'Could we possibly see your tattoo? If not that's totally fine!' Holocaust survivors' playful activism on TikTok

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Abstract

Over the past few years, digitalisation has led to the development of new forms of Holocaust memory, with advances in digital technology reshaping and introducing alternative ways of remembering, understanding and representing the Holocaust. The purpose of this study is to examine how three Holocaust survivors – Lily Ebert (100), Gidon Lev (88) and Tova Friedman (85) – share their firsthand experiences on TikTok by segmenting traumatic memories using the platforms' audio–visual aesthetic and adapting their testimonies for the attention spans of young users. Based on 1-year content production and detailed analysis of 84 videos across the three profiles, a mixed-methods approach was applied to identify how each survivor interacts with their 'fans' using a unique communication style and with distinct goals. The results of the multimodal analysis show that the three survivors are engaged in meaningful acts of playful online activism on the memory of the Holocaust by bringing testimony and daily life together, in order to protect historical facts and combat antisemitism and Holocaust distortion.

Keywords

Holocaust distortion, Holocaust survivors, online activism, social media, TikTok

Introduction

The Second World War and the Holocaust are among the most significant collective memories that continue to shape Western identity (Pakier and Stråth, 2010). Since the 1990s, a cosmopolitan

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dimension of memory has emerged, with the annihilation of European Jewry gaining increasing prominence (Levy and Sznaider, 2006). In recent decades, digital technologies have played an expanding role in the globalisation and internationalisation of Holocaust remembrance. The 'transnational turn' (Assmann, 2017) and the 'connective turn' (Hoskins, 2018) suggest that digital technologies are reconfiguring the construction of social and individual memory. While memory and its implications are shared, studied and remembered across different nations and cultures, transcending geographical boundaries, the advent of social media and other digital communication platforms has revolutionised the way memories are formed and disseminated. In contrast to traditional individual or localised collective memories, digital platforms facilitate the formation of 'connected' memories that are interactive and participatory, host multiple narratives and perspectives, and are widely accessible and shareable. With the expansion of new modes of Holocaust commemoration and representation, the 'era of witness' (Wieviorka, 2006) has evolved into an 'era of the user' (Hogervorst, 2020), resulting in the emergence of new memory ecologies (Hoskins, 2016) and innovative forms of Holocaust commemoration and education (Walden, 2021). As an increasing number of people, including those who did not personally experience the Holocaust, become active in shaping its memory, digital platforms, technologies and user interactions play a central role in these modern memory frameworks.

The participatory culture of social media (Jenkins et al., 2013) has permeated the digital practices of many Holocaust organisations (Ebbrecht-Hartmann, 2021; Manca, 2022; Manca et al., 2022a) and other content creators (Commane and Potton, 2019; Dalziel, 2016; Gonzáles-Aguilar and Makhortykh, 2022), which can sometimes conflict with Holocaust memorial gatekeepers' concerns that serious content is not overshadowed by more trivial content (Dalziel, 2021). On one hand, the ability of users to create, share, remix and collaborate on content has led to more democratic and decentralised forms of media production and consumption (Jenkins, 2006). On the other hand, the Internet and social media have enabled the dissemination and spread of hateful content, including antisemitism, Holocaust denial and distortion, on an unprecedented scale (Hübscher and von Mering, 2022). Due to the potential virality of antisemitic and negative content (Wetzel, 2017), the phenomenon of online hate is particularly relevant: hateful comments made online lead to more negative implicit attitudes towards the target population than neutral comments (Weber et al., 2020).

As we mark the 79th anniversary of the Holocaust, due to the growing awareness of ignorance and distortion surrounding the topic, the need for education about this historical event is increasingly urgent. At the same time, scholars (Schweber, 2015; Stein, 2014) have identified a phenomenon of 'Holocaust fatigue', characterised by desensitisation or indifference to Holocaust narratives and education due to factors such as repeated exposure, generational distance, competing narratives and misuse in public discourse (Neiger et al., 2023; Novis-Deutsch et al., 2023; Trzoss et al., 2023). However, while 'Holocaust fatigue' is primarily observed in Western cultures – especially in regions where Holocaust education is an integral part of the curriculum and where the Holocaust is prominent in public discourse, media and cultural representations (Novis-Deutsch et al., 2023) – the landscape is shifting. As global communication expands and Holocaust memory becomes more universally accessible, the issue of recognition in educational contexts is not limited to Western settings (Konkka, 2023).

Despite the growing number of individuals who limit or distort historical facts about the Second World War and the Holocaust or demonstrate limited understanding of historical concepts and events (Alper, 2020; Lawson, 2017), recent research suggests that it is important to continue to teach about the Holocaust. There is a growing interest among Gen Z in the Nazi era, with many drawing parallels between today's racist and discriminatory practices and the motivations of the

perpetrators. In addition to being digitally literate, many young people seem to prefer 'snackable' content and a 'fusion of digital and analogue' experiences (Arolsen Archives, 2022).

The initial adoption of TikTok by museums, organisations and survivors as a communication tool during the COVID-19 pandemic (Ebbrecht-Hartmann, 2021) highlights the importance of adapting communication styles and media formats for younger audiences (Ebbrecht-Hartmann and Divon, 2022). While the first instances of TikTok being used for Holocaust remembrance and education may have been driven by circumstances with limited face-to-face interactions, the use of the platform has continued to grow and evolved into a multi-faceted approach. Nevertheless, there are several questions that need to be addressed (Ebbrecht-Hartmann, 2022): how can we capture the complexity of Holocaust remembrance in a 60-second video? How can TikTok videos use their multimodal format to represent the complexity of Holocaust memory? How can users be actively engaged and participate in the process?

This study examines how Holocaust memory is platformised (Nieborg and Poell, 2018; Poell et al., 2021) on TikTok by three Holocaust survivors who began using the social media platform during the COVID-19 pandemic (Ebbrecht-Hartmann, 2021). Using TikTok's audio–visual format, survivors tailored their testimonies to the attention spans of younger users, segmenting their traumatic memories to promote Holocaust education and combat antisemitism and distortion by serving as agents of memory. Through the use of TikTok's socio-technical affordances, the platform functions as a convergence point for different trajectories of Holocaust remembrance and education. While this seems to be a trend on other social media platforms, where shared human interests and emotions about the Holocaust can merge and transcend national boundaries and narratives (Manca and Passarelli, 2023), the online activism of Holocaust survivors on TikTok takes on unique characteristics. Through their specific experiences and intentions, and by 'playing' with the features of the platform, survivors have created a bridge between past and present to represent their memories and engage with young users' interests. This study also examines user engagement and interaction with profiles to understand what content resonates with audiences and how users respond to different types of content.

The platformisation of Holocaust testimony

The phenomenon of 'platformisation' (Nieborg and Poell, 2018; Poell et al., 2021) highlights the central role of digital platforms in transforming cultural production and practices, with an emphasis on profitability and algorithmic content curation. While this development offers opportunities for increased reach and innovation, it also presents challenges in balancing algorithmic benefits with risks, such as reduced diversity and centralised control, which are key concerns in the digital age (Tintiangko et al., 2023).

To draw a parallel with the domain of Holocaust memory, the advent of digitalisation has played a profound role in the transmission and remediation of Holocaust memory (Bolter and Grusin, 2000). In the field of virtual Holocaust memory (Boswell and Rowland, 2023; Walden, 2021), the preservation of survivors' testimonies is a top priority. Educational activities involving personal encounters with Holocaust survivors are believed to provide unique insights into the history of the Holocaust and create lasting memories (Ebbrecht-Hartmann, 2021). By presenting the Holocaust as a story of individuals rather than just numbers (Holloway, 2023), personal testimony from Holocaust survivors can be a powerful medium for educating young people about historical trauma (Azad and Carlsson, 2024). As the last Holocaust survivors approach the end of their lives, researchers and educators are exploring various media formats to preserve their accounts. The iconic figure of the 'survivor-witness', a central element of contemporary Western moral culture,

stands as a universal symbol of both despair and hope (Dean, 2019), demanding specific technological efforts for its ideological and mnemonic preservation.

The USC Shoah Foundation's Institute for Visual History and Education has pioneered digital preservation of Holocaust testimony (Shandler, 2017), recently with projects such as Dimensions in Testimony, in which survivors answer questions in a 360-degree setup, creating interactive 'virtual conversations' for museum visitors (Frosh, 2018). Another project, The Last Goodbye, features a VR-guided tour of the Majdanek concentration camp by survivor Pinchas Gutter (Marrison, 2021; Zalewska, 2020). While these hologram-based initiatives provide immersive experiences, they also present pedagogical and ethical challenges, such as influencing users' moral responses and potentially affecting empathy (Marcus et al., 2022; Schultz, 2023).

In online social networks, digital development has made platforms such as Facebook and Instagram popular for virtual Holocaust remembrance (Birkner and Donk, 2020; Ebbrecht-Hartmann, 2021). Facebook pioneered virtual spaces for sharing memories (Menyhért, 2017; Popescu, 2019), while Instagram projects such as 'Eva.Stories' (https://www.instagram.com/eva.stories/) and 'Ich bin Sophie Scholl' (https://www.instagram.com/ichbinsophiescholl/) offer a new form of media witnessing while raising questions of authenticity in Holocaust remembrance (Henig and Ebbrecht-Hartmann, 2022; Klein, 2022; Steir-Livny, 2020). While 'I am Sophie Scholl' has been criticised for trivialising history, it, along with 'Eva.Stories', represents a shift towards engaging younger generations (Murphy, 2023) and the descendants of survivors of collective trauma in Holocaust remembrance through their everyday digital media (Hirsch, 2001).

Notwithstanding the various formats of remediation, digital Holocaust witnessing (Marrison, 2021) focuses primarily on disseminating vital historical information and engaging viewers' empathic capacities, inviting them to connect deeply with victims' stories and experiences (Stephens, 2021). This connection is not simply passive consumption, as the ultimate goal is to foster meaningful relationships and initiate dialogue among viewers, ensuring that the memories and lessons of the Holocaust remain active and influential in contemporary discourse (Pinchevski, 2019).

In this study, we aim to advance understanding of the platformisation of digital Holocaust witnessing by analysing the direct testimony of three survivors who, along with their partners and descendants, engage young audiences on TikTok. Our aim is to deepen understanding of their experiences and the continuing relevance of their stories. However, the incorporation of Holocaust victims into the digital ecology of social media highlights the tensions in Holocaust commemorative culture (Stephens, 2021). Balancing historical integrity with popular culture, collective memory with self-expression, and bridging generational communication gaps is challenging. These tensions are exacerbated by the need to address the sensitive and often politicised nature of Holocaust remembrance in the public sphere (Novis-Deutsch et al., 2023; Subotić, 2023), and the diverse understandings and interactions of different stakeholders and generations with Holocaust memory and its contemporary significance.

TikTok's socio-technical affordances

Founded by Chinese entrepreneurs in 2017, TikTok has rapidly grown in popularity as a video-sharing platform, becoming the fifth most used social media app in the world. As of January 2024, TikTok had 1.1 billion active users in 160 countries, including more than 150 million in the United States alone. Furthermore, 37.3% of these users are below the age of 25, while 32.9% are between the ages of 25 and 34 (Demandesage, 2024). The widespread adoption of TikTok has immediately raised concerns about its geopolitical implications, particularly as it poses a significant challenge to the cultural, economic, and political dominance of US edtech companies (Gray, 2021). There are

also reservations about the platform's algorithms and their potential role in appealing to young users and causing addiction (Wang and Guo, 2023).

As a socio-technical system (van Dijck, 2013), TikTok has specific affordances (Bucher and Helmond, 2018; Gibson, 1979) that set it apart from other platforms and contribute to its widespread popularity. Some of these unique affordances include short-form videos, typically ranging from 15 seconds to 3 minutes in length; the For You Page (FYP), an algorithmically driven feed that curates content based on user behaviour, engagement and preferences; easy-to-use video editing tools, that offer a wide range of effects and sound libraries, enabling users to create professional-looking content directly on their smartphones; sound and music integration features, that allow users to overlay popular music, sound bites and voiceovers onto their videos; Duet and Stitch features, that make it easy for users to react to, remix or co-create content with other users; interactive engagement tools such as polls, Q&A sessions and clickable website links embedded in videos, that promote interactive content that goes beyond passive viewing; and AR filters and effects, where the platform presents a variety of augmented reality effects that can change appearances, backgrounds and even introduce interactive components.

