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## Rendering forgotten places of NS terror visible

Art, research, participation and digital technologies as an assemblage in the project “Making Traces Readable in the NS Forced Labour Camp Roggendorf/Pulkau”

After being largely neglected for a long time, NS forced labour camps and camp-like facilities used for the internment of prisoners of war and civil forced labourers are increasingly drawing interest from the realms of research and historic preservation and from the general public.<sup>1</sup> For Austria, the Federal Monuments Office has compiled all research on NS forced labour camps up to and including 2021 und calculated a total of 2,115 “NS victim sites” based on this secondary literature.<sup>2</sup> However, this already very high number is surely just the lower limit: It can be assumed that as the war progressed, collective forced labour camps were established in almost all larger communities for locally used prisoners of war, foreign civil forced labourers (among them also Hungarian Jewish families) – mostly in existing buildings but sometimes in newly built barracks as well. An ongoing research project starting from the 13 camp sites mentioned in the list has already located 64 places with 99 labour camps and camp-like facilities in the district of Krems alone.<sup>3</sup> Most of these former labour camp sites are no longer known, as

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1 As an example for Austria, see Christian Klösch, *Lagerstadt Wolfsberg. Flüchtlinge Gefangene Internierte. Dokumentation zur Ausstellung* (Wolfsberg: Edition Museum im Lavanthaus, 2013); conference “Unsichtbare Lager in Niederösterreich: Beforschen, dokumentieren und zugänglich machen“, 2019; see <http://first-research.ac.at/2019/10/08/tagung-unsichtbare-lager-in-niederoesterreich-beforschen-dokumentieren-und-zugaenglich-machen>; <https://www.geschichtewiki.wien.gv.at/Zwangsarbeiterlager>; <http://ungarische-zwangsarbeit-in-wien.at>; international see <https://www.zwangsarbeit-in-leipzig.de/karte>; EU project “Accessing Campscapes”, <https://www.campscapes.org>, accessed 14 March 2023.

2 Bundesdenkmalamt (Austrian Federal Monuments Office), ed., *Katalog NS-Opferorte in Österreich* (sites of NS victims), <https://www.bda.gv.at/service/denkmalverzeichnisse/liste-der-ns-opferorte-in-oesterreich.html>, accessed 14 March 2023.

3 See research project “NS-Volksgemeinschaft’ und Lager im Zentralraum Niederösterreich. Geschichte – Transformation – Erinnerung,” Institut für jüdische Geschichte Österreichs with the

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**Note:** We dedicate this article to Heidemarie Uhl (1956–2023), who drew our attention to this place and worked on it alongside us with the passion and commitment that characterized her.

they can be found neither in scientific nor in local history publications. This is partly due to the fact that sources are fragmentary and that dealing with this “loaded” past is difficult when it comes to regional history, but there is also the factor that the use of forced labour was a normal part of everyday life in times of war. The employment of “foreign labourers” or prisoners of war as an everyday element of the NS regime<sup>4</sup> was handed down as historically remarkable only in cases of particular cruelty and rarely made its way into the local memory.

Where they have not been demolished yet, the many existing buildings that served as collective accommodation for forced labourers have long been put to other uses, and former larger-scale encampments are rarely recognisable as such now. The barracks have been removed and the areas have been either reconverted to fallow land or turned into housing estates, parking spaces, or leisure facilities.

This means that similar to the “Stolpersteine”, which are placed directly outside the last residences of Jewish displaced and deported persons in order to commemorate them, these sites of forced labour are usually right in the middle of our everyday spaces – with a few exceptions where such sites were turned into memorials or somehow marked with reminders. The former camp sites were put to new uses and their historical dimension is no longer recognisable. So how can we create an awareness of these “loaded” but forgotten locations that are largely spaces in our everyday lives? This question is framed by fundamental challenges of the current culture of memory that arise from the growing temporal distance to the time of the Shoah and NS terror, and especially from the foreseeable end of direct historical testimony. The search for new anchor points for reference and confrontation and associated new formats of dissemination and involvement is characteristic of this present stage of “post-memory”.<sup>5</sup> The historic location has come into focus as a new anchor point that is attributed “authenticity”<sup>6</sup> and

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University for Continuing Education Krems (ns-lager-niederösterreich.at), 2022–2024, person responsible for research in the Krems district: Edith Blaschitz.

