 5). For the first time in history, “mass audiences were able to follow and interpret events on the battlefield” (Hoskins & Loughlin, 2010: 81) which led to the emergence of “distant publics” (ibid: 80) during wartime and the reconfigurations of relations between war, media and mass audiences. In addition, the dispatch of war reports experienced a revolution with the introduction of the telegraph system which enabled the transmission of news from the frontline to the newsroom within hours. This marked a significant shift from the previous lengthy and poetic accounts of battlefields by individual war correspondents to short, precise and direct reporting of events. The telegraph system laid down the foundations for the journalistic golden standard known today as “emphasizing facts over opinions” in particular (Kovarik, 2015: 375), and war journalism in general (Hoskins & Loughlin, 2010: 78).

According to Ulrich Keller, due to the extensive usage of picture journalism, lithographic presses and metropolitan show businesses that wanted to cater the needs of growing urban publics, the modus of this war shifted from being witnessed by co-present “spectators” to “something more organized for commercial mass consumption”, as a result – some aspects of the war were deliberately staged as mass spectacles (2001: 3). This war became the first instance of efforts jointly made by the press and the entertainment industries “to create a spectacular war in their own image” (ibid: 255). According to Guy Debord, “the spectacle is not a collection of images, but a social relation among people, mediated by images” (1995: 12), meaning that it is not simply a form of entertainment but a powerful tool of social control that reinforces dominant ideologies and shapes our perceptions of the world. As a result, the direct and illustrated war dispatches published in *The Times* kept the public both informed, entertained and eager for the next installments of the war “reality” (Markovits, 2009). In summary, the Crimean War marked the rise of remote publics with the capacity to shape public opinion, a spectacle war

distinguished by its combination of entertainment and framing, and a unique style of almost real-life war correspondence and journalism. *The Times*, therefore, transformed from a neutral media technology into a key protagonist during the conflict and served as a platform for a national debate, for readers' mobilization and politicians accountability (Carter, 2011: 1214). This is how the Crimean War became dubbed the first media war in history.

According to Seethaler et al. (2013), the tradition of war journalism in the modern sense of this word was continued during the American Civil War of 1863 and the German-French War of 1870-1871, and laid down the foundations of modern propaganda. World War I happened to be, therefore, the first war fought not only on the battlefield but largely also in the public sphere with the intention to win over "the dominant interpretation of war" or metahistory. According to Diego Lazzarich, "the narration of war became one of the main cognitive categories of modern war itself" (in Seethaler 2013: 37-57). The emergence of modern propaganda and censorship during the Great War made media a vital element for imagination, memory and action.

During World War II, the media served not only to elicit support and sympathy for the war effort but also to mobilize civilian populations as new weapons of mass destruction were introduced requiring the occupation of larger amounts of population. As a result, total war necessitated total propaganda with both visual media, such as print press, sound-on-cinema, photography and print advertisements, as well as audio media such as radio, serving as crucial weapons for influencing public opinion. According to Kovarik, film directors utilized the art of moving images and sound to manipulate emotions and deceive audiences (2015: 293), while journalists and politicians used public radio to deliver memorable speeches such as Edward R. Murrow's famous "Hello, America. This is London calling" or Winston Churchill's June 4th 1940 address (ibid: 422). As Seethaler notes, the power of radio as a relatively new technology reshaped public perceptions of the moment and the war in general (2013: 8). Corporations employed advertising to demonstrate their patriotism and transform public opinion (Kovarik, 2013: 340-341) which was also a novel way to combine business, state and war. All in all, because of the all pervasive propaganda employed by all media available at that time, World War II marked the first time that the boundaries between previously upheld distinctions in warfare between combatants and non-combatants got blurred (Carruthers, 2000: 55).

The emergence of television as a new media technology during the 1950s disrupted and rearranged not only existing mass media business models, but also the ways in which people

conducted and perceived wars. The best illustration of this period is the Vietnam War, which took place from 1955 to 1975. The war in Vietnam is often referred to as the first "television war" (Carruthers, 2000: 108) or "living-room war" (Hoskins & O'Loughlin, 2010: 3). It marked the beginning of a Broadcast War that spanned from the 1950s until the 1990s and represents the first phase of the mediatization of war. According to Andrew Hoskins and Ben O'Loughlin, this phase is characterized by the dominance of television as the main medium for the coverage and representation of war (2010: 11). Television became the primary source of information and images about war for the public, and the format of news coverage was based on the principles of immediacy and visual impact, with correspondents reporting live from the front lines. The coverage of the Gulf War in 1990-1991 marked the pinnacle of the Broadcast War phase, as it was the first war to be fully mediated by television and to be watched in real-time by millions of viewers around the world enabled by 24-hour cable news networks like CNN.

Another characteristic of the Gulf War is that it heralded the global satellite era with the TV-spectacle being the dominant mode of representation (Hoskins & O'Loughlin, 2010: 3). The term "TV-spectacle" implies that the coverage of the war was a carefully orchestrated media event designed to project a particular image of the conflict, unlike the uncensored and unedited footage from the Vietnam War. The Gulf War was depicted as a technological and efficient military operation, omitting the horrors of the war as it was in Vietnam, and focused on high-tech military hardware such as smart bombs and laser-guided missiles. As a result, the Vietnam War TV-coverage led to increased scrutiny of the government and military, while the Gulf War TV-depiction resulted in "clean", "sanitized", "high-tech" versions of warfare and therefore in increased military support. It became clear that the dominant media plays a decisive role not only in the perception of war on the home front but also in the outcome of war (Seethaler, 2013: xii). With personal computers, mobile phones and the world wide web being on the rise, the Gulf War marked the last war in history that was carefully scripted for popular media consumption from beginning to end (Keller, 2001: 254).

The terrorist attacks on September 11th marked the end of the broadcast-era or spectacle-era and coincided with the emergence of diffused wars including the subsequent global-war-on-terror. Diffused war marks the second phase of mediatization of war and media and is determined by continuous connectivity, chaotic messages and their unpredictable effect, diffused audiences, participation and interactivity, as a result – weaponized media and challenges

for the traditional notions of institutional authority, trust and objectivity (Hoskins & O’Longlin, 2010: 19) prompted by the proliferation of the internet. Barzilai-Nahon defines the new, networked media environment as such: "Communication in the networked environment is often non-linear, and participants shape and are shaped by the network structure and its affordances. Information is distributed and accessed via various nodes and links, and flows are often decentralized and multimodal, involving multiple channels and media" (2008: 1497). Together, these developments signaled a fundamental transformation in the ways in which media started to operate in a modern society. According to Manovich, “the computer media revolution affected all stages of communication, including acquisition, manipulation, storage and distribution, it also affected all types of media – texts, still images, moving images, sound and spatial constructions” (2001: 19).

The year 2007, which marked the height of the Afghanistan (2001-2011) and Iraq (2003-2011) wars, was the year of the iPhone's launch. As Ford and Hoskins (2022) note, the full extent of the device's impact on how people engage with the internet, each other, and the world around them was not immediately apparent at the time. However, the new generation of mobile devices with iPhone being the icon has since become an essential part of modern life. In the context of war and conflict, a smartphone paired up with technologies such as mobile internet and social media has enabled diffused individuals to participate in social life in ways that were previously unimaginable, revolutionizing the trajectories in which people live, work and engage – with a conflict and each other. The rise of iPhone-alike mobile devices thus represents a significant shift in the ways in which technology mediates our experiences of the world, and highlights the profound impact of digital technologies on modern society and its conduct of a war.

The Syrian War (2011-present) and the ongoing Russian-Ukrainian war (2014-present) are taking place in a world where smartphones have become the dominant communication technology. The launch of the iPhone led to the emergence of a new, third phase of mediatization known as the "arrested war," as Hoskins and O’Loughlin (2010) argue. This phase is characterized by a growing reliance on social media platforms and mobile technologies to communicate and disseminate information in real-time. The arrested war is marked by a proliferation of digital content, including user-generated videos and images which have become critical in shaping public perceptions of conflict. Social media platforms such as Facebook and

Twitter have also emerged as key tools for mobilizing support and organizing protests, as well as for spreading propaganda and disinformation. Overall, the emergence of the arrested war represents a latest shift in the ways in which media technologies are shaping our experiences of contemporary conflict and highlights the importance of studying the complex interactions between technology, media, and society in the 21st century.

Since then, the relationship between technology, media, and war has been conceptualized in various ways by scholars in recent years. Pötzsch (2015) proposes the term "iWar" to describe the transition from a participatory Web 2.0 to an intelligent and increasingly autonomous Web 3.0. Meanwhile, Merrin (2018) introduces the concept of "participative war" highlighting the socially and historically constituted nature of participation in warfare, and the mediums through which it occurs. Boichak (2021) employs the term "digital war" to describe the immediacy and low costs with which information can be amplified, framed, and diffused, and the unprecedented opportunities for public participation and engagement with mediatized conflicts. Hoskins and Ford (2022) update the third phase of mediatization of war and media with the fourth one called "radical war", with radical war emphasizing the digitally saturated fields of perception through which war is legitimized, planned, fought, experienced, remembered, and forgotten – being datafied, manipulated and controlled.

Despite the varying terminologies used by these scholars, all acknowledge the central role a connected multimedia mobile device plays in shaping our experiences of contemporary life, be it peace or war. The emergence of smartphones, high-speed mobile internet and social media platforms has enabled unprecedented levels of participation, engagement, and mobilization and has given rise to new forms of communication and action during warfare. As Boichak and Hoskins (2022) note, these developments have profound implications for our understanding of war and its impact on society, underscoring the need for continued research into the complex interactions between technology, media, and warfare.

### **Smartphone as a new media technology unleashed**

Since the launch of the iPhone in 2007, there has been a flurry of academic research on the impact of smartphones on contemporary life particularly in the areas of communication, media consumption and social interaction. According to Wei et al. (2022), the past 15 years have

seen a significant growth in mobile communication research, with studies focusing on mobile devices and media evolving from a technological object to a key social object with a broad range of impacts on people's daily lives. Following the argument of Susan Carruthers, that “war should not be seen as a special case of how the media works but rather as a magnifying glass which highlights and intensifies many of the things that happen in peacetime, albeit revealing them in exaggerated form (2000: 13), the current study suggests to incorporate an overview of recent academic debates on mobile devices during both peace and war time. The smartphone as a new media technology cannot be regarded as something outside the human culture, it is a technological object as much as it is cultural (Manovich, 2001: 15).

According to El Khaddar (2017), it is important to differentiate between a mobile phone and a smartphone, as the latter is characterized by significant advancements in three critical areas: hardware, software, and network infrastructure. Firstly, the hardware improvements include features such as high-resolution screens, responsive keyboards, powerful processors, advanced sensors, and high-quality cameras, which have drastically improved the user experience of mobile devices. Secondly, the evolution of operating systems and the development of various applications have transformed the smartphone industry by providing a vast array of functionalities such as social media, gaming, and productivity tools that were not available on traditional cell phones. Lastly, the network infrastructure has advanced with the introduction of 3G, 4G and 5G networks, offering faster and more reliable internet connectivity, and a larger wireless bandwidth that enables cloud-based storage and processing of data. Collectively, these three advancements have shaped the modern smartphone and its capabilities, setting it apart from traditional cell phones.

Goggin argues that the smartphone represents a new form of media technology that has disrupted the mediascape by creating new opportunities for communication, media consumption and social interaction becoming “an integral part of the fabric of modern life” (2011: 3). He notes that the smartphone has transformed the way people consume media, with mobile devices now serving as the primary means of accessing news, entertainment and social media. He also explores the cultural implications of the smartphone, arguing that it has had a profound impact on the way people perceive and experience the world around them. The constant presence of mobile devices, as per Goggin, has altered our sense of time and space, blurring the boundaries between public and private, work and leisure, and online and offline.



Further debates about the impact of mobile communication on social relationships are dialectic in nature as well. Some scholars argue that mobile devices promote social connectedness and facilitate interpersonal communication (Ling, 2012), while others suggest that they can lead to social isolation and reduce the quality of face-to-face interactions (Turkle, 2011). Another area of discussion is the role of mobile communication in political participation and activism. As Castells observes, mobile technologies have been used to mobilize protests and enable citizen journalism, giving voice to marginalized groups (2015). However, the use of mobile devices in political activism also raises questions about the role of technology in shaping political outcomes and the potential for digital divides. Finally, scholars have also examined the impact of mobile communication on identity and self-presentation. As Baym notes, mobile communication has enabled new forms of self-expression and identity formation, as well as opportunities for surveillance and self-policing (2015). In sum, mobile communication has stimulated diverse academic discussions, highlighting its transformative effects.

### **Researching smartphone and crisis**

Given the research topic and the nature of technological advancement, the use of smartphones within modern warfare is a relatively new area of academic inquiry. Still, there are several studies on the ways in which smartphones have changed the nature of conflict and military operations. Peter W. Singer & Emerson Brooking, Thomas Rid, David Patrikarakos, Andrew Hoskins & Ben O'Loughlin are among the prominent scholars who have conducted research on this topic. Their research has shaped research problems and arguments, leading to the production of new knowledge on the use of smartphones in modern warfare. For instance, Singer's (2018) research has shed light on the emergence of cyberwarfare and the use of social media platforms by militants to recruit new members and spread propaganda. His work has contributed to a better understanding of how technological advancements are changing the nature of warfare. Similarly, Patrikarakos' (2015) research has explored the use of social media by ISIS militants and how they have exploited the affordances of social media platforms to spread their ideology and gain new recruits. Rid's (2012) research has focused on the use of encrypted messaging apps by militants to communicate securely and plan attacks.

