

RESEARCH ARTICLE

Instant memories of the Russian war against Ukraine – mapping the virtual *Meta History: Museum of War*

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Abstract

This paper explores how Ukrainian virtual museums of war are embedded in today's connective environment of humans, codes and algorithms. In particular, I examine the ways virtuality as a mode of memory-making is deployed by the *Meta History: Museum of War* to shape the mediation and remembering of the full-scale Russian war against Ukraine as it unfolds. Using digital methods and digital ethnography, this study maps the emerging assemblage of the *Meta History: Museum of War* to grasp how the museum is contributing to efforts to repel the Russian invasion through its artistic and material engagement with the war. By exploring the network of exhibitions and the museum's virtual infrastructure, the study illustrates how the museum generates affective instant memories in order to wield influence over events that will in turn be exhibited in the future. Consequently, it adds valuable insights into the production of virtual engagement with war.

Keywords: ecology of war; virtual museum; instant memory; Ukraine; history

Introduction

We have a new take on the role of art in society – it must be relevant, courageous, activist. And eternal.¹

This quote from the website of the Ukrainian virtual museum *Meta History: Museum of War*² (hereafter MHMW), a museum that went online on 4 March

¹ Meta History Museum of War (no date) *About us | Meta History Gallery*. Available at: <https://metahistory.gallery/about-us> (Accessed: 29 August 2022).

² This study follows the MHMW from March to September 2022. The data collection took place during this period. Therefore, the analysis touches only upon subsequent developments within the MHMW in a peripheral way. However, as the MHMW has undergone substantial changes and some controversies, I would like to address some issues which are certainly crucial for the future of the MHMW and the achievement of its goals. Until April 2023, the MHMW was adding new artworks and thus expanding, but in the same month, the official Twitter account reported that the museum founder, who calls himself VK, allegedly embezzled money from the project. This has been denied by VK, who claims that the MHMW had been hacked, and therefore that the team lost all access (see *Meta History: Museum of War* [[@Meta_History_UA](https://twitter.com/Meta_History_UA)] (2023, April 18) We are heartbroken to report that V K has embezzled funds from our charitable Meta History project to an unknown address: 0x7EDfB40acD6b9ed095BfD72Ca881160037704661, *Twitter*. Available at: https://twitter.com/Meta_History_UA/status/1648470241012494337 (Accessed: 13.11.2023). What exactly occurred cannot be determined at this

2022,³ is straightforward: we take sides, we try to influence the ways people make sense of the full-blown Russian invasion of Ukraine, and lastly, we are here to stay. The date when the MHMW went online makes it evident that the museum is a direct response to the war. While the museum does not directly fight the occupying forces on the battlefields, the quote implies that the war ecology extends beyond Ukrainian soil.

Drawing on memory, war and museum studies, this paper aims to shed light on virtual memory-making as the Russian invasion unfolds. More precisely, it does so by zeroing in on the virtual MHMW, exploring how the museum becomes an active agent by mapping its evolving assemblage (Deleuze and Guattari 1988) from March to August 2022. By proposing an ecological understanding of war (Ford and Hoskins 2022) that encompasses more than the actual battlefields in Ukraine, I analyse the virtual modes that the MHMW is adopting to create what I term ‘instant memories’ (Ekelund 2022, 78) in order to recollect, remember and mediate the war. Hence, the MHMW is considered a memory agent and a ‘site of persuasion’ (Morphy 2006), which does not simply exhibit artefacts but conveys ideas, effects and stories shaping the understanding of the Russian invasion. Thus, by taking into account these various modes, this paper asks how the MHMW is taking part in repulsing the Russian invasion of Ukraine through its engagement with the war. I argue that the MHMW is an emerging assemblage that is involved in the production of ‘instant memories’ (Ekelund 2022) and ‘online crowds’ (Stage 2013) to actualise the capacities of its memory work. The museum employs virtuality in its various manifestations to evoke affective responses.

For an exploration of the museum’s engagement with the war, I employ qualitative methods informed by digital ethnography and digital methods (Caliandro 2017; Pink *et al.* 2016). This allows for a broad conception of the MHMW, encompassing not only the exhibitions but also the museum’s infrastructure. Analysing the infrastructure and visual material aligns with Niederer’s (2019) call to consider the technicity of digital platforms alongside their content. Similarly, understanding the fieldsite in (digital) ethnography as a network (Burrell 2016), I illustrate the mobility of the social realm by following the assemblage of people and things in the virtual museum. This correlates with Rogers’ (2015, 2019) argument on ‘follow[ing] the medium’, which engages with data in a way that recognises the medium’s inherent logic. Bridging these approaches, Caliandro (2017, 551) proposes ‘mapping the practices through which internet users and digital devices structure social formations around a focal object (e.g. a brand)’ as the main task of ethnographers navigating digital spaces.

To map the assemblage, this paper provides a contextualisation of the MHMW within broader efforts to commemorate the Russian invasion in Ukraine since 2014. Before turning towards the main theoretical concepts: assemblages (Deleuze and Guattari 1988), the

point. In the following, the website of the MHMW could no longer be accessed from June 2023, whereas social media and other platforms were still being updated, albeit less frequently. The museum has been accessible again since autumn 2023, using a new link: meta-museum.me/. While the design and content look very similar at first sight, it is noticeable that the team now only consists of one individual: VK.

While these disputes only marginally affect this study, the developments illustrate the constant possibility of ephemerality. Links can break, and digital spaces may be no longer accessible; they may be blocked, hacked or not updated. In Russia’s ongoing war against Ukraine, the risk of potential cyber-attacks or the disruption or destruction of critical infrastructure is further increased. This adds another layer of uncertainty to virtual entities like the MHMW. Even if the aspiration is to be operational for a long time, ephemerality is always lurking around the corner.

³ Domain Tools (2022) *MetaHistory.gallery WHOIS, DNS, & Domain Info*. Available at: <https://whois.domaintools.com/metahistory.gallery> (Accessed: 28 August 2022). Since the original domain of the MHMW (metahistory.gallery) is no longer accessible, it is possible to visit the museum via the Internet Archive Wayback Machine. The following link shows the number of times the website or parts of it were saved at a particular moment: https://web.archive.org/web/20230000000000*/metahistory.gallery (Accessed: 13.11.2023).

'new ecology of war' (Ford and Hoskins 2022), 'instant memories' (Ekelund 2022) and the 'online crowd' (Stage 2013), in the next step, digital methods are applied to better grasp how the museum has evolved over the first months of its existence, what its affordances⁴ are and how it is connected to other digital entities. After covering the infrastructural dimension of the museum, the focus shifts to artistic engagement with the war and the purpose that is thereby pursued. I subsequently develop a discussion that focuses on how new technologies have altered the workings and structures of war, museums and their blending together by acknowledging the multiple configurations of human and non-human elements which render war tangible for everybody, at least in a virtual sense.

Contextualising – the MHMW in the new ecology of war

On 24 February 2022, the silence of the dawn was broken by incoming shells, mortars and rockets as the Russian army crossed Ukrainian borders from the north, south and east to start its illegal war of aggression against Ukraine.⁵ Since that day the occupying forces have been shelling, killing, murdering, raping, burning and looting to destroy the independence of the Ukrainian state, topple its government and deny the Ukrainian people their freedom to choose their own destiny. Harrowing accounts from places like Bucha, Mariupol or Kherson meticulously recount the atrocities perpetrated by the invaders.⁶ To facilitate legal procedures for war crimes committed, international bodies are currently documenting the atrocities in the territories liberated by the Ukrainian armed forces in 2022 (OHCHR 2022).

Even while the intensity and the sheer scale of the war since February 2022 marks a significant turning point, the fact that the Russian state and its proxies in Donbas have been waging war in Ukraine since 2014 should not be ignored. The military, cultural and economic aggression against Ukraine over these years has razed vast swathes of the Ukrainian south and east to the ground and has made these regions largely uninhabitable.⁷ The significance of these events has left numerous traces on Ukraine and its

⁴ Affordances are here understood as the 'complex co-evolution of users and environment' (Bucher and Helmond 2018, 244), that is, how digital platforms such as the MHMW website might afford certain activities, but also how different users through their actions afford something back. See further Bucher and Helmond (2018, 244–250).

⁵ For the violations of international law by the Russian invasion, see for example Haque (2022) An unlawful war, *AJIL Unbound*, 116, pp. 155–159.