Known primarily for its bite-sized video content, TikTok's inherent rhetorical characteristics (Edwards and Gelms, 2018) set it apart from other major social media platforms in several ways. For example, while Instagram has incorporated video over time through Stories, IGTV and Reels, it does not match TikTok's editorial depth and remains largely image-centric. YouTube, originally tailored to long-form video, recently added 'Shorts' to compete with TikTok, but the latter remains inherently designed for short clips, for which it offers more sophisticated features. Similarly, Twitter has incorporated video and even live streaming with Periscope, but its primary affordance is the 'tweet' and short-text updates. Finally, while Snapchat pioneered ephemeral content, it tends to focus on private, person-to-person sharing, in contrast to TikTok's emphasis on public, discoverable content. In summary, while there is overlap in functionality between TikTok and other platforms, TikTok's specific combination of short videos, music integration, collaborative features and algorithmic discovery feed makes it unique in the social media landscape.

When compared to other digital Holocaust remembrance and education projects on social media, the swelling popularity of TikTok is evidenced by the huge follower numbers of these profiles, numbers that dwarf those of older platforms such as Facebook, Twitter and Instagram (Manca et al., 2022b). Several factors influence this rise: platform specificity – some newer social media platforms cater to specific niches or interests, potentially attracting more engaged and passionate audiences through influencers (Albadri, 2023); algorithmic advantages – TikTok uses a robust algorithm that promotes content based on user engagement, making it easier to gain followers quickly (Wang and Guo, 2023); and less competition – compared to established platforms such as Facebook, Twitter and Instagram, newer platforms such as TikTok often face less competition, allowing users to stand out and gain followers more effortlessly.

TikTok as a space for playful online memory activism

For the specific focus of this study, we concentrate on TikTok as a space for digital activism (McCaughey and Ayers, 2003). Thanks to the power of algorithmic visibility for members of marginalised groups, the platform's features can, for example, amplify a unique climate activism where non-experts become dominant voices, shaping youth consensus through an 'atmosphere of mutual concern' about climate change (Hautea et al., 2021). Or Asian/American women can creatively occupy the #StopAsianHate hashtag as an anti-racist space-making practice to counter anti-Asian racism and build pan-Asian solidarity (Lee and Lee, 2023).

A specific form of digital activism is made available in a way that is both entertaining and educational (Abidin, 2021). 'Playful activism' is a form of digital activism that uses humour, creativity, fun and playful tactics to address serious issues, promote social change or challenge dominant power structures (Lewis, 2021). Playful activists employ art, satire, pranks and games to engage and provoke dialogue, leveraging evolving platform affordances for individualised, strategic and low-commitment participation, emphasising emotion-driven virality and a shift towards playful 'politainment' (Castillo-Esparcia et al., 2023). On TikTok, playful activism leverages adaptable memetic templates to enable everyday users to engage in emerging socio-political scenarios, positioning it as a performance rooted in affordance-based capabilities (Cervi and Divon, 2023). The multimodal nature of TikTok allows users to mimic, parody, and create variations on one another's works to reach a wider audience. As such, TikTok contributes to the online activism by providing an innovative medium through which memetic affordances may be played through meme challenges, duets and reactions (Cervi and Marín-Lladó, 2022). During the escalation of violence between Palestinians and Israelis in May 2021, Palestinian TikTok users harnessed the platform's culture of imitation and rivalry for playful activism. They took advantage of the collaborative, conversational, and community-driven socio-technical features to engage regular users in resistance through looping meme videos (Cervi and Divon, 2023). Using TikTok, Palestinian activists developed creative micro-videos that not only raise awareness but also foster a sense of community and unity around the conflict by tapping into the platform's culture of shared enjoyment (Abbas et al., 2022).

While TikTok's affordances allow for unique forms of online activism, it is worth noting that digital memory activism represents a broader sphere within the realm of digital engagement. Increasingly recognised as an important and worthwhile form of political engagement, memory activism refers to efforts by communities, activists, scholars and artists to challenge, reshape or draw attention to how history and memory are publicly represented and understood (Ranger and Ranger, 2023). Located at the intersection of memory and social movement studies (Gutman and Wüstenberg, 2023), the activist turn in memory studies focuses on 'the strategic commemoration of the past in order to achieve or prevent change in public memory by working outside state channels' (Gutman and Wüstenberg, 2022: 1071).

In the digital age, online platforms such as websites, social media and virtual archives are crucial for memory activism and the dissemination of alternative histories (Fridman, 2022). This 'connective turn' (Hoskins, 2018) is exemplified by hashtag memory activism, which creates new platforms for alternative memory narratives. However, while beneficial, algorithms and participatory cultures risk promoting dangerous rhetoric (Walden, 2022), as seen in controversial hashtags such as the #HolocaustChallenge, where users mimicked deceased Holocaust victims in video memes, intertwining personal connections with Holocaust memory (Divon and Ebbrecht-Hartmann, 2023). TikTok activism includes also efforts to counter online antisemitism and create a positive environment in the #JewishTikTok community in the United States. Using memes, dances, and challenges, 'JewToks' use parody and humour for socio-political advocacy, challenging antisemitic stereotypes (Divon and Ebbrecht-Hartmann, 2022). In this sense, TikTok provides a distinctive platform for Jewish creators, Holocaust institutions and survivors to engage with younger audiences, a feat that is difficult to achieve through traditional media.

This study shows how three Holocaust survivors use playful memory activism to unpack, contextualise and inform historical and contemporary Holocaust memory issues while navigating the unique audiovisual grammar of social media (Ebbrecht-Hartmann and Divon, 2022). Through their content, they facilitate a dialogue that connects a younger generation with survivors and actively contributes to the development of a new form of Holocaust remembrance. This research analyses how survivors successfully adapt to the limitations of the TikTok platform and create content that

sparks meaningful conversations with young users. Using features such as sound, music and video clips, they engage viewers and address the lingering effects of a painful past as activists to preserve the memory of the Holocaust and to combat antisemitism and Holocaust distortion.

The case study

Scholars have extensively researched memory and survivor testimony for several decades (Greenspan, 2010; Wieviorka, 2006). Such testimonies serve as invaluable resources for historical research and Holocaust education, providing a lens for understanding history from a human perspective. Incorporating these testimonies into the classroom is seen as an effective way to remember Holocaust survivors and victims, humanise statistics and foster empathy in students (Foster et al., 2020; Gray, 2014).

Today, the responsibility for Holocaust memory has been passed on to the grandchildren and great-grandchildren of survivors. Although there is a significant literature on the intergenerational transmission of Holocaust trauma (Johns et al., 2022), less attention has been paid to the role that the third and fourth generations play in the transmission of memory (Hepworth, 2019). This study provides an opportunity to closely examine the role of the 'generation after' (Hirsch, 2012) of grandchildren and great-grandchildren in supporting survivors in the transmission of Holocaust memory through digital platforms such as TikTok. The study will allow us to explore how these younger generations are actively engaged in Holocaust remembrance and how the legacy of the Holocaust is preserved and transmitted.

This study focuses on three Holocaust survivors – Lily Ebert (100), Gidon Lev (88) and Tova Friedman (85) – who have brought their extensive experience in educational outreach to the digital realm of TikTok, adapting to its unique affordances to engage younger audiences in Holocaust remembrance with the help of their younger relatives:

1. Lily Ebert and Dov Forman (@lilyebert). London-based Lily Ebert[1], a survivor from Hungary, has long been an active Holocaust educator. Her collaboration with her great-grandson, Dov Forman, led to the creation of a widely followed TikTok account and the co-authoring of 'Lily's Promise'. Her TikTok presence, with over 45 million likes, extends Lily's commitment to education, using the platform to share her experiences and engage with a younger, digital audience.

2. Gidon Lev and Julie Gray (@thetrueadventures). Israeli survivor Gidon Lev[2], who began sharing his story with schoolchildren later in life, teamed up with partner Julie Gray to create a TikTok account to promote Holocaust education and combat antisemitism. Their account, complemented by Gidon's biography 'The True Adventures of Gidon Lev', reached over 460,000 followers and demonstrates Gidon's adaptability in using digital platforms for advocacy and education.

3. Tova Friedman and Aron Goodman (@tovafriedman). Tova Friedman[3], a survivor living in the United States, has embraced TikTok with the help of her grandson, Aron Goodman. Her channel, which shares her Auschwitz experience and combats antisemitic ideas, has attracted over 500,000 followers. Tova's digital engagement, alongside the publication of her memoir, 'The Daughter of Auschwitz', demonstrates her continued commitment to Holocaust education through modern, interactive media.

Table 1. Information extracted through the TIKWM API.

Information about the analysed profiles	Username
	Number of followers
	Number of followings
	Number of likes
	Number of videos uploaded
Information about the videos of the analysed profiles	Title
	Duration
	Number of views
	Music
	Number of likes
	Number of comments
	Number of shares
	Number of downloads
	Creation date
Information about comments and replies to comments for each video	Textual content
	Creation date
	Number of likes

Methodology and analysis

Methodological approach

To examine the patterns of interaction in the three profiles and their most successful content, we used a mixed-methods approach, combining quantitative methods with qualitative analysis (Creswell, 2014; Creswell and Plano Clark, 2017). We employed data mining techniques and application programming interface (API) software to extract TikTok videos and their associated metadata, using a Python script for data extraction and storage. We applied machine learning methods to analyse different types of data within these videos, including voiceovers and textual labels on frames. Specifically, we used speech-to-text and OCR (Optical Character Recognition) algorithms to capture and process audio and textual information in the videos (Yuning et al., 2021).

We used various libraries and APIs to extract metadata, audio transcripts and textual content from TikTok videos, including captions and user comments. Specifically, we used the TIKWM API ('TIKtok video no WaterMark' – https://www.tikwm.com/) to extract metadata about users, videos, comments and comment replies. The range of API calls supported is detailed at https://rapidapi. com/yi005/api/tiktok-video-no-watermark2/, and Table 1 lists the full data extracted through the TIKWM API.

We extracted video speech transcripts using OpenAI's Whisper, a deep learning-based speech recognition model that combines recurrent, convolutional and fully connected neural networks for high accuracy and the ability to handle accents, non-standard pronunciation and background noise (https://openai.com/research/whisper; Radford et al., 2023).

Text in TikTok videos was analysed using PaddleOCR, a deep learning-based OCR library that provides advanced OCR templates for various applications (https://github.com/PaddlePaddle/ PaddleOCR). The PP-OCR model within PaddleOCR, developed by Du et al. (2020), uses convolutional neural networks (CNN) for image feature extraction and recurrent neural networks (RNN) for character recognition. This model also uses a pruning technique to streamline the CNN network, reducing the computational load.

In a second stage of analysis, in order to identify the content that resonated most with the followers, we conducted a qualitative analysis (Denzin and Lincoln, 2000) of the posts, focusing on

their level of interaction. Using a multimodal analysis approach (Kress, 2000; Kress and Van Leeuwen, 2001), we examined the audio-visual-textual elements of these videos and explored how users engaged with them. This methodology allowed us to identify the unique characteristics of each content creator and the different forms of user interaction that involved audio, visual, and textual components.

By triangulating findings from both social media communication and user engagement in a specific context, this study deepens our understanding of the 'new ecological memory' (Bruce, 1985) as represented by Holocaust content creators on social media.

Procedure

To ensure a representative dataset, our analysis focused on content produced between 1 October 2021 and 30 September 2022. We chose this timeframe to ensure that the videos had enough time to accumulate a significant number of views and comments, with the aim of gathering a meaningful volume of reactions for comparative analysis. On 10 January 2023, our scripting software harvested a total of 917 videos: 275 from @lilyebert, 532 from @thetrueadventures, and 110 from @tovafriedman.

To optimise our qualitative analysis with a limited dataset, we employed a data reduction technique as recommended by Namey et al. (2008). Our aim was to identify which types of content were most likely to drive engagement and generate meaningful discussion. We achieved this by targeting content with the highest and lowest engagement metrics, such as comments and likes. Rather than cataloguing every post or activity on profiles, our focus was to dive deep into the multimodal aspects of the content and the discussions around it from a curated set of videos. Through this approach, we aim to establish a method of analysis that has the potential to be scaled up for larger datasets in subsequent studies. Our selection of the top 10 and bottom 10 videos from each profile was based on the following criteria:

- The highest number of comments (including replies)
- The highest number of likes
- The lowest number of comments (including replies)
- The lowest number of likes

After removing the duplicates, we were left with a total of 84 videos to analyse: 30 from @lilyebert, 29 from @thetrueadventures, and 25 from @tovafriedman. Using our script software, we extracted comments and responses from each video, in addition to the relevant metadata. However, due to the limitations of the API used, we were only able to extract 115,630 comments and 29,642 replies. This represents approximately 87% of the total comments and responses. Detailed figures for the three profiles can be found in Table 2.