Hoskins and O'Loughlin's (2010) study on the use of smartphones during the 2014 conflict between Israel and Hamas in Gaza demonstrated the value of social media monitoring for military intelligence gathering. The Israeli military used smartphones to monitor social media activity in Gaza which provided valuable intelligence about Hamas' activities and potential targets, while Hamas fighters used smartphones to coordinate attacks and communicate with one another. In addition to this concrete example, the researchers provided an overarching analysis of the media environment dominated by a mobile device describing it with characteristics such as instantaneous global awareness, enhanced connectivity and proximity, new forms of visibility and symbolic representation as well as new forms of perceptions, identities in the trinity of government, military and publics, and new forms witnessing a war: "The mediatization of war matters because perceptions are vital to war – the perceptions of a public who can offer support to a war, of government trying to justify a war, and those in the military themselves who are trying to perceive and understand exactly what is happening as war is waged. It is through media that perceptions are created, sustained and challenged" (2010: 5).

The study served to bridge the gap between research examining the use of smartphones as a military tool and research investigating the use of smartphones by civilians. Speaking of the latter, Katrin Voltmer (2013) researched the use of mobile devices and social media during the Arab Spring uprising pointing out the empowering effects of mobile technologies on citizen journalism and political mobilization. Kleis Nielsen (2022) explored how mobile devices have changed political communication and participation, highlighting how mobile technologies have facilitated new forms of political engagement. Lastly, Anne Kaun (2016) investigated how mobile technologies have transformed political communication and mobilization. In conclusion, these studies have provided valuable insights into the usage of smartphones in crisis and war, demonstrating the transformative effects of mobile technologies on communication, mobilization, and political participation. Previous research on the use of smartphones in crisis and war, while valuable in shaping research problems and arguments in the area, did not fully capture the unique circumstances and implications of the Russian invasion into Ukraine in 2022. The scale and intensity of the conflict, coupled with Ukraine's large number of smartphone users and high-speed internet penetration, create a distinct context that requires dedicated examination. Moreover, the specificities of the Russian-Ukrainian war, technological advancements, evolving media landscape, and societal and cultural factors necessitate a focused investigation to

understand the challenges, opportunities, and transformative effects of smartphones in this context. Therefore, additional research specifically addressing the Russian-Ukrainian war is needed to fully comprehend the implications of smartphone usage in this complex conflict.

### **Smartphone on the frontline: Russian-Ukrainian war**

The Russian-Ukrainian war can be divided into two phases: 2014-2022 annexation of Crimea and the hybrid war in Ukraine's East – Donbas, and 2022-present the full-scale Russian invasion into Ukraine. The use of smartphone and other mobile devices in the context of the Russian-Ukrainian war from 2014 and till 2022 has been explored by Aaron Brantly (2019), Christopher Paul and Miriam Matthews (2016), Serhy Yekelchuk (2015), Olga Boichak and Sam Jackson (2020), Irina Shklovski and Volker Wulff (2018), Roman Hobryk (2022). This period is characterized by both a distinct media and war environment when compared with the full-scale Russian invasion of Ukraine in 2022.

Aaron Brantly's (2019) research examined the role of social media in the Russian-Ukrainian conflict and how it was used to shape narratives and influence public opinion. She argued that social media platforms like Twitter and Facebook played a critical role in the spread of propaganda and disinformation, which affected the outcome of the conflict. Brantly's research helped to shed light on the information war aspect of the conflict and how it was being fought on social media platforms.

Christopher Paul and Miriam Matthews's (2016) research explored the use of propaganda by the Russian government in the context of the conflict. They examined how the Russian government used social media platforms to spread propaganda and disinformation to influence public opinion in Ukraine and abroad. Paul and Matthews's research highlighted the importance of understanding how propaganda is used in modern conflicts and how it can impact the outcome of a conflict.

Serhy Yekelchuk's (2015) research examined the political and strategic implications of the conflict for Ukraine and Russia. He argued that the conflict had significant implications for regional security and that it was important to understand the motivations behind Russia's actions. Yekelchuk's research produced new knowledge about the broader geopolitical implications of the conflict and helped to shed light on the strategic objectives of the Russian government.

The research of Boichak and Jackson (2020) revealed how russophone residents of Mariupol used social media, particularly Facebook, to build a Ukrainian identity, resist occupation, and cultivate a notion of good citizenship. They leveraged the affordances of anonymity and interactivity on the platform to protect their identities, organize support networks, and articulate their national identity. Social media served as a public space for collective storytelling, supporting the legitimacy of the Ukrainian state in a city facing conflicting allegiances.

Irina Shklovski and Volker Wulff (2018) investigate the usage of a private mobile phone among soldiers, volunteers and civilians on both sides of the war – Western Russian and Eastern Ukraine, from the perspective of human-computer interaction research arguing that broader power relations on mobile communication infrastructure ownership and control should be considered. Though they presented many instances on how a smartphone is used in a war such as entertainment, keeping in touch with friends and family, posting battlefield updates on social media and requesting help from volunteer organizations, their major research concern was limited to user's yet uncontrolled "digital visibility" and their consequent controlled protection from any kind of surveillance.

Another notable researcher in the field is Roman Hobryk (2022). His research primarily focuses on the use of mobile technology by Ukrainian soldiers on the frontline and how it has affected the dynamics of the conflict. Hobryk's research draws on a variety of theoretical frameworks, including media ecology theory, which emphasizes the ways in which media technologies shape our perceptions and interactions with the world, and actor-network theory, which focuses on the complex and dynamic networks of actors and technologies that are involved in shaping social and political processes.

Matthew Ford argues that the use of social media and smartphone technology to record and propagandize war is not new, as the Islamic State was particularly adept at using connected technologies to shape the information space. The genocide in Myanmar was amplified and accelerated through Facebook (Ford & Hoskins 2022). Bellingcat emerged from the Syrian civil war as one of the most important forensic investigative journalist organizations, keeping track of the war's digital footprint as a way of holding the Assad government to public account. However, the previous research did not account for the situation such as the Russian invasion into Ukraine in 2022 which made this particular war the most digitally connected war in history.

Also, the previous research did not specifically address the emergence of new qualities of knowledge such as interrelations and interactions within the smartphone-centered media environment from a holistic point of view – between smartphones as a media technology, emerging communication systems, human beings in a crisis situation and their environment. There has been no academic inquiry on the major characteristics of the whole smartphone-centered media environment in a crisis situation such as certain new features of connection, communication and relation that civilians develop through the prism of their smartphones during a war. Consequently, there is a pressing need to bridge the gap in the existing literature by investigating the new media ecology that has emerged in the context of the Russian-Ukrainian war and its impact on the perceptions of Ukrainian civilians towards the war. Such an inquiry is vital to gain a deeper understanding of how the new media ecology is shaping the conduct and unfolding of the war from a civilian perspective.

### **Research gap**

This chapter highlights the research gap in the study of the interplay between media and war. The literature review reveals a continuity in research on the topic, ranging from the first media war, the Crimean War, to the current Russian-Ukrainian war. However, most of the studies focus on how combatants use smartphones during the war, leaving a gap in the understanding of the interplay of a fully fledged war and smartphones among civilians. The ongoing Russian-Ukrainian war, which began in 2014, has been characterized by the annexation of Crimea and the war on Donbas in 2014 and the media environment different from 2022 when Russia started the full-scale invasion. The latter has had a much bigger impact on the civilian population of Ukraine, which by 2022 has the highest number of smartphone users and high-speed internet penetration among other nations that has ever been at war.

However, little research has been done on how the war has restructured the media ecology and affected the perception of war and communication between various parties during the war, with civilians as point of departure in the first place. Therefore, there is a need to contextualize the usage of a smartphone during the fully fledged war and investigate how it has restructured the media ecology and reframed its major characteristics such as connectivity, communication and interrelations between media technologies, civilians and their environment.

This study aims to fill the research gap by exploring the interplay between smartphones, Ukrainian civilians and the Russian-Ukrainian war since the Russian invasion in 2022 with the objective to focus on understanding how media technology such as a smartphone shapes and influences various aspects of society, culture and communication practices in a high-networked society.

### **Theoretical frameworks: navigating approaches**

There are many approaches that one could take when researching the connections between technology, society and culture. Actor-network theory and theory of affordances are some of them and were extensively employed by researchers mentioned above. However, this study draws on the medium theory or media ecology theory utilized mainly by Hoskins and O'Loughlin (2010) who, in their turn, do not explicitly discuss and analyze the case of the Russian-Ukrainian war. The medium or media ecology theory is the best suitable theoretical framework for the purpose of this research as it employs a holistic approach for the investigation of how media technologies influence the dissemination of information, the construction of meaning, the formation of relationships and identities, the organization of communities and communication modes among them. The medium theory explores the ways in which media technologies impact human perception, cognition, behavior and social structures from historical, social and cultural perspectives all at once.

Medium theory and technological determinism are two influential perspectives, while both emphasizing the importance of technology in shaping human communication, culture, and society, still possess important differences. Medium theory suggests that different media have inherent properties that shape how they are used and the kinds of communication that take place through them. According to Marshall McLuhan, "the medium is the message" and "we shape our tools, and thereafter our tools shape us" (1964: 7). In other words, different media have different properties that affect how we perceive and process information, and these properties have social and cultural implications.

In contrast, technological determinism suggests that technology has an independent, autonomous, and deterministic impact on society and culture, regardless of human agency or cultural context. According to Raymond Williams, one of the main critics of technological

determinism: "technology is neither autonomous nor independent, but is a product of specific social and historical circumstances" (Williams, 1983: 96). In other words, technological change is not inevitable or predetermined but is shaped by social and cultural factors. The opposition between technological determinism and social constructivism can be seen as a debate about the degree of agency that human beings have in shaping their own lives and societies. Technological determinism suggests that technology has a deterministic impact on society, whereas social constructivism suggests that society is actively involved in constructing and shaping technology according to its own values and interests. Medium theory is more aligned with social constructivism, as it emphasizes the active role that society plays in shaping media and communication technologies and emphasizes the feedback loops as well as interactions between media and society. According to Neil Postman, one of the main proponents of medium theory: "media ecology looks into the matter of how media of communication affect human perception, understanding, feeling, and value" (Postman, 1992: 161).

Although medium theory and media effects theory are two different approaches to studying the impact of media, Joshua Meyrowitz – the prominent scholar in the field of medium theory – claims it to be an alternative to the dominant paradigm of media effects (in Bryant, Oliver, & Raney, 2009: 517). Medium theory examines the ways in which different communication technologies shape human communication and culture, and how the usage of a certain medium can influence the perception of reality and thus the conduct. Medium theorists are interested in understanding the unique properties or characteristics of each medium and how they influence human behavior and social structures. For this purpose, Meyrowitz defines 12 medium characteristics (see Appendix) which became the basis for this research. Despite being formulated during an era dominated by television, the implications of medium theory remain highly relevant today, particularly given the rise of smartphones and the internet as dominant technologies, while still acknowledging the continued presence and relevance of traditional media such as print and television within the contemporary media landscape.

## **Methodology and sampling the smartphone phenomenon**

To explore the broader implications of smartphone usage as a dominant media technology and prevalent media practice in conflict zones, the case study method is well-suited. Flyvbjerg (2001) argues that “case study research excels at bringing us to an understanding of a complex issue or object and can extend experience or add strength to what is already known through previous research” (2001: 51). Studying the relationship between smartphones and war in the context of the Russian-Ukrainian war provides unique advantages compared to other contemporary conflicts. The complexity of the conflict, involving multiple actors and a combination of conventional and hybrid warfare tactics, along with information warfare, offers a rich context to explore the multifaceted roles and implications of smartphone usage. Furthermore, Ukraine's high smartphone penetration rate allows for a comprehensive examination of their impact on communication and social dynamics in a conflict setting. The full-scale invasion of Ukraine by Russian forces in 2022 further intensifies the conflict and introduces new dynamics for studying the transformative effects of smartphones in a highly connected and networked society.

A case study approach facilitates a comprehensive and nuanced understanding of how smartphones influence the behavior and attitudes of civilians, and how the technology shapes their perception of the war. By conducting an in-depth analysis of this specific case, valuable insights can be gained into the underlying causes and mechanisms of the interplay between media and war, contributing to the development of further theoretical frameworks. In the case of smartphones and war, a case study approach enables the identification of patterns and relationships between smartphones as a media practice, civilians, and warfare.

While the case study method is central to this research, it does not exclude the use of additional qualitative methods. Hansen suggests that “the choice of method depends broadly on whether the research is primarily aimed at investigating communications or media content” such as texts or documents or “people and their beliefs, actions and behavior” (2019: 40-41). In this research, the focus is on how smartphones, as media technology, shape perceptions of the war, as “it is through media that perceptions are created, sustained and challenged” (Hoskins, 2010: 5). Perceptions are complex processes “selecting, organizing and interpreting sensory information in order to understand the environment” (Johnson et al. 2012: 87), making qualitative research



methods essential. Alongside the case study, ethnography and in-depth interviews were employed to examine individual perceptions. Qualitative methods, as highlighted by Silverstone, provide insights into “the complexities of human relationships and social processes” (1999: 4), which is particularly relevant in the study of an armed conflict involving political, military, social, cultural, and technological factors.

Case study methodology allows the researcher to focus on a single case or a small number of cases, enabling in-depth exploration of a complex phenomenon like the Russian-Ukrainian war. Ethnography involves immersion in the culture and social setting under investigation (Bazeley, 2018: 15), providing a nuanced understanding of the lived experiences and perspectives of those involved. In-depth interviews involve extensive conversations with individuals who possess relevant knowledge and experiences related to the research topic (Hansen, 2016: 149), offering valuable insights into various dimensions of the conflict, including the impact of smartphone usage. These qualitative methods, as described by Edwards, facilitate the exploration of individual experiences, beliefs, attitudes and feelings about a particular topic” (2015: 2), enhancing the understanding of the research subject.