⁶ See, for instance: *War Crimes Watch Ukraine - FRONTLINE/AP collaboration* (no date). Available at: <https://www.pbs.org/wgbh/frontline/interactive/ap-russia-war-crimes-ukraine/> (Accessed: 23 November 2022) or Brand Ukraine NGO (no date) *Russia's war crimes in Ukraine, war in Ukraine*. Available at: <https://war.ukraine.ua/russia-war-crimes/> (Accessed: 23 November 2022).

⁷ The level of destruction and damage to infrastructure and environment is devastating. Regions that have been close to or on the front line since 2014 are particularly affected, including large areas that have been mined. Taken together, this has led to the displacement of millions of people. See, for instance: UNHCR (n.d.) *Ukraine Refugee Crisis: Aid, Statistics and News*. Available at: <https://www.unrefugees.org/emergencies/ukraine/> (Accessed: 01 December 2023). Anthes, E (2022, April 13) A 'Silent Victim': How Nature Becomes a Casualty of War. *The New York Times*. Available at: <https://www.nytimes.com/2022/04/13/science/war-environmental-impact-ukraine.html> (Accessed: 01 December 2023). Donbas.Realities (2023, June 11) *The Ukrainian Cities Obliterated In Russia's Self-Proclaimed 'Liberation'*. Radio Free Europe/Radio Liberty. Available at: <https://www.rferl.org/a/ukraine-destroyed-cities-russia-war/32454453.html> (Accessed: 01 December 2023). Kulish, H (2023, October 3) *The total amount of damage caused to the infrastructure of Ukraine due to the war reaches \$151.2 billion – estimate as of September 1, 2023*. Available at: <https://kse.ua/about-the-school/news/the-total-amount-of-damage-caused-to-the-infrastructure-of-ukraine-due-to-the-war-reaches-151-2-billion-estimate-as-of-september-1-2023/> (Accessed: 01 December 2023). Landmine Use in Ukraine | Human Rights Watch (2023, June 13). Available at: <https://www.hrw.org/news/2023/06/13/landmine-use-ukraine> (Accessed: 01 December 2023).

landscapes, including on memory politics. Since the outbreak of the war nine years ago, multiple steps have been taken to document, archive, legislate and remember the war (Marples 2017; Olzacka 2021; Törnquist-Plewa and Yurchuk 2019; Zhurzhenko 2022): from the famous decommunisation laws⁸ (Marples 2018) to monuments commemorating the Maidan and its fallen heroes, for instance in Ternopil, Mykolaiv or Poltava,⁹ to museums narrating contemporary Ukrainian history.¹⁰

In this regard, the MHMW joins the ranks of actors shaping cultural memory – here understood as the ‘interplay of present and past in socio-cultural contexts’ (Erl 2008, 2) – to commemorate the war (digitally). As highlighted by Olzacka (2021, 1040), museums in Ukraine have recently been active in shaping (state) narratives of the Russian invasion and fostering forms of activism and participation to discuss the Ukrainian past, present and future. This ‘digitally-driven museum front’ (Olzacka 2023, 3–4) goes beyond the functions typically associated with museums preserving, displaying and interpreting objects.¹¹ Rather, Ukrainian museums of war take up multiple roles to pursue ‘museum activist’ practices (Sandell and Janes 2019, 1), emphasising the need to act.

This entanglement of mnemonic, activist and digital practices renders the case study of the MHMW particularly intriguing since the connective environment enables the emergence of new museum forms (Olzacka 2023; Walden 2022). The MHMW illustrates the in-between nature of museums and similar entities that are both subjected to and actively participating in the connective turn (Hoskins 2011). While leveraging the possibilities and multiplicities of the connective environment, the MHMW simultaneously relies on more traditional forms of communication to shape a specific narrative (Walden 2022, 32–34).

⁸ Verkhovna Rada of Ukraine (2015a) *Проект Закону про доступ до архівів репресивних органів комуністичного тоталітарного режиму 1917–1991 років* (transl. On Access to the Archives of Repressive Organs of the Communist Totalitarian Regime from 1917–1991). Available at: http://w1.c1.rada.gov.ua/pls/zweb2/webproc4_2?id=&pf3516=2540&skl=9 (Accessed: 23 August 2022).

Verkhovna Rada of Ukraine (2015b) *Проект Закону про засудження комуністичного та націонал-соціалістичного (нацистського) тоталітарних режимів в Україні та заборону пропаганди їх символіки* (transl. On Condemning the Communist and National Socialist (Nazi) Totalitarian Regimes and Prohibiting the Propaganda of their Symbols). Available at: http://w1.c1.rada.gov.ua/pls/zweb2/webproc4_1?pf3511=54670 (Accessed: 23 August 2022).

Verkhovna Rada of Ukraine (2015c) *Проект Закону про правовий статус та вшанування пам'яті борців за незалежність України у XX столітті* (transl. On the Legal Status and Honouring of the Memory of the Fighters for the Independence of Ukraine in the 20th Century). Available at: http://w1.c1.rada.gov.ua/pls/zweb2/webproc4_1?pf3511=54689 (Accessed: 23 August 2022).

Verkhovna Rada of Ukraine (2015d) *Проект Закону про увічнення перемоги над нацизмом у Другій світовій війні 1939–1945 років* (transl. On the Commemoration of the Victory over Nazism in World War II 1939–1945). Available at: http://w1.c1.rada.gov.ua/pls/zweb2/webproc4_1?pf3511=54649 (Accessed: 23 August 2022).

⁹ ‘Пам'ятник Небесній сотні’ (transl. Monument to the Heavenly Hundred) (2017) *Wikipedia*. Available at: <https://tinyurl.com/5dcaj4zd> (Accessed: 23 August 2022).

Several monuments have been destroyed or demolished by the occupiers since Feb. 2022, see e.g. Olga Tokariuk [@olgatokariuk] (2022), *Twitter*. Available at: <https://twitter.com/olgatokariuk/status/1513430993708986369> (Accessed: 17 January 2023).

¹⁰ For instance: The National Memorial to the Heroes of the Heavenly Hundred and Revolution of Dignity Museum (no date) *Maidan Museum*. Available at: <https://www.maidanmuseum.org/uk> (Accessed: 23 August 2022). For a more thorough discussion in this regard, see Olzacka (2021).

¹¹ The International Council of Museums uses the following definition: ‘A museum is a not-for-profit, permanent institution in the service of society that researches, collects, conserves, interprets and exhibits tangible and intangible heritage. Open to the public, accessible and inclusive, museums foster diversity and sustainability. They operate and communicate ethically, professionally and with the participation of communities, offering varied experiences for education, enjoyment, reflection and knowledge sharing’. *Museum Definition* (2022). Available at: <https://icom.museum/en/resources/standards-guidelines/museum-definition/> (Accessed: 06.10.2023).

The following analysis of the MHMW thus provides valuable insights into new modes of remembering in times of connectivity and war.

At the core of the MHMW lies digital remembering of the Russian invasion of Ukraine. More precisely, the MHMW is a virtual entity set up by the Ukrainian NFT (non-fungible token) community in collaboration with the Ukrainian Ministry of Digital Transformation and Ukrainian and international artists after the start of the Russian invasion of Ukraine in February 2022 to fight the occupiers in digital spaces and beyond. Besides political support, the launching of the MHMW was, for instance, announced on Deputy Minister Oleksandr Bornyakov's Twitter account,¹² the Ministry of Culture has been providing media services and the museum has partnered with various entities in the crypto world.¹³ Most of these companies provide solutions for the MHMW such as tech support, audits, smart contracts or security. When it comes to implementation and execution, the virtual museum was conceptually created and is led by Vasyl Kopanov, known as 'VK', and Oleksandr Pokhylenko.¹⁴ On the museum's website, VK's position is listed as 'Chaos', while Pokhylenko is responsible for the technological domain. Several other people are also mentioned, including art coordinator Anna Feuerbach. In media appearances, VK refers to the museum as a 'technological charity project'.¹⁵ In this regard, the aim of the MHMW is threefold: first, it preserves the memory of the events in Ukraine; second, it indicates how the war should be remembered; and lastly, its activities are used to collect donations in support of Ukraine.¹⁶ In doing so, the museum enacts war through NFT¹⁷ artworks, meaning neither the artworks nor the museum have a physical mooring. The MHMW is thus considered a virtual museum. Virtual museums draw on 'the characteristics of a museum', to expand, augment and personalise the museum for visitors through the possibilities of digital space.¹⁸ In this light, its application of the term 'museum' can be seen as a way to derive authority and to legitimise the interplay between the different functions, including museum, archival and fundraising, to pursue its goals embedded in a recognised framework.