<sup>4</sup> See, for example, Florian Freund, “NS-Arbeitskräftepolitik in der ‘Ostmark,’” in *NS-Zwangsarbeit in der Elektrizitätswirtschaft der „Ostmark“ 1938–1945*, ed., Oliver Rathkolb and Florian Freund. *Ennskraftwerke – Kaprun – Draukraftwerke – Ybbs-Persenbeug – Ernsthofen* (Vienna: Böhlau, 2014), 8–26, 9; in addition, oral history interviews with Franz Bischl, Helene Schneider, Herta Wieninger and Erika Thurner within the framework of the project “Spuren lesbar machen,” interviewer: Edith Blaschitz, May 2022, available at: <https://pulkau.topothek.at>.

<sup>5</sup> Hirsch, Marianne, *Family Frames: Photography, Narrative, and Postmemory* (Cambridge, Massachusetts: Harvard University Press, 1997).

<sup>6</sup> On the frequently used but very vague term of “authenticity,” see, for example, Michael Rössner and Heidemarie Uhl, ed., *Renaissance der Authentizität? Über die neue Sehnsucht nach dem Ursprünglichen* (Bielefeld: transcript, 2012).

“truthfulness”. In order to support referencing and get a better idea, there have been experiments with digital technologies as well. ‘On-site’ applications facilitate the simultaneous visual perception of historical (moving) images or digital reconstructions at the historical ‘location’.

Against the background of the question of how to deal with forgotten camp sites in spaces of everyday life and what digital technologies can do, the project “Making Traces Readable in the NS Forced Labour Camp Roggendorf/Pulkau”<sup>7</sup> was developed and implemented in Lower Austria. The objective was to visualise – in other words, explore, represent, and make accessible – the history of forced labour in the quarry between Groß-Reipersdorf and Roggendorf close to the town Pulkau. The quarry experienced an eventful history and evolved from an early industrial location into a leisure paradise and event venue – and during the NS regime, prisoners of war and foreign civil persons were forced to do extremely hard physical labour there.

For the project, a concept was developed that combines the physical location with artistic and specialist approaches, participatory remembrance work, and digital technologies. This connection between the place, different actors (artists, scientific experts, digital/creative media technologies experts, and citizen scientists), and digital technologies can be referred to as an “assemblage” in which heterogeneous components form a social fabric in a collaborative process and in relation to one another. Within the framework of the implementation, the main focus of the project was on the question of how the various components can be entangled with each other in the most meaningful way possible in order to render the historical events and experiences visible. Due to the increasing temporal distance to the events of the Shoah and NS terror as well as a lack of available sources on locations that have received little attention so far, gaps and blank spaces are to be expected despite the reconstructive process. Another question addressed in the project was how a productive way of dealing with these gaps and fragmentary knowledge can be found.

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7 Duration: 11/2021–04/2023, team: Rosa Andraschek (artist), Martin Krenn (artist), Austrian Academy of Sciences: Heidemarie Uhl; University for Continuing Education Krems: Edith Blaszitz, Daniela Wagner; Institute for Jewish History in Austria: Wolfgang Gasser; St. Pölten UAS: Georg Vogt, Clemens Baumann, Thomas Moser, Alexander Schlager, OpenGLAM: Sylvia Petrovic-Maier, with funding from: the Federal Ministry for Arts, Culture, the Civil Service and Sport, the provincial government of Lower Austria (division of Art and Culture).