### **Crafting research design and process**

From the outset, this research has taken into account three key aspects: duration, structure, and depth, as proposed by Jensen (2011: 272). Duration was determined by both the research's purpose, which aimed to capture a specific phenomenon of interconnections of smartphone and warfare – within a particular time-space which is from the Russian full-scale invasion in 2022 and on, as well as practical considerations, including the anticipated length of the study – 4 months. Regarding structure, careful attention was given to the organization of extensive fieldwork ethnography and qualitative interviewing, encompassing both the preparatory phase and the actual data collection process which included a trip to Ukraine in March 2023. The interview guide was developed based on Meyrowitz's recommendations for studying a specific media object within its corresponding media environment (see Appendix). While the interviews followed a predetermined sequence, ample room was left for delving into further in-depth questions that were not initially part of the questionnaire which is defined as semi-structured interviewing. This approach provided a balance between structure and flexibility,

allowing for a more comprehensive exploration of the research topic while maintaining some level of consistency across interviews as well delve deeper when deemed necessary. The aspect of depth, which is generally recognized as a fundamental characteristic of qualitative research, was given due consideration throughout the study, alongside raising important ethical considerations which will be discussed further.

Given that the subjects of this research are human beings, it is essential to recognize the potential social and emotional harm that empirical studies can inflict upon them, as emphasized by Jensen (2011: 366). This consideration becomes particularly significant in the context of this study, as the respondents are Ukrainians who have directly experienced the traumatic events of the Russian invasion in 2022. Hence, this research not only addressed the theoretical and methodological aspects but also prioritized the development of an ethical framework, fostering awareness of potential pitfalls and cultivating empathy and respect in interactions with participants (Jensen, 2011: 366). To ensure ethical practices, the research design incorporated informed consent procedures (refer to Appendix), providing participants with comprehensive information about the study's purpose, potential consequences, and anticipated societal implications (Jensen, 2011: 366). By implementing these measures, the research sought to uphold ethical standards, safeguard the well-being of the respondents, and promoted a respectful and empathetic approach throughout the study process. As part of the informed consent procedures, the respondents were explicitly told that they had the right to halt the interview process at any point if they felt uncomfortable or overwhelmed by the emotional content being discussed. This assurance aimed to allow them to maintain control over their level of engagement and ensure their voluntary participation throughout the study. Out of the total respondents, one individual out of seven chose to exercise this option and temporarily halt the interview process due to emotional distress. However, subsequent to regaining emotional composure, this respondent willingly provided consent to resume the interview.

In the design of qualitative research, the process of conceptualization plays a crucial role (Jensen, 2010: 267). In the present study, the nature of the research necessitated that the analytical categories were not predetermined but instead emerged from the interviews themselves. This approach adhered to the principle of double hermeneutics, wherein individuals interpret their everyday lives and significant events, increasingly through communication technologies, as imbued with inherent meaning. Subsequently, researchers interpret the

interpretations made by individuals and groups regarding themselves and their communications. It is important to recognize that people engage in interpretations within specific contexts and for particular purposes, thereby orienting themselves in the world and assuming positions from which they exercise agency. These interpretations, in turn, inform their actions (ibid: 266). By following this interpretive process, me being the researcher was able to derive meaningful findings from the empirical data and provide insights into the participants' perspectives and experiences.

The study was undertaken with the primary objective of immersing oneself in a specific social context and establishing points of observation and communication to gather relevant data. The research aimed to create a temporal time-space by physically being present in Ukraine during March 2023 for 14 days, more than a year after the initiation of the Russian invasion in 2022. This allowed for the development of interpersonal connections with the interviewees, enabling reflective, unmediated face-to-face discussions on the significant experiences they lived through in the context of the war – both during the time of the invasion, shortly after and now as more than a year has passed. The methodology involved the selection of seven Ukrainian participants as respondents, indicating their role as representatives of a particular societal position, as opposed to informants associated with certain institutions or organizations. The approach to interaction with the field and informants included both structured and unstructured note-taking of the field before and after the interviews, audio recording of the interviews, and refraining from note-taking during interviews to facilitate a more organic conversation. The physical presence in Ukraine for data collection purposes helped create a naturalistic context (Jensen, 2010: 266), which is crucial for conducting qualitative research, as qualitative projects, like their quantitative counterparts, engage in the sampling of cultures, communities, locales, informants, periods, and practices (ibid).

### **Sampling pathways**

As Jensen suggests, the sampling in qualitative communication research should follow the “contextual orientation” and be defined as “a multistep procedure of contexts and within contexts” (2011: 268-269). For the purpose of this research, sampling decisions were made with reference to the context of the Russian-Ukrainian war. On February 24th 2022, Russia launched a

full-scale invasion into Ukraine, President Zelensky declared martial law, Ukrainian men aged 18-60 were forbidden to leave the country, therefore from the first day of the invasion all Ukraine's population became directly affected and engaged into the situation. Ukrainians who were physically located in Ukraine at that time and experienced the beginning of the invasion either eye-witnessing or through their smartphones all become, therefore, possible research objects of this thesis, as they all are part of the context. Within the particular context and in line with the qualitative communication research tradition, however, it is important to sample only the respondents that me as a researcher has direct access to. As traveling to Ukraine's East and South does not seem safe at the time of thesis writing in spring 2023, the data collection became limited to Ukraine's Western region.

The purpose of the research was to sample both males and females, and convenience sampling was the best method to do so. Snowball sampling as one of the variants of convenience sampling was employed "where an initial contact generates further informants" (ibid: 270). The selection started with the journalist and the civil servant who each suggested further informants such as an internally displaced person, military chaplain, another journalist and war volunteers. In that way, two points of entry for the snowballing techniques have been used to avoid dependency on just one informant. Observation, interviewing and analyzing the recorded speech as text were chosen as concrete techniques for interacting with the field and conducting research for the purpose of this study.

### **Immersing in the smartphone experience**

In addition to my acknowledgments, I want to highlight my own role and experiences during my research journey. I traveled extensively and diligently took systematic notes on smartphone usage throughout my expedition. Immersed in the cultural fabric of the region, I observed not only the general societal dynamics but also focused on the behaviors and interactions of the respondents. These pre-interview, during-interview, and post-interview observations provided invaluable insights into the utilization of smartphones in an active front-line remote area, where the threat of life and the possibility of aid raids loomed.

To capture a comprehensive understanding of the phenomenon of interest from an emic perspective, I employed ethnography as a qualitative research method. Ethnography involved

active participant observation, wherein I became an integral part of the community being studied. While engaged in their activities, I attentively observed and recorded their behaviors, interactions, and the role of smartphones in their lives (Hansen, 2016: 147). This immersive approach allowed me to gain an intimate understanding of their experiences.

As Altheide emphasizes, participant observation entails keenly watching, listening, and taking diligent notes on the natural unfolding of events and conversations (2014: 41). These fieldnotes became the foundation of my research, serving as a rich source of data that documented not only external observations but also my personal reactions and emotions (Hansen, 2016: 153). Fixing and organizing these fieldnotes into a coherent and manageable form for analysis became an essential step in the process (Altheide, 2013: 42).

Analyzing the fieldwork involved delving beyond surface-level descriptions. As Edwards suggests, the focus was on interpreting the meaning inherent in the collected data, uncovering underlying themes and patterns, and investigating the underlying reasons behind them (2015: 5). Following Bazeley's guidance, I meticulously coded the data, breaking it down into smaller, meaningful units to identify emerging themes and patterns (2018: 110).

In essence, ethnography allowed me to be an active participant in the world I was studying, fostering a deep understanding of the phenomenon from within. The techniques of fieldnote writing, fixing the data, and conducting in-depth analysis formed the backbone of my ethnographic research (Altheide, 2013: 38). Through this comprehensive approach, I aimed to uncover the intricate relationships between smartphones, war, and the Ukrainian people, illuminating the nuances of their experiences in the face of adversity.

### **Unlocking perspectives with interviews**

In addition to my previous sections, I want to emphasize the significance of interviews as a method of data collection and highlight my role as a researcher in shaping the research process:

Interviewing is a widely recognized and frequently employed method for gathering data, although it presents its own challenges due to the complex nature of human communication. As Jensen points out, interview statements are not mere representations of what people think; rather, they are dynamic actions that arise through the interactive process between the interviewer and interviewee(s), constituting valuable data (2011: 270). In this research, I assumed the role of an

interpretative agent, acknowledging that interpretation is an ongoing and interactive activity (ibid: 266). The research process unfolded through iterative learning from the field, with theories and insights emerging from this continual engagement.

Language serves as both the tool for data collection and the object of analysis within interviews. Therefore, the interviews were recorded and subsequently transcribed using software. These transcripts, along with the audio interviews themselves, were treated as texts, enabling analysis of the language utilized by both the interviewees and myself as the researcher. Through this analysis, I explored the underlying assumptions, meanings, and themes conveyed through language, aiming to develop a profound understanding of the participants' experiences and perspectives. This analytical process involved identifying patterns, themes, and meaningful connections within the data and continuously reflecting and refining the depth of the research. The ultimate goal was to generate relevant evidence and insights that contribute to a comprehensive understanding of the changing dynamics of the Russian-Ukrainian war, particularly in relation to the impact of smartphone usage on perception.

For this research, respondent interviews were chosen as the primary method of data collection. The respondents, all of whom were Ukrainian, were interviewed in Ukraine during the height of the Russian invasion in February 2022. They represented a diverse range of social statuses, including local and internally displaced individuals, journalists, civil servants, military chaplains, and war volunteers and activists. The selection of respondents aimed to capture a broad spectrum of experiences and perspectives within the context of the war. Respondent interviews, a method that involves interviewing individuals who are considered representatives of specific categories such as gender, age, ethnicity, or social status, were instrumental in uncovering valuable insights from these diverse perspectives.

By incorporating these interviews into the research process, I strived to shed light on the multifaceted impact of smartphones and the evolving dynamics of the Russian-Ukrainian war, as perceived and experienced by the Ukrainian people themselves.

### **Grounded theory: anchoring findings in empirical reality**

When it comes to analyzing textual data, there is a wide range of research methods available, such as content analysis, semiotics, discourse analysis, corpus linguistics, narrative

analysis, genre analysis, and more (Hansen, 2019: 41). For this research, the approach chosen was qualitative analysis of qualitative data, employing the grounded theory method (GTM). The distinctive feature of GTM is that the theory developed is firmly grounded in the data itself (Urquhart, 2013: 4). In other words, the method constructs theory based on the information extracted from the textual data (ibid: 8). The interviews in this study resulted in 70 pages of text, making qualitative data analysis an appropriate fit, as it aligns with the inductive process of GTM—building theory from the ground up.

Central to GTM is the process of coding and establishing connections between constructs (Urquhart, 2013: 9). Naming and connecting categories during the coding process lay the foundation for constructs and relationships (ibid: 9). Categorization plays a crucial role in GTM, with categories being low-level concepts linked to specific ideas (ibid: 9). To generate categories, GTM follows a coding procedure that involves three stages: open coding, axial coding, and selective coding (Kuckartz, 2014: 22). However, prior to engaging in open coding, it was essential for me as the researcher to clarify certain terms and abbreviations encountered in the data.

Following the terms clarification stage, I proceeded with open coding, which involves developing initial concepts and dimensions (Kuckartz, 2014: 23). Concepts serve as labels or tags for phenomena, forming the basis for research questions and theory (ibid: 61). The aim of open coding was to be analytical rather than descriptive and to foster an iterative and reflective process (Urquhart, 2013: 47). After completing open coding, I moved on to axial coding, which focused on establishing connections between the codes generated in the open coding phase (Kuckartz, 2014: 24-25). During this stage, I identified the codes that were central to the research questions and theory, refining and developing them into categories according to a specific coding paradigm. This was followed by selective coding, which aimed to uncover patterns and tendencies within the data (Kuckartz, 2014: 25). Once these three stages of coding were completed, I began to construct the theory and provide answers to the research questions (Urquhart, 2013: 106).

By employing the GTM coding process, I strived to meticulously analyze the textual data from the interviews, allowing for the emergence of a theory deeply rooted in empirical evidence. This approach enabled me to explore the dynamics of smartphone usage within the context of the

Russian-Ukrainian war and provide meaningful insights into the perceptions and experiences of the Ukrainian people.



## **Navigating the smartphone era in times of war**

The following chapter is structured into three distinct sections, each exploring major themes that have emerged from the empirical data: the main characteristics of the existing media environment at the time and after the Russian invasion into Ukraine, how this media environment affects the foundations of communication among civilian Ukrainians such as connectivity, intimacy and trust, as well as how the media environment contributes to distinct patterns of participation, witnessing and remembering the war. The chapter aims to provide insights into the ways in which smartphones, as a dominant technological and communication media, have introduced new patterns of social relations among Ukrainians during the ongoing full-scale Russian invasion of Ukraine in 2022.

All the participants in the study possessed one smartphone from the 4G model range, with four of them using Android and three using iOS operating systems, being employed for both personal and professional purposes. The participants regarded their smartphones as personal communication devices, which they typically did not share with others. All interviewees reported having experienced the evolution of mobile technology as owners of simple cellular phones at first, and now they have full-functional multimedia smartphones which support Katz' (2008) viewpoint on mobile communication as a continuum. Goggin makes a distinction between mobile and cellular communication technologies, arguing that while every mobile communication technology may be called portable, it is not necessarily cellular, such as newspapers, radios, e-books (2006: 6). However, for the purpose of this research, mobile media technologies will be considered as mobile cellular smartphone devices.

## **Staying (dis)connected in the time of a war**

### **New media ecology**

The first interview with Ganna, 31-year old female doctor from a currently occupied Eastern Ukraine's city, took place in a small cafe. During the interview, Ganna never pulled out her smartphone, giving me her undivided attention. The first interview felt special in that sense, as subsequent interviews were all marked by the interviewees keeping their smartphones either

in their pockets or on the table — at all times. It is a common observation in Ukrainian communication culture to have a smartphone as part of people’s daily activities, however with the conventional full-scale war waging outside the window a smartphone becomes more than that. As a result, the conversations with other interviewees were interrupted by their smartphone vibrating, beeping, or notifying an incoming message or phone call. When such situations occurred, the conversations were paused so that the interviewees could quickly scan the incoming messages and decide whether it was important enough to stop the interview entirely, or if it could wait till the interview was over. Some cases included personal matters like a message from a family member, the others – app-enabled notification of an air raid. The physical requirement for checking in with a smartphone is either throwing a quick glance at notifications on the screen or direct interaction with the device via a finger to expand the notification or take a call. One has to be distracted and switch the attention, so other activities – both mediated and unmediated – can hardly be done at the same time.