As a virtual museum, the MHMW deploys recent technological modifications (Hoskins 2011) which have widened possibilities to mediate, reenact and remember war. Digital omnipresence has led to other emotional engagements with war (Kuntsman 2010). A multitude of

¹² Alex Bornyakov [@abornyakov] (2022, March 25), *Twitter*. Available at: <https://twitter.com/abornyakov/status/1507341599394746410> (Accessed: 12.11.2023).

¹³ This includes the Blockchain Association of Ukraine; Kuna, the first Ukrainian cryptocurrency exchange; and Hacken, an auditing firm.

¹⁴ МЕТА ІСТОРІЯ: МУЗЕЙ ВІЙНИ — Код ЄДРПОУ 44825804 (transl. Meta History: Museum of War — Code EDRPOU 44825804) (n.d.). Available at: https://youcontrol.com.ua/catalog/company_details/44825804/ (Accessed: 11.11.2023).

¹⁵ Мистецтво і технологія блокчейну (transl. Art and technology of Blockchain) (2023). Available at: <https://telegraf.design/mystetstvo-i-tehnologiya-blokchejnu-yak-nft-muzej-meta-history-dokumentuye-istoriyu-i-zbyraye-koshty-na-dopomogu-ukrayiny/> (Accessed: 11.11.2023).

¹⁶ Meta History Museum of War (no date) *About us | Meta History Gallery*. Available at: <https://metahistory.gallery/about-us> (Accessed: 29 August 2022).

¹⁷ Blockchain is a technology that allows for the secure storage and sharing of information without needing to rely on a trusted third party as a broker. It represents a distributed database where information is stored in so-called blocks. These blocks are then connected via cryptography by nodes of a computer network and form a blockchain that enables the creation of a timeline of information. This system allows data to be stored and distributed since the information on the blockchain cannot be altered. In the case of the artworks exhibited in the Warline, they are placed as NFTs on the blockchain. This means that they cannot be replaced by anything else. Thus, the storing of the NFTs on a blockchain creates the possibility to secure relevant information such as copyright or ownership.

¹⁸ Polycarpou, C (2018) *The ViMM Definition of a Virtual Museum*. Available at: <https://www.vi-mm.eu/2018/01/10/the-vimm-definition-of-a-virtual-museum/> (Accessed: 25.11.2022).

digital spaces have become sites of conflict and contestation (Ford and Hoskins 2022; Kuntsman 2010; Merrin 2018). Multifaceted entanglements between humans, codes, algorithms and their permanent modifications have produced new conditions in how war is fought and perceived. Hence, today's war has to be treated as 'radical war' – that is, 'the immediate and ongoing interaction between connected technologies, human participants, and the politics of violence' (Ford and Hoskins 2022, 11). 'Radical war' is fought in the so-called 'new ecology of war': 'an information and battle environment in which mobile and connected devices such as the smartphone enable to share and create content that can produce lethal effects' (ibid 2022, 49). Within this new ecology, 'radical war' is participative since everyone who has access to at least mobile internet has the potential to be involved.

Such a line of argument foregrounds the crucial connection between human and non-human elements. To this end, I argue – in line with Ford and Hoskins (2022) – for an ecological understanding of war which goes well beyond the actual battlefields and embraces the multiple engagements between human and non-human agents (Hörl 2017, 3). Consequently, the entire MHMW and its renderings of war have to be considered as part of today's theatres of war in Ukraine and beyond. The museum is not merely processing the course of the war but actively seeking to engage in it.

On assemblages and instant memories

Since the MHMW is challenged by a double incompleteness – both the Russian invasion of Ukraine itself and the museum are constantly developing – I consider the virtual museum to be in a process of becoming. To grasp this aspect of becoming, the notion of assemblage is applied. Assemblages (Deleuze and Guattari 1988) describe the relations between different agential elements that are not stable but open-ended. Bennett (2010, 23–24) uses the term 'ad-hoc groupings', where the agency of the assemblages and their ability to impact are more than the sum of their individual elements. Consequently, assemblages as a virtual 'space of possibilities' (DeLanda 2016, 28–29), whose capacities might be actualised in the future, have an inherent potential for action (Nikolic 2017, 127). Virtuality does not necessarily refer here to an interactive, digital or online entity taking advantage of today's connective environment, but to something that is opposed to the actual: 'the world of real extended objects' (Bluemink 2020). The virtual is thus real, if not yet actualised (Deleuze 1994, 272).¹⁹ To actualise the capacities of its memory work, the MHMW is involved in the production of 'instant memories' (Ekelund 2022) and 'online crowds' (Stage 2013). At the core of both concepts lies the examination of digitality and the shaping of affective connections.

Instant memories 'that are shared in the groups are produced for the very instant that the post is made' and further 'for an instantaneous response from other members when they encounter it within their personalised flow' (Ekelund 2022, 77). The author argues in his study on retrospective Facebook groups that the creation of memories is heavily influenced by the design of social media platforms. The underlying structures emphasise a sense of immediacy and constant moving on to the next post, which is then reflected in the 'hurriedness' and 'fragmented' aspects of the interactions. This relates to the fact that users in most cases are engaging with the latest content (Ekelund 2022, 77). In the case of the MHMW, this sense of immediacy is further exemplified by the dimension of the unfolding war. In contrast to other mnemonic practices, it is not possible to put an end to the event, not even an arbitrary one, as the Russian invasion is constantly

¹⁹ Here, I relate to the Deleuzian elaborations on the distinction between the 'virtual' and the 'actual' made by Bergson (Deleuze and Guattari 1988, 1994). Bergson sees the virtual and the actual in opposition to the dichotomy of the possible and the real. While the possible is considered as opposed to the real, the virtual is part of reality. In this regard, both the actual and the virtual are real, but the virtual is not yet actualised. The virtual is thus opposed to the actual. Actualisation describes then the 'becoming-actual of the virtual' through creative acts of difference.

evolving and changing its course, shaping perceptions accordingly. The unfolding requires the MHMW to catch up with what is happening at any given moment.

This immediacy, where the act of production practically collapses with the act of remembering, coincides with the mechanisms in place within ‘the third memory boom’ (Hoskins and O’Loughlin 2010, 117): the wish to prevent forgetting. However, when discussing the war feed of Russia’s war against Ukraine, Hoskins and Shechlin (2023, 459) argue that an intensified immediacy leads to something new, namely a ‘memory of the present for the present’. In the case of the MHMW, the key factors in this reasoning – the structuring of mnemonic processes by algorithms, the unfolding of the event itself and the scale of data available – can certainly be observed. However, this involves restricting or enhancing certain modes of memory rather than taking over the processes of production itself. The MHMW has a clear intention to moor past events and thus impact the future. Yet, given the abundance of existing data, such intent is inevitably accompanied by a structuring and narrating of war memories. The narrative provided by the museum is therefore one of many. In this case, the MHMW relies on the capacity of visual platforms to generate memories and create visual narratives (Serafinelli 2020).

The reliance on visual practices is related to the second feature of instant memories: the aim to evoke emotional feedback. As Ekelund (2022, 80–81) states, the intentions of those users who create posts are *inter alia* to ‘produce affect’. Since the MHMW cannot rely on established online groups, the production of instant memories by the unfolding MHMW is considered an attempt to establish an ‘online crowd’. Stage (2013, 216) identifies three main features of online crowds: users assemble in a particular digital environment while being active within the same environment to achieve a common goal based on shared affective sensations. In other words, they converge on the digital infrastructure of the MHMW to fight and remember the Russian invasion through the use of NFTs, and they are connected by the affective reactions evoked by the emerging archive of war comprising artistic renderings of the horrors. Thus, both ‘instant memories’ and ‘online crowds’ are heavily influenced by the interplay of platform and content in its ability to affect and act.