The qualitative analysis of the selected videos was guided by a constructivist grounded theory approach, which emphasises the subjective nature of the research process and the role of the researcher in constructing meaning from the data (Charmaz, 2014). Our aim was to derive insights and understanding directly from the data, rather than applying a pre-existing theoretical framework from the outset (Glaser and Strauss, 1967). Two researchers were involved in the process, both of whom were responsible for coding and theory development. They regularly discussed and compared their findings to ensure the reliability and robustness of the emergent theory. Initially, the researchers independently labelled each piece of data with a code that simultaneously categorised, summarised and explained that piece of data. During the axial coding phase, they labelled data chunks with codes that represented themes or ideas that emerged from the content. Then, in the

Table 2. Data statistics extracted from the 84 videos analysed.

	@lilyebert	@thetrueadventures	@tovafriedman	TOT
# videos	30	29	25	84
# comments	67,447	30,769	17,414	115,630
# replies to comments	8,674	11,817	9,151	29,642

selective coding phase, they aimed to identify a core category that could be related to other categories. Each piece of data was compared with others to identify similarities and differences. It is important to emphasise that the data collected and analysed was not intended to be representative of the population as a whole.

Given the multi-faceted and multimodal nature of TikTok videos – which consist of layers of moving images, text and sound – we focused on analysing several features. These included the 'caption' (text displayed below the video), any text visible within the video itself, the full transcript of any spoken content, and song lyrics where applicable.

Analysis

Through the first stage of the analysis, seven themes that capture the types of content in the videos were identified. The first theme, 'Facts about the Holocaust', concentrates on specific events or general information related to the Holocaust, whether experienced firsthand or related to others. It includes interviews, documents, photographs and other related materials.

The second theme, 'Survivor testimony', focuses on the contemporary roles and activities of survivors. This includes actions such as visiting schools, giving speeches and participating in commemorative events, as well as recounting past experiences to underline the importance of remembrance.

The third theme, 'Reaction to antisemitism, Holocaust denial and distortion', covers any content aimed at countering antisemitism or incidents of Holocaust denial or distortion. It also includes strategies to counter hate speech and other forms of discrimination.

The fourth theme, 'Daily life', encompasses all activities of current and everyday life that do not explicitly mention the Holocaust (e.g. birthdays, Shabbat, Jewish holidays, etc.). These activities are often associated with Jewish identity and culture, or with active participation in the public life.

The fifth theme, 'Engagement invitation', refers to directly addressing followers with an invitation to comment, ask questions, and so on. The aim is to foster engagement by encouraging online users to interact with the survivor, thereby strengthening the bond between the survivor and their followers.

The sixth theme, 'Book promotion', refers to the promotion of one's own autobiographical book. This can include using various marketing methods such as social media campaigns, speaking engagements and attending book festivals.

Finally, a seventh theme, 'Fundraising Campaign', focuses on fundraising endeavours to finance the creation of a book or film detailing the life of the survivor. The full list of themes and some examples are shown in Table 3.

In a subsequent stage, we grouped these themes into the following three main patterns of discourse that emphasise strategies of discursive practices (Wodak and Meyer, 2009): (1) Protecting the facts, (2) merging testimony with everyday life, and (3) countering antisemitism, denial and distortion. We will detail these patterns of discourse in the "Results" section.

Table 3. List of themes and related examples.

Theme	Example
Facts about the Holocaust	*Caption*: none *OCR text video*: "Standing in front of The Angel of Death [broken heart emoji]" *Soundtrack*: See You Again (Piano Arrangement) – Alexandre Pachabezian *Audio transcription*: "When we arrived in Auschwitz, there was a man standing and there was a doctor, Mengele. And he decided who will stay alive and who will die. They took my mother, my younger brother, my younger sister, straight to be killed" *Interaction feature*: none
Survivor testimony	*Caption*: "#answer to [anonymised] Thank you so much! #thanks#holocaust#survivor#history#truth#thankful#thankyou#mystor#israel#jewish#unitedstates#usa#poland@TikTok *OCR text video*: "How are you", "Holocaust Survivor Q&A–How are you? Answer"" *Soundtrack*: Imperial Piano–Treia Music *Audio transcription*: "I am doing remarkably well and I am very grateful to all of you that you're giving me a chance to share my story because at 84, I don't know how long I'll be here. So it's like a miracle that I'm able to talk to so many of you and so many of you are interested and I know that you will keep my story and tell it to your children and to your grandchildren when I'm not here anymore. So I feel very blessed" *Interaction feature*: Response
Reaction to antisemitism, Holocaust denial and distortion	*Caption*: "Reply to [anonymised] #neveragainneveragainisnow #vigilance #respect #history #holocaustsurvivor #crimesagainsthumanity" *OCR text video*: "Reply to [anonymised]'s comment: Get over it. ""get over" the Holocaust?" *Soundtrack*: original sound – Gidon & Julie *Audio transcription*: "Really, get over it, get over the Holocaust? Do you think this is like a spilled cup of coffee that you wipe clean and everything is okay afterwards? No my dear sir. This is the loss of friends, family, uncles, aunts, brothers, sisters, mothers, we don't get over it just like that. We remember it and we work through it and make sure nothing ever, ever like that happens again anywhere, anytime, any place" *Interaction feature*: Response
Daily life	*Caption*: "Thank you @unitedhatzalahofisrael @united_hatzalah_israel for the once-in-a-lifetime experience of volunteering for the week. The calls were crazy!! @israel @Embassy of Israel #fyp #israel #savinglives #ncsy #yomncsy #unitedhatzalah #rescue" *OCR text video*: "Hatzalah Rescue", "Volunteer EMS!!" *Soundtrack*: Sun goes down – Andreas Roehrig *Audio transcription*: "We're here in Israel helping out a food at Hatzalah volunteering for the week and it's been really fun. We want to thank Sally and United Hatzalah of Israel. Thank you guys so much. It's been so much fun and Uh-huh, I just want, thank you guys" *Interaction feature*: none

(Continued)

Table 3. (Continued)

Theme	Example
Engagement invitation	*Caption*: "Meet Tova Friedman, a Holocaust Survivor from Tomashov Mazovsky, Poland. #shoah #israel @israel @lilyebert #alwaysremember #poland #fyp #education #Fy" *OCR text video*: "MEET TOVA" *Soundtrack*: Inspiration – WavebeatsMusic *Audio transcription*: "Hi, my name is Toma Friedman and I am a holocaust survivor. I was a child of six when I was in Auschwitz. If you have any questions at all, I would love to answer them. And soon a book will be coming out that I'll describe everything in detail. Behind this camera is my wonderful grandson and he is managing the account" *Interaction feature*: Shoutout
Book promotion	*Caption*: "Excited to see you #london! It's in BIO #daughterofauschwitz #shoah #holocaust #survivor #jewish #britain #england #xyzbc #fyp #foryou @Lily Ebert & Dov Forman #PepsiApplePieChallenge" *OCR text video*: "Live UK Press release!", "Live UK Book Launch!", "Jewishmuseum.org.uk", *Soundtrack*: Feel the groove – Queens Road, Fabian Graetz *Audio transcription*: "I am very excited to go to the UK and launch my new autobiography, The Daughter of Auschwitz. I'll be speaking at the Jewish Museum August 30th at 6 o'clock. To get tickets, go to Jewishmuseum.org. The link is in my bio" *Interaction feature*: none
Fundraising campaign	*Caption*: "#tiktokgrandpa invites you to #zoom by contributing to our #kickstarter and #help make #thenewadventuresofgidonlev #documentary #cometrue #thankyou ahead of time! #fyp #viral #holocaustsurvivor #truestory" *OCR text video*: "Can you imagine . . .", "Let's Zoom", "a documentary about Gidon and Julie?", "It's happening", "Directed by the award-winning director of Queen Mimi", "with Renee Zelwegger andZach Galifianakis", "But we need your help", "Contribute to our Kickstarter campaign (Link in our bio)", "Get a film credit and a one-one Zoom with Gidon and Julie", "for contributions of $250+", "Made before June 25th,12 pm EST", "The New Adventures of Gidon Lev: The story of a Holocaust survivor and the writer who loves him" *Soundtrack*: I Love It (feat. Charli XCX) – Icona Pop *Audio transcription*: "Okay, this is going to be just like a TikTok. Are you ready? Yes. I'm ready. Oh, wait. What did you even say? Not this way. Oh, I think we're . . . Horizontal. Can you see us though? What do you think? The leg is not good. Okay. Hold on. How do you look, are you ready? I need my glasses. I want to thank you from the bottom of my heart for contributing to our field. It's a dream come true. Thank you very, very much. Me too. We'll see you with a premiere. Did you take your shirt?" *Interaction feature*: none

In a further phase of our analysis, we classified TikTok interaction features based on the affordances of the platform. This included identifying videos as duets (merging with another clip for a side-by-side or split-screen effect), stitches (incorporating up to 5 seconds of another user's video), replies to a 'fan', and shoutouts (mentioning or acknowledging another user). In addition, we categorised videos as 'Event promo' if they were created to promote an upcoming event.

Finally, our focus was on the comments with the highest number of responses. We selected the top 10 comments, each with an average of 377.5 (*SD*=272.6) responses, and performed textual and contextual analysis on them. Five of these 10 comments came from the @tovafriedman profile, with responses ranging from 143 to 1066. Meanwhile, three came from the @lilyebert profile, with responses ranging from 197 to 384, and two came from the @thetrueadventures profile, with responses ranging from 218 to 576.

Table 4 shows the list of the top 10 comments, along with the videos and related themes that prompted each comment. The theme that generated the most comments was 'Facts about the Holocaust' (*N*=7), while 'Responding to antisemitism, Holocaust denial and distortion' received two top comments and 'Survivor testimony' had one top comment.

The three TikTok profiles were analysed in accordance with legal frameworks such as the EU's General Data Protection Regulation (GDPR), which imposes strict guidelines on the use of personal data, as well as TikTok's terms of service and privacy policy. Robust data security measures have been put in place to protect the information collected. Profiles were analysed to protect sensitive information such as location, personal interests, or information about friends and family. To ensure ethical research practices, we followed the guidelines outlined in the ESRC Framework for Research Ethics and Stevens et al. (2015) and the European Commission (2021) on Internet research and social media data in research. We were careful to distinguish between public and private spaces, and to protect data to ensure confidentiality and anonymity. In this study, we only used publicly available TikTok profiles as data sources, and anonymised the comments and responses presented as examples to protect the privacy of the individuals who made them.

Results

Engagement and interaction

Our analysis of the 84 videos showed that they were mainly divided into the categories 'Daily life' (*N*=23, 27.4%), 'Facts about the Holocaust' (*N*=21, 25.0%) and 'Survivor testimony' (*N*=18, 21.4%). Nine videos (10.7%) dealt with issues such as antisemitism, Holocaust denial and distortion, while eight videos (9.5%) contained invitations to get involved. 'Book promotion' (*n*=4, 4.8%) and 'Fundraising campaign' (*n*=1, 1.2%) were less common.

We also observed that the three profiles differed in terms of the predominant content they contained (Table 5). The profiles of @lilyebert and @tovafriedman were mainly focused on 'Facts about the Holocaust' (23.3% and 44.4%, respectively), 'Survivor testimonies' (33.3% and 16.0%, respectively) and 'Daily life' (33.3% and 20.0%, respectively). The profile of @thetrueadventures, however, focused more on 'Reaction to antisemitism, Holocaust denial and distortion' (31.0%) and 'Daily life' (27.6%).

The analysis of user engagement showed that 'Facts about the Holocaust' and 'Reaction to antisemitism, Holocaust denial and distortion' videos received the most comments and likes (Figure 1). On the other hand, 'Daily life' videos seemed to generate less engagement, while 'Survivor testimony' videos seemed to be evenly distributed between the two sub-groups in terms of engagement.

When analysing the interaction features, we found that the most frequently used types were Response and Duet (Figure 2). Specifically, the use of Response was prevalent in the profile of @tovafriedman (N=13), while the use of interaction features in the profile of @thetrueadventures was concentrated on Duet (N=7) and Response (N=8). In contrast, @lilyebert's profile was found to be the least interactive, with four Responses. These findings suggest that the use of interaction features may differ between profiles and influence user participation in different ways.

Table 4. The top 10 comments.