Through the participant observation during the interviews, it became evident that smartphones had not only become an integral part of Ukrainian’s everyday life or the mundane, but also a personal necessity during the war – an indispensable technology to be carried around, switched on and charged at all times. In that way, a smartphone has transformed from just a technological device that facilitates communication into an everyday practice tightly embedded into the social texture of the war-life context. The use of smartphones has become a pervasive personal practice, a habit, a routine that goes hand in hand with other unmediated realities of daily life. As a result, it became unclear which was interrupting the other: the smartphone and the reality “out there” or the interview and the reality “in here”. The blurred boundary between the proximity of the smartphone and the present moment of the interview made it difficult to distinguish between the two, creating an ambiguous sense of the here and now. This can be explained by Manovich's argument about smartphone’s ability to create “seamless interface” between a physical world and “the world of data” as he calls it (2011: 47) – or between the physical and the digital world, in other words.

The portability and “always-on immediacy” afforded by a smartphone allowed for unrestricted connectivity via the touch of a fingerprint and effortless transitions back and forth between the unmediated reality of the interview and the mediated reality of other ongoing matters on the smartphone’s screen. The interviewees displayed remarkable ease in seamlessly

navigating these multiple realities although simultaneously, yet still sequentially – either/or. None of the respondents claimed this to be a problematic activity, though such a switching back and forth made them prioritize fast. In that sense, a smartphone as media technology has become a true extension of our bodies and minds, making interconnections with everyday life invisible and creating an immediate link between action and reaction. Such a tendency is reflective of McLuhan's concept of immediacy or immediate reciprocity (1964: 7) which is characteristic of a smartphone with its two-way flow of information and not of earlier media technologies such as TV or printed press with their one-way information flow. A smartphone as media technology has dissolved the traditional notions of space and time allowing the respondents to be in many social situations at the same time (“here and there”), which resulted in a new reality characterized by the possibility of instantaneous interactions, reciprocity and almost unconscious switching between diverse social worlds – mediated and unmediated ones. In the context of the war, this translated to a smartphone being a vital node for critical communication and coordination which allowed for immediate response to emergencies with prior very quick assessment of its severity.

The touchscreen technology of smartphones is particularly important for the concept of immediacy as well as bringing the physical and digital environments together, as it allows for a tactile, multisensory experience, where users can navigate through the device seemingly with no effort. Through touch, the experience of using a smartphone creates sensations of perceptual and emotional intimacy. Some of the respondents revealed using a smartphone “right after waking up” and “before going to sleep, right in my bed”. A smartphone becomes an invisible, pervasive and ubiquitous computing technology embedded into a person's everyday life – in the most intimate ways possible. This generates a more direct, immersive and tangible interaction experience, allowing for ever greater blending of mediated and unmediated realities into the same context of a single individual. Orest, a 33-years old journalist, claims: “All my work, all my social life, basically all the information I consume and produce, all is inside my smartphone”. Oleg, a 45-years old civil servant in a decision-making position, adds: “A smartphone is all for me, everything is in there, smartphone is everything”. As Andrew Hoskins points out: “a smartphone has become the place where we live” (2022: 2), and this ubiquity of a smartphone in the Ukrainians' life has not just influenced the communication patterns and social structures during the peacetime, but transformed the way the Ukrainians perceived the surroundings during the war. Because of the nature of the invasion and the characteristics of a smartphone, as well as

the impossibility of disconnect for fear of missing out on critical information, the war started to feel and be everywhere, both here and there, close and far, physical and digital, direct and mediated, personal and global – all in one, and all at the same time.

Although a smartphone has become a pervasive and ubiquitous technology, it did not replace other communication tools but rather complement them. In fact, a new media technology is never created in a vacuum, rather becomes a remediation of the old ones (Bolter & Grusin, 2000). Meyrowitz suggests that “each new technology is seen as a complement or supplement to the old, and is itself taken as part of the surrounding environment, one element in a continuously changing cultural matrix” (1985: 19). According to both the interviewees and the Detector Media findings (see Introduction), Ukrainians are indeed surrounded by a media-rich environment in addition to their smartphones with traditional media such as TV, radio or digital press taking the backstage after the start of the Russian invasion in 2022, and smartphones with access to social media and instant messaging – occupying the parterre within the entire media mix. Such a quick and drastic shift in media consumption preferences among Ukrainians after February 24th 2022 can be explained by inter alia changes in domains such as connectivity, intimacy and trust which are the major themes explored in the next section of the thesis. Meanwhile, to illustrate the point: Ganna has a TV at home, however she admits to “never watching it really”. Alina, a 31-year old local TV-channel head, also has a TV at home but claims to use it solely as a background media technology: “I need something to be chit chatting in the background. I wouldn't say I watch it, but I use it – as a background noise”. Sometimes, she can accidentally hear “something interesting or fun” on TV. Orest, on the other hand, does not have TV at home at all. Each war has been characterized by a dominant media technology: World War II by radio, Vietnam and Gulf War by television, and the Russian-Ukrainian War by smartphones, which have now become the most important medium for communication, coordination and information exchange. In a media environment where smartphones dominate, other technologies are subordinated and hierarchically organized around them: like older technologies like TV or radio becoming optional, and newer technologies like smartwatch as mentioned by Alina or a laptop as mentioned by Oleg – complementing a smartphone. As a result, a smartphone is a prevalent but not a singular media technology, it exists within a given time-space media and cultural mix whose various components are getting constantly restructured, adapted and reconfigured.

## **(Dis)connection during war**

The ubiquity and pervasiveness of a smartphone does not automatically translate into complete penetration and adoption of this technology. Too much reliance on a smartphone as allegedly ubiquitous and pervasive media technology can make certain people excluded from receiving critical information during a war as they may lack media literacy or needed technical infrastructure. Ganna explains: “My mother is old. She has a smartphone but does not really know how to use it apart from obviously calling and sending an sms, let alone using any apps”. After Ganna left Rubizhne in early March 2022 and relocated to a safer Ukraine’s region, her mother stayed on the occupied territory in Ukraine’s East. At some point, the shelling became too heavy and her mother decided to get evacuated, however she could not do so as she did not know how to use social media or any other apps on her smartphone. She could not get the information where the Ukrainian soldiers’ positions in Rubizhne were located exactly and how to reach them safely and unharmed. So, she gave up and eventually “was evacuated by Chechens” to the Russian-controlled side of the city and further into Ukraine’s east. Up until now, Ganna’s mother remains on Ukraine’s territory currently occupied by Russians. Consequently, the media technology of a smartphone creates a gap between its ubiquity and exclusion with the gap being called a digital divide (van Dijck, 2020). Such a gap can be decisive in a critical emergency situation like an active warfare.

The ubiquitous prevalence of smartphones has significantly intensified reliance on this technological medium among formal and informal entities, encompassing unofficial war volunteers and official authorities, as they endeavor to establish effective emergency communication channels. However, the mere prevalence of smartphones does not ensure their universal adoption, as the digital divide is influenced not only by access to technology, but also by digital literacy skills. During times of war, the need to overcome the digital divide that is determined by both access and skills becomes more critical, as access to digital resources such as smartphones and the internet and the knowledge how to use them becomes not just the matter of inequality but a privilege that may impact survival.

Similar to the access to a smartphone itself with the mobile internet embedded in it and provided by telecommunication companies, an effective usage of a smartphone requires external infrastructure such as access to reliable electricity that can be critical for ensuring that

smartphones remain functional and useful during times of warfare. In the absence of these resources, individuals may find smartphones obsolete and themselves unable to access critical information or communicate with others, potentially putting their safety and well-being at risk. Ganna continues: “In the course of the first days of the full-scale invasion, electricity in the city disappeared. To be able to charge our smartphones, we had to go to the nearest kindergarten’s shelter where some volunteers organized a collective power station from a portable energy generator. No electricity also meant no internet. We could only use our smartphones like in “old good times” for calling or sending sms. To be able to send an sms, however, we sometimes had to climb to the 9th floor of a multi-story building as the telecommunication networks were on and off, at times very weak”.

During a crisis situation such as war, individuals become increasingly aware that “the success of mobile phone initiatives in crisis contexts is often dependent on the wider communication infrastructure and support systems in place” (Paul et al., 2021: 103). This makes the understanding of a wider technological infrastructure and new media ecology highly relevant to both civilians and military during the war, as new media ecology during the war is “a complex constellation of platforms that interact in a number of different ways” (Hoskins and Ford, 2022). As the example of Ganna's experience illustrates, the availability of reliable electricity and telecommunication networks are crucial components of the digital infrastructure that enable individuals to make effective use of their smartphones during times of war. The importance of external infrastructure in enabling effective smartphone usage during times of war underscores the need for collective action and cooperation between individuals, governmental authorities and telecommunication companies, thus making the “technical” become “social”, “collective” and “common”.

### **Smartphone hardware and infrastructure**

Indeed, the widespread integration of smartphones into our daily lives is facilitated by a complex telecommunication infrastructure comprising various supporting technologies and collective actions. Individuals possess auxiliary components, including chargers, additional batteries, and power banks, while mobile telecommunication companies manage and maintain infrastructure elements such as towers, fiber optic cables, satellites, signal boosters, and data

centers. In times of war, the ability to keep smartphones charged and operational becomes a matter of utmost importance. The respondents in the aftermath of a full-scale invasion have reported acquiring additional mobile devices, such as older generation smartphones with extended battery life, along with portable power banks and stations to mitigate potential infrastructure disruptions and power outages. However, the reliability of the mobile telecommunication system during wartime depends not only on individual efforts but also on the collaborative actions of telecommunication companies, the military, and the government to ensure access, safety, and timely repairs. The significance of mobile and internet access as a critical tool in the Russian-Ukrainian war is emphasized by the responsibility of Ukrainian authorities to give a quick “green light” to the Ukrainian telecommunication companies to safeguard and restore vital infrastructure elements such as towers, fiber optic cables and data centers which they did in short terms. The Ukrainian telecommunication companies were reported to be the second ones marching into the liberated Ukraine’s zones after the military who were the first and did the de-mining. This underlined the importance of mobile and internet access for all parties involved including Ukrainian civilians as critical weapon of the Russian-Ukrainian war<sup>7</sup>.

During the interview, Oleg who is a civil servant employed by the regional administration office stresses the pivotal role of Starlinks in this complex communication infrastructure. To illustrate the point, he references the deployment of Starlink by Elon Musk in Ukraine 2 days after the invasion – February 26th 2022, as response to the tweet of Mykhailo Fedorov (see Introduction). At first, Starlink was dispersed among crucial decision-making centers, such as Oleg’s regional administration office and military command hubs, and that prevented Russia’s initial goal to fully destroy and cut off Ukraine’s communication infrastructure. Given this context, the value of commercial Starlinks and personal smartphones in maintaining connectivity, keeping updates of developments, and coordinating efforts cannot be disputed. As of the end of 2022, there were more than 25000 Starlink terminals in Ukraine<sup>8</sup>. According to Kolovos (2023), Gulf War can be considered the first “space war” with the GPS navigation

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<sup>7</sup> Bergengruen, V. (2022) *The battle for control over Ukraine's internet*, *Time*. Time. Available at: <https://time.com/6222111/ukraine-internet-russia-reclaimed-territory/> (Accessed: May 5, 2023).

<sup>8</sup> Wall, M. (2022) *1,300 SpaceX Starlink Terminals with Ukraine's military went offline due to funding shortfall: Report*, *Space.com*. Space. Available at: <https://www.space.com/ukraine-spacex-starlink-terminals-offline-funding-shortfall> (Accessed: May 5, 2023).

system enabled by the satellites and allowing for high accuracy of cruise missiles becoming the crucial point of the war, whereas the Russian-Ukrainian war can be tagged the first “commercial space war” with Starlink being “vital in restoring Ukraine's damaged command and control system, as traditional ground-based communication systems were subject to Russian cyber-attacks and electronic jamming”. The use of Starlink owned by US-based commercial company SpaceX in conjunction with the smartphones privately owned by Ukrainian civilians including key government decision-makers was a flux of personal and global, individual and collective – again. The joint effort was deemed a strategic asset in the endeavors to maintain connectivity and awareness about the situation “real-time”.



## **Connectivity, intimacy and trust**

### **Staying connected: between being overwhelmed and focused**

Connectivity is not a benefit but a requirement for living in a contemporary society (boyd, 2010), and the concept of connectivity begins to matter deeply in a world where people “increasingly live out aspects of their lives online in networked publics” (ibid: 39). Connectivity is also a powerful resource and the practice of networking is “one of the essential ways in which power is exercised in our societies” (Castells, 2010: 57). As illustrated in the previous chapter, smartphones ensure connectivity by virtue of their portability, widespread availability and seamless integration into individuals' daily lives. Connectivity is intrinsic to almost all important capabilities of a smartphone during wartime. Historically, printed press established national unity during wartime, while radio added an intimate aspect to it and television increased immediacy and connectivity through moving visuals. However, with the smartphone's two-way flow of connectivity and interactivity, it has revolutionized wartime media ecology by allowing individuals and groups to communicate and connect in a more dynamic and immediate way – with each other as individuals, groups, organizations and institutions. The empirical data reveals that qualities related to connectivity, specifically being well-informed and the capacity to form intimate connections and trust, emerged as the most significant themes.