Building on these theoretical frameworks, I present an analysis of the data assembled during the initial months of the full-scale invasion from March to August 2022²⁰ in order to discuss the memory practices of the MHMW. The first part of the analysis covers the MHMW’s integration into the digital space; this includes domain and traffic analysis, search engine rankings and user engagement with both the website and the MHMW’s social media channels. In the second part, I conduct an ethnographical online observation (Dawson 2019, 274–277) to analyze the visual layout and content of the MHMW and its main exhibition ‘Warline’ in more detail. To explore the exhibition, I rely on compositional analysis (Rose 2016, 61–84) to critically approach and interpret the visual material. Since this approach focuses on the compositional modalities of the artworks, it is combined with visual ethnography (Pink 2021) to situate the production of knowledge and modes of remembering by the MHMW in a broader context.

Analysis: MHWM – entrance²¹

The departure point for the mapping is the museum website,²² figurative entrance to the virtual museum. By entering the website, we are entering the exhibition. When I first

²⁰ Such an approach has its limitations as it provides only a snapshot in time.

²¹ The use of the term *Meta History* refers to the name of the virtual museum. It is not intended to imply further theoretical discussions regarding the concept of ‘metahistory’.

²² Meta History Museum of War (no date) *Home*. Available at: <https://metahistory.gallery/> (Accessed: 24 August 2022).

came across the virtual museum in mid-March 2022, several features immediately caught my eye: the colours used, the title and the language. Even though it is a Ukrainian virtual museum, the site is predominantly in English – the headlines, menu and description. Admittedly, there are often Ukrainian translations, but they appear rather secondary and not at the centre of attention. For instance, they are placed on the right-hand side of the page. Since the direction of reading is from left to right, the English text is thus brought to the fore. In this regard, the deliberate choice of language sheds light on the target audience since the MHMW relies on English as the language of coding (McCulloch 2019) and as the most used language on the internet. To highlight this point, in 2022, more than 63 per cent of websites were still written in English (Richter 2022). The underlying intention is, I would argue, for the efforts of the virtual museum to go well beyond Ukraine and its population. They are addressed primarily to visitors who do not reside in Ukraine and/or are not fluent in Ukrainian. English is used to bridge the spatial distance.

Besides the use of language, my first perceptions were heavily affected by the design of the MHMW. Almost the whole virtual museum is kept in black and white, with only the exhibited artworks bringing splashes of colour. The applied contrasts certainly contribute to an enhanced impact of the artworks on the visitor. By bringing to the fore the visual part of the assemblage which constitutes the virtual museum, the colours heighten the significance of the artworks and act like a spotlight on a piece in a dimly lit art hall. The same can be said when it comes to the title; in large black letters displayed at the top of the website is written: 'THE NFT-MUSEUM of the war of putin's russia against Ukraine'.²³ Besides the the statement's literal meaning, its style evokes two references that seem important. On the one hand, in opting to use lowercase for 'russia' and 'putin', the virtual museum denies both the state and President Putin parity with Ukraine and the rest of the world. Due to distortions and abuses of history where 'denazification' implies 'deukrainisation' – that is a call to commit crimes against humanity and mass violence – Russian fascist authorities (Snyder 2022) have forfeited their status.²⁴ On the other hand, the second reference, 'NFT-MUSEUM', spotlights the virtual museum's main technological feature. Overall, the NFT as a technological feature is very noticeable. When you navigate through the museum and its exhibitions, there are insistent reminders to buy NFTs, spread over the whole website. Since they partially distract from the contemplation of the works of art, I could not deny myself the perception that the main emphasis is put on the role of the museum as a fundraiser. This practice of fundraising could also be a way to overcome the fact that the act of liking and sharing in the digital space might be misconstrued as action (Hoskins 2020); rather, donating money has the potential to build a connection and provide a sense of involvement. The MHMW does so rather effectively: nearly 1.3 million USD have been raised²⁵ – hence, it might be this particular function that takes centre stage in comparison to the other functions. If this assumption is correct, the success of the MHMW relies on connective ways to effectively disseminate its messages and narratives.

MHMW – infrastructure

The following section takes a closer look at the structure of the museum – at the digital infrastructure which might give a hint of how successful the MHMW is when it comes to

²³ Meta History Museum of War (no date) *Home*. Available at: <https://metahistory.gallery/> (Accessed: 24 August 2022).

²⁴ There is an ongoing controversial discussion about whether the Russian state should be named fascist – see, for instance, Berman (cited in Coalson 2022); Laruelle (2022); Motyl (2022); Snyder (2022).

²⁵ Meta History Museum of War (no date) *Home*. Available at: <https://metahistory.gallery/> (Accessed: 24 August 2022).

building an ‘online crowd’ (Stage 2013). The point of departure for the endeavour is the museum domain. It was registered as ‘metahistory.gallery’ on 4 March 2022 and is hosted on a United States (US) server. However, this is not particularly significant as over 500 other sites are currently hosted on the same server.²⁶ In addition, the fact that the site registration happened quite recently means that less technical data are available. Yet what becomes evident is that the museum seems to be suffering a decline in visitors. The traffic decreased from 59,000 visits in May to 6,500 in July.²⁷ Perhaps the decline can be linked to the more general decrease of media publications about the war in Ukraine, drawing strong criticism from inter alia the MHMW itself.²⁸ To give an example, the number of interactions on social media dropped from 109 million in the first week to 4.8 million after 100 days of war.²⁹ While there is no definitive answer here, some other figures point in a slightly different direction. For instance, the number of backlinks³⁰ rose from 3,700 in May to 6,600 in August.³¹ A cursory scroll through these links indicates that they originate from domains all over the world, with a large number of articles linked to cryptocurrency or NFT-related topics.³² The value of backlinks – their quantity and quality, to be more precise – resides in the fact that they are a key factor when it comes to how domains are ranked by search engines like Google or Bing.³³ A quick Google query in English using the term ‘metahistory’, since we have already established its significance when it comes to the museum, confirms this assumption as the domain ranks third out of over 300,000 results.³⁴ Similarly, when searching on ‘Ukrainian war museum’, the MHMW appears on the first page.³⁵ The results delivered by Google PageRank³⁶ might be considered incidental. But the role of algorithms in shaping forms and orders of memories (Esposito 2017; Makhortykh 2021) should not be neglected given the importance of search engines in our online practices. What is crucial here is that the ways algorithms

²⁶ Domain Tools (2022) *MetaHistory.gallery WHOIS, DNS, & Domain Info*. Available at: <https://whois.domaintools.com/metahistory.gallery> (Accessed: 28 August 2022).

²⁷ Similarweb (2022) *metahistory.gallery*. Available at: <https://www.similarweb.com/website/metahistory.gallery/#traffic> (Accessed: 28 August 2022). Similarweb is a platform providing web analytics. It has to be taken into consideration that while the application tools or services to analyse websites lead to results, it is not feasible to reconstruct the way the data were gathered and processed by the provider. Thus, the data have already been structured before the start of the analysis. This applies not only to similarweb but to the other tools used in this paper as well.

²⁸ Meta History: Museum of War [@Meta_History_UA] (2022) ‘The number of social media publications concerning russia’s war against Ukraine has decreased by 22 times compared to the beginning of military action’, *Twitter*. Available at: https://twitter.com/Meta_History_UA/status/1560700521635549184 (Accessed: 29 August 2022).

²⁹ Rothschild, N. (2022) *World looks elsewhere as Ukraine war hits 100 days, Axios*. Available at: <https://www.axios.com/2022/06/02/ukraine-russia-war-social-media-interest> (Accessed: 29 September 2022).

³⁰ Backlinks are links that have a direction, so incoming links from other domains to the target domain – in this case, metahistory.gallery.

³¹ Ubersuggest (2022) *Backlinks: metahistory.gallery*. Available at: https://app.neilpatel.com/en/traffic_analyzer/overview?domain=https%3A%2F%2Fmetahistory.gallery%2F (Accessed: 28 August 2022).

³² BuzzSumo (2022) Content > Backlinks – BuzzSumo. Available at: https://app.buzzsumo.com/content/backlinks?links_sitewide=true&q=https://metahistory.gallery/&search=true (Accessed: 28 August 2022).

³³ There is a value called ‘domain authority’, which includes backlinks and shows how likely domains are to appear in search results, and the MHMW domain scores 48 out of 100. That might seem low at first glance; however, the tool ‘ubersuggest’ describes such a value as ‘very good’. See: MOZ (no date) *Domain Authority: What is it and how is it calculated*, Moz. Available at: <https://moz.com/learn/seo/domain-authority> (Accessed: 17 January 2023) and Ubersuggest (2022) *Backlinks: metahistory.gallery*. Available at: https://app.neilpatel.com/en/traffic_analyzer/overview?domain=https%3A%2F%2Fmetahistory.gallery%2F (Accessed: 28 August 2022).