Profile	# responses	Comment	Corresponding video	Theme of the video
@tovafriedman	1066	"just remember, there are people alive today who honestly believe being asked to wear a mask is the same thing as what this woman went through."	*Caption:* "#Reply to [anonymised] Her 'name' was A-27633. #shoah #fy #fyp #plestine #israel #jewish #jewtok @israel @lilyebert #education #xyzbca" OCR text video: "Reply to [anonymised]'s comment "I met a lady that was part of this horrific event. She had a tattoo on her wrist. Was wondering if you have one too, and if we can see it. She also", "A-27633" *Soundtrack:* Sad – AShamaluevMusic *Audio transcription:* "I had no name, my name was 27.633. I was tattooed by a young woman whose hands trembled because she wasn't happy to tattoo children. And she told me how to take care of it afterwards so it shouldn't swell. She gave me a rag with cold water and she told me to press it tightly not to rub it. And she said, remember, this is your name. You better memorize it. I didn't know any numbers. I have never been to school but I very quickly memorized it because I knew it was different between life and death" *Interaction feature:* Response	Facts about the Holocaust
@thetrueadventures	576	"it pisses me off when anti vaxxers try to compare a choice to not be vaccinated to not having a choice of being in a literal traumatic torture camp."	*Caption:* "#duet with [anonymised] #holocaustsurvivor #stopantisemitism #foryoupage #fyp ל #fyp #shoah #antivaxxer #comeon #notfunny" OCR text video: "2 days into 2022 . . . [very sad face emoji]", "So excited For 2022 !!!", "[anonymised]" *Soundtrack:* Good vibes – Ellen Once Again *Audio transcription:* "I'm really excited to jump on this new trend. I'm calling it first day at an unvaccinated camp". "Shame on you. Are you trying to look like a Holocaust survivor? Because you don't want to be vaccinated? I was four years in a concentration camp. Here, I wore the star. Do you want me to help you? Have the day you deserve" *Interaction feature:* Duet	Reaction to antisemitism, Holocaust denial and distortion
@tovafriedman	407	"What languages do you speak?"	*Caption:* "#Reply to [anonymised] how many languages do you speak?! #laguage #shoah #fyp #listen #storytime #english #yiddish #german #germany #jew #arab #education" OCR text video: "What languages do you speak?", "Reply to [anonymised]'s comment: Does she still speak german? Or did she at all after being liberated?", "Languages", "Languages German Polish Yiddish Hebrew English" *Soundtrack:* Feeling – Official Sound Studio *Audio transcription:* "I understand German but I don't speak it. I probably can speak Polish. I speak Yiddish Hebrew and of course English" *Interaction feature:* Response	Facts about the Holocaust

Table 4. (Continued)

Profile	# responses	Comment	Corresponding video	Theme of the video
@lilyebert	384	"How does someone not know?"	*Caption:* "#stitch with [anonymised] I survived the hell of Auschwitz-Birkenau. I am a witness. 🫶 #holocaustsurvivor #learnontiktok #98yearold #witness #history #neverforget #strongwoman #tiktokgrandma #love #holocaustmemorialday #jewish #concentrationcamp #hell #survivor #remember #germany #hungarian #jew" *OCR text video:* "WHAT IS THE HOLOCAUST? THIS IS SO SAD", "THE WHAT? THE HOLOCAUST? THIS IS SO SAD", "I DON'T KNOW", "My name is Lily Ebert", "I am a 98year old Holocaust, Auschwitz, survivor.", "Over 100 members of my family were murdered during the Holocaust.", "I survived the hell of Auschwitz-Birkenau where over 1.1 million people were murdered during the Holocaust.", "Do you want to learn about the Holocaust? Follow this account to hear what happened to me and my family" *Soundtrack:* Schindler's List – Movie Theme – Michele Garruti *Audio transcription:* none *Interaction feature:* Stitch	Survivor testimony
@lilyebert	279	"The scary thing is it wasn't even that long ago. 🫤"	*Caption:* "Pregnant women in Auschwitz 🫶🏻 #holocaustsurvivor #learnontiktok #heartbraking #97yearold #greatgrandma #neverforget #strongwoman #hungarian #germany #jew #jewish #oldperson #important #sostrong" *OCR text video:* "It is difficult what I am about to tell now", "But they [the pregnant women] tried to kill their own babies.", "It was better to kill their own babies than to let the Nazi's experiment on their babies" *Soundtrack:* Schindler's List – Movie Theme – Michele Garruti *Audio transcription:* "It is difficult what I am telling you now. But they right killed their babies. Killed their babies. You think, what I am telling you, but that was better than to let the Nazis experiment about the babies" *Interaction feature:* none	Facts about the Holocaust

(Continued)

Table 4. (Continued)

Profile	# responses	Comment	Corresponding video	Theme of the video
@tovafriedman	267	"Our ALMIGHTY lord Jesus Christ spared all ur lives. Thank you for sharing ur UNBELIEVABLE story God bless you my dear lady."	*Caption:* none *OCR text video:* "[?] [anonymised] asked "How were you & the other children able to escape being immediately sent to the gas chambers?" *Soundtrack:* Sad Song – Silver Ash *Audio transcription:* "They rounded us up all the children in our barrack and walked us to the gas chamber. We got in there, was a gigantic room. We all got undressed and they told us to make sure we find our clothing as if we weren't going to be killed. We stood there naked for a number of hours freezing, absolutely freezing. And then they just sent us back. They were screaming and yelling at each other and I understood at the age of six and a half that they got the wrong barrack and they're going to get us later. But in truth, I really don't know what happened why they sent us back" *Interaction feature:* Response	Facts about the Holocaust
@tovafriedman	238	"Not so fun fact if we were silent for 10seconds for every holocaust victim we would be silent for 5years"	*Caption:* "Reply to [anonymised] You have a responsibility to continue her legacy 🖤☐ #survivor #shoah #israel #storytime #xyzbca @israel @lilyebert" #holocaust" *OCR text video:* "Reply to (anonimysed)'s comment: "My great memaw is A-27627"] *Soundtrack:* Cornfield Chase – Hans Zimmer *Audio transcription:* "I would have loved to meet your grandmother. She must have been together with me because the numbers were consecutive, but I don't know her. And I wish I knew more about her because we lived together in the same place. I had a friend who unfortunately committed suicide, but her number was one ahead of mine. Because we were fighting who's going to be ahead if she won, because she was a year older. But it's really very interesting that your grandmother have a number like that" *Interaction feature:* Response	Facts about the Holocaust
@thetrueadventures	218	"Even dark humour has its limits . . ."	*Caption:* "#duet with [anonymised] Thank you for calling this out. The original is "under review" and the IG has gone private. #antisemitism must be called out and condemned. #holocaustsurvivor #fyp" *OCR text video:* "A Holocaust survivor's reaction to [anonymised] TikTok", "Antisemitism is a sickness" *Soundtrack:* original sound – Good Trouble *Audio transcription:* "Guys, get it? Like the holocaust. It's funny. Fucking prick" *Interaction feature:* duet	Reaction to antisemitism, Holocaust denial and distortion

(Continued)

Table 4. (Continued)

Profile	# responses	Comment	Corresponding video	Theme of the video
@lilyebert	197	"And here in America, people are comparing wearing masks and getting a vaccine to the holocaust. Unbelievable."	*Caption:* "One of the last remaining survivors of Auschwitz 🏳️ #holocaustmemorialday #holocaustsurvivor #98yearold #learnontiktok #strongwoman #concentrationcamp #neverforget #history #jew #survivor #jewish #robertrinder #oneshow #theoneshow #bbcone" *OCR text video:* none *Soundtrack:* Schindler's List – Movie Theme – Michele Garruti *Audio transcription:* "More than six million Jewish men, women and children were murdered by the Nazis in the Second World War, including members of 98-year-old Lily Ebert's family. Lily is one of the last remaining survivors of Auschwitz and has agreed to share her story with me. "That was just the last picture before they took us to the camp". In July 1944, at the age of 20, Lilian and her family were deported from Hungary and taken to Auschwitz. "When we arrived, first and first, five dead, travelling nearly without food, without water. We were already half dead. When we went down from the train and this man, with one movement, he sent people all to right or to the left. My mother and my younger sister and brother were sent to their left". This would be the last time she'd see them. Lily later discovered that those on the left-hand side were taken to the gas chambers. "When did you realize what Auschwitz was?". "When a chimney fire came out and we asked people what sort of factory is here, somebody said it is not a factory. They were burned. Your parents, the children, your parents is burning. And you know what? I saw it with my eyes and I still cannot understand how is that possible. But it is true". Lily has a precious reminder of her mother, a gold necklace she hid from the Nazis, first in the heel of a shoe and then every day in a piece of bread. "Where is the gold necklace?". "That means for me everything, because that is the only thing that I have for my mother". "What's your message to those who look at your story and wonder how you have the strength to carry on?". "Never give up hope" *Interaction feature:* none	Facts about the Holocaust

Table 4. (Continued)

Profile	# responses	Comment	Corresponding video	Theme of the video
@tovafriedman	143	"Do you see many similarities with what is going on now worldwide? Thank you for sharing your story 💗"	*Caption:* "Reply to [anonymised] 11 million killed, 6 million Jews. @israel #israel #shoah #poland #fyp #education #neverforget #tovafriedman #survivor #fy" *OCR text video:* "What was the holocaust?", "Reply to lucaswhitehouse22's comment "whats the holocaust" *Soundtrack:* Sad piano ballad (moist / BGM)(936730)–TrickSTAR MUSIC *Audio transcription:* "The Holocaust is the most tragic event in the 20th century. A man, Adolf Hitler, decided that in order to have his country Germany be great, he has to kill other people for that. Six million Jews were killed, murdered, they were shot, they were gassed, they were drowned. Among them a million and a half children. Other people, blacks, gypsies, mentally ill, gays, everybody that he felt he deemed not having the kind of pure blood that he wanted for his country to be great" *Interaction feature:* Response	Facts about the Holocaust

Table 5. Distribution of videos across the three profiles.

	@lilyebert	@thetrueadventures	@tovafriedman
Facts about the Holocaust	7 (23.3%)	3 (10.3%)	11 (44.4%)
Survivor testimony	10 (33.3%)	4 (13.8%)	4 (16.0%)
Reaction to antisemitism, Holocaust denial and distortion	0 (0.0%)	9 (31.0%)	0 (0.0%)
Daily life	10 (33.3%)	8 (27.6%)	5 (20.0%)
Engagement invitation	2 (6.7%)	4 (13.8%)	2 (8.0%)
Book promotion	1 (3.3%)	0 (0.0%)	3 (12.0%)
Fundraising campaign	0 (0.0%)	1 (3.4%)	0 (0.0%)
TOT	30 (100.0%)	29 (100.0%)	25 (100.0%)

In the following sections, we explore the video and aesthetic content of the TikTok profiles according to the following three primary patterns of discourse that emerged from the analysis: (1) protecting the facts, (2) merging testimony with everyday life and (3) countering antisemitism, denial and distortion. We then consider the most common conversation patterns that emerged from the analysis of comments and responses.

Patterns of discourse

Protecting the facts. One of the most engaging patterns among users is the sharing of firsthand experiences during the war and the Holocaust. This theme often includes videos explaining what the Holocaust was like, what happened in Auschwitz during the selections or in a ghetto. Many of these videos answer questions from young users, such as 'What happened at Auschwitz?' or 'Did survivors receive psychological assistance after liberation?' Other videos address common misunderstandings or misconceptions, such as 'Is it true they pulled out the gold teeth?' or 'He was never at a camp unless he has the tattoo'. In some cases, the questions relate directly to a survivor's experience, such as 'Did you go in the showers or burners, or did you escape?' or 'Did you meet Anne Frank?' These types of questions allow for a more nuanced reflection on life in the camp or ghetto.

Interestingly, tattoos are one of the main symbolic elements that most attract the interest of young users, as they are seen as a quintessential symbol of concentration camps. Users often ask survivors about their tattooing experiences, whether it is possible to see the tattoo, or whether survivors have ever considered having it removed (Figure 3).

It is important to note that survivors are mindful of their audience, especially the younger generation, when sharing their experiences. They aim to provide essential information within a short time frame of 30–60 seconds, while avoiding traumatising their young viewers. They often share dramatic details, such as the terrible smell emanating from the crematorium ovens or the killing of small children on arrival at Auschwitz. However, they do this in a way that is age appropriate and respectful of their audience.