In this present investigation, the initial exposure to the all-out invasion and consequent early war encounters were contingent upon the physical location of individuals, their degree of association with individuals having better knowledge, such as the military or authorities, and the means through which they were made aware of the conflict, either by direct exposure to war sounds such as shelling or explosions or indirectly via mediated communication through smartphones. Ganna, who was in Rubizhne, heard the explosions and the war started for her unmediated, directly. After hearing the first explosion, she turned on TV and saw that not only Rubizhne but the entire Ukraine was under the Russian attack. Both facts left her in shock and confusion on what to do, at the same time she felt relieved that it was not just Ukraine's East – she hoped to receive help sooner. Oleg received a mobile phone call on his smartphone from a region's governor close to 5am on February 24th, who requested to immediately meet him and other region's officials up in their office shortly after. Oleg brushed his teeth, and left the house

wearing informal jeans and a hoodie. Couple of hours after the Russians started attacking Ukraine from the south, the east and the north, Ukraine's President held a teleconference call with all Ukraine's regional administrations – “via a special line”. Together with the region's head, Oleg attended this meeting. Some of Ukraine's regional governors (Luhansk, Donetsk, Kherson, Kyiv, Sumy, Chernihiv regions) were already reporting the illegal border crossings by the Russians, brutal strikes and murders of both soldiers and civilians. Several minutes into the teleconferencing, one of them said: “I have to go, they [the Russians] have just hit us”. The brutality of the war was live-streamed.

Other respondents claimed they received the news of the full-scale invasion through the mobile phone calls of their family members or through their social media news feeds — Telegram and Facebook, after they woke up that morning of February 24th. Alina recalls: “I got a phone call at 6am. I was told: The war has started. The first thing I did was to go and wash my hair. As earlier I was told that there would be no electricity, no water”. The same phone call was received by Mykyta, a 27-years old priest and military chaplain: “I received a phone call from one of my friends, combatants on the frontline. This is the most usual and most trustworthy source of the latest news for me”. Ivanna, a 39-years old art manager, woke up by hearing how her house windows were shaking, and the first thing she did was accessing her Facebook messenger and texting to a friend who was a journalist: “He would 100% know what was happening”. She asked: “Has the war started?” “Yes, it has” – he responded. That is how Ivanna knew for sure, afterwards she accessed her Facebook feed and dropped a public message from her Facebook account: “How is everyone? What are you doing?”. Later, she changed Facebook to Telegram and received the important news mainly from there.

During the Russian-Ukrainian war, the smartphone's transformative effect on connectivity became evident, particularly in terms of speed and immediacy. Respondents in the study had essential apps such as Telegram and the air raid alert app installed on their smartphones, reflecting the enhanced instant connectivity that sets smartphones apart from other media technologies. This rapid access to information became crucial during the war, where staying disconnected from news was not an option. While news is traditionally seen as constructed by news organizations and journalists within specific contexts, the empirical data from this study showed that respondents received information either through direct experience or mediated communication with personally known and trusted individuals via phone calls or instant

messaging apps, especially during the first days of the Russian full-scale invasion. When the information was not mediated by authorities or journalists, it became "news" through the personal interpretation of someone the respondents knew and trusted.

Telegram channels emerged as one of the primary news sources for Ukrainians during the war<sup>9</sup>, with respondents confirming its dominance in their media practices. Telegram, a cloud-based instant messaging application, offered shorter, faster, and more direct news content, allowing respondents to quickly assess the importance of each piece of news. Respondents reported subscribing to the Telegram channels of their local regional governors and city mayors to receive news firsthand, with some officials amassing significant numbers of followers on their profiles. "Up from 7,000 to 200,000 people and this is a very big growth since the full-scale invasion has started", according to Oleg. While Telegram feeds provided quick updates, respondents turned to online newspapers or YouTube streams for more in-depth coverage and analysis when they needed a deeper understanding of a particular topic. This suggests that individuals rely on a range of sources to stay informed during conflicts, prioritizing information from sources they trust. While speed and brevity are valued in Telegram feeds, traditional news sources remain important for contextualizing news and providing in-depth analysis.

Regarding the air raid alerts, before the availability of dedicated apps, regional government administrations established Telegram group chats to communicate with major media outlets, including representatives like Alina. These chats served to inform citizens about potential air raids through various channels. In the initial weeks of the invasion, smartphones facilitated direct communication between city and regional authorities and media outlets, addressing civil safety and threats. Over time, dedicated air raid alert apps were developed by Ukraine's Ministry of Digital Transformation and individually installed on personal smartphones. All interviewees had the "Air raid alert" app installed, which provided information on air raids in specific regions. As physical air raid technologies or audible sirens were not universally available, the app played a critical role in ensuring safety. With features such as unique sound notifications and tailored text messages recommending actions for each type of threat such as chemical threats, radiation danger, street fighting, artillery shelling and air raids, the app became an indispensable tool for participants in the study. The transition to this new era of connectivity, characterized by speed

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<sup>9</sup> Bergengruen, V. (2022) *Telegram becomes a digital battlefield in Russia-Ukraine war*, *Time*. Time. Available at: <https://time.com/6158437/telegram-russia-ukraine-information-war/> (Accessed: May 4, 2023).

and immediacy, occurred at a remarkable pace. The availability of apps like Telegram and the air raid alert app transformed the way individuals accessed information and communicated during the war, highlighting the smartphone's unparalleled capabilities in times of crisis.

### **Increased need for intimate connectedness**

Remaining disconnected is not a viable option during times of war; however, the transformative impact of remaining connected can be observed through the examples of intimacy and trust elucidated in subsequent sections. Ganna grew up in the times when there were no smartphones, she had a traditional landline telephone stationed at home which enabled her to make audio phone calls. Now, when she has a private, portable, mobile smartphone, she prefers instant messaging over calling. The same change of preference over time applies to Alina who now primarily used social media and instant messaging for both private and professional communication, as well as Orest and Oleg. The preference for instant messaging over calling can be attributed to its flexibility, convenience, record-keeping capabilities, and ability to support asynchronous communication allowing users to send and receive messages at their own pace and convenience (Dhir: 2020, 148). However, this preference was partially reversed when there was a need for quick mobilization of resources and for creating more intimate bonds in the context of wartime.

With her mother, Ganna still uses audio calls as “it is easier with her to communicate via calling than messaging”, this can be explained by digital divide based on skills discussed earlier. But Ganna continues: “This is how we communicate. For me, it is a more natural way of connecting”. An audio call helps to build more intimate relations between the parties which becomes even more important during the wartime. Licoppe and Smoreda indicate: "Audio communication offers a high degree of intimacy, in that the speaker's voice is often perceived as more personal, as well as providing richer contextual cues than text-based communication. These features make audio communication particularly well-suited to the expression of emotions and the maintenance of close relationships" (2005: 320). This highlights the importance of audio calling for maintaining social connections and intimacy, especially in situations where face-to-face interaction is not possible, such as during periods of physical separation or conflict. “The spoken word was the first technology by which man was able to let go of his environment

in order to grasp it in a new way” argues McLuhan (1964). “Audio communication has always carried with it a greater sense of intimacy and personal involvement than visual communication” adds Meyrowitz (1985). Audio calling afforded by a smartphone becomes therefore an option to be used more often during the time of a war.

Similarly, Ivanna and her love partner reversed back to calling with the video calls to dominate their preferred communication style. Days after the full-scale invasion, Ivanna evacuated her parents to Portugal leaving her love partner behind, in a war-torn Ukraine. Male aged 18-60 were banned from leaving Ukraine, in line with the martial law imposed late in the evening on February 24th 2022. So, Ivanna and her partner used video-calling as a way to create a more intimate connection that resembled face-to-face conversations that they could not have unmediated – at that time. Ivanna was video broadcasting her partner via a video call the peaceful streets of Portugal with “the intention to distract him from thinking about the war 24/7”. Her love partner confessed to her that he had panic attacks, so threatening the situation was in Ukraine during the first weeks of the full-scale invasion. Knowing that at least Ivanna was in a safe place, and Ivanna’s efforts to bring in “just a bit of positive thoughts during the dark times” via the video calls were game-changing for both Ivanna and her love partner. After Ivanna returned back to Ukraine, they stopped using video calls and switched back to traditional audio calling and texting via messengers. Toma et al. suggests: "Video communication has been shown to be effective in the creation and maintenance of social bonds, as visual cues and nonverbal behavior can convey emotions and facilitate the development of shared experiences. Video communication may enhance feelings of intimacy, particularly in long-distance relationships, by providing a more realistic and immersive communication experience" (2008: 56). This highlights the potential of video calling to facilitate intimate social connections, particularly in situations where physical distance limits face-to-face interaction.

During times of war, the advent of smartphones facilitated a shift in communication preferences towards audio and video calling, fostering a sense of closeness and intimacy among individuals. This trend was observed not only among the general population but also among regional leaders in Ukraine, including governors and mayors. These leaders embraced tactics of intimacy by launching their own Telegram broadcasting channels and significantly expanding their followers' base. Some of them even adopted a casual dress style, reminiscent of President Zelensky, and utilized live broadcasting from their shelters or cars to relay news and updates

directly from their respective regions. Such strategies aimed to establish a more personal connection with the public and foster a sense of unity and solidarity during times of crisis.

In conclusion, during times of war, the use of audio and video calling on smartphones emerged as a preferred mode of communication, enabling individuals to feel closer and more connected. This shift in preference was observed among the general population as well as regional leaders in Ukraine, who employed tactics of intimacy, such as launching broadcasting channels and adopting casual styles, to foster a sense of unity and solidarity. This highlights the transformative impact of remaining connected and utilizing smartphones to maintain social connections and intimacy during challenging times.

### **Defining whom to trust in a war context**

When the respondents did not connect with the loved ones or the ones they trusted, they reported to feel generally overwhelmed and confused by being constantly bombarded with an unstoppable flow of information especially in the weeks following the Russian invasion on February 24th 2022. In today's digital age, the use of smartphones has become a powerful tool in the information wars that have emerged as a result of the widespread use of social media platforms. In times of war, smartphones are used to spread propaganda, disinformation and misinformation. In addition, they are used to influence public opinion, change the narrative of events, and to sow confusion and distrust among the population. "As the use of social media in warfare has grown, so too has the difficulty of distinguishing fact from fiction. Misinformation and outright propaganda are all too often taken as genuine news, leaving the public with the daunting task of sorting truth from lies" (Singer & Brooking, 2018). Being a TV-outlet head, Alina claimed she had to convince even her fellow colleagues who are professional journalists that certain information was not true or should have been double-checked: "Fight against the disinformation takes up lots of my personal and professional life, even inside my own professional team of journalists and especially in the first weeks of a full-scale invasion".

Orest is convinced that it is a normal situation for a society when not everyone has an ability to critically assess the information. He does not consider a problem of disinformation as a problem in itself, but thinks the problem is the lack of trust: "In a society, where the state institutions are relatively weak, you don't know whom to trust. You are confused. We have a big

problem with trust. So for such a situation, the best strategy is to trust what is called “someone has told someone”. This is how it works in Ukraine. We need to go through our long way of becoming mature”. With the rise of fake news and the manipulation of information, the smartphone has become a double-edged sword in the information wars. On the one hand, it can provide real-time information and updates from the ground, enabling people to stay informed about the latest developments in a conflict. On the other hand, it can also be used to spread false and misleading information that can cause harm. Orest continues: “We need to build up our own information culture which is built on real expertise and trust”.

The questions of trust and expertise have become important for Ukraine even before the full-scale invasion in 2022. The widespread following and trust garnered by media-savvy figures such as Zelensky and regional authorities through their personal Telegram channels during times of war illustrates a shift towards the prominence of individual personalities over established media outlet brands and official government communication. This phenomenon highlights the growing significance of personal branding and the role of social media in shaping public perception and trust during periods of conflict.

In the new media ecology, a smartphone connected to high-speed internet and with social media apps installed, was initially seen by some respondents as a technology with the potential to build up a dialogue with the Russians. When the invasion started, Ganna, Oleg and Kyrylo (a 38-years old craftsman) texted some of their Russian acquaintances, re-posted photos and videos of the Russian atrocities posted by Ukrainian and Western media outlets, with the hope that the Russians “would see the truth as they were allegedly brainwashed by the Russian propaganda”. However, they did not reach the effect they hoped for as such a participatory and allegedly liberating technology as a smartphone is not always used as neutral, but rather as a node to reinforce the established social norms and structures (Sparks in Servaes, 2014: 81). After a number of unsuccessful attempts, the above-mentioned respondents gave up and started to use smartphones as their own resource in the common war effort to defeat the Russian army in Ukraine.

## **Witnessing, participating, remembering**

### **War witnessing in smartphone age**

In the context of the full-scale Russian invasion, Ukrainian civilians assume various roles, and one of them is being a witness to a war. War witnessing in the smartphone age has become a complex phenomenon. While all the respondents (apart from Ganna) claimed that they were not witnessing “the real war” themselves, their access to the online world through smartphones has provided them with a vivid experience of the war. This vivid experience is largely shaped by the narratives and visuals that are circulated through social media, messaging apps, and online news sources. However, this experience is often filtered, selective, and at times, highly emotional and affective (Papacharissi, 2015), rather than objective and comprehensive. This finding supports Matthew Ford’s and Andrew Hoskins’ (2022) argument that our realities become thus fragmented. While communication technologies like a smartphone have enabled us to connect instantaneously and across great distances, they have also fragmented our experiences and relationships. These fragmentation realities have also made the war experiences more relational.

Respondents who have personal connections to individuals who have experienced the war firsthand possess a more nuanced and realistic comprehension of the war. Their accounts are derived from first-hand experiences and direct interactions with those who “saw and sniffed the real war”, rather than filtered through digital screens. These personal connections have had an impact on those who have not experienced “the real war” directly, who have compared themselves unfavorably to those who have been on the frontlines. The latter group expressed that they have not truly seen the war compared to those who have, despite the fact that they had electricity outages, missiles flying over their heads and direct experience of sitting in a bomb shelter for hours – mainly in the first weeks of the full-scale invasion. The definition of witnessing the war, therefore, becomes a relative term that depends on whether the respondent has had the opportunity to communicate with someone who has seen the war “through their own eyes”. If so, triggered by an allegedly guilt-feeling of not suffering as much as the first-hand accounts, Orest claimed “We here, compared to the other civilians who lost their houses, family members or even lives, we did not really see the true war”. Alina and Ivanna were of the same



opinion. Though a smartphone can provide a vivid visualization of a war, it cannot compare to “the facial expressions of the people who actually were there” as per Orest.