³⁴ Google (2022) *metahistory – Google Suche*. Available at: <https://tinyurl.com/yj7e8kkt> (Accessed: 28 August 2022).

³⁵ I used a cleaned browser to do the queries.

³⁶ Google PageRank is essentially an algorithm used by Google to rank websites in the search results. For a slightly outdated overview, see the book *Google’s PageRank and Beyond* (2006) by Langville and Meyer.

such as PageRank turn data into rankings are influenced by various parameters including user behaviour. Yet the loading of the individual parameters remains arcane. This reflects the partly hidden role that algorithms play in the formation of memories (Makhortykh 2021, 181–183). As a consequence, some of the results above have limitations and should be handled with caution. Nevertheless, this section has demonstrated the entanglement of the virtual museum in the connective environment on the structural level of links and within the Google universe. For a broader mapping, it is now necessary to consider the ways other users can engage with the museum.

To this end, the study seeks to take a closer look at the social media accounts managed by the virtual museum. It soon becomes evident that the museum uses different social media platforms for distinct purposes. The orientations of the chosen platforms differ between engagement, advertising and art (Twitter,³⁷ Instagram³⁸ and Telegram³⁹ respectively), technical details (Github,⁴⁰ Discord⁴¹), exchange and collecting new ideas (Discord), selling (OpenSea,⁴² Rarible⁴³) and information and blogs (Medium⁴⁴). Looking at this list, it is noticeable that Facebook is absent. Ignoring the world's largest social media platform, the museum focuses rather on platforms where the NFT community is active such as Discord⁴⁵ or Github.⁴⁶ For instance, the Meta History Discord server⁴⁷ is managed by members of the virtual museum's core team, making it possible to engage with them directly. In addition, the server consists of different channels where you can share ideas, discuss the artworks or buy and sell NFTs. In September 2022, the server had nearly 1,000 members. Compared with other platforms used by the museum, the actual engagement on Discord is rather active: users engage in substantial discussions which go well beyond one-sided NFT promotion or showing support and encouragement. This kind of engagement is most prominent on Instagram or Twitter, although this does not necessarily mean that the museum's outreach is limited. As indicated by an analysis of its Twitter

³⁷ Meta History Museum of War (no date) *Meta History: Museum of War (@Meta_History_UA) / Twitter*, Twitter. Available at: https://twitter.com/Meta_History_UA (Accessed: 30 August 2022).

³⁸ Meta History Museum of War (no date) *META HISTORY: Museum of War on Instagram, Instagram*. Available at: <https://www.instagram.com/p/ChczHMsNa1j/> (Accessed: 30 August 2022).

³⁹ Meta History Museum of War (no date) *META HISTORY: Museum of War, Telegram*. Available at: https://t.me/metahistory_ua (Accessed: 17 January 2023).

⁴⁰ *Meta History: Museum of War* (no date) *GitHub*. Available at: <https://github.com/museum-of-war> (Accessed: 30 August 2022).

⁴¹ Meta History Museum of War (no date) *Discord, Discord*. Available at: <https://discord.com/channels/957355493767151646/957365949537857596> (Accessed: 17 January 2023).

⁴² OpenSea (no date) *Meta History: Museum of War - Chapter 1 - Collection, OpenSea*. Available at: <https://opensea.io/collection/metahistormuseum> (Accessed: 30 August 2022).

⁴³ Rarible (no date) *Meta History*. Available at: <https://rarible.com/meta-history> (Accessed: 30 August 2022).

⁴⁴ *META HISTORY museum* (no date) *Medium*. Available at: <https://medium.com/@metahistory> (Accessed: 30 August 2022).

⁴⁵ Discord is an instant messaging social platform. Since its launch in 2015, it has particularly been used by the online gaming community. However, over the last couple years, the platform has also attracted more and more other users, and is no longer limited to gaming content. Today the platform has around 150 million active users. See further: Statista (no date) *Topic: Discord, Statista*. Available at: <https://www.statista.com/topics/9816/discord/> (Accessed: 30 September 2022).

⁴⁶ GitHub is a hosting service for software development and distributed version control, that is, by using Git it is possible to track changes in files, a feature that is often used in open-source software development projects. GitHub is the largest source code host in the world. It was acquired by Microsoft in 2018. See further: 'GitHub' (2023) *Wikipedia*. Available at: <https://en.wikipedia.org/w/index.php?title=GitHub&oldid=1134152194> (Accessed: 17 January 2023).

⁴⁷ Meta History Museum of War (no date) *Discord, Discord*. Available at: <https://discord.com/channels/957355493767151646/957365949537857596> (Accessed: 28 August 2022).

account,⁴⁸ 5,000 followers is far from a huge number, but the level of influence is high. The account is regularly retweeted, cited by popular users and mentioned in several public lists, mostly related to NFT and/or Ukraine.⁴⁹ To better assess user engagement on social media, I deploy the tool buzzsumo.⁵⁰ This web analytics tool counts mentions and interactions such as shares, likes and comments on different platforms. Despite having limitations,⁵¹ buzzsumo definitely does reveal indications regarding the content users are most engaged with. In the case of the MHMW, by far the most attention is given to the Warline.⁵²

MHMW – Warline

The Warline depicts the unfolding of the Russian war against Ukraine in chronological order. Its objective is to create a chronology of events that includes every day of the invasion, but the unfolding complicates things considerably. As described on the website,⁵³ the pieces of art exhibited in the Warline mostly consist of two parts: a tweet from an official Ukrainian or international source put together with a creation by an artist rendering a visual interpretation of the same tweet. This could be digital art in the form of a drawing, a short animation or a work generated by artificial intelligence. In the next step, the work of art is stored as an NFT on the Ethereum blockchain. The NFT artworks are later released in so-called drops, that is, several pieces of art issued simultaneously at a specific moment in time. As of August 2022, the MHMW had carried out three such drops while the fourth had been announced on Twitter.⁵⁴ An art director is responsible for compiling a drop,⁵⁵ but artists can also apply directly on the website. They subsequently receive a tweet to create an artwork around it.⁵⁶ What remains unclear, however, is the selection process for the tweets, and thus who gets to decide which events are displayed in the museum. The name of the relevant artist can be found at the lower end of the artwork's page, but generally artists do not feature prominently in the Warline. As soon as the drop is released, the artworks can be bought in cryptocurrency by anyone interested via the platform OpenSea.⁵⁷ In more detail, each artwork is sold for 0.15 Ethereum, which in

⁴⁸ TruthNest (no date) *Meta History Museum of war*. Available at: https://app.truthnest.com/analysis-results/user/Meta_History_UA (Accessed: 31 August 2022).

⁴⁹ *List memberships for @Meta_History_UA / Twitter* (no date) *Twitter*. Available at: https://twitter.com/meta_history_ua/lists/memberships (Accessed: 31 August 2022).

⁵⁰ Buzzsumo is an online platform that provides its customers primarily with content research but also information about influencers or monitoring options. In this paper, I used content research to get information on the popularity of particular pieces of content. See *BuzzSumo | The World's #1 Content Marketing Platform* (no date) *BuzzSumo.com*. Available at: <https://buzzsumo.com/> (Accessed: 31 August 2022).

⁵¹ Buzzsumo is flawed in that it includes only particular social media platforms: Facebook, Twitter, Reddit and Pinterest. Thus, it does not measure engagement on, for instance, Instagram or Telegram, and the latter especially plays a significant role in the war ecology in Ukraine.

⁵² BuzzSumo (no date) *Content > Content Analyzer - BuzzSumo*. Available at: <https://app.buzzsumo.com/content/web?q=https%3A%2F%2Fmetahistory.gallery%2F> (Accessed: 28 August 2022).

⁵³ *Meta History Museum of War* (no date) *About us | Meta History Gallery*. Available at: <https://metahistory.gallery/about-us> (Accessed: 29 August 2022).

⁵⁴ *Meta History: Museum of War* [@Meta_History_UA] (2022) 'We appreciate your support of Ukraine', *Twitter*. Available at: https://twitter.com/Meta_History_UA/status/1554744894069116928 (Accessed: 30 August 2022).