# 1 Rediscovering “forgotten” historical locations using the example of the NS Forced Labour Camp in Roggendorf near Pulkau

We understand the forced labour camp in the granite quarry in Roggendorf close to Pulkau as an example of societal forgetting and of the rediscovery of locations of NS crimes. After 1945, people kept quiet about these places – after all, they were testimonies of personal and institutional entanglement with the NS regime and therefore best forgotten. The involvement of local society in the national socialist apparatus of power became a taboo topic. As is well known, Austria distanced itself from any responsibility for the Nazi regime with the so-called “Victim Theory” – by reference to the Moscow Declaration from 1943, Austria defined itself as “the first free country to fall a victim to Hitlerite aggression” in its Declaration of Independence from 27 April 1945.<sup>8</sup> However, the collective silence and blocking-out strategy is characteristic not just of the former “perpetrator societies” of Germany and Austria but of all European countries that were occupied by the Nazi regime.<sup>9</sup> The historian Tony Judt refers to these national narratives of presenting one’s “own” people as innocent and attributing crimes to Nazi Germany as “European post-war myths”. These exculpatory self-portrayals lost their power of persuasion at the end of the twentieth century when the Holocaust moved into the centre of remembrance culture.<sup>10</sup> The debates revolving around the repression of personal and institutional involvement in the Nazi crimes and the catching-up through remembering the previously unacknowledged Holocaust victims became a transnational European phenomenon of the end of the twentieth century.<sup>11</sup> A new generation asked new questions about history – it was no longer about the nation that fell victim to the expansion politics of the “Third Reich” but rather about society: The NS tyranny, and especially the persecution and deportation of the Jewish population,

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8 See Ruth Wodak et al., *Wir sind alle unschuldige Täter* (Frankfurt am Main: Suhrkamp, 1990); Heidemarie Uhl, “Opferthesen, revisited. Österreichs ambivalenter Umgang mit der NS-Vergangenheit,” *Österreich. Aus Politik und Zeitgeschichte* 68/34–35 (2018): 47–54.

9 See Tony Judt, “Die Vergangenheit ist ein anderes Land: Politische Mythen im Nachkriegseuropa,” *Transit* 6 (1993): 87–120.

10 See Daniel Levy and Natan Sznaider, *Erinnerung im globalen Zeitalter: Der Holocaust* (Frankfurt am Main: Suhrkamp, 2001).

11 See Tony Judt, “Epilog: Erinnerungen aus dem Totenhaus. Ein Versuch über das moderne europäische Gedächtnis,” in *Geschichte Europas von 1945 bis zur Gegenwart*, ed. Tony Judt (Munich, Vienna: Hanser, 2006), 931–966; Monika Flacke, ed., *Mythen der Nationen. 1945 – Arena der Erinnerungen*, (Mainz: Philipp von Zabern Verlag, 2004) (catalogue on the exhibition of the same name by the Deutsches Historisches Museum Berlin 2004/05).



would not have been possible without the active participation or at least acceptance of broad segments of the population. Working through the shared responsibility for the Nazi crimes brought local history into focus for the first time.

As the Nazi past was consistently ignored in the post-war decades, the places where the NS tyranny manifested itself in concrete terms tended to be forgotten by society.<sup>12</sup> Their history was not passed on to the next generations. There was a social consensus, particularly in the local face-to-face communities, on what to talk about and what to keep quiet about. Dominant narratives focused on military service in the German *Wehrmacht*, institutionalised in the “Kameradschaftsverbände” (associations of comradeship) that became mass organisations a few years after the end of the war. They also characterised the memorial landscape at the local and regional levels. The war memorials, most of which were installed after World War One, now also commemorated the soldiers of the *Wehrmacht*.<sup>13</sup> Memorials for the resistance against the Nazi regime were extremely hard to realise outside the big cities. The fact that there may have been opponents of the Nazi regime – who were imprisoned, deported to concentration camps, or killed for their commitment – in one’s own community was another taboo subject. After all, the associated questions of concrete shared responsibility for the denunciation and persecution of political opponents would have challenged the consensus of silence. As a consequence, perpetrators were protected, while the victims were purposefully forgotten. We discovered this same approach to the victims in the region we investigated: The day labourer Anna Goldsteiner from Pulkau was executed by beheading at the Regional Court of Vienna on 5 July 1944 for “Wehrkraftzersetzung” (a Third-Reich term for “undermining the military forces”). It was not until 2011 and upon the persistent and long-futile efforts of her grandson that she was acknowledged with a commemorative plaque – which is now located, not very prominently, at the foot of the war memorial.<sup>14</sup>