Susan Sontag claims that “to witness an event is to be present at it in person, to hear and see the event, to participate in it through one's gaze” (2003: 22). This emphasizes the idea that witnessing is an active process of engagement, rather than just passive observation. Merleau-Ponty describes witnessing as “a lived experience” that is “embodied and situated in a particular context” (1962). This highlights the idea that witnessing is not only a cognitive process but also involves the body and the surrounding environment.

The paradox arises because the smartphone provides the respondents with immediate access to information and images of distant suffering in real-time. As a result, they felt that they were more connected to those who were suffering, and they had a greater awareness of the situation. However, the constant stream of information and images also had a numbing effect on their emotions, especially taking into account that every image in a digitized world is not an image in itself but a certain viewpoint on a situation (Berger, 1972). At the time of interviewing, there was a most recent video circulating in social media and messengers like Telegram about a Ukrainian prisoner of war being brutally shot by Russians after he proclaimed “Glory to Ukraine”. The video was uploaded unedited onto Telegram and sparked a feeling of shock among Ukrainians. Kyrylo pointed out that he became desensitized to the suffering of this man, as the man was commodified and commercialized as a war symbol: “Some people are making money out of him, and this I find is very disappointing. They created merchandise and numerous digital images out of him. I am not sure if I like it to be this way”. Orest, on the other hand, is sure that seeing such a video is important as it evokes awareness and emotions needed to continue the fight: “This brings people closer together in their joint war effort, they see the illegal and brutal execution of the Ukrainian prisoner of war – uncut, unedited, uncensored. And it strikes you emotionally”. He, however, points out the negative effect of such a media exposure: “You cannot always be in stress, the full-scale invasion lasts longer than a year now. Because of such suffering being brought to us directly through our smartphones, we distance ourselves from this suffering with time. It is a protection mechanism. We as human beings cannot take so much pain in, for so long”.

The virtual nature of the smartphone can create a sense of detachment and remove its users from the immediacy of the situation, as one second they see the brutal execution filmed and

uploaded uncensored into their social media or public messenger, the other – some sales or promotions popping up as push notifications on their smartphones. This switching on and off between serious and sensitive content and other types of information makes the users quickly switch emotionally between the social situations. Ivanna: “Now I can only truly sympathize with something that is related to me personally, something I was personally engaged or “tuned in” – through my volunteering or help to a friend or a person that I know: someone needs urgent help, is injured or got killed on the frontline”. So, while the smartphone can bring us closer to distant suffering in one sense, it can also make us feel more emotionally distant in another sense. Chouliaraki claims that smartphones enable us to witness and respond to the suffering of others in real-time, yet this increased awareness can also lead to emotional fatigue and disengagement. The constant barrage of images and information can create a sense of detachment and numbness, making it harder to empathize with the suffering of others (2006: 65).

In summary, the smartphone's real-time access to information and images creates a sense of connection and awareness among users, but it can also lead to emotional detachment and desensitization. The smartphone's ability to switch between serious content and other types of information can distance users from the suffering they witness. This paradoxical effect is reflected in respondents' views, with some finding media exposure important for evoking emotions and awareness, while others are disappointed by the commodification of suffering. The virtual nature of the smartphone can create detachment and hinder sustained emotional engagement with distant suffering. Nonetheless, respondents still felt empowered by smartphone connectivity and chose to take action in environments where they could have a direct influence, particularly towards individuals they already knew or had prior connections with.

### **How can I participate with a smartphone?**

The widespread prevalence of smartphones, the extensive scope of modern warfare, and the all-encompassing impact of the full-scale invasion on Ukrainian society have culminated in a situation where non-participation by civilians is more of an anomaly than a norm. Nonetheless, the involvement of civilians in war efforts in an era of private, portable, mobile, connected smartphones is as multifaceted and complex as the realities it pervades. Castells argues that the smartphone equipped with high-speed internet provides a platform to explore and express

identity in ways that are more dynamic and expansive than other forms of media. It can allow users to participate in new kinds of communities, create new kinds of relationships, and construct new forms of self-expression (2010: 167). On the other hand, the use of a smartphone emphasizes the development of social roles rather than individual identities, according to McLuhan (1964). So in line with McLuhan's suggestion, the various social roles facilitated by a smartphone during a full-scale war will be explored.

One of the ways that Ukrainian civilians could creatively participate in a war, was joining the “keyboard army” as it was initially called in an article by *Ukrainska Pravda*<sup>10</sup>, and later shaped and reformed in a more organized movement of Ukraine’s concept of “Internet Army” or “IT Army”. There, individuals with technical skills use their smartphones to contribute to the war effort. Alina was an active member of “IT Army” which she is proud of: “This is an initiative launched by the Ukraine’s professionals in the sector of public communication affiliated with the government. I trusted them, and happily joined in. Every day, they posted a so-called task – to write public or private messages, to comment on something, to spread photos and explainers etc. It was both fun and interesting to be engaged in that way. When I had time, I always participated. The community was around 500 thousand people last year, I guess”. Answering the question, whether Alina received any personal replies, she said: “Sometimes, yes. As we were sending out information to politicians, opinion leaders and celebrities of other countries, it was particularly heart-warming to receive replies from them. Baltic states celebrities sometimes replied to me with the words of solidarity and support, I was happy. I still follow them on Instagram”. This proves the above mentioned tendency for smartphone-enabled social media to connect one-to-one to “distant others” including individual politicians and celebrities which was not possible in any other media ecology dominated either by TV or printed press.

Participation can be defined as the active engagement of individuals in the social, economic, and political spheres of society. The role of media in facilitating participation has been widely discussed by scholars, however participation of civilians in the war effort within the Russian-Ukrainian war yields new research possibilities. Dahlgren defines participation to be “fundamentally a mediated activity, the realm of the media is, therefore, of central importance in

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<sup>10</sup> Azhniuk, Y. (2022) *Keyboard Army. How can you help with war effort.*, *Ukrainska Pravda*. *Ukrainska Pravda*. Available at: <http://web.archive.org/web/20220225204512/https://www.pravda.com.ua/columns/2022/02/25/7325924/> (Accessed: May 4, 2023).

terms of both the practicalities and the normative dimensions of participation" (2009: 8). Historically, participation through media has been limited to passive engagement, such as reading newspapers or watching television. However, with the advent of new media technologies such as the internet and social media embedded into a smartphone, participation has evolved to include more active forms of engagement, such as commenting on online forums or sharing content on social media (Jenkins, 2006). In contrast to the passive participation enabled by traditional media, active participation through new media technologies has the potential to empower citizens and give them a greater sense of agency in the public sphere (ibid). This is what is observed within the Russian-Ukrainian war when civilians are joining “Keyboard Army” or “IT Army”.

Orest used Facebook and Telegram community groups to coordinate the first-weeks “back-office” efforts for the Ukrainian armed forces and territorial defense: “Since the first day of a full-scale invasion, there was an outbreak of volunteers’ chats, groups, hubs, centers facilitated by social media and group messengers. After having coordinated between each other, people joined whatever pleased them more. Some joined the ones who were producing Molotov-cocktails on a mass scale, the others were preparing camouflage nets etc. Me and my colleagues took up the task of coordinating food supplies – via Facebook and Telegram. We did not impose any moderation at that time, we just kept on adding people – it was like one big people's hive”. After the initial, biggest threat of this Ukraine’s region to be invaded faded away, Orest silenced the notification sound for this group chat and basically disengaged as for now as his priorities shifted to other tasks. According to Castells (2010), traditional mass media, such as press and TV, create a one-way communication flow and operate within a hierarchical and centralized system, which limits the ability of individuals to interact and communicate with one another. In contrast, the emergence of networked communication technologies, such as smartphones, has led to the development of decentralized and horizontal communication patterns, enabling individuals to connect with each other regardless of location and time. The decentralized and horizontal communication enabled by a smartphone became decisive during the full-scale invasion in 2022.

While Orest was coordinating the local supplies with the help of a smartphone, Mykyta used social media like Facebook to bring awareness of the frontline to the relatively remote, calmer and safer Ukraine’s regions as well as abroad – to the Ukrainian diaspora. While he was

deploying humanitarian aid to Ukraine's East, he walked through destroyed cities and could have taken a private photo or two. He published these photos then on his private Facebook account to show distant realities of the war. Apart from being a military chaplain, Mykyta has been a member of Journalist Guild of Ukraine since 2011 – in other words, a professional journalist. “I remember, as part of our humanitarian mission, we brought some bread to a village destroyed by the Russians. I gave one loaf of bread to a small boy and he started talking to the loaf of bread: “Hello, my dear bread. I have been waiting for you for a long time. I won't eat you all at once, of course. I will eat you bit by bit, my dear bread”. When he was walking away, I took a photo of him from the back with my smartphone. This was one of the stories I published on Facebook telling people that it hit me hard emotionally, but also with the purpose to tell the people away from the frontline that their help is needed. I highlighted the importance of civilians participating in a war effort, I asked them to continue and never stop till we win in this war”.

During times of war, smartphones can serve as both empowering tools and sources of limitation. They offer ways to participate, connect individuals, and provide critical information. However, they can also blur the lines between civilians and combatants, posing risks to personal safety and creating a sense of digital vulnerability. For example, Mykyta's hacked smartphone led him into a dangerous situation near enemy positions, while Ganna's fear of jeopardizing her mother's safety prevents her from engaging in online debates or sharing opinions publicly. The dual nature of smartphones in wartime highlights their potential for empowerment and restriction. It is important to highlight that under the Geneva Convention, civilians who are taken hostage do not receive the same level of protection as prisoners of war which makes the participation of civilians in a war with a smartphone highly gray area.

### **Fixating the moment with a smartphone**

Participation through smartphones is often associated with a focus on capturing and preserving moments, which consequently influences the formation of memories. The use of smartphones facilitates a tendency to fixate on particular moments, shaping the way individuals remember and recall their experiences. When Ganna was still in Rubizhne — in the first days of the active full-scale invasion, she used social media such as Facebook and Instagram to spread out the information that she was a doctor and could help people in her city. On February 24th,

when there was still electricity and mobile internet in the city, she accessed both Facebook and Instagram, and started to take in phone calls, instant text and audio messages from people in Rubizhne who needed urgent medical help and could use a doctor's advice in the situation when attending a doctor was not possible. At that time, she actively used her media library to store people's photos, scans and screenshots of their medical results. A media library continues to be an important smartphone capability for Ganna even now, when she is already evacuated to a safer place in Ukraine. Taking a picture of a patient's medical history or medical check results not just makes Ganna's work more efficient, but helps her document her personal experience and trigger memory recall of the war. Participation through smartphones, particularly in the case of Ganna, involves a fixation on capturing and recalling specific moments of her voluntary involvement as a doctor during the war.

Orest is also a big fan of his smartphone's media library as storage of important information. He finds taking screenshots and storing them on his smartphone's media library crucial for his job as a journalist: "When you are a journalist, you are aware of the fact that some digital information might be available now, but can disappear some time later. So it is important to fixate on that moment of time, when it is available. I had situations when the information from the source it was spread disappeared — minutes or days after". Orest as a journalist exploits exactly these kinds of situations to investigate the truth and build up his publicly available articles. In his mind, the screenshots are never enough, as they should always be supplemented with a number of other sources for cross-check and accountability. Still, he uses his smartphone media library to facilitate storytelling, war narration and wider communication about the trust on this war.

During the initial weeks of the full-scale invasion, Kyrylo actively engaged in voluntary activities such as digging trenches and establishing a territorial defense check-point on the outskirts of his hometown. While documenting the efforts he and his friends undertook using his smartphone, Kyrylo chose not to share the captured footage publicly. He expressed his motivation for doing so, stating, "I took a couple of shots for myself, for my future family and children, so they become aware of what really happened." This personal act of documentation reflects Kyrylo's desire to preserve a historical record of the events for future generations and emphasizes the significance of individual memory in the context of collective experiences. Such a personal account can potentially contribute to collective memory of the war and facilitate the

formation of a sense of identity and belonging to the Ukrainian nation who fought the war against Russians.

To sum up, participation through smartphones in the context of war often involves a strong inclination to capture and retain specific moments, influencing the formation of memories. Ganna, as a doctor during the active invasion, utilized her smartphone's media library to store photos, scans, and screenshots of patients' medical records, enabling her to efficiently document and recall information. Similarly, Orest, a journalist, recognized the importance of capturing screenshots to preserve fleeting digital information for future reference and to support his investigative work. Kyrylo, while engaging in voluntary activities, documented the events with his smartphone but chose to keep the footage for personal use, aiming to create a record of the truth for future generations. This emphasis on individual memory and documentation aligns with Lev Manovich's observation that smartphones have transformed from mass media devices to tools enabling vast amounts of data (2001: 23) in a form of individual recordings, generating vast quantities of memories that pose significant questions about the nature of memory in a digitized and fragmented world.

## **Conclusion**

The present study examines the role of smartphones as both a media technology and media practice in the context of a significant social disruption, specifically the war between Ukraine and Russia starting in 2022. Ukrainian civilians, who currently constitute one of the most networked societies, serve as the focus of investigation. The research findings are analyzed in accordance with Meyrowitz's theoretical framework on medium theory, which encompasses both macro and micro levels of analysis (Meyrowitz, 2009: 523). The macro level explores the broader impact of smartphone usage on the fabric of social relations, in the case of the current research – during times of war, while the micro level delves into specific aspects of ubiquity, connectivity, closeness, and the social roles fostered by smartphones when being used by civilians during a war. These thematic dimensions emerged from the research findings and contribute to addressing the initial research questions.