⁵⁵ *Мистецтво і технологія блокчейну* (transl. Art and technology of Blockchain) (2023). Available at: <https://telegraf.design/mystetstvo-i-tehnologiya-blokcheynu-yak-nft-muzej-meta-history-dokumentuye-istoriyu-i-zbyraye-koshty-na-dopomogu-ukrayiny/> (Accessed: 11.11.2023).

⁵⁶ *For Artists | Meta History Gallery* (n.d.). Available at: <https://web.archive.org/web/20230321082514/https://metahistory.gallery/for-artists> (Accessed: 14.11.2023).

⁵⁷ OpenSea is one of the biggest NFT marketplaces; for further information, see OpenSea (no date) *OpenSea, the largest NFT marketplace, OpenSea*. Available at: <https://opensea.io/> (Accessed: 30 August 2022).

August 2022 equated to roughly 270 USD. The entire proceeds, minus a commission fee, are transferred to the Ethereum wallet of the Ministry of Digital Transformation.⁵⁸ While it is not possible to track the exact project into which the money is eventually transmitted, the virtual museum grants access to their official wallets and the transaction history.⁵⁹ Thus, by connecting visual artistic renderings of war with the collection of donations, the MHMW's engagement with war present and past can be seen as an attempt to materialise a different future. Such activist imaginations of the future are part of the transformative capacity of memory (Gutman *et al.* 2010; Gutman and Wüstenberg 2023).

When entering the Warline, it is noticeable that the design of the exhibition hall is consistent with the overall design of other parts of the webpage. The background is kept in white with black font, whereas only the artworks add splashes of colour. Similarly, the use of languages further reinforces the aforementioned imbalance between English and Ukrainian. While the rationale of the Warline, 'a chronology of events of the Ukrainian history of modern times, set in stone',⁶⁰ is stated in both English and Ukrainian, the information for personal customisation of the museum is only written in English. This includes settings like the chronological order (newest or oldest first), arrangement of the artworks (daily or hourly) or whether all the artworks should be visible or only those on sale. Furthermore, all of the artworks consist of a tweet rendered as digital art. Most of the tweets that serve as the basis for the 459 artworks were posted in English.⁶¹ If the tweet is written in Ukrainian, then the MHMW adds a translation; however, this does not happen in the reverse case. Besides the emphasis on English, the chosen tweets are a vehicle to increase the legitimacy of the MHMW itself and the exhibition. In this regard, the two scopes of the Warline – preservation and narration of war – mirror the main aspects of memorial museums.⁶² Sodaro (2017, 162) divides them into the museum and the memorial functions of memorial museums.

The museum function serves as a way to present the historical understanding of a particular set of events, thereby claiming to be true and authentic (Sodaro 2017, 163–165). To solidify the claims, memorial museums assemble material remains of the past. In the case of the MHMW, this material is symbolised by the collected tweets, which form the backbone of the exhibition. In addition, their significance is increased by the fact that in the vast majority of cases, the MHMW includes only tweets from verified accounts – namely, those possessing the verified 'blue tick'. Such a sign denoted, prior to the takeover by Elon Musk, that Twitter had labelled the account in question as of 'public interest' and 'authentic'.⁶³ Thus, the account is endowed with authority by the social media, which then transfers to the artworks. Since the artworks include the tweet in its entirety, the blue tick is visible.

The second primary function, which is called the memorial function, intends to remember the violent past, acknowledge the victims and be part of the healing. The

⁵⁸ *Мінцифра та блокчейн-спільнота запустили NFT-музей війни путінської Росії проти України | Міністерство цифрової трансформації* (transl. *The Ministry of digital Transformation and the blockchain community have launched an NFT museum of Putin's Russia's war against Ukraine | Ministry of Digital Transformation*) (2022). Available at: <https://web.archive.org/web/20220410040815/https://thedigital.gov.ua/news/mintsifra-ta-blokcheyn-spilnota-zapustili-nft-muzey-viyni-putinskoi-rosii-proti-ukraini> (Accessed: 29 March 2023).

⁵⁹ Meta History Museum of War (no date) *Home*. Available at: <https://metahistory.gallery/> (Accessed: 24 August 2022).

⁶⁰ *Warline: A chronology of events of Ukrainian history* (2022). Available at: <http://web.archive.org/web/20220829195326/https://metahistory.gallery/collection/warline> (Accessed: 19 April 2023).

⁶¹ This represents the status at the end of August 2022.

⁶² I do not imply that the MHMW should be considered a memorial museum, but I want to indicate that the Warline, and thus also the MHMW, employs functions that are very similar to the approach of memorial museums.

⁶³ Twitter (no date) *Twitter Verification requirements – how to get the blue check*. Available at: <https://help.twitter.com/en/managing-your-account/about-twitter-verified-accounts> (Accessed: 20 October 2022).

commemoration and the victimisation are part of an effort to repair communities that have suffered; contained therein lies the promise of a better future, where the past remains past (Sodaro 2017, 170–172). What tends to get hidden in this rhetoric is the fact that these museums are fundamentally political projects (Sodaro 2017, 183). And it is precisely in this respect that the MHMW differs from other institutions, as it openly emphasises its political character. At its core, the virtual museum is deeply political, activist and future-oriented. This is, I argue, connected to the playing out of the war, meaning there is no clear-cut to ‘the past’, which is often implied in memorial museums. The violence is not over yet, and thus it cannot be musealised to show that the present is different and brighter (Sodaro 2017, 172). The impossibility to disconnect present events from ‘the past’ leads in the case of the MHMW to a call to action, pointing towards a brighter and peaceful future.

Since the imagined future has not yet arrived, the work of the MHMW will carry on. At first – as of the end of August 2022, the Warline spans from day one of the war to day 66 – it was not entirely clear whether the museum aimed to cover all days. That has changed. The MHMW roadmap declares that the Warline will end only ‘after victory’ is achieved.⁶⁴ Until that day, the museum continues to narrate the Russian invasion of Ukraine. Inevitably, such an approach leads to the unfolding of the war being mirrored in the evolving character of the museum. The exhibition changes as the war goes on and cannot therefore be finalised. The uncertainty that surrounds it and the incompleteness of the MHMW is made more manifest by the apprehension of the war through art. The artworks do not only depict what happened or is happening but what will or might happen as well. Thus, the past, present and future are collapsed in a complex montage of war. The different temporalities affect the mediation of the invasion, while also depending on its actualisation. More precisely, while today certain pieces of art depict Ukrainian victory in a particular way, the actual course of war might alter its representation or perception.

Warline – artworks

To give due prominence to some key parts of the assemblage, I would like to highlight three topics that appear repeatedly within the Warline: suffering, politics and resilience. While the exhibition explores a range of other subjects, the three selected topics are displayed frequently. Furthermore, they illustrate the becoming of the Warline since the three selected artworks to discuss the aforementioned topics were published at the beginning, in the middle and at the end of the data assembling.

Suffering: the suffering of Ukraine appears in a multitude of shapes and forms, from material suffering encompassing houses, bridges, monuments, fields, nature, animals and bodies, to mental and emotional wounds of fear, grief, torture and occupation. It was in the early hours of 24 February when President Volodymyr Zelensky addressed Ukraine and its people in a video message to state that the country was under attack but that ‘we are Ukraine’, ‘we are strong’ and ‘we will win’.⁶⁵ While Zelensky’s address was delivered in a rather official and dispassionate tone, the artwork⁶⁶ around the tweet depicts the emotional state of people sitting in their apartments. It does so in comic-book style, painting a completely grey world where only the flashes of explosions

⁶⁴ Roadmap | Meta History Gallery (no date). Available at: <https://metahistory.gallery/roadmap> (Accessed: 21 April 2023).

⁶⁵ Defense of Ukraine [@DefenceU] (2022) ‘! Звернення Президента Володимира Зеленського <https://t.co/oQ1bsB6Ow8>’, Twitter. Available at: <https://twitter.com/DefenceU/status/1496712173250387968> (Accessed: 6 September 2022).

⁶⁶ Day 1, 07:02 (no date). Available at: <https://metahistory.gallery/warline/4> (Accessed: 6 September 2022).

bring some occasional light into the apartments. The ashen-faced people sit together in their bedrooms and try to understand what is happening: the world is out of joint, chaotic and bloody as the loud flashes of the explosions leave a red stain trickling down into the streets. The flow in connection with the colour red represents the blood of people killed or severely wounded by Russian attacks in the first hours of the invasion.