As mentioned earlier, the rediscovery of the repressed local Nazi history is the result of the change in perspective on the NS era that came about in the 1980s. The Nazi crimes, and the Holocaust in particular, which were off limits in

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12 One exception is the concentration camp in Mauthausen where a memorial was built upon the initiative of the Soviet occupational forces. In line with victim theory, however, the concentration camp was reinterpreted as a site of Austrian victimisation; see Bertrand Perz, *Die KZ-Gedenkstätte Mauthausen. 1945 bis zur Gegenwart* (Innsbruck: StudienVerlag, 2006).

13 This was critically examined for the first time in Reinhold Gärtner and Sieglinde Rosenberger, *Kriegerdenkmäler. Vergangenheit in der Gegenwart*, (Innsbruck: Österreichischer Studienverlag, 1991).

14 See Anna Goldsteiner, “Die Unterstützerin der Schlurfs von Pulkau,” in *Nationalsozialismus in Niederösterreich. Opfer. Täter. Gegner* (Nationalsozialismus in den österreichischen Bundesländern 9), ed., Stefan Eminger, Ernst Langthaler and Klaus-Dieter Mulley (Innsbruck u.a.: Studien-Verlag, 2021), 289–291.

the silence consensus of the post-war decades, now took centre stage and the fact that the victims of persecution were forgotten and the NS past repressed thus far were much criticised. Instead, the main focus then moved especially to Nazi history in the immediate vicinity – the forgotten places of Nazi terror became anchor points for the reconstruction of a history of violence on our very doorstep. The silence of the parents and grandparents became the motor for the “generation of memory”<sup>15</sup> committed to the reappraisal of the NS past. Local initiatives researched the persecution of the Jewish population in their district and their community. The study of temporary history was characterised by an intensive confrontation of local and regional NS history, borne by a young generation of historians. A topography of persecution, displacement, and destruction extending across all of Austria was thus rendered visible: the synagogues and houses of prayer destroyed during the November pogrom of 1938, the train stations used for deportation, the external camps belonging to the concentration camps, the innumerable execution sites along the death marches where Jewish forced labourers from Hungary were driven across Eastern Austria towards Mauthausen as the Soviet army drew near. The forced labour camp in the granite quarry of Roggendorf close to Pulkau was first brought up in a publication on Hungarian Jews who were forced to do labour in Lower Austria in 1944/45 – a pioneering work published by Marie Theresia Litschauer in 2006.<sup>16</sup> The aforementioned list drawn up by the Austrian Federal Monuments Office which makes reference to 2,115 NS victim sites is the result and the catalyst of an awareness, which has grown in the past years, of the extent to which forced labourers were used in Austria. But just as is the case in Pulkau, many of these locations still barely register at all in the local memory.<sup>17</sup>

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15 See Jay Winter, “The Generation of Memory: Reflections on the Memory Boom in Contemporary Historical Studies,” *Bulletin of the German Historical Institute* 27 (2000): 69–92.