### **What is the extent and quality of smartphone technology's pervasiveness in the context of the Russian-Ukrainian full-scale war?**

The ubiquity and pervasiveness of smartphone technology in the context of the Russian-Ukrainian full-scale war is evident in the everyday lives of individuals affected by the conflict. Smartphones have become an integral part of Ukrainian communication culture, and their usage has transformed from a mere technological device to an everyday media and cultural practice, a personal necessity during the war. The interviews conducted with individuals affected by the war reveal the inseparable bond between smartphones and the war-life context. Despite the interruptions caused by incoming messages and phone calls, the interviewees prioritize checking their smartphones, as they serve as vital nodes for critical communication and coordination. The smartphone's portability and always-on connectivity allow for unrestricted access to information and effortless transitions between mediated and unmediated realities. This seamless integration of the physical and digital worlds blurs the boundaries between the smartphone and the present moment, creating an ambiguous sense of the here and now. McLuhan's concept of immediacy aptly describes the smartphone's ability to facilitate instantaneous interactions and reciprocity between social worlds.



The touchscreen technology of smartphones further enhances the immediacy and immersive experience of using these devices. Users navigate through their smartphones effortlessly, creating sensations of perceptual and emotional intimacy. Smartphones have become an invisible, pervasive and ubiquitous computing technology embedded into individuals' everyday lives. They have become the place where people live, as they encompass war, work, social life, entertainment and information consumption and production. The ubiquity of smartphones has not only influenced communication patterns and social structures during peacetime but also transformed the way Ukrainians perceive their surroundings during the war. The war feels ever-present, blurring the distinctions between physical and digital, personal and global, mediated and unmediated realities.

While smartphones have become the prevalent and dominant medium for communication, coordination and information exchange during the war, they do not replace other communication tools but rather complement them creating a unique media mix that is constantly restructured, adapted and reconfigured. Traditional media such as TV and radio take a backstage role, with smartphones providing access to social media and instant messaging platforms. However, the ubiquity of smartphones does not guarantee universal adoption and complete penetration. The excessive dependence on smartphones exacerbates the digital divide, which persists as a formidable challenge with life-or-death implications in times of active warfare. Individuals with limited digital literacy or lacking technical infrastructure may be excluded from receiving critical information, impacting their safety and well-being during the conflict. Overcoming the digital divide becomes crucial in ensuring an inclusive public sphere during war.

This wider comprehension of the media mix and the challenges posed by the illusion of ubiquitous smartphone adoption prompts all parties involved in a warfare to consider a broader perspective regarding the role of efficient communication in times of war. It fosters an awareness that the effective utilization of smartphones during wartime is contingent upon external infrastructure, including dependable electricity and telecommunication networks. Access to these resources is critical for smartphones to remain functional and useful in providing real-time information and communication. The availability of reliable infrastructure components, including towers, fiber optic cables, and data centers, is essential for effective smartphone usage during war. The maintenance and restoration of this infrastructure requires collective action and cooperation between individuals, telecommunication companies, governmental authorities, and

the military with individuals contributing and keeping their devices charged and operational, with telecom companies rapidly restoring connectivity in affected areas, with the government expediting approvals for infrastructure repairs, and the military accelerating demining efforts.

The deployment of commercial technologies like Starlink by Elon Musk has helped maintain connectivity and prevent Russia's initial goal of fully destroying Ukraine's communication infrastructure. Starlink's satellite internet constellation has provided a reliable communication infrastructure, especially in areas where traditional terrestrial networks have been compromised or destroyed. By offering a decentralized and independent communication network, Starlink has helped mitigate the impact of Russia's attempts to disrupt Ukraine's communication infrastructure, thereby enhancing the country's resilience and ability to stay connected.

In conclusion, smartphone technology's pervasiveness in the context of the Russian-Ukrainian full-scale war is extensive and has transformed the everyday lives of individuals affected by the conflict. Smartphones have become indispensable tools for communication, coordination and accessing critical information. The new media ecology that has emerged blurs the boundaries between mediated and unmediated realities, creating an immediate and immersive experience. However, challenges such as the digital divide and the dependence on external infrastructure highlight the need for collective action and cooperation to ensure inclusive access.

### **What are the evolving social dynamics and experiences among Ukrainian civilians shaped by smartphone-mediated communication in the context of the Russian-Ukrainian full-scale war?**

The research question aimed to investigate the evolving social dynamics and experiences of Ukrainian civilians in the context of the full-scale Russian-Ukrainian war, with a particular emphasis on smartphone-mediated communication. The research delved into the broader implications of connectivity, immediacy, and the rapid dissemination of information on human affairs. The chapter specifically examined the nature of intimacy and trust among individuals during wartime, which emerged as significant themes in the empirical research.

Connectivity, as the ability to maintain communication and stay connected in contemporary society, has become an essential requirement for individuals. Smartphones have revolutionized connectivity by offering a portable and seamless integration into daily life, providing immediate access to information through high-speed internet and social media platforms. Unlike traditional media technologies such as printed press or television, smartphones enable real-time and instantaneous communication. In the context of war, smartphones play a vital role in facilitating communication and connection between individuals, groups, organizations, and institutions. This is evident in the widespread use of smartphone apps like Telegram and Air Raid Apps among Ukrainians.

However, the ubiquitous and persistent connectivity facilitated by smartphones, in conjunction with the prevalence of disinformation, misinformation, and fake news, can lead to an overwhelming amount of information and a state of exhaustion. In the context of diverse news, perspectives, and the rapid dissemination of information, along with the proliferation of falsehoods, individuals in the study sought closer and more intimate relationships. The findings indicate that individuals obtained information about the war through direct personal experiences or mediated communication with individuals they personally knew and trusted. In conclusion, the utilization of smartphones and their immediate access to information, as well as their rapid distribution, have significantly influenced the dynamics of closeness, intimacy, and trust among individuals.

The preference for instant messaging over calling was observed, attributed to its flexibility, convenience, and record-keeping capabilities. However, during the wartime, there was a need to create more intimate bonds, and audio calls were preferred for building closer relationships. Audio communication offers a higher degree of intimacy and personal involvement, allowing the expression of emotions and the maintenance of close relationships. Additionally, video calling emerged as a way to create a more intimate connection during the war, especially in long-distance relationships. Visual cues and nonverbal behavior conveyed through video calls facilitated shared experiences and enhanced feelings of intimacy. Video calling provided a more realistic and immersive communication experience, compensating for the physical distance and limitations of face-to-face interaction.

Trust posed a persistent challenge in Ukrainian society both prior to and during the full-scale invasion. The use of smartphones has influenced trust dynamics, with a greater

emphasis on trusting individuals within one's own social network, even if they represent authoritative figures or assume the role of media channels. The accessibility and immediacy of platforms like Telegram have foregrounded closeness, as evident in live streams, direct appeals, and the sharing of personal photos and videos. President Zelensky, portrayed as relatable and informal through videos from his office or bunker and his casual attire, has contributed to the emergence of mini-Zelenskys at various regional levels. These individuals, in positions of power, seek trust by adopting a more informal and direct approach, thus fostering trust among civilians. The respondents reported following regional leaders' personal accounts on Telegram and other social media platforms to stay informed about local events and developments, as well as various other bloggers who appear to be one of the major sources of news among Ukrainians now.

To sum up, smartphones have revolutionized connectivity, providing immediate access to information through high-speed internet and social media platforms. However, the constant connectivity, coupled with disinformation, misinformation, and fake news, can lead to information overload and exhaustion. Individuals sought closer relationships due to the diversity of news and the need for trust in a context of war. Direct personal experiences and communication with known and trusted individuals played a crucial role in obtaining war-related information. The use of smartphones has reshaped patterns of trust, with a focus on individuals within personal networks, including authorities and trusted media channels. The accessibility of platforms like Telegram has facilitated closer connections through live streams, direct appeals, and the sharing of personal content. The informal and relatable image of President Zelensky has influenced trust, resulting in the emergence of similar figures at regional levels. Regional leaders' personal accounts on Telegram and other social media platforms have become significant sources of local news for respondents.

**How are Ukrainian civilians involved in the dynamics of the Russian-Ukrainian full-scale war through the prism of smartphone technology, and what are the implications of their smartphone-mediated involvement for their experiences of the war?**

In the context of the full-scale Russian invasion, Ukrainian civilians assume various roles, ranging from witnesses to active participants, both directly and indirectly. The diversity of news and viewpoints contributes to a phenomenon known as "relational witnessing," whereby

individuals compare their experiences to those who have suffered more or less than them, shaping their self-perception as witnesses. Distant suffering becomes more salient when it is connected to individuals within close and trusted networks. However, the overwhelming variety and diversity of distant suffering can also lead to disengagement and detachment towards distant "digital unknowns," influenced by the reframing of their experiences in negative ways, such as commercialization. The spread of disinformation and uncertainty about the authenticity of news further contribute to this disengagement.

Being a witness is therefore a relational experience, influenced by personal comparisons and the dynamics of one's social network. Despite this, all respondents in the study claimed to be participants in the war. The interactive nature of smartphones and the ability to store and share information contribute to this sense of participation. Participants can engage in various forms of involvement, such as becoming digital warriors by joining the IT or Keyboard Army, mobilizing themselves or others, spreading awareness, or gaining awareness of the war. However, these different levels of participation also pose threats to civilians that have not been adequately addressed. Merely possessing a smartphone can make an individual a target for suspicion by the Russians, potentially leading to interrogation or even being held hostage. The Geneva Conventions do not explicitly recognize civilians taken hostage as war prisoners, highlighting the potential weaponization of smartphones without legal implications for civilians.

Memory plays a significant role in the link between participation and the use of smartphones. Respondents reported using their smartphones to document their personal experiences of war, storing videos, photos, and other files as a means of triggering memory recall and shaping their roles in future narratives. These stored memories serve not only as personal reminders but also contribute to collective memory for future generations. They foster a sense of identity and belonging to a nation at war and facilitate storytelling and war narration. Screenshots and stored information hold the potential to serve as evidence of the truth about the war, contributing to the fight for a truthful narrative in the future.

In conclusion, Ukrainian civilians assume diverse roles as witnesses and participants in the full-scale Russian invasion. The diversity of news and viewpoints influences the relational nature of witnessing, while the interactive capabilities of smartphones enable individuals to actively participate in the war effort. However, participation carries risks, as smartphones can make individuals targets and subject them to interrogation or hostage situations. Moreover, the

link between participation and memory highlights the role of smartphones in shaping personal and collective narratives of the war. By documenting and storing information, individuals contribute to the preservation of memory and the fight for a truthful narrative.

## Bibliography

- Altheide, D. L. (2013). *Qualitative media analysis*. Sage.
- Barzilai-Nahon, K. (2008). Toward a theory of network gatekeeping: A framework for exploring information control. *Journal of the American Society for Information Science and Technology*, 59(9), 1493–1512.
- Baym, N. K. (2015). *Personal connections in the digital age*. Polity.
- Bazeley, P. (2018). *Qualitative data analysis: Practical strategies*. Sage.
- Berger, J. (1972). *Ways of Seeing*. Penguin Books.
- Boichak, O., & Jackson, S. (2020). From national identity to state legitimacy: Mobilizing digitally networked publics in eastern Ukraine. *Media, War & Conflict*, 13(3), 258-279.
- Boichak, O., & Hoskins, A. (2022). My war: participation in warfare. *Digital War*, 3(1), 1-8.
- Bolter, J. D., & Grusin, R. (2000). *Remediation: Understanding New Media*. MIT press.
- Brantly, A. F. (2019). From Cyberspace to Independence Square: Understanding the Impact of Social Media on Physical Protest Mobilization During Ukraine's Euromaidan Revolution. *Digital Icons: Studies in Russian, Eurasian and Central European New Media*, 19, 360-378.
- Carruthers, S. L. (2000). *The media at war*. Palgrave Macmillan.
- Carter, L. (2011). Review of *The Crimean War in the British Imagination* by Stefanie Markovits. *The English Historical Review*, 126(522), 1214-1216.
- Castells, M. (2010). *The Rise of the Network Society*, 2nd edition. Wiley-Blackwell.
- Castells, M. (2015). *Networks of Outrage and Hope: Social Movements in the Internet Age*, 2nd edition. Polity.
- Chouliaraki, L. (2006). *The Spectatorship of Suffering*. SAGE.
- Dahlgren, P. (2009). *Media and political engagement: Citizens, communication, and democracy*. Cambridge University Press.
- Boyd, D. (2010). Social Network Sites as Networked Publics: Affordances, Dynamics, and Implications. In Z. Papacharissi (Ed.), *Networked Self: Identity, Community, and Culture on Social Network Sites*, 39-58.
- Debord, G. (1995). *The society of the spectacle*. Zone Books.

- Dhir, A., Kaur, P. and Rajala, R., 2020. Continued use of mobile instant messaging apps: A new perspective on theories of consumption, flow, and planned behavior. *Social Science Computer Review*, 38(2), 147-169.
- Edwards, R. (2015). *What is qualitative interviewing?* Bloomsbury Publishing.
- El Khaddar, M.A., & Boulmalf, M. (2017). Smartphone: The Ultimate IoT and IoE Device. *Smartphones from an Applied Research Perspective*.
- Ford, M., & Hoskins, A. (2022). *Radical war: data, attention and control in the twenty-first century*. Oxford University Press.
- Flyvbjerg, B. (2001). *Making social science matter: why social inquiry fails and how it can succeed again*. Translated by S. Sampson. Cambridge University Press.
- Goggin, G. (2006). *Cell phone culture: mobile technology in everyday life*. United Kingdom: Routledge imprint of Taylor & Francis.
- Goggin, G. (2011). *Global mobile media*. London, United Kingdom: Routledge imprint of Taylor & Francis.
- Hansen, A. (2016). *Media and communication research methods: An introduction to qualitative and quantitative approaches*. Palgrave Macmillan.
- Hobryk, R. (2022). The use of mobile technology in the conflict in Eastern Ukraine: an actor-network analysis. *Journal of Global Security Studies*, 7(1), 18-38.
- Hoskins, A., & O'Loughlin, B. (2010). *War and media: The emergence of diffused war*. Polity.
- Innis, H. A. (1951). *The bias of communication*. University of Toronto Press.
- Jenkins, H. (2006). *Convergence culture: Where old and new media collide*. New York University Press.
- Jensen, K. B. (Ed.). (2011). *Handbook of media and communication research*. Routledge.
- Johnson, J. D., & Johnson, C. M. (2012). *Joining Together: Group Theory and Group Skills*. Pearson.
- Katz, J. E. (Ed.). (2008). *Handbook of mobile communication studies*. The MIT Press.
- Kaun, A. (2016). *Crisis and critique: a history of media participation in times of crisis*. Zed Books.
- Keller, J. (2001). *The ultimate spectacle: a visual history of the Crimean War*. Pimlico.
- Kolovos, A. (2023). *Commercial satellites in crisis and war: the case of the Russian-Ukrainian conflict*. Hellenic Air Force Academy.



