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DAILY LIFE IN TIMES OF WAR

A Technological Mediation Perspective

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In this current affairs piece, I wanted to draw attention to how seemingly mundane technologies in civil life allow people to maintain a sense of normalcy and a sense of humanity amid war. Because any such analysis will imply knowledge claims as "claims on people's lives," (Haraway, 1988, p. 580), it has to be situated – i.e. showcase the politics, contestation and contingency of the described and analyzed human-technology practices (Pinch and Collins, 1982). Thus, following Haraway: "The only way to find a larger vision is to be somewhere in particular" (1988, p. 590). In what follows, I reflect on a recent trip to my home city Vinnytsia, in Ukraine, on November 1-10, 2024, and showcase the role of technologies in people's daily activities in wartime. This was the first time I returned home in almost three years since Russia attacked Ukraine again in 2022, with the primary purpose of seeing my parents and reconnecting with friends and family. In this piece, I also tangentially turn to postphenomenology for a philosophical lens to structure this rather personal and, at times, autoethnographic story and to avoid "a view from nowhere," instead focusing on the micro-level of human-technology relations that I aim to showcase (Ihde, 1990).

As the full-scale war by Russia in Ukraine has persisted for over 1000 days[1] now, people keep manifesting great resilience and grit in maintaining daily life and routine activities. It is no small feat when your average day is interrupted by multiple air raid sirens, electricity blackouts, and other unprecedented measures that have become all too normalized. The use of technologies has helped people a lot in building and developing this resilience. While cutting-edge robots and AI tested en masse on the Ukrainian battlefield increasingly receive academic attention (e.g., Goncharuk, 2024; Kunertova, 2024; Rickli and Mantellassi, 2024; Saxon, 2024), the use of technologies to support the mundane lives of people during the war misses reflection in the academic discourse and appears only incidentally in the emerging Ukrainian fiction (e.g. Zhadan, 2021; Duda, 2023; Kuznjetsova, 2024) and non-fiction novels (e.g. Chekh, 2020; Mykhed, 2024; Paplauskayte, 2024), as well as in the international media coverage (e.g. Topol, 2022; Hong, 2023; Adams, 2024). With this short piece, I want to show that the mundane level of life during the war, maintaining which requires inventing new and creatively appropriating existing technologies, is not self-evident and presents a body of situated knowledge underpinned by constant negotiation, maintenance, and fought-for achievement that academic community can learn from.

People's daily lives are heavily regulated by many war-related phenomena. In this short piece, I'd like to draw attention to three such examples that are strongly technologically mediated: managing air raid alerts, power outages, and military conscription. This selection is a biased one related to what I experienced first-hand or witnessed during my short trip and does not reflect all the diversity of technological solutions and innovations that currently support the daily life of Ukrainians (e.g. the AI-based chatbots by Ukrainian Railways that facilitate civilian mobility by automatically monitoring an availability of a required ticket or a desired direction and can purchase a ticket for a client[2]).

Overall, smartphones are the dominant way in which people receive and share information about the war, from a simple way to check on each other via messaging apps after the recurring bombings across the country to using social media to share creative donation campaigns to support the affected civilians and the army. At the same time, there is an ever-increasing

[1] The Russian-Ukrainian war started in 2014 with Russian military assaulting and occupying parts of the Ukrainian eastern regions of Donetsk and Lugansk, along with the Autonomous Republic of Crimea. The full-scale invasion refers to Russia's assault of all the territory of Ukraine as of February 24, 2022.

[2] Mykhailov, D. (2024). "'Укрзалізниця' запустила функцію моніторингу квитків у застосунку" [Translation from Ukrainian: "Ukrainian Railways introduced a function of ticket monitoring in their app." Suspilne Media, April 11. Accessed on December 1, 2024 at https://suspilne.media/723828-ukrzaliznica-zapustila-funkciu-monitoringu-kvitkiv-u-zastosunku/

amount of war-related apps and information chatgroups that help people schedule their daily activities.