Politics: the colour red and its association with blood is a recurrent motif. In a tweet,⁶⁷ the Ukrainian foreign minister Dmytro Kuleba cautions the European Union (EU) countries not to bow to the demands of the Russian Federation to pay for oil and gas in rubles since such a transaction would be equivalent to collaborating in the killing of Ukrainians. Similarly, the digital rendering⁶⁸ of the same tweet foregrounds a big hand in black and white close to grabbing a coin. The coin symbolises the possible profits of meeting Russian demands and the greedy ulterior motives. By contrast, the background runs in red and white stripes, thus reifying the death toll Ukraine would have to bear in the event of an unfavourable decision for them. Paying the energy resources in rubles will cost the lives of innocent Ukrainians and metaphorically red will become more dominant within the artwork. Hence, I attach to the red flow a double meaning: the gas pipeline which finances the invasion and the killings it causes.

Resilience: while Ukraine was being bombed, its people executed and its children traumatised, to paraphrase the tweet⁶⁹ by Secretary of Defence Lloyd J. Austin III, and partially obstructed by international politics, the country withstood and the armed forces repelled the brutal and illegal assault on its independence. Such shades of hope and confidence do illustrate the possibility or perhaps rather the imperative of a better future without war and occupation within the Warline. The piece of art,⁷⁰ which is generated by a neural network,⁷¹ depicts a giant creature standing under what might be a steel plant. Wearing torn blue clothes and with a flag tied around its upper body, the head of the creature, resembling a cyborg or zombie, is lit up in yellow. In front of this character stands a blurred grey mass of people. There is only one person who sticks out, sitting elevated from all the others but still lower than the giant figure on something like a platform. Most probably a Russian soldier, he sits upright but seems mutilated as he wears an eye patch and has lost his legs. In front of him lies a removed black mask. It is not possible to recognise the soldier's facial expression but his gaze seems to be fixed on the giant cyborg, while the yellow-golden aura that surrounds him seems to be getting closer and closer. The figure of the cyborg,⁷² ie the connection of organism and machine, has gained traction in Ukraine since 2014–2015 and the battle of Donetsk International Airport, one of the most brutal battles of attrition in Eastern Ukraine. While Ukrainian forces had long withstood, they were ultimately defeated and the airport reduced to rubble.⁷³ Emerging from the rubble was the notion of the Ukrainian defenders as cyborgs because they resisted the

⁶⁷ Dmytro Kuleba [@DmytroKuleba] (2022) 'If any EU country bows to Putin's humiliating demands to pay for oil and gas in rubles, it will be like helping Ukraine with one hand and helping Russians kill Ukrainians with the other. I urge relevant countries to make a wise and responsible choice', *Twitter*. Available at: <https://twitter.com/DmytroKuleba/status/1506899782786244612> (Accessed: 6 September 2022).

⁶⁸ Day 29, 09:44 (no date). Available at: <https://metahistory.gallery/warline/347> (Accessed: 6 September 2022).

⁶⁹ Secretary of Defense Lloyd J. Austin III [@SecDef] (2022) 'Ukraine's hospitals have been bombed', *Twitter*. Available at: <https://twitter.com/SecDef/status/1520114633218080774> (Accessed: 6 September 2022).

⁷⁰ Day 65, 21:55 (no date). Available at: <https://metahistory.gallery/warline/457> (Accessed: 6 September 2022).

⁷¹ *Sirens Gallery* (no date) *sirens.gallery*. Available at: <https://sirens.gallery/> (Accessed: 6 September 2022).

⁷² Donna Haraway (1991, 149) defines the notion of cyborg as 'a cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction'. While Haraway's wider argument has far-reaching implications on how to assess the figure of the cyborg, in this case I rely on the narrow definition above.

⁷³ 'Бої за Донецький аеропорт' (transl. Battle of Donetsk Airport) (2022) *Вікіпедія*. Available at: <https://tinyurl.com/52v4ywbv> (Accessed: 23 November 2022).

numerically superior occupiers in inhuman conditions and seemingly possessed the ability to fight around the clock. The expression was first mentioned by a soldier of the Russian army or its proxies, but the label and its surrounding events were later artistically and politically re-enacted in many ways,⁷⁴ ranging from remembrance days⁷⁵ to stamps,⁷⁶ books and films – for instance, the popular Ukrainian war drama ‘Cyborgs: Heroes Never Die’ (ukr. Кіборги: Герої не вмирають).⁷⁷ In this regard, the notion of the cyborg represents the strength of Ukraine, its resistance, resilience and determination, which in the end will be superior to the occupiers – no matter what.

Ultimately, the three listed topics illustrate the artistic becoming of the Warline. It shows the transformation of topics as well as styles, reflecting the unfolding war along with the artistic exploration and meaning-making process. The points discussed also mirror the temporal aspects the MHMW aims to influence. The portrayal of sorrow represents the instant memorialisation of the victims, addressing both past and present. In contrast to this, artworks dealing with international politics aim rather at influencing the course of the war in real time, thus representing a present layer. Lastly, voices of resilience do instil hope for a better future.

In general, the illustrations bring to the fore the material traces of war and its abysmal grief. They tell a story of the war, oscillating between sorrow, hatred, resilience and confidence. But it feels at times like a double-faced diary: on the one hand, the official news sources are often delivered in a more dispassionate tone, where the horror hides behind the language; on the other, the screaming and touching graphic illustrations depict war-ridden Ukraine and its people. However, since digital art is more prominent within the composition of the artwork, the visual expression prevails over the written tweet, serving to shape reactions. What the Warline does, by drawing on artworks, is to bring the corporeal aspects of war closer in the digital space. It aims to make war felt within bodies, even though the visitors might be hundreds of kilometres away in front of their screens. Thus, the MHMW engagement resonates with what Agostinho *et al.* (2020, XII–XIII) call the ‘new digital materiality of war’,⁷⁸ arguing that digital connectivity has fundamentally changed the materiality of war, insofar as it has partially stripped armed conflicts of their materiality. In line with this, the MHMW contributes to the extended materiality of war through the exhibition of NFT artworks. The exhibited pieces of art combine information, memories, imaginations and structures of feeling to process how today’s war is experienced.

⁷⁴ Радіо Свобода (transl. Radio Liberty) (2015) ‘Слово «кіборги» словник назвав словом року’ (transl. Dictionary called the word ‘cyborg’ the word of the year), *Радіо Свобода*. Available at: <https://www.radiosvoboda.org/a/26779804.html> (Accessed: 7 September 2022).

⁷⁵ Радіо Свобода (transl. Radio Liberty) (2022) ‘День пам’яті захисників Донецького аеропорту – Зеленський закликав українців пам’ятати героїв’ (transl. The Day of Remembrance of the Defenders of Donetsk Airport – Zelenskyy called on Ukrainians to remember the heroes), *Радіо Свобода*. Available at: <https://www.radiosvoboda.org/a/news-oos-boyovyky-obstrilyzelenskyi-dap-kiborgy/31656567.html> (Accessed: 23 November 2022).

⁷⁶ Ukrposhta (2020) *Українська пошта нагороджує «кіборгів»* (transl. Ukrposhta honors cyborgs), *Ukrposhta*. Available at: <https://www.ukrposhta.ua/ua/news/57031-ukrposhta-vshanovu-kiborgiv-doneckogo-aeroporту-22-sichnja-zjavitsja-poshtova-marka-voni-vistojali-ne-vitrimav-beton> (Accessed: 23 November 2022).

⁷⁷ UFD Independent Films (2017) *КІБОРГИ | Офіційний тизер | Official teaser* 2017. Available at: <https://www.youtube.com/watch?v=dVFq1VJlog> (Accessed: 7 September 2022).

⁷⁸ This term relies on and expands Judith Butler’s call for ‘an extended materiality of war’ (Butler 2010, xi). In particular, Butler (2010) spoke about the capacities of drones and their onboard cameras to transmit images of the war on the one hand, but on the other, for the same cameras to act as part of the weapon that inflicts violence and horror upon people as well.