These videos employ various multimodal aesthetics to enhance their emotional impact. Archival images, such as family photographs and footage of extermination sites, are often used to illustrate survivors' accounts. In addition, background music, such as sad instrumental pieces or footage from the film 'Schindler's List', is often included to heighten the emotional intensity of the videos.
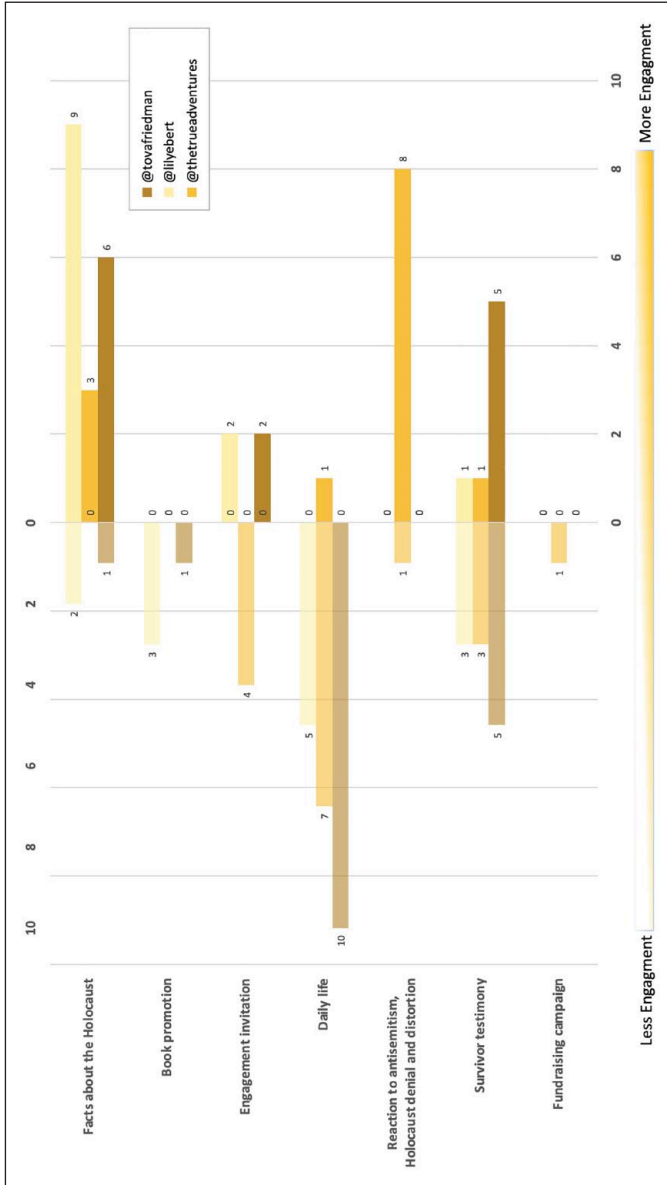
Figure 1. The distribution of the most and least engaging videos across the three profiles.
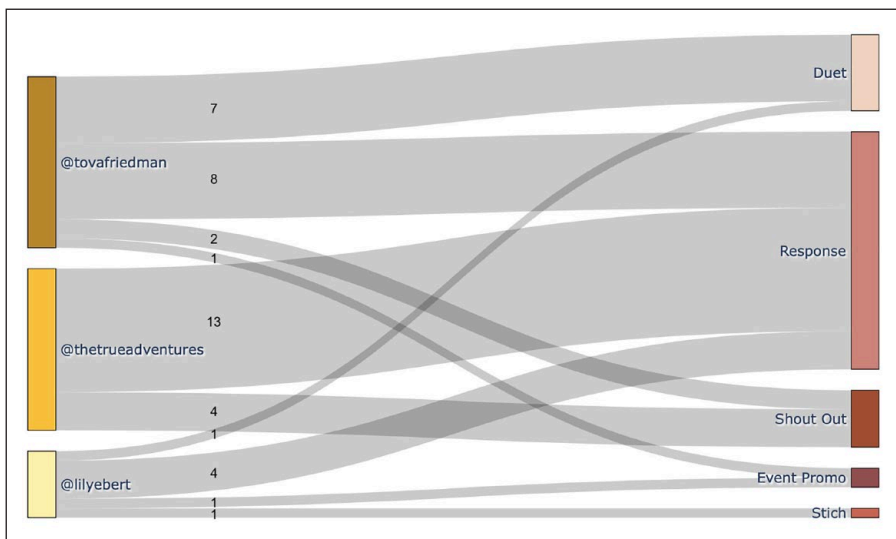
Figure 2. Distribution of interaction features across the three profiles.

Merging testimony with daily life. In addition to recounting their experiences during the Holocaust, survivors often highlight their current roles as witnesses and their daily lives. These videos focus on survivors' commitment to preserving the memory of the Holocaust and their involvement in Holocaust education. They show how survivors have used their experiences to connect with the younger generation. This pattern includes participation in Holocaust Memorial Day events, invitations to appear on television programmes, and direct invitations to their followers to ask questions and participate in TikTok conversations about the Holocaust. Videos promoting autobiographical books, fundraising for new projects, expressing support for young artists or taking part in civic engagement events also fall into this category (Figure 4).

However, not all videos in these categories receive the same level of attention, with some classified as 'less engaging'. These include Shoutouts and event promotions in general. Despite this, these categories still make extensive use of interactive features such as Duets or Stitches, indicating a conscious use of TikTok's aesthetic grammar. This demonstrates the creative ability of the three profiles to use the platform's tools to their advantage.

Countering antisemitism, denial and distortion. Videos aimed at countering antisemitism and Holocaust distortion can all be found on the @thetrueadventures profile. In this sense, @thetrueadventures could be seen as a platform for education through videos that contradict antisemitic views and claims. Thanks to the Response or Duet functionality, parallels between the Holocaust and mandatory vaccination against COVID-19 (Figure 5, left) or jokes alluding to the extermination of Jews by gas (Figure 5, right) are addressed in particular. For example, @thetrueadventures has posted videos in response to outright denialist comments such as 'when are you going to admit it was all a lie?' or 'get over it'. In response to other TikTokers or screenshots of antisemitic comments, @thetrueadventures confronts antisemitism and hate speech by addressing the issues directly. This is to ensure that users are aware that such comparisons are inappropriate and that jokes about the Holocaust should not be made. Sometimes a middle finger seems to be the best response to
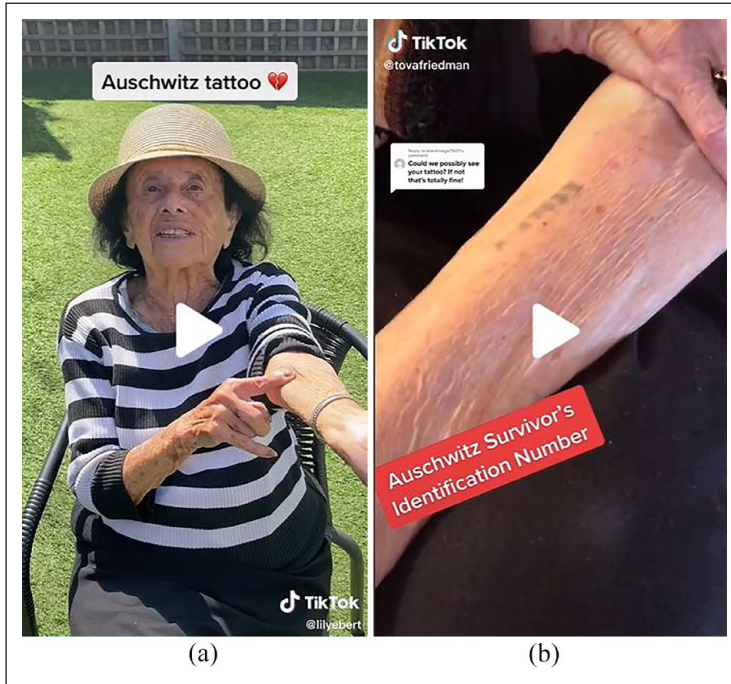
Figure 3. Survivors showing their tattoos: (a) Lily Ebert and (b) Tova Friedman.

comments such as 'not to say the Holocaust was justified, but Europe would be more proud, more homogeneous, and stronger if Germany won'.

Conversation patterns

Establishing and rejecting similarities. The conversation pattern that generated the most comments (Table 3) relates to the themes of 'Facts about the Holocaust' and 'Reaction to antisemitism, Holocaust denial and distortion'. In at least four cases, across all three profiles, discussions also relate to policies regarding the management of the COVID-19 pandemic and vaccines, which seemed to be of particular interest to young users at the time the videos were posted. These discussions have generated a flood of comments, with some commentators drawing parallels between the current situation and the Nazi era and the Holocaust as a pretext for questioning the use of masks and the administration of anti-COVID vaccines. This has led to the formation of two opposing groups of commentators.

The first group supports the idea that making any comparison is 'extremely disrespectful' and 'insulting to those whose families suffered during the Holocaust'. They acknowledge that drawing parallels with the Holocaust may be too extreme, and they view the Holocaust as a unique and horrific historical event that any comparison to it is inappropriate and disrespectful. The second group draws parallels, citing reasons such as coercion into vaccination and observations of adverse effects in others in support of their comparisons.

In three cases, an initial comment from a user complaining about comparisons has sparked a very heated debate between supporters of the two positions. Similarly, in another case, an 'innocent' question such as 'Do you see many similarities with what is going on now worldwide? Thank
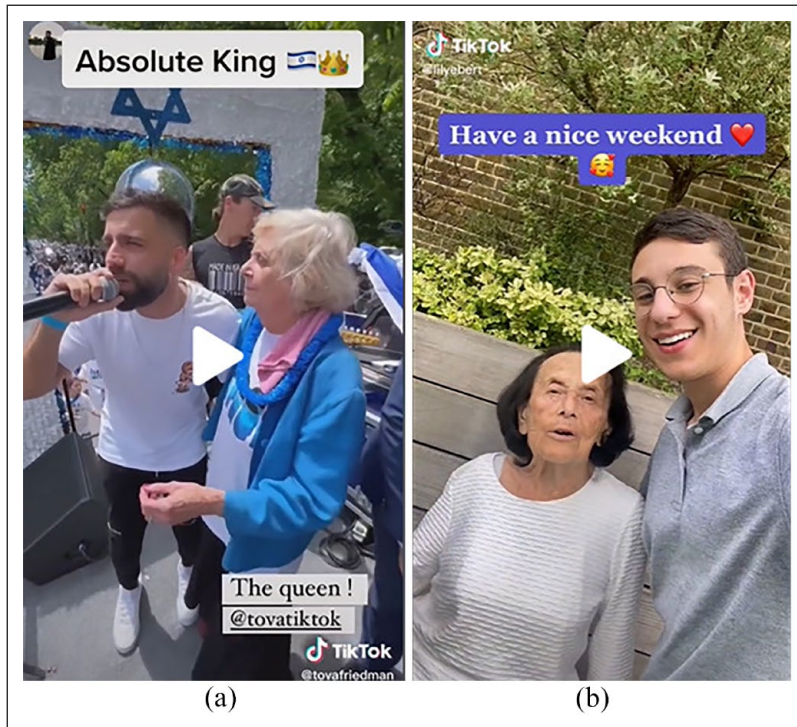
Figure 4. Survivors celebrating life: (a) Tova Friedman and (b) Lily Ebert with Dov Forman.

you for sharing your story' was met with a quick and sharp response from the page administrator – 'No, I don't see many similarities with what's going on now, and if you do, you can get off my page' – which sparked an intense debate.

The sources of power that underpin opposing positions on similarities between the Holocaust and current events extend beyond official bodies (e.g. WHO, CDC, etc.). Both opponents and supporters of such similarities draw on testimony from Jewish organisations and other survivors to support their claims. In addition, a family's direct connection to the Holocaust offers a unique perspective on the issue and lends an authenticity that is beyond reproach (Table 6).

Delving into humour, education and global connections. Other conversations deal with the justification and limits of humour in relation to the Holocaust. Comments such as 'Even dark humour has its limits . . .' spark debates about its appropriateness in discussing the event. The consensus seems to be that dark humour should be reserved for those who have experienced the Holocaust or their descendants as a way of coping with the trauma. However, there are certain topics that should be off-limits to everyone, regardless of heritage or experience.

Conversations with less polarity deal with the state of Holocaust education in different countries and its importance at different educational levels. Comments such as 'How can anyone not know?' spark conversations about the global importance of Holocaust education. There is general agreement that the story should be told accurately and thoroughly to ensure that future generations understand both its significance and its far-reaching consequences.
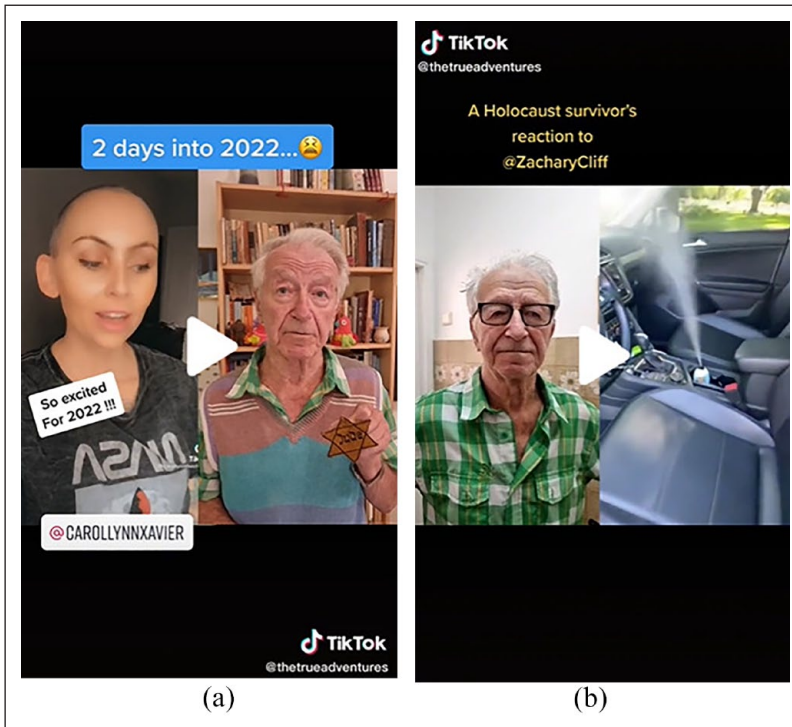
Figure 5. Duets exposing Holocaust distortion and antisemitism: (a) Gidon Lev and (b) Gidon Lev.