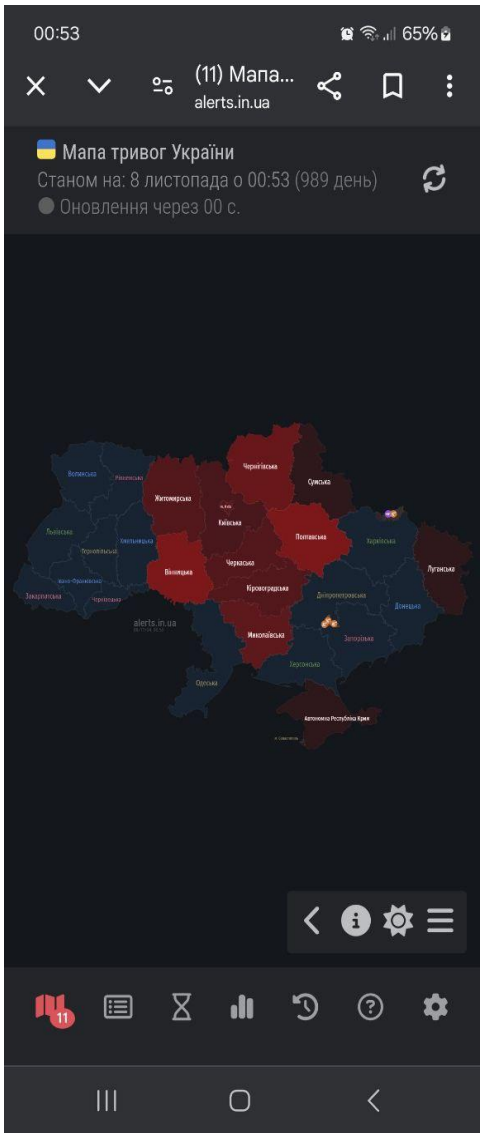

Figure 1. Air-raid alert map for Ukraine, a print screen made on November 8, 2024

One of the most important groups of technologies here are the ones that alert people to the incoming air raids and when the alert state is finished. Even though there are many centralized physical alert systems in all the towns across the country, sometimes they don't reach all the homes, and the sound of the siren is often muffled if one's windows are closed and well-isolated. That's why digital phone-based alerts come in handy if one chooses to use them. These could be designated websites or apps with an air-alert map of the country, region-specific apps or groups and information channels on messaging apps that share similar information. All these digital means transmit the central alerts from the nation- or region-specific government resources and bring them to the pockets of individual people, or wherever their smartphones are. People can customize the apps, e.g. turn on or off the (chilling) alert sound. Figure 1 shows a print screen I made from one of such websites, www.alerts.in.ua.

The main screen shows which regions in the country are currently under the threat of attack, indicated by color red. The message above details the current date and time, as well as the day of the full-scale war (here, day 989). Below, one can see more information: the list sign provides a detailed list, type and start time of incoming airborne threats per region; the clock sign shows one how long the alerts lasted per region; the graph sign gives a statistics on alerts per month, day, region, etc. People rely on similar technologies to know whether and when to go to the bomb shelters, how to structure their daily activities (e.g. whether it makes sense to bring your child to school that day), and simply to get an overall sense of what is currently happening in the country. They also use the statistics of the air raids as a way to justify doing – or not doing – certain things.

Upon my visit, what became apparent was the profound sense of technological embodiment of the air raid sirens after more than two and a half years of full-scale war: even with the app alerts on and the central sirens audible, people don't "hear" them anymore, and the sirens withdraw to the background. As they are normalized, the sirens are not perceived to communicate an alert state - also because sometimes, one finds oneself more often in this alert state than outside of it. Almost no one goes to the bomb shelters anymore, choosing to wait out the sirens outside or even not interrupting their activity (e.g. if the institution they are at does not impose an evacuation protocol during the air raid alerts, an increasingly frequent occurrence). This example shows how people can embody even the technologies purposefully designed to be disruptive, e.g. the alert-related technological systems, if their use persists over longer periods

of time. What I saw on the streets were images of seemingly trivial peaceful life, people going about their business, busy restaurants and shopping malls, cinemas, and bookshops – regardless of being often interrupted by the air raid alerts. The new norm was the alert state and people learned to accommodate it. Instead, it is the extended periods of silence, i.e. the lack of alerts, that disembodied people from their daily life, that people started being suspicious of, intuiting that a larger attack might be coming after that.

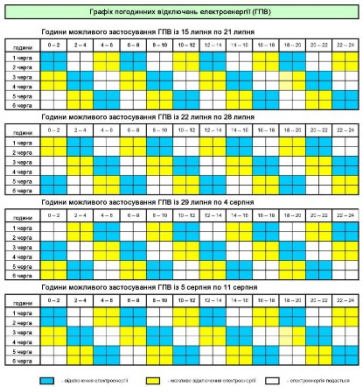

Figure 2. A daily 24-hour schedule of electricity cuts in Vinnytsia, Ukraine, July-August 2024. The blue blocks indicate intended cuts, the yellow – possible ones, the white – times with electricity. The top row indicates the time of day when cuts will be administered, 0h-24h. The left row shows the cuts distribution per population group, 1-6. Source: Vinnytsia Regional Energy Company.