16 Maria Theresia Litschauer, 6|44 – 5|45 *Ungarisch-Jüdische ZwangsarbeiterInnen. Ein topo|foto|grafisches Projekt* (Vienna: SCHLEBRÜGGE.EDITOR, 2006), 207–212. In fundamental publications on Hungarian Jewish forced labourers, there is no evidence on the quarry in Roggendorf as a forced labour site yet; see, for example, Szabolcs Szita, *Verschleppt, verhungert, vernichtet: die Deportation von ungarischen Juden auf das Gebiet des annektierten Österreich 1944–1945* (Vienna: Eichbauer Verlag, 1999); Eleonore Lappin, Susanne Uslu-Pauer, Susanne and Alfred Wiener, *Ungarisch-jüdische Zwangsarbeiterinnen und Zwangsarbeiter in Niederösterreich 1944/45* (Studien und Forschungen aus dem NÖ Institut für Landeskunde 45), (St. Pölten: NÖ Inst. für Landeskunde, 2006).

17 [Fritz Dittlbacher], NS-Opfer Die vergessenen Lager, orf.at, 04/06/2021, see <https://orf.at/stories/3215700/>, accessed on 23 March 2023.

## 2 Making places readable – aesthetic strategies of site specificity

As mentioned earlier, many cases of “rediscovered” historical sites of Nazi violence have been built over, adapted for new uses, or demolished. Frequently, only few material relics remain and many of them are hidden below the surface. The project title “Making Traces Readable in the NS Forced Labour Camp Roggendorf/Pulkau” is thus programmatic: In order to make places speak out loud, to tell their story, and to raise awareness for their past, it is necessary to render historical traces readable – regardless of whether they are material remains or have been forgotten. The historical and contemporary location of Roggendorf/Pulkau becomes the starting point for the artistic examination that operates with site specificity and in cooperation with the local community to develop new formats of narration in the process. The artistic projects designed by Rosa Andraschek and Martin Krenn (as we will see later) show the potential of using digital media for these new forms of conveyance – they allow visitors to independently and individually discover the place’s history, to decipher the material remains, and to reconstruct the forced labour camp’s structures which are no longer there.

## 3 Space – (re-)constructions of the past – digital technologies

When it comes to historical sites which are preserved and staged as such, visitors have certain ‘expectations of authenticity’ and wish to see reference made to historical events and experiences. With reference to the touristic context, Erik Cohen already established in the 1970s that visitors accept staged ‘authenticity’ as ‘authentic’ when it is recognised as such.<sup>18</sup> A US study of museums came to similar conclusions: In order to fulfil visitors’ ‘authenticity expectations’, it is sufficient for things to appear ‘authentic’.<sup>19</sup> Media and technologies are used to fulfil these expectations as well. Operators, on the other hand, are eager to fulfil this need or awaken such

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<sup>18</sup> Erik Cohen, “Rethinking the Sociology of Tourism,” *Annals of Tourism Research* 6(1) (1979): 18–35.

<sup>19</sup> Theo van Leeuwen, “What is Authenticity? Discourse Studies – Special Issue: Authenticity in Media Discourse” (2001), cited in Katja Köhr, *Die vielen Gesichter des Holocaust. Museale Repräsentationen zwischen Individualisierung, Universalisierung und Nationalisierung* (Göttingen: V & R unipress, 2012), 16.

needs with appropriate offers. In order to make educational offers more attractive, there have been experiments with technologies such as Augmented Reality and Virtual Reality in the past few years. In this context, 'on-site' applications have been developed that integrate georeferenced historical (moving) images and digital reconstructions right at the historical "site".<sup>20</sup> Such augmented<sup>21</sup> or blended<sup>22</sup> spaces tend to promise users an allegedly direct glimpse into the past. With film techniques such as close-up and direct viewing or the use of moving images, history is 'brought to life' and sometimes viewers even get to experience it as their own. Digital technologies serve as intensifiers of perception and as facilitators of affective reference to historical realities ('putting oneself in another person's shoes'). These applications are often communicated as 'living history', 'time travel', or 'own testimony' of historical events and experiences.<sup>23</sup> The seemingly precise images of the past suggest that they can answer the question of 'What was it really like?' that is relevant for everyone interested in history.