In one case, the profile owner initiated a discussion by asking 'What languages do you speak?' which generated a large number of responses. The diversity of responses indicates that followers come from a number of countries and speak a variety of languages, highlighting the international reach of the profile and creating an audience of global proportions.

Discussion

In this study, we explored how three Holocaust survivors use TikTok to engage in remembrance activism (Gutman and Wüstenberg, 2023; Ranger and Ranger, 2023). By analysing their agency of playful civic engagement, we analysed the intersection of individual and collective memory with digital communication (Castillo-Esparcia et al., 2023). In line with the nature of TikTok, Holocaust survivors occasionally incorporate elements of humour, music and trending challenges to make their content relatable and accessible to the platform's younger demographic (Lewis, 2021). This approach does not trivialise their experiences but presents them in a way that resonates with the culture of the platform. Survivors integrate personal anecdotes, historical data and modern reflections into their videos, often emphasising the overarching message of 'never forget' and the importance of remembrance. These high-engagement videos on TikTok show that its predominantly younger audience values learning about the Holocaust, underlining the continued relevance of Holocaust education despite claims of Holocaust fatigue (Nesfield, 2015). This also demonstrates the ability of Holocaust survivors to use video activism for social and educational change, transcending traditional dichotomies such as online/offline and digital/analogue (Askanius, 2019).

Table 6. Examples of comments rejecting or supporting the parallels between the Holocaust and COVID-19 policies and their respective sources of power.

Advocating non-confrontation		Comparing and contrasting	
Statements	Sources of power	Statements	Sources of power
"You have no idea what she has been through. You dishonor her and the dead by comparing the mandates to the horrors of the Holocaust."	"my grandpa was in the Holocaust and he gets so fucking mad when people compare. he was a kid hiding underneath his mother's dead body so he wouldn't be killed. He lost everyone he knew and all his family and is still looking for relatives. just get the vaccine."	"You think it got to that overnight? it was a series of mandates that were enacted that finally resulting in that Look @ the big picture!"	"I knew a survivor. She said it started with the loss of it one freedom at a time. Such as medical mandates. People had forced medical procedures."
"This a vile comparison. Anti-vax are not going to end up with all property confiscated, tortured, have family murdered or be murdered themselves."	"Jewish organizations have repeatedly condemned this analogy as offensive and wildly inaccurate. How about respecting that?"	"Unstable economy, new leadership, propaganda and hatred towards one group of people was the beginning . . . sound familiar?"	"other survivors describe similarities, as far as how it began"
"not one single part of the holocaust had literally ANYTHING in common with today. masks slow the spread of a pandemic. youre clearly an idiot."	"The first person who compares the two to my face is getting laid out I have Jewish friends and I won't be taking any shit from anyone"	"that's not what's its about. .. we are afraid of control getting out of control and it eventually leads to this. not that what we have now is remotely the same by any means. .. buy many who remember the fall that led up them being taken and sent to camps, have spoken out that they see a resemblance"	"I've spoken with quiet a few Jewish people who see things the same as me. you obviously don't care about a government trying to control us though."
"For those that CHOOSE to be a public health threat, there will be consequences. Consequences that in NO WAY compare to those of the victims of Holocaust"		"I've said this to u B4. I don't compare the pandemic to WW2, I compare the actions of the governments."	
"Being put in a concentration came, starved, beaten, sleeping on wood, working like a slave has nothing to do with wearing a fkn mask during a pandemic"		"Those people aren't comparing the mask to what she went through I think they're comparing the freedom being taken away like hers and not having choice"	
"But it really didn't start like this. At all. Vaccine mandates – stemming from lifesaving/protecting measures. The holocaust: stemming from hatred."		"Started with the small things, one right taken away then another the list goes on, it didn't start with the trains and camps Karen"	
"Yes, it isn't. This woman didn't decide whether or not she was Jewish. She didn't ask to be hated because of how she was born. You choose to not get vaccinated"		"I think people are just pointing out comparisons to how it started, propaganda and division between people. . . history needs to be taught so not repeat"	
"Ppl were murdered for their religion, for literally being born Jewish. Anti vaxxs are bullied for a choice they willingly made. stop. It's insulting"		"it's not disrespectful at all we all are human whatever happened to Jews or others all and what happened that time is happening now and back then same"	

However, despite their previous extensive experience in sharing their stories with different audiences, these survivors have had to adapt to new digital communication methods, especially on a platform as complex as TikTok. For all three survivors, their initial ventures into TikTok were inspired by (younger) family members who were experienced in the intricacies of the platform, an influence that is evident in the survivors' adoption and continued engagement with their users. Descendants of the Holocaust, as the 'generation after', play a crucial role in maintaining Holocaust remembrance (Hirsch, 2012), helping to keep these important narratives alive and relevant for modern audiences. While this generation's connection to the past primarily involves imaginative efforts and the carrying of trauma, survivors' use of TikTok uniquely blends direct testimony with insights from the realm of postmemory. Indeed, this case study examines a distinctive approach in which multiple layers of memory are intimately intertwined and connected, forming a tapestry of recollections and reinterpretations of the past that participate in the formation of new memory ecologies (Hoskins, 2016). From this perspective, platforms such as TikTok may provide new avenues for their manifestation and contribute to the transnational turn of Holocaust memory accelerated by digital platforms (Assmann, 2017). Younger generations, far removed from the direct experience of the Holocaust, can reinvigorate interest and provide fresh perspectives by blending current cultural references, trends, and aesthetics with historical content. This approach transcends national boundaries (Assmann, 2014) and promotes a cosmopolitan understanding of memory (Levy and Sznaider, 2006). Furthermore, the algorithmic nature of the platform extends the reach of these memories, optimising content based on user engagement and bringing Holocaust narratives to the forefront of global consciousness.

The juxtaposition of modern cultural elements with historical content on platforms can lead to tensions due to specific communication constraints. This balance between playful and serious narratives requires an understanding of platform logics such as algorithmic curation, hypertextuality, interactivity and visuality (Hase et al., 2023). The challenge is to condense profound experiences into short clips without oversimplifying, yet create compelling storytelling for audiences accustomed to concise content. The following are some of the opportunities and challenges identified from our analyses.

The potential of multi-layered storytelling for online memory activism

The three profiles use different aesthetic strategies to match TikTok's style and create artistic acts of remembrance, balancing sound and image (Ebbrecht-Hartmann and Divon, 2022). Each profile displays a unique style, integrating specific elements that reflect their creative vision. The study reveals that all three profiles use TikTok's whimsical tone for storytelling, promoting an affective mode of engagement (Papacharissi, 2016). This highlights TikTok's ability to convey complex emotions in an innovative and engaging way, demonstrating its capacity for deeper communication beyond humour and lip-syncing (Zeng and Abidin, 2021). Survivors engage with younger audiences on TikTok in a playful way through creative storytelling, including animation, music and multimedia; participating in respectful challenges; and humorously debunking Holocaust myths. Their frequent response videos feature high-user interaction and offer a personal insight into the survivor experience. The Q&A format encourages in-depth discussions, creating a dialogue between survivors and users. In particular, young users feel comfortable asking challenging questions, from the basic 'What is the Holocaust?' to sensitive inquiries about survivors' tattoos. This open engagement, perhaps due to their limited understanding of the complexities of the Holocaust, highlights TikTok as a safe, non-judgmental space for these discussions (Kansteiner, 2018).

The tattoos of Auschwitz survivors, particularly the Number Tattoo, are a focal point of interest for young TikTok users. Recognised as a symbolic representation of the Holocaust (Baruch-Stier,

2015), this tattoo has become emblematic of Auschwitz and the survivor experience. Interestingly, some young users even judge the authenticity of a survivor's story by the presence of this tattoo. The cultural significance of the Number Tattoo stems from powerful liberation images of children showing their arms to a Soviet cameraman in Auschwitz (Ebbrecht-Hartmann et al., 2022). Influenced by new media, socio-political changes and generational shifts, the perception of this physical memorial has evolved, as seen in the adoption of these tattoos by Israeli descendants of Holocaust survivors (Klik, 2020). Through their interactions with these symbols, TikTok users contribute to reinforcing and shaping popular narratives and iconic images, thereby framing the collective memory of the Holocaust (Popescu and Schult, 2015).

Stitches and duets on TikTok are particularly effective at countering antisemitism or Holocaust distortion. For example, creators challenge videos that inappropriately compare the Holocaust to current events, such as the use of the 'Hanging Tree' from The Hunger Games to compare concentration camp treatment to COVID-19 vaccinations. In general, creators either use subtle music that blends into their content or leverage trending audio memes for their messages (Ebbrecht-Hartmann and Divon, 2022). Stitches and Duets are also used to promote Jewish bloggers and creators by sharing their handles with a wider audience. However, these videos tend to be less popular with users, who prefer content that focuses on historical facts and the personal experiences of the three survivors.

Overall, survivors are particularly effective in engaging young people in Holocaust awareness (Azad and Carlsson, 2024). This is consistent with young people's interest in the Nazi era and their desire for more comprehensive Holocaust education (Arolsen Archives, 2022). Young viewers resonate with content based on personal narratives, as firsthand accounts of the Holocaust enhance their understanding and engagement (Foster et al., 2020; Gray, 2014). In addition, TikTok's interactivity encourages two-way dialogue, allowing young users to question, reflect and contribute, deepening their investment in learning (Jenkins, 2006).

Challenges: historical analogies under dispute

Analysis of this study shows that many discussions drew parallels between Nazi Germany's persecution of Jews and COVID-19's pandemic response. These data likely reflects a period of heightened user interest in these topics. However, the social media pages of Holocaust museums and memorials showed minimal biased comments, indicating different patterns of engagement (Manca et al., 2022b).

This study suggests several reasons for the different discussions of the Holocaust on TikTok and Holocaust institution social media pages. One is the younger average age of TikTok users compared to those following Holocaust institutions (Manca, 2022), suggesting that younger users may be less prone to social media digilantism (Wight and Stanley, 2022). TikTok's socio-technical features, such as its recommendation algorithm, short-video format and 'react' feature, are likely to encourage more open discussion of sensitive topics. Another factor is the different perceptions of Holocaust remembrance across platforms and audiences. Holocaust memory, institutionalised in Western cultural memory with its iconic symbols and narratives (Baruch-Stier, 2015), influences social media discourse. This often leads to self-censorship in order to conform to established narratives (Kansteiner, 2018). However, TikTok users, especially younger ones, seem more inclined to challenge these restrictions, reflecting a shift in who controls and shapes memory representation in the digital age. This trend towards the democratisation of memory on platforms such as TikTok allows for personal interpretations and a form of multidirectional memory (Rothberg, 2009), balancing established memories with younger users' perspectives shaped by postmemory. In this sense, the memory activism of three Holocaust survivors, in line with the #ourHolocauststory

campaign, highlights tensions in the digital age between established firsthand memories and young users' interpretations and sharing of these memories through the lens of postmemory.

The comparison of the Holocaust with other events remains controversial, involving debates about its 'uniqueness' and the need for a universal perspective, especially among young people (Pellegrino and Parker, 2022). Young TikTok users are unwittingly part of a wider discussion involving the media and civil society, contributing to the use of the Holocaust as a motif for expressing political views and social identities (Ariely, 2022; Steir-Livny, 2022). The concept of 'relationing to the Holocaust' explains contemporary uses of its memory, appealing to psychological needs such as analogy and meaning making (Novis-Deutsch et al., 2023). This memory is deeply rooted in Western consciousness and is often used for dominant connotations or specific agendas (Subotić, 2023).

On social media, the Holocaust is an evolving discursive event, blurring the lines between commemorative and non-commemorative uses (Neiger et al., 2023). Understanding these discourses in different online contexts is key to shaping learning ecologies (Manca and Raffaghelli, 2023). User-generated history lessons on TikTok (Adriaansen, 2022) can reshape power dynamics on social platforms and foster collaborative environments for trusted information. Holocaust institutions face challenges in engaging audiences in participatory storytelling and building trust. This research suggests opportunities to explore the boundaries of participation and how memory 'travels' across cultures and digital environments (Erll, 2011).