A similar case of technological use in regulating daily life is related to power outages. As Russian army often targets Ukraine's critical infrastructure services, particularly electricity networks and plants, there is not enough power in the country to ensure the daily needs of citizens next to maintaining infrastructural demands and those of emergency services. For this reason, the country undergoes regular scheduled power outages to balance the demands of energy consumption with the amounts of available energy. Just as with the air raid alerts, the scheduling of power cuts and communications around them are very dynamic and technologically mediated.

To ensure an equitable allocation of power outages across the country, the population and businesses not belonging to the critical infrastructure services are divided into six groups of outages that regulate their timings and duration (see Figures 2 and 3).

People can learn which group they belong to and track the intended outages by checking the official web resources of the regional energy companies, city-specific websites and apps, and by using chatbots of local energy companies. While so far, the power outages have mostly followed a planned schedule, e.g. following a 2-4 hours off – 2-4 hours on schedule, as can be seen on Figure 2, lately, because of the intensified Russian attacks on Ukrainian energy grid, the cuts are unscheduled and last longer, e.g. for seven hours in a row, as can be seen on Figure 3.

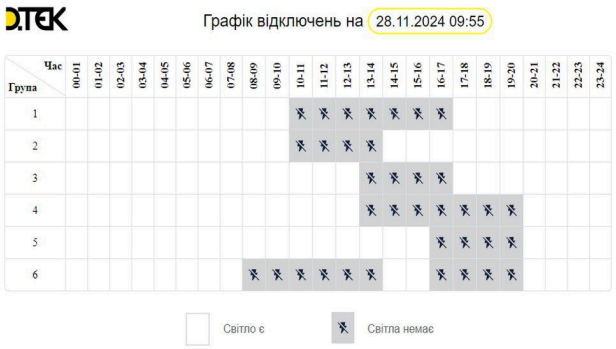

Figure 3. An emergency schedule of electricity cuts in Kyiv, Ukraine, on November 28, 2024. The grey blocks indicate the time of day without electricity, the white – with. The top row indicates the time of day when cuts will be administered, 0h-24h. The left row shows the cuts distribution per population group, 1-6. Source: DTEK Energy Company.

Even though the power cuts only tentatively follow the schedule (e.g. sometimes the light remains on or is turned off sporadically in cases of emergency), such technologies anchor the daily lives of people by giving them a sense of control and expectation management.

Such communication tools also alert people to the need of equipping themselves with everything necessary to live through extended periods without electricity - and heating. Food that does not require refrigeration, candles and matches, torches, power banks to charge electronic devices, blankets, camping-style gas cookers to cook food when electric stoves don't work, all these technologies enable people to take matters into their own hands, not wanting to be hostage to electricity cuts and ensuring as comfortable of a life during power cuts as possible.

Figure 4. A range of consumer power stations, Vinnytsia, Ukraine. Copyright Yurii Sarancha

If they can afford it, people also buy different battery and charging stations, cutting-edge power units to help support their daily lives during the blackouts or to ensure an uninterrupted business activity. For instance, Figure 4 gives a snapshot of consumer power stations in use by individuals and small businesses, all taken within a range of one residential block in the city of Vinnytsia on November 20, 2024. From left to right, Figure 4 depicts (1) a household power generator that allows charging digital devices and fueling small home appliances; (2) a small enterprise power generator that allows, e.g., a small shop to bake bread and light the premises; (3) an institutional larger-capacity generator supporting medium-size premises, e.g. a kindergarten; (4) a mobile power generator that can be easily transported and that supports small-medium businesses. In rarer cases, people even install solar panels on the balconies of residential buildings to support their household activities and be able to use fridges and washing machines when the central power is out (Figure 5).

Figure 5. Apartment-based solar panels, Vinnytsia, Ukraine. Copyright Yurii Sarancha

International Energy Association in its September 2024 report on the emergency state of Ukraine's power grid credited everyday citizens for their resilience, saying that faced with scheduled blackouts and unscheduled interruptions to the electricity supply, "Ukrainians have shown immense solidarity, courage and ingenuity" (p. 6). It is important to mention that this ingenuity is hard-earned and achieved through laborious planning, rationing one's daily activities, negotiating and compromising, much of which is conditioned by the kind of technologies that are available to people. Even though people often maintain a brave face and even joke about the power cuts, it is increasingly difficult to put up with extended periods without electricity and heat, especially on a brink of cold winter.