Kovarik, B. (2015). *Revolutions in communication: media history from Gutenberg to the digital*. 2nd edition. Bloomsbury Publishing USA.

Kuckartz, U., 2014. *Qualitative text analysis: a guide to methods, practice & using software*. London: SAGE Publications Ltd.

Licoppe, C. & Smoreda, Z. (2005). Are social networks technologically embedded? How networks are changing today with changes in communication technology. *Social Networks*, 27(4), 317-335.

Ling, R. (2012). *Taken for grantedness: The embedding of mobile communication into society*. MIT Press.

Manovich, L. (2001). *The language of new media*. MIT Press.

Manovich, L. (2013). *Software takes command*. Bloomsbury Academic.

Markovits, S. (2009). *The Crimean War in the British imagination*. Cambridge University Press.

McLuhan, M. (1962). *The Gutenberg galaxy: the making of typographic man*. University of Toronto Press.

Merrin, W. (2018). *Digital war: a critical introduction*, 1st edition. Routledge.

Merleau-Ponty, M. (1962). *Phenomenology of perception*. Translated by C. Smith. Routledge & Kegan Paul.

Meyrowitz, J. (1985). *No sense of place: The impact of electronic media on social behavior*. Oxford University Press.

Meyrowitz, J. (2009). Medium theory: An alternative to the dominant paradigm of media effects. In J. Bryant, M. B. Oliver, & A. A. Raney (Eds.), *The SAGE handbook of media processes and effects*, 101-118. SAGE Publications.

Nielsen, R. K., & Ganter, S. A. (2022). *The power of platforms: shaping media and society*. Oxford University Press.

Papacharissi, Z. (2015). *Affective publics: sentiment, technology, and politics*. Oxford University Press.

Patrikarakos, D. (2015). *War in 140 characters: how social media is reshaping conflict in the twenty-first century*. Basic Books.

Paul, C., & Matthews, M. (2016). *The Russian "Firehose of Falsehood" propaganda model: why it might work and options to counter it*. RAND Corporation.

- Paul, J.D., Bee, E., Budimir, M. (2021). Mobile phone technologies for disaster risk reduction. *Climate Risk Management*, 32(4).
- Postman, N. (1992). *Technopoly: the surrender of culture to technology*. Vintage Books.
- Rid, T. (2012). Cyber war will not take place. *Journal of Strategic Studies*, 35(1), 5-32.
- Pötzsch, H. (2015). The Emergence of iBorder: bordering bodies, networks, and machines. *Environment and Planning D: Society and Space*, 33(1), 101–118.
- Seethaler, J., Karmasin, M., Melischek, G., & Wöhlert, R. (2013). *Selling war: the role of the mass media in hostile conflicts from World War I to the "War on Terror"*. Intellect Books.
- Shklovski, I., & Wulff, V. (2018). Control and protection in the context of war: The use of mobile phones in Ukraine. *Information Technologies & International Development*, 14(1), 1-18.
- Silverstone, R. (1999). *Why study media?* Sage Publications.
- Singer, P.W. & Brooking, E. T. (2018). *LikeWar: The weaponization of social media*. Houghton Mifflin Harcourt.
- Sontag, S. (2003). *Regarding the pain of others*. Macmillan.
- Servaes, J. (Ed.). (2014). *Technological determinism and social change: communication in a tech-mad world*. Lexington Books.
- Toma, C. L., Hancock, J. T., & Ellison, N. B. (2008). Separating fact from fiction: an examination of deceptive self-presentation in online dating profiles. *Personality and Social Psychology Bulletin*, 34(8), 1023–1036.
- Turkle, S. (2011). *Alone together: why we expect more from technology and less from each other*. Basic Books.
- Urquhart, C. (2013). *Grounded theory for qualitative research: a practical guide*. SAGE.
- van Dijk, J. (2020). *The digital divide*. Polity.
- Voltmer, K. (2013). *The media in transitional democracies*. Polity.
- Williams, R. (1983). *Culture and society, 1780-1950*. Columbia University Press.
- Wei, R., Fan, J., & Leo-Liu, J. (2022). Mobile communication research in 15 top-tier journals, 2006–2020: An updated review of trends, advances, and characteristics. *Mobile Media & Communication*, 1(26).
- Yekelchik, S. (2015). *The conflict in Ukraine: what everyone needs to know*. Oxford University Press.

"#Putin'sWar; Going viral." *The Economist*, 2 Apr. 2022, p. 48(US). Gale Academic OneFile, [link.gale.com/apps/doc/A698906874/AONE?u=unimelb&sid=bookmark-AONE&xid=8732fd7e](https://link.gale.com/apps/doc/A698906874/AONE?u=unimelb&sid=bookmark-AONE&xid=8732fd7e). [25 July 2022].

NGO Detector Media (2023). *Ukrainian media literacy index: 2020-2022 (full version)*, *detector.media*. Available at: <https://detector.media/infospace/article/210210/2023-04-18-indeks-mediagramotnosti-ukraintsiv-2020-2022-povna-versiya/> [Accessed: 15 May 2023].

## **Appendix**

### **Joshua Meyrowitz 12 characteristics of media (2009: 519-520):**

- The type of sensory information the medium is able and unable to transmit and whether the medium is uni- or multisensory
- The form or forms of information conveyed by the medium within each sense
- The degree of verisimilitude between the medium form and “reality”
- Whether the medium offers unidirectional versus bidirectional versus multidirectional communication
- Whether exchanges through the medium are sequential or simultaneous
- The degree and type of control the users have over reception and transmission
- The physical requirements for using the medium and what other mediated and unmediated activities can and cannot be done easily at the same time
- The degree and type of human intervention / manipulation that is necessary or possible in creating a message
- The scope and nature of dissemination of the medium
- The medium’s durability
- The relative ease or difficulty of learning to code and decode messages in the medium, including the issue of whether one tends to learn to use the medium all at once and the issue of the ratio of coding/decoding complexity
- All the ways in which media physically interact with each other

**Interviewees:**

Name	Age	Gender	Profession	Interview date	Interview duration
Ganna	31	F	Doctor	13.03.2023	1:35H
Orest	33	M	Journalist	14.03.2023	1:23H
Alina	31	F	Journalist	14.03.2023	1:15H
Mykyta	27	M	Military chaplain	15.03.2023	1:38H
Oleg	45	M	Civil servant	16.03.2023	1:03H
Ivanna	39	F	Art manager	18.03.2023	1:42H
Kyrylo	38	M	Craftsman	18.03.2023	1:28H

## Informed voluntary consent (Ukrainian version)

Інформована добровільна згода респондента  
на участь у науковому дослідженні

Я, \_\_\_\_\_ згоден/-а на участь у проведенні наукового дослідження на тему: Мобільний смартфон як медіа-технологія, що вплинула на хід повномасштабного вторгнення РФ в Україну (2022-нині).

Мета дослідження: Мене звать Ольга Запорожець. Мій мейл: ХХХ. Я є стипендіаткою Шведського Інституту, магістр східноєвропейських студій (2011, Ягелонський Університет), нині магістр медіа і комунікацій (2023, Університет Лунду та Мельбурна). Надихаючись медіумною теорією Маршала Маклюєна та Джошуа Мейровіца, я досліджую використання мобільного смартфона як сучасної медіатехнології, що має здатність перелаштовувати усталені соціальні структури та навколишню соціальну реальність на прикладі війни РФ в Україні.

Під час виконання цього дослідження я проводжу глибинні інтерв'ю з українськими цивільними: журналістами, волонтерами, внутрішньо переміщеними особами, громадськими та політичними діячами (вік 18+, стать без обмежень, громадянство Україна). Для збору даних Університетом Лунду мені було надано наукову стипендію для подорожі в Україну в період 11-20.03.2023.

Будь-яка інформація залишатиметься конфіденційною. Ваші персональні дані (ім'я, прізвище, місце роботи, будь-які інші конкретні дані з вказанням імен, прізвищ, локацій) залишатимуться конфіденційними та не будуть частиною будь-якої письмової наукової роботи в будь-якому вигляді. Лише деперсоналізовані цитати можуть бути опубліковані у форматі “Респондент/-ка, ХХ років, рід занять (до прикладу: лікар/-ка, журналіст/-ка ітд), сказала...”.

Наукова робота з висновками та деперсоналізованими цитатами буде опублікована англійською мовою в каталозі магістерських робіт Університету міста Лунд. Частини роботи використовуватимуться для написання наукової пропозиції для подальших досліджень. Користь від дослідження: підсилений голос українських респондентів та кейсу російської війни проти України в міжнародній науковій спільноті.

Я детально поінформований/-на про мету, завдання та терміни проведення дослідження.

Я мав/-ла можливість задавати будь-які питання, які мене цікавлять стосовно наукового дослідження та одержав/-ла на них відповіді.

Отримавши роз'яснення, я згоден/-на співпрацювати з дослідницею та зобов'язуюсь інформувати у випадку, якщо я бажаю припинити інтерв'ю.

Я поінформований/-на про те, що можу вийти з дослідження на будь-якому з його етапів.

Я розумію, що участь у дослідженні не передбачає матеріальної винагороди або компенсації.

Я поінформований/-на про те, що інформація про мою участь у дослідженні залишається суворо конфіденційною.

Я поінформований/-на про те, що результати дослідження можуть бути опубліковані та можуть обговорюватись дослідниками.

Дата, підпис респондента

Дата, підпис дослідниці

### **Informed voluntary consent (English translation)**

Informed voluntary consent of the respondent to participate in a scientific research study

I, \_\_\_\_\_, agree to participate in a scientific research study on the topic: "Mobile Smartphone as a Media Technology that Influenced the Course of Russia's Full-scale Invasion of Ukraine (2022-present)."

Research objective: My name is Olga Zaporozhets. My email is XXX. I am a scholarship recipient of the Swedish Institute, holding a master's degree in East European Studies (2011, Jagiellonian University) and currently pursuing a master's degree in Media and Communication (2023, Lund University and University of Melbourne). Inspired by the media theories of Marshall McLuhan and Joshua Meyrowitz, I am investigating the use of mobile smartphones as a contemporary media technology that has the ability to reshape established social structures and the surrounding social reality, using the example of the Russian war in Ukraine.

During the course of this research, I will conduct in-depth interviews with Ukrainian civilians, including journalists, volunteers, internally displaced persons, as well as public and political figures (aged 18+, any gender, Ukrainian citizenship). Lund University has provided me with a research scholarship for travel to Ukraine during the period of March 11-20, 2023, for data collection purposes.

Any information provided will remain confidential. Your personal data (name, workplace, any other specific information including names, surnames, locations) will be kept confidential and will not be part of any written academic work in any form. Only de-identified quotations may be published as follows: "Respondent, XX years old, occupation (e.g., doctor, journalist, etc.), said..."

The research paper with conclusions and de-identified quotations will be published in English in the master's thesis catalog of Lund University. Parts of the work may be used to write a research proposal for further studies. The benefit of this research is to amplify the voices of Ukrainian



respondents and the case of the Russian war against Ukraine within the international academic community.

I have been thoroughly informed about the purpose, objectives, and timeline of the research study.

I have had the opportunity to ask any questions I had regarding the research study and have received answers.

Having received clarification, I agree to collaborate with the researcher and undertake to inform if I wish to terminate the interview.

I am aware that I can withdraw from the study at any stage.

I understand that participation in the study does not involve any financial reward or compensation.

I am informed that information about my participation in the study will be strictly confidential.

I am informed that the research findings may be published and discussed by researchers.

Date, respondent's signature

Date, researcher's signature

## Questionnaire

1. What kind of smartphone do you have? What other phones did you have before?
2. How do you use a smartphone on an everyday basis? What do you use your smartphone for?
3. How has your smartphone usage changed after the full-scale Russian invasion?
4. Are there any differences between your usual smartphone usage and your usage after the full-scale Russian invasion started?
5. Can you recall the first weeks of the full-scale invasion? How did you use your smartphone back then? Are there any differences in how you use it now?
6. Do you use the same smartphone for both work and private purposes? How do you feel about that? How do you prioritize different usage purposes?
7. How do you use your smartphone to create a message?
8. Do you always have your smartphone with you? Please reflect on this.
9. Do you keep your smartphone always on? How do you control the reception and transmission of information via your smartphone? Do you switch it off, put it on flight mode, put it on vibration mode, or use any other options? Please reflect on this.
10. Do you use any other devices in conjunction with your smartphone, such as a headset or smartwatch?
11. What smartphone apps do you use, how do you use them, and why? Please consider before, during, and after the full-scale invasion.
12. Apart from apps, how else do you use your smartphone, such as for calling, texting, alarms, media library, etc.? For each usage mode, please discuss further.
13. How do you engage with various communication modes if you are offered such an option? Do you actively engage or remain passive?
14. Can you think of the degree of "reality" that a smartphone mediates? How is the reality portrayed on the screen of your smartphone the same or different from physical reality?
15. How do you normally get the news?
16. What other sources do you use apart from smartphones, such as radio, television, etc.? What purposes do these other devices serve, and how do you use them?