Discussion

The mapping of the MHMW highlights the becoming of the museum over the first months of its existence. It sheds light on the assemblages of human and non-human elements between which the agency of the museum as a site of persuasion (Morphy 2006) and as an active Ukrainian agent in the war is evoked. The mediation of instant affective memories of war in connection with the infrastructure illustrates the MHMW's attempts to bridge the spatial gap in order to establish an 'online crowd' (Stage 2013) which promotes support for Ukraine on different levels. Against this backdrop, the next section leads a critical discussion to illustrate, clarify and extend the issues that the examination of the MHMW has raised in shaping flattened instant memories of the Russian invasion: abundance of digital data and the production of digital archives. The discussion further explores how the mnemonic practices employed by the MHMW to mediate and remember the war, along with its efforts to build an 'online crowd', rely on the openness, uncertainty and participative aspects of the connective environment, while simultaneously, aiming to establish a coherent 'Warline'. Hence, this tension sheds light on the ways (virtual) museums are using the combination of different characteristics and functions (Olzacka 2023; Walden 2022). However, the design of the study has some limitations. Too little attention is placed on the visitors of the museum and their perception of the exhibitions. A closer look at the interactions between the museum and its visitors as well as how the digital artworks affect bodies would certainly complement and expand this research.

Connectivity and the omnipresence of data have turned today's war into 'an experience that is continuously streamed' (Ford and Hoskins 2022, 118). Consequently, digital technologies have led to a war that is pervasive at all times (Merrin 2018, 294), making the mediation of violence through connected technologies inevitable. This entails at least two implications: an information overload that complicates making sense of events (ibid 2018, 293), and thus the necessity to draw on certain types of information sources. Such a multiplicity of data does have ramifications for the creation of narratives as well (Timcke 2022⁷⁹). Namely, it implies a fragmented audience and the content has to be considered 'asynchronous' – not necessarily following the realities or the timeline of the battlefield. In addition, it is often decontextualised (Ford and Hoskins 2022, 15) and later on recontextualised in other forms. On this point, MHMW's Warline is one of the digitally available narratives that transform and modify our perception of the war. However, the aim extends beyond this: the chronology of war provided employing NFT artworks should form an 'eternal archive'⁸⁰ for later generations so that they will never forget the horrors. Yet the storytelling requires a flattening of the Russian invasion of Ukraine, leading to an archive that excludes other voices. This is further reinforced by the tidiness of the museum; the exhibitions are well structured and designed, thus doing away with the messiness and multilayeredness of the invasion. Similarly, while the MHMW claims to preserve the 'true history',⁸¹ which can be understood as implying the possibility of depicting the entire and closed past, the actual exhibition consists of traces of war (Winter 2013, 23–24). Thus, aspiration and reality inevitably have to diverge. Due to its claims, the MHMW neglects the selection methods which lead to the inclusion of particular tweets, inevitably reducing the complexity. Such a dismissal of absences creates an impression of the MHMW as a fixed and self-contained traditional archive instead of a fragmented emerging archive that acknowledges multiplicity and uncertainties.

⁷⁹ This reference is taken from a book review of the book 'Radical War' (Ford and Hoskins 2022).

⁸⁰ Meta History Museum of War (no date) *About us | Meta History Gallery*. Available at: <https://metahistory.gallery/about-us> (Accessed: 29 August 2022).

⁸¹ Meta History Museum of War (no date) *About us | Meta History Gallery*. Available at: <https://metahistory.gallery/about-us> (Accessed: 06 October 2022).

The role of archives in the process of knowledge production, and therefore in simultaneously silencing other accounts of what has happened, has been debated and criticised widely in social sciences (Agostinho *et al.* 2020; Carter 2006; Derrida 1996; Foucault 1972; Mbembe 2002; Trouillot 1995). Based on this, the archive as a site where sources, ie ‘artifacts and bodies that turn an event into fact’, are classified, collected and stored represents ‘an active act of production’ (Trouillot 1995, 48–52). Similarly, Derrida (1996, 17) reminds us that the archive is not simply a place where things are stored, but rather a space of contestation regarding what can be collected and what not. Hence, it is crucial to bear in mind that the process of storing stuff ‘produces as much as it records the events’. Through methods of selection – which include, for instance, events, producers, guidelines and spaces – archives (re)produce historical narratives by shedding light on the chosen presences while silencing their inherent absences (Trouillot 1995, 53). However, although these assumptions are still perfectly true, the changes brought by connectivity have altered the ways archives work and are perceived, doing away with the limitations of physical space and thus creating new opportunities to produce pastness. This development is epitomised by the MHMW and its exhibition of NFT artworks. Indeed, the connective archive, part of the datafication of the mundane and the everyday, is the first medium that has more space than there is stuff we can produce (Hoskins 2018, 3). While connectivity was first seen as a means to a more inclusive archive, it has become evident by now that such a view is too sanguine. Today’s connective archives are still permeated by authority and power (Agostinho *et al.* 2020, X). Yet what has altered is the mobility and malleability of the things recorded. In this regard, Ernst (2018a) notes rightly that the internet is characterised by its dynamic and perpetual updating. Of course, archives do not make up the internet, and neither can the internet be considered an archive. But connective archives are contributing to the updating of the internet, insofar as they are accumulating data by ‘permanently archiving presence’ (Ernst 2018b, 144). Collecting and processing events that are becoming past is exactly the *modus operandi* of the Warline. It is thus ‘archiving presence’.

The production of instant memories and its sense of immediacy are linked to the structural design of today’s connective platforms, which are often shaped by speed and newness. Hoskins and Shechlin (2023, 459) claim that these changes will eventually lead to a ‘memory of the present for the present’, thus doing away with memory that can potentially be actualised in the future. However, while the MHMW is involved in the broader struggle over how the Russian war against Ukraine is memorialised in the present, its emerging archive does still shape a future that could be actualised. This is linked to the selection methods which form a narrativisation of the war. In connection with the affective potential of the instant memories that rely on the chronological and visual composition of the Warline, the remembering of the unfolding Russian invasion aims at having an impact in the ‘new ecology of war’ (Ford and Hoskins 2022), ultimately to support a country under attack.

Coda

This paper illustrates how the virtual museum becomes an active, engaged and provocative agent in the Russian war against Ukraine. The MHMW generates the agentic capacity by its embeddedness in human and non-human elements: the infrastructure, exhibitions and users, engaging with each other in multiple ways. By employing digital methods and digital ethnography, I trace the interplay of the different modes and how in their becoming they take part in repulsing the occupiers. This approach illustrates the double incompleteness of the virtual museum – the evolving nature of the exhibition and the unfolding of the war. Furthermore, it demonstrates that artistic renderings of the war are not only a

visual representation and textual narrativisation of the past in the present but rather a way to wield influence on the events that will be exhibited in the future.

The virtual museum blurs online and offline distinctions. Within the new ecology of war (Ford and Hoskins 2022), the MHMW deploys the various possibilities of our connective environment to collect donations for the Ukrainian armed forces, build an archive of the invasion for later generations and remember the atrocities committed by the occupying forces. These efforts are reflected in the affordances of the museum. All in all, the MHMW is shaping instant forms of memory (Ekelund 2022) to convey on multiple levels – visual, emotional and technical – the physical and mental wounds the war is inflicting on Ukraine. The aim, I argue, is thereby to bridge the spatial dimension, to bring war closer. By doing so, the museum tries to create an ‘online crowd’ (Stage 2013) as a way to further grow and multiply the impact of the museum in Ukraine and beyond. The kind of impact the MHMW seeks to achieve is mirrored in the exhibitions. In this regard, the MHMW’s most engaging hall Warline does not simply sketch a Ukraine that is suffering and devastated, but rather transfuses through its actions and NFT artworks voices of hope and resilience. The different roles of the MHMW – museum, memorial museum, gallery and archive – are thus not closed but emerging. And there are, as Derrida (1996, 36) reminds us regarding the archive, always questions of the future at stake. Thus, the unfolding MHMW assemblage and the instant memories point towards the openness of what is yet to come: towards becoming in virtuality and beyond, towards victory.

Data availability statement. Data supporting the findings of this study are accessible via the provided footnotes and via the Internet Archive Wayback Machine under the following link: https://web.archive.org/web/20220901000000*/metahistory.gallery. The Wayback Machine captures and saves the content of webpages at a certain point in time, thus the tool allows to track the modifications of the domain ‘metahistory.gallery’. In case certain data is not or no longer accessible, it can be made available upon request from the author (sebastian.graf@hist.lu.se).

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