A very morally loaded case worth noting is technologies in relation to the conscript law. As the Ukrainian army struggles with manpower, a recent conscription law requires that all men between 25 and 60 use the Reserv+ app (Figure 6) from the Ministry of Defense of Ukraine to register and update their personal details to this electronic database. The application then produces an electronic military registration document that allows the government to track the number of conscripts and people eligible for military service. These efforts facilitate an efficient call-up process.

However, after more than two and a half years of full-scale war and rampant casualties, not everyone eligible for military service wants to abide by the conscription requirements. To boost the mobilization efforts, the government deploys many conscription squads to roam the city streets, public transport, restaurants, shops, etc. checking the status of people on the Reserv+ app: those who listed their updated credentials in the app are let go, and those who did not are often transported directly to the enlistment and training camps. Mobile military security checkpoints do the same, checking the cars moving within and across the cities. As a result, the people you see on the street in daylight are mostly women, young males or those above the age of retirement, or men who have an exemption from military service.

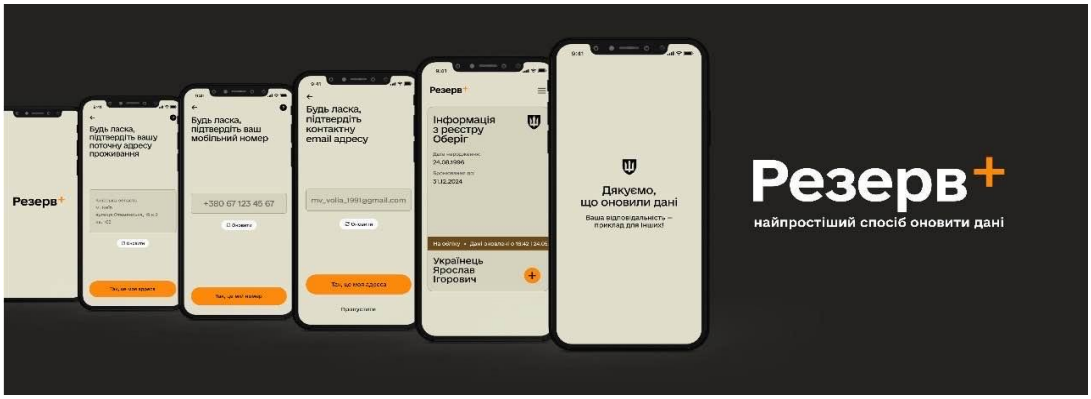

Figure 6. A visualization of the Reserv+ app detailing the steps to update the credentials of people eligible for military service. Copyright Kateryna Chernohorenko, Ministry of Defense of Ukraine

Many people to whom I spoke felt that the new law, materialized through digital technologies effectively imprison men in their homes – if they do not wish to enlist. Many of such men can't afford that and need to maintain their jobs to support their families. It is not surprising then that many of those choosing to avoid conscription turn to technologies to facilitate their freedom of movement even under the new stringent war regime. In chat groups on social media and certain apps, creative appropriation of GPS and word-of-mouth techniques allows people to triangulate the position of conscription squads and security checkpoints to devise "safe" movement routes for a walk or to reach a certain destination in a city. Not dissimilar to the apps that alert drivers to speed cameras and traffic obstacles, this technologically facilitated group effort allows people a new sense of agency. Since these apps and chat groups effectively allow people to bypass the conscription law, they are very dynamic and migrate to new groups or host domains to avoid being closed by the government. These technologies, while allowing some to manifest their freedoms, also introduce an element of division in society, polarized by a desire to win the war relying predominantly on volunteer manpower and a desire to live. Such apps often become an object of heated arguments between people who enlisted and those who want to avoid the draft – or between their friends and family. No technology is ever neutral in itself, but attributing it with meaning, blame or praise also depends on the context in which one finds oneself, becoming a "moralizing technology" in drastically different senses (Verbeek, 2011).