The appeal of the 'direct view into the past' extends to the telling of the history of the Shoah and NS terror as well. Although the announcement of 'authenticity' seems questionable owing to the sensitivity of this topic area – especially when own experiences are insinuated<sup>24</sup> – new ways of conveying history are urgently sought after as the possibility of direct accounts by contemporary witnesses will end soon. For example, there have been experiments with technology-assisted 'own testimony'. One Augmented Reality app on the story of Anne Frank, which was already offered in 2012, promised users a clear picture of the past: It claimed to show Amsterdam "just like it was during World War II".<sup>25</sup> The mobile app "iWalk" by the USC Shoah Foundation makes historical images and eyewitness accounts available in marked locations and is currently also referred to as a

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20 Apps such as timelooper, revisitor; see Edith Blaschitz, "Digitale Erinnerungstechnologien in der historischen Vermittlungs- und Bildungsarbeit," *Österreich in Geschichte und Literatur (ÖGL)* 4 (2018): 364–371, 344–345.

21 Lev Manovich, "The Poetics of Augmented Space," *Visual Communication* 5(2) (2006): 219–240.

22 David Benyon, "Presence in Blended Spaces," *Interacting with Computers* 24(4) (2012): 219–226.

23 See Edith Blaschitz, "Mediale Zeugenschaft und Authentizität: Zeitgeschichtliche Vermittlungsarbeit im augmentierten Alltagsraum," *Hamburger Journal für Kulturanthropologie* 5 (2016): 51–67.

24 See, for example, early media-assisted offerings such as that of the Anne Frank Exhibition at the Museum of Tolerance in Los Angeles which promised visitors they would "experience the story as never before," as quoted in Edith Blaschitz and Erich Herber, "Mediating The Holocaust Past: Transmedia Concepts at Holocaust Memorials and Museums," in *Politika Memorije in Pozabe, Načini izročila in Interpretacije / The Politics of Memory and Oblivion, Modes of Transmission and Interpretation*, ed. Jana Babšek (Tržič: Muzej Tržič, 2016), 261–274, 269.

25 Downloaded on 2 January 2016; no longer in use today, see <https://www.annefrank.org>.

window into the past (“IWalk unlocks a new window into our past”<sup>26</sup>), which enables users to empathise: “The groundbreaking Virtual IWalk web app [. . .] allowing viewers to feel like they are standing with the survivor at the location”.<sup>27</sup>

In many cases, this perpetuates debates that have an extensive history of discourse regarding the relationship between film and history. In the promise of offering “windows into our past”, recourse is made both to the indexicality and documentary character of cinematic pictures and to the reconstructive capacity of cinematic presentation of the past. If we understand history more in the sense of Walter Benjamin as moments that we encounter when the present enters into a constellation with them, we experience another dimension that also became the basis of project work in the granite quarry. The focus here is not on the immersion in a media representation of the past and an attempt at reconstruction, but on the contrast between mediatisation and the present physical space. The past is rendered visible as a trace, as the “empowerment of a memory”<sup>28</sup> through artistic practice – an added value becomes apparent between media phenomena and the physical venue. Searching and finding such traces in this type of quarry involves the context of old photographs as well as material changes and traces on site. Stories can be spread over the place like a net and provide an orientation that is derived from the narration just as much as from the physical experience of walking. In the installation of Martin Krenn, this experience of walking and exploring on one’s own encounters fragments of the past that suddenly show themselves, just like Walter Benjamin intended. By now, the practices and constellations between the physical and virtual spaces and their interrelationship offer a multitude of approaches in the field of tension between reconstruction and encounter.

*Digital Mapping* is also used to reconstruct past events, only it is not the fascination of technology-assisted perception effects that is at the centre but rather the visualisation of historical micro- and macrolevels as well as the enrichment with digital information: Digital overview maps highlight the marked places’ integration into larger contexts. Moreover, the individual places can be enhanced with georeferenced information, video and audio files, and images (or linked to

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<sup>26</sup> About IWalk, <https://iwalk.usc.edu/sites/iwalk>, accessed on 14 March 2023.