Conclusion and an update

Initially dominated by young people engaged in dancing, lip-syncing and other playful activities, TikTok has evolved into a space for education, activism and the sharing of personal narratives (Abbas et al., 2022; Cervi and Divon, 2023; Cervi and Marín-Lladó, 2022; Hautea et al., 2021). In this changing digital landscape, Holocaust survivors have used playful civic engagement to unpack, contextualise and inform both historical and contemporary issues of Holocaust memory, while mastering the unique audiovisual grammar of social media (Ebbrecht-Hartmann and Divon, 2022). In this context, the platformisation (Nieborg and Poell, 2018; Poell et al., 2021) of Holocaust memory on TikTok manifests itself in different modes of engagement. These include commemorative, responsive and explanatory modes, each characterised by a dynamic interplay between traditional narratives and contemporary interpretations of the Holocaust. Creators on TikTok integrate their videos into the trends and challenges of the medium, address and critique problematic comparisons between past and present that circulate on the platform, and emphasise individual biographies by exploring historical objects and including documents or photographs. These approaches tailor the complexity of the Holocaust narrative to resonate with the platform's predominantly younger audience. In contrast to subverting and challenging the commemorative discourses of the public sphere about the Holocaust (Ray and Kapralski, 2019) through alternative perspectives, historical research and critiques of commemorative events, the three survivors adapted to the affordances and 'action possibilities' (Gibson, 1979) of the platform. They shared their stories and raised awareness among younger audiences, thereby substantiating and reinforcing the accepted commemorative discourse. This approach was grounded in the algorithmic design and policy framework of the platform, which shaped certain types of interactions and content (Bucher and Helmond, 2018).

This case study highlights the potential and complexity of digital platforms such as TikTok in preserving and transmitting Holocaust memory, combining firsthand testimony with postmemory interpretation. However, the platform also faces increasing challenges from Holocaust misinformation and antisemitism. Efforts to counter Holocaust denial and educate users on TikTok are

ongoing, but challenges such as the spread of antisemitic content and inappropriate Holocaust comparisons remain. The rise in antisemitism, particularly following the events of 7 October involving Hamas and Israel, led to increased reports of hate speech and misinformation. This prompted TikTok to remove numerous videos that violated its policies against violence, hate speech, misinformation and terrorism, including pro-Hamas content (TikTok, 2023). Despite these measures, the account @thetrueadventures was deactivated by its owners due to continued threats of violence and perceived lack of moderation (Gray, 2023).

Recent events highlight the dual nature of digital platforms in Holocaust remembrance: they offer opportunities to engage younger audiences, but also pose challenges due to the opaque nature of social media algorithms and their role in recommending extreme content and fostering radicalisation (Shin, 2024). While understanding these algorithms is key to effective and informed interaction, there is also a need for a stronger commitment from social media companies to combat antisemitism and hate speech, including investment in algorithmic adjustments to reduce the spread of harmful content.

Finally, the methodological framework used also has implications. This study used a mixed-methods approach, combining the precision of quantitative methods with the depth of qualitative insights to provide a holistic view of the data. Data mining techniques using API software streamlined content extraction, while the use of speech-to-text and OCR algorithms captured both audio and textual nuances from the videos, enhancing the depth and breadth of the analysis. The qualitative multimodal analysis sheds light on complex user interactions with audio-visual-textual elements, enriching the understanding of social media communication and user engagement. The robust nature of this framework suggests its potential adaptability across different social media platforms and research domains. However, data extraction is constrained by the requirements and policies of the specific platform, and the accuracy of the speech-to-text and OCR algorithms is not guaranteed. The rapid evolution of platforms such as TikTok can quickly render research outdated due to changes in platform mechanics and user behaviour. Furthermore, while the method effectively captures audiovisual-textual engagement, it may miss more subtle interactions, such as emotional responses. For future research, a deeper exploration of individual user experiences, perhaps through focus group interviews, is recommended. This could provide a richer understanding of individual perspectives and identify key influencers or 'memory bridges' that facilitate intergenerational memory transfer by connecting content creators with the general user base.

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Notes

1. https://en.wikipedia.org/wiki/Lily_Ebert
2. https://en.wikipedia.org/wiki/Gidon_Lev
3. https://en.wikipedia.org/wiki/Tova_Friedman

References

Abbas L, Fahmy SS, Ayad S, et al. (2022) TikTok intifada: analyzing social media activism among youth. *Online Media and Global Communication* 1(2): 287–314.

Abidin C (2021) Mapping internet celebrity on TikTok: exploring attention economies and visibility labours. *Cultural Science Journal* 12(1): 77–103.

Adriaansen RJ (2022) Historical consciousness: analogies and historical user-generated history lessons on TikTok. In: Carretero M, Cantabrana M and Parellada C (eds) *History Education in the Digital Age*. Cham: Springer, pp. 43–62.

Albadri HA (2023) The role and impact of social media influencers. *Information Sciences Letters* 12(8): 2685–2696.

Alper BA (2020) *What Americans Know about the Holocaust*. Washington, DC: Pew Research Center.

Ariely G (2022) Historical analogies under dispute: reactions of Israeli Jews to analogies between the Holocaust and the plight of African asylum seekers in Israel. *Memory Studies* 15(5): 1011–1026.

Arolsen Archives (2022) Gen Z and Nazi history. Available at: enc.arolsen-archives.org/en/study/ (accessed 16 March 2023).

Askanius T (2019) Video activism as technology, text, testimony – or practices? In: Stephansen H and Treré E (eds) *Citizen Media and Practice*. London: Routledge, pp. 136–151.

Assmann A (2014) Transnational memories. *European Review* 22(4): 546–556.

Assmann A (2017) Transnational memory and the construction of history through mass media. In: Bond L, Craps S and Vermeulen P (eds) *Memory Unbound: Tracing the Dynamics of Memory Studies*. New York and Oxford: Berghahn Books, pp. 65–82.

Azad A and Carlsson J (2024) 'When you told us what had happened to you, I started to shiver' – what children and teenagers immediately express and comprehend after listening to testimonies of Holocaust survivors. *Holocaust Studies* 30(1): 66–83.

Baruch-Stier O (2015) *Holocaust Icons: Symbolizing the Shoah in History and Memory*. New Brunswick, NJ: Rutgers University Press.

Birkner T and Donk A (2020) Collective memory and social media: fostering a new historical consciousness in the digital age? *Memory Studies* 13(4): 367–383.

Bolter D and Grusin R (2000) *Remediation: Understanding New Media*. Cambridge, MA: The MIT Press.

Boswell M and Rowland A (2023) *Virtual Holocaust Memory*. Oxford: Oxford University Press.

Bruce D (1985) The how and why of ecological memory. *Journal of Experimental Psychology General* 114(1): 78–90.

Bucher T and Helmond A (2018) The affordances of social media platforms. In: Burgess J, Marwick A and Poell T (eds) *The SAGE Handbook of Social Media*. Thousand Oaks, CA: Sage, pp. 233–253.

Castillo-Esparcia A, Caro-Castaño L and Almansa-Martínez A (2023) Evolution of digital activism on social media: opportunities and challenges. *Profesional de la Información* 32(3): 1–16.

Cervi L and Divon T (2023) Playful activism: memetic performances of Palestinian resistance in TikTok #Challenges. *Social Media + Society* 9(1): 1–13.

Cervi L and Marín-Lladó C (2022) Freepalestine on TikTok: from performative activism to (meaningful) playful activism. *Journal of International and Intercultural Communication* 15(4): 414–434.

Charmaz K (2014) *Constructivist Grounded Theory* (2nd ed). Thousand Oaks, CA: Sage.

Commane G and Potton R (2019) Instagram and Auschwitz: a critical assessment of the impact social media has on Holocaust representation. *Holocaust Studies* 25(1–2): 158–181.

Creswell JW (2014) *Research Design. Qualitative, Quantitative, and Mixed Methods Approaches*. Thousand Oaks, CA: Sage.

Creswell JW and Plano Clark VL (2017) *Designing and Conducting Mixed Methods Research*. 3rd ed. Thousand Oaks, CA: Sage.

Dalziel I (2016) 'Romantic Auschwitz': examples and perceptions of contemporary visitor photography at the Auschwitz-Birkenau State Museum. *Holocaust Studies* 22(2–3): 185–207.

Dalziel I (2021) Becoming the 'Holocaust police'? The Auschwitz-Birkenau state museum's authority on social media. In: Walden VG (ed.) *Digital Holocaust Memory, Education and Research*. London: Palgrave Macmillan, pp. 179–212.

Dean CJ (2019) *The Moral Witness. Trials and Testimony after Genocide*. New York: Cornell University Press.

Demandesage (2024) 46 TikTok statistics for 2024 (users, creators & revenue). Available at: https://www. demandsage.com/tiktok-user-statistics/ (accessed 30 January 2024).

Denzin N and Lincoln Y (2000) *Handbook of Qualitative Research*. 2nd ed. Thousand Oaks, CA: Sage.

Divon T and Ebbrecht-Hartmann T (2022) #JewishTikTok. The JewToks' fight against antisemitism. In: Boffone T (ed.) *TikTok Cultures in the United States*. London: Routledge, pp. 47–58.

Divon T and Ebbrecht-Hartmann T (2023) Performing death and trauma? Participatory mem(e)ory and the Holocaust in Tiktok #POVChallenges. In: *AoIR selected papers of internet research*. DOI: 10.5210/spir. v2022i0.12995.

Du Y, Li C, Guo R, et al. (2020) PP-OCR: a practical ultra lightweight OCR system. arXiv preprint arXiv:2009.09941. Available at: https://arxiv.org/pdf/2009.09941.pdf (accessed 16 March 2023).

Ebbrecht-Hartmann T (2021) Commemorating from a distance: the digital transformation of Holocaust memory in times of COVID-19. *Media, Culture & Society* 43(6): 1095–1112.

Ebbrecht-Hartmann T (2022) Foreword. In: Manca S, Haake S, Rehm M and et al. (eds) *Addressing Holocaust Distortion on Social Media. Guidelines and Recommendations for Memorials and Museums* (IHRA Project Report), pp. 11–13.

Ebbrecht-Hartmann T and Divon T (2022) Serious TikTok: can you learn about the Holocaust in 60 seconds? *MediArXiv*. DOI: 10.33767/osf.io/nv6t2.

Ebbrecht-Hartmann T, Stiassny N and Schmidt F (2022) The Auschwitz tattoo in visual memory. Mapping multilayered relations of a migrating image. *Research in Film and History. Video Essays* 1–19. Available at: https://doi.org/10.25969/mediarep/19713; https://film-history.org/node/1129 (accessed 16 March 2023).

Edwards D and Gelms B (2018) The rhetorics of platforms: definitions, approaches, futures. *Present Tense* 6(3): 2–10.

Erll A (2011) Travelling memory. *Parallax* 17(4): 4–18.

European Commission (2021) *Ethics in Social Science and Humanities*. Brussels: DG Research & Innovation.

Foster S, Pearce A and Pettigrew A (2020) *Holocaust Education. Contemporary Challenges and Controversies*. London: UCL Press.

Fridman O (2022) *Memory Activism and Digital Practices after Conflict*. Amsterdam: Amsterdam University Press.

Frosh P (2018) The mouse, the screen and the Holocaust witness: interface aesthetics and moral response. *New Media & Society* 20(1): 351–368.

Gibson J (1979) *The Ecological Approach to Visual Perception*. Boston, MA: Houghton Mifflin.

Glaser B and Strauss A (1967) *The Discovery of Grounded Theory: Strategies for Qualitative Research*. New York: Routledge.

González-Aguilar JM and Makhortykh M (2022) Laughing to forget or to remember? Anne Frank memes and mediatization of Holocaust memory. *Media, Culture & Society* 44(7): 1307–1329.

Gray J (2023) Why I am leaving TikTok behind. *The Times of Israel*, 19 November. Available at: https:// blogs.timesofisrael.com/why-i-am-leaving-tiktok-behind/ (accessed 30 January 2024).

Gray JE (2021) The geopolitics of 'platforms': the TikTok challenge. *Internet Policy Review* 10(2): 1–26.

Gray M (2014) *Contemporary Debates in Holocaust Education*. London: Palgrave Macmillan.

Greenspan H (2010) *On Listening to Holocaust Survivors: Beyond Testimony*. New York: Paragon House.

Gutman Y and Wüstenberg J (2022) Challenging the meaning of the past from below: a typology for comparative research on memory activists. *Memory Studies* 15(5): 1070–1086.

Gutman Y and Wüstenberg J (2023) *The Routledge Handbook of Memory Activism*. New York: Routledge.