Behind the seemingly normal images of city life that I witnessed during my trip were dire circumstances, incredible losses, hard labor, hope and incredible resilience of people, their power to adapt and persevere. I saw an increasingly technological society forced to innovate rapidly not only to maintain regular civil activities but also to maintain a high level of military response to Russian attacks. This innovation was not always high-tech but also frugal, leading people to creatively reappropriate technologies to fit the dynamically changing daily needs (e.g. the camping gear that now often serves household needs). There needs to be an academic reckoning with this daily perseverance and resilience, not only in Ukraine but wherever the war and military conflicts persist.

As Ukraine is by far not the only country living through a war or a military turmoil, apart from exposing the power of human ingenuity, there is an academic duty to preserve a record of seemingly mundane maintenance and resilience of daily life, and to show how technologies help to weave a specific sense of reality: of safety or danger, of justice or its evasion, as facilitators of meticulous planning in times of uncertainty, being symbols of hope or representing desperate choices one has to make. Navigating and learning from such technological mediations of daily life during the war would help elevate the daily life not as something trivial or given but as something achieved and fought for, negotiated and sustained. It could remind us of what it takes to be a situated human, to uphold the value of life, and how precarious this is, all welcome and necessary messages given the current global state of affairs.

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References

Adams, P. (2024). “Ukraine fights to keep the lights on as Russia hammers power plants.” BBC, November 29. Access on December 1, 2024 from https://www.bbc.com/news/articles/c3vlg91yz6po.

Chekh, A. (2020). *Absolute Zero*. Translated from Ukrainian to English by O. Lutsyshyna and O. Jennings. Glagoslav Publications B.V.

Duda, T. (2023). *Daughter*. Translated from Ukrainian to English by D. Gibbons. Mosaic Press.

Goncharuk, V. (2024). “Survival of the Smartest? Defense AI in Ukraine.” In *The Very Long Game: 25 Case Studies on the Global State of Defense AI* (pp. 375-395). Cham: Springer Nature Switzerland.

Haraway, D. (1988). “Situated knowledges: The science question in feminism and the privilege of partial perspective.” *Feminist Studies, 14*(3), pp. 575-599.

Hong, J. C. (2023). “In Ukraine, civilians train on survival skills to cope with dangers from Russia’s war.” *El País*, July 11. Accessed on December 1, 2024 at https://english.elpais.com/international/2023-07-11/in-ukraine-civilians-train-on-survival-skills-to-cope-with-dangers-from-russias-war.html.

Ihde, D. (1990). *Technology and the lifeworld: From garden to earth*. Bloomington: Indiana University Press.

International Energy Association. (2024). *Ukraine’s energy security and the coming winter: A report*. Accessed on December 1, 2024 at https://www.iea.org/reports/ukraines-energy-security-and-the-coming-winter.

Kunertova, D. (2024). *Learning from the Ukrainian Battlefield: Tomorrow’s Drone Warfare, Today’s Innovation Challenge*. ETH Zurich.

Kuznjetsova, J. (2024). *Tikapuut* [Original Finnish: The Ladder, Ukrainian: Драбина]. Translated from Ukrainian to Finnish by Eero Balk. Aula & Co.

Mykhed, O. (2024). *The Language of War*. Translated from Ukrainian to English by M. Gibson, H. Leliv, and A. Dewar. Allen Lane. An imprint of Penguin Books.

Paplauskayte, M. (2024). *The train arrives on schedule*. Stories of people and the railway. [Original Ukrainian: Потяг прибуває за розкладом. Історії людей і залізниці]. Laboratoriya.

Pinch, T., and Collins, H. M. (1982). *Frames of meaning: The social construction of extraordinary science*. Routledge.

Rickli, J. M., & Mantellassi, F. (2024). *The War in Ukraine: Reality Check for Emerging Technologies and the Future of Warfare*. Geneva Centre for Security Policy.

Topol, A. (2022). “Ukraine’s 15,000-Mile Lifeline. How the country’s vast rail system has helped it withstand an invasion.” The New York Times, November 15. Accessed on December 1, 2024 from https://www.nytimes.com/2022/11/15/magazine/ukraine-trains.html.

Saxon, D. (2024). “Military AI and Accountability of Individuals and States for War Crimes in the Ukraine.” *In Responsible Use of AI in Military Systems* (pp. 169-191). Chapman and Hall/CRC.

Verbeek, P.-P. (2011). *Moralizing technology: Understanding and designing the morality of things*. Chicago: University of Chicago Press.

Zhadan, S. (2021). *The Orphanage: A Novel*. Translated from Ukrainian to English by R. Costigan-Humes. Yale University Press.