Hase V, Boczek K and Scharkow M (2023) Adapting to affordances and audiences? A cross-platform, multimodal analysis of the platformization of news on Facebook, Instagram, TikTok, and Twitter. *Digital Journalism* 11(8): 1499–1520.

Hautea S, Parks P, Takahashi B, et al. (2021) Showing they care (or don't): affective publics and ambivalent climate activism on TikTok. *Social Media + Society* 7(2): 1–14.

Henig L and Ebbrecht-Hartmann T (2022) Witnessing Eva Stories: media witnessing and self-inscription in social media memory. *New Media & Society* 24(1): 202–226.

Hepworth A (2019) From survivor to fourth-generation memory: literal and discursive sites of memory in post-dictatorship Germany and Spain. *Journal of Contemporary History* 54(1): 139–162.

Hirsch M (2001) Surviving images. Holocaust photographs and the work of postmemory. *The Yale Journal of Criticism* 14(1): 5–37.

Hirsch M (2012) *The Generation of Postmemory: Writing and Visual Culture after the Holocaust*. New York: Columbia University Press.

Hogervorst S (2020) The era of the user. Testimonies in the digital age. *Rethinking History* 24(2): 169–183.

Holloway S (2023) Survivor testimony in holocaust education. *Agora* 58(2): 30–33.

Hoskins A (2016) Memory ecologies. *Memory Studies* 9(3): 348–357.

Hoskins A (2018) The restless past: an introduction to digital memory and media. In: Hoskins A (ed.) *Digital Memory Studies: Media Pasts in Transition*. London and New York: Routledge, pp. 1–24.

Hübscher M and von Mering S (2022) *Antisemitism on Social Media*. London: Routledge.

Jenkins H (2006) *Convergence Culture: Where Old and New Media Collide*. New York: New York University Press.

Jenkins H, Ford S and Green J (2013) *Spreadable Media: Creating Value and Meaning in a Networked Culture*. New York: New York University Press.

Johns AN, Brown LS and Cromer LD (2022) Examining intergenerational transmission of Holocaust trauma as it relates to Jewish identity, communication type, and mental well-being. *Journal of Traumatic Stress* 35(5): 1497–1507.

Kansteiner W (2018) The Holocaust in the 21st century: digital anxiety, transnational cosmopolitanism, and never again genocide without memory. In: Hoskins A (ed.) *Digital Memory Studies: Media Pasts in Transition*. London and New York: Routledge, pp. 110–140.

Klein M (2022) 'My Daughter Éva': a story of translation, paratext and digital communication. *History & Memory* 34(1): 133–158.

Klik E (2020) Customizing memory: number tattoos in contemporary Israeli memory work. *Memory Studies* 13(4): 649–661.

Konkka O (2023) 'Millions of Russians, Ukrainians, Belarusians, Jews, People of All Ethnicities': teaching and remembering the Holocaust in Russian schools. *Holocaust Studies* 29(1): 39–65.

Kress G (2000) Multimodality: challenges to thinking about language. *TESOL Quarterly* 34(2): 337–340.

Kress G and Van Leeuwen T (2001) *Multimodal Discourse: The Modes and Media of Contemporary Communication*. London: Edward Arnold.

Lawson T (2017) Britain's promise to forget: some historiographical reflections on what do students know and understand about the Holocaust? *Holocaust Studies* 23(3): 345–363.

Lee JJ and Lee J (2023) #StopAsianHate on TikTok: Asian/American women's space-making for spearheading counter-narratives and forming an ad hoc Asian community. *Social Media + Society* 9(1): 1–11.

Levy D and Sznaider N (2006) *The Holocaust and Memory in the Global Age*. Philadelphia, PA: Temple University Press.

Lewis T (2021) Experiment with playful protest. In: Hart R (ed.) *Fixing American Politics. Solutions for the Media Age*. New York: Routledge, pp. 37–45.

Manca S (2022) Digital Holocaust memory on social media: how Italian Holocaust museums and memorials use digital ecosystems for educational and remembrance practice. *International Journal of Heritage Studies* 28(10): 1152–1179.

Manca S and Passarelli M (2023) Social media as lieux for the convergence of collective trajectories of Holocaust memory. A study of online users in Germany and Italy. *Heritage* 6(9): 6377–6396.

Manca S and Raffaghelli J (2023) An examination of learning ecologies associated with the Holocaust: the role of social media. *Journal of Computer Assisted Learning* 39(6): 1874–1887.

Manca S, Passarelli M and Rehm M (2022a) Exploring tensions in Holocaust museums' modes of commemoration and interaction on social media. *Technology in Society* 68: 101889.

Manca S, Rehm M, Haake S, et al. (2022b) Countering Holocaust distortion on social media. *White Paper*. Available at: https://holocaust-socialmedia.eu/wp-content/uploads/Countering-Holocaust-distortion-on-social-media-White-Paper-HD.pdf

Marcus AS, Maor R, McGregor IM, et al. (2022) Holocaust education in transition from live to virtual survivor testimony: pedagogical and ethical dilemmas. *Holocaust Studies* 28(3): 279–301.

Marrison K (2021) Virtually part of the family: the last goodbye and digital Holocaust witnessing. In: Walden VG (ed.) *Digital Holocaust Memory, Education and Research*. London: Palgrave Macmillan, pp. 15–30.

McCaughey M and Ayers MD (2003) *Cyberactivism – Online Activism in Theory and Practice*. New York: Routledge.

Menyhért A (2017) Digital trauma processing in social media groups: transgenerational Holocaust trauma on Facebook. *Hungarian Historical Review* 6(2): 355–376.

Murphy CA (2023) Instagram stories and historical re-enactment in social media memory: Eva Stories and Ich bin Sophie Scholl. In: Marková A and Kuznetcova M (eds) *Memory of Central and Eastern Europe. Past Traumas, Present Challenges, Future Horizons*. Prague: Charles University, Karolinum Press, pp. 48–72.

Namey E, Guest G, Thairu L, et al. (2008) Data reduction techniques for large qualitative data sets. In: Guest G and MacQueen KM (eds) *Handbook for Team-Based Qualitative Research*. Lanham, MD: AltaMira Press, pp. 137–163.

Neiger M, Meyers O and Ben-David A (2023) Tweeting the Holocaust: social media discourse between reverence, exploitation, and simulacra. *Journal of Communication* 73(3): 222–234.

Nesfield VL (2015) Keeping Holocaust education relevant in a changing landscape: seventy years on. *Research in Education* 94(1): 44–54.

Nieborg DB and Poell T (2018) The platformization of cultural production: theorizing the contingent cultural commodity. *New Media & Society* 20(11): 4275–4292.

Novis-Deutsch NS, Lederman S, Adams T, et al. (2023) *Sites of Tension: Shifts in Holocaust Memory in Relation to Antisemitism and Political Contestation in Europe*. Haifa, Israel: The Weiss-Livnat International Center for Holocaust Research and Education.

Pakier M and Stråth B (2010) *A European Memory? Contested Histories and Politics of Remembrance*. New York: Berghahn.

Papacharissi Z (2016) Affective publics and structures of storytelling: sentiment, events and mediality. *Information, Communication & Society* 19(3): 307–324.

Pellegrino A and Parker J (2022) *Teaching and Learning through the Holocaust. Thinking about the unthinkable*. London: Palgrave Macmillan.

Pinchevski A (2019) *Transmitted Wounds: Media and the Mediation of Trauma*. Oxford: Oxford University Press.

Poell T, Nieborg S and Duffy BE (2021) *Platforms and Cultural Production*. Cambridge: Polity Press.

Popescu DI (2019) Eulogy of a different kind: letters to Henio and the unsettled memory of the Holocaust in contemporary Poland. *Holocaust Studies* 25(3): 273–299.

Popescu DI and Schult T (2015) *Revisiting Holocaust Representation in the Post-Witness Era*. London: Palgrave Macmillan.

Radford A, Kim JW, Xu T, et al. (2023) Robust speech recognition via large-scale weak supervision. In: *International conference on machine learning*, pp. 28492–28518. PMLR. Available at: https://cdn.openai.com/papers/whisper.pdf

Ranger J and Ranger W (2023) Towards a resonant theory of memory politics. *Memory Studies* 16(2): 451–464.

Ray L and Kapralski S (2019) Introduction to the special issue – disputed Holocaust memory in Poland. *Holocaust Studies* 25(3): 209–219.

Rothberg M (2009) *Multidirectional Memory: Remembering the Holocaust in the Age of Decolonization*. Stanford, CA: Stanford University Press.

Schultz CKN (2023) Creating the 'virtual' witness: the limits of empathy. *Museum Management and Curatorship* 38(1): 2–17.

Schweber S (2015) Holocaust fatigue in schools today. *Social Studies Today* 70(1): 44–49.

Shandler J (2017) *Holocaust Memory in the Digital Age: Survivors' Stories and New Media Practices*. Stanford, CA: Stanford University Press.

Shin D (2024) *Artificial Misinformation. Exploring Human-Algorithm Interaction Online*. London: Palgrave Macmillan Cham.

Stein A (2014) Too much memory? Holocaust fatigue in the era of the victim. In: Stein A (ed.) *Reluctant Witnesses: Survivors, Their Children, and the Rise of Holocaust Consciousness*. Oxford: Oxford University Press, pp. 166–182.

Steir-Livny L (2020) Eva.stories: disrespect or a successful change in Holocaust memory? *Jewish Film & New Media: An International Journal* 8(2): 129–152.

Steir-Livny L (2022) Traumatic past in the present: COVID-19 and Holocaust memory in Israeli media, digital media, and social media. *Media, Culture & Society* 44(3): 464–478.

Stephens C (2021) Playing pretend on social media. In: Walden VG (ed.) *Digital Holocaust Memory, Education and Research*. London: Palgrave Macmillan, pp. 237–265.

Stevens G, O'Donnell VL and Williams L (2015) Public domain or private data? Developing an ethical approach to social media research in an interdisciplinary project. *Educational Research and Evaluation* 21(2): 154–167.

Subotić J (2023) Holocaust memory and political legitimacy in contemporary Europe. *Holocaust Studies* 29(4): 502–519.

TikTok (2023) The truth about TikTok hashtags and content during the Israel-Hamas war. Available at: https://newsroom.tiktok.com/en-us/the-truth-about-tiktok-hashtags-and-content-during-the-israel-hamas-war (accessed 30 January 2024).

Tintiangko J, Fung AYH and Leo-Liu J (2023) Compelled TikTok creators? The ambivalent affordances of the short video app for Filipino musicians. *Media, Culture & Society* 45(8): 1600–1615.

Trzoss A, Werner W, Kleist C, et al. (2023) The politicisation of historical memory on Twitter. 'Positive antisemitism' in the Holocaust debate in Poland. *Rethinking History* 27(4): 780–810.

van Dijck J (2013) *The Culture of Connectivity. A Critical History of Social Media*. Oxford: Oxford University Press.

Walden VG (2021) *Digital Holocaust Memory, Education and Research*. London: Palgrave Macmillan.

Walden VG (2022) Understanding Holocaust memory and education in the digital age: before and after COVID-19. *Holocaust Studies* 28(3): 257–278.

Wang X and Guo Y (2023) Motivations on TikTok addiction: the moderating role of algorithm awareness on young people. *Profesional de la Información* 32(4): 1–10.

Weber M, Koehler C, Ziegele M, et al. (2020) Online hate does not stay online – how implicit and explicit attitudes mediate the effect of civil negativity and hate in user comments on prosocial behavior. *Computers in Human Behavior* 104: 106192.

Wetzel J (2017) Soft denial in different political and social areas on the web. In: McElligott A and Herf J (eds) *Antisemitism Before and Since the Holocaust: Altered Contexts and Recent Perspectives*. Basingstoke: Palgrave Macmillan, pp. 305–331.

Wieviorka A (2006) *The Era of the Witness*. Ithaca, NY: Cornell University Press.

Wight C and Stanley P (2022) Holocaust heritage digilantism on Instagram. *Tourism Recreation Research*. Epub ahead of print December. DOI: 10.1080/02508281.2022.2153994.

Wodak R and Meyer M (2009) *Methods for Critical Discourse Analysis* (2nd ed.). London: Sage.

Yuning D, Li C, Guo R, et al. (2021) PP-OCRv2: bag of tricks for ultra lightweight OCR system. ArXiv abs/2109.03144. Available at: https://arxiv.org/abs/2109.03144 (accessed 30 January 2024).

Zalewska M (2020) The Last Goodbye (2017): virtualizing witness testimonies of the Holocaust. *Spectator* 40: 45–52.

Zeng J and Abidin C (2021) '#OkBoomer, time to meet the Zoomers': studying the memefication of intergenerational politics on TikTok. *Information, Communication & Society* 24(16): 2459–2481.

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