<sup>27</sup> New Virtual IWalk Web App Brings Remote Users to Holocaust-Related Historical Sites, <https://sfi.usc.edu/news/2022/01/32476-new-virtual-iwalk-web-app-brings-remote-users-holocaust-related-historical-sites>, accessed on 14 March 2023; see also Victoria Grace Walden. “Afterword: Digital Holocaust Memory Futures: Through Paradigms of Immersion and Interactivity and Beyond,” in *Digital Holocaust Memory, Education and Research*, ed. Victoria Grace Walden (London: Springer International Publishing, 2021).

<sup>28</sup> Walter Benjamin, “Über den Begriff der Geschichte,” [www.textlog.de/benmain/abhandlungen/ueber-den-begriff-der-geschichte](http://www.textlog.de/benmain/abhandlungen/ueber-den-begriff-der-geschichte).



**Figure 1:** GPS Web App (photo by Martin Krenn).

relevant databases). By now, there is a multitude of Digital Mapping projects (like the GPS Web App as shown in figure 1) in the German-speaking area addressing the history of the Shoah and NS terror or places of Jewish life.<sup>29</sup>

Digital maps are particularly suitable for collaborative and self-motivated work. Digital Mapping, which refers to the (collaborative) measuring and mapping of spaces,<sup>30</sup> has evolved into an active practice of reconstructing narratives of the present but also the past. With the goals of consolidating the sense of identity and of self-affirmation, for example, communities draw up digital maps together that depict their present and past.<sup>31</sup> In many cases, this results in the development of “counter maps” that “re-map” dominant representations.<sup>32</sup> In other words, the heightened societal awareness of participatory processes and di-

<sup>29</sup> See, for example, [memento.wien](https://memento.wien); <https://www.mappingthelives.org>; <https://verbrannte-orte.de>; <https://www.gedenkplaetze.info>, <https://map.erinnerungszeichen.de>; [www.erinnerungslandschaft.at](https://www.erinnerungslandschaft.at); <http://ungarische-zwangsarbeit-in-wien.at>, accessed on 14 March 2023.

<sup>30</sup> See Chris Perkins, “Mapping Place,” in *The Routledge Handbook of Place*, ed., Tim Edensor, Ares Kalandides and Uma Kothari (London: Routledge, 2020), 357–366.

<sup>31</sup> See, for example, the use of <https://www.historypin.org> as a platform for various community maps.

<sup>32</sup> See Perkins, *Mapping*, 362.



versified cultures of memory is also reflected in activities that use spaces as the basis for historical considerations.

In the humanities and social sciences, the space-related approach has led to new questions and to the proclamation of a “Spatial Turn”.<sup>33</sup> As Doreen Massey puts it, space is a result of practices, relationships, connections, and inconsistencies.<sup>34</sup> She adds that this makes space a “sphere of the possibility of multiplicity”.<sup>35</sup> Since Pierre Nora Memory research has also addressed the connection between places and (collective) memory for a long time now. While these questions pertaining to specific places were nationally, religiously, or ethnically framed<sup>36</sup> in the 1980s and 1990s, transnational perspectives extending beyond the boundaries of identities, nations, and communities of remembrance as well as beyond the discussion of individual places became increasingly relevant from the 2000s and, even more so, the 2010s. Divergent narratives of remembrance are taken into account and changes, connections, and interdependencies are explored.<sup>37</sup> The collective memory is defined as changeable and fluid: Jeffrey K. Olick refers to the collective memory as an “ongoing process”,<sup>38</sup> while Astrid Erll talks about a “travelling memory”,<sup>39</sup> and Michael Rothberg calls it a “multidirectional memory”.<sup>40</sup> Despite the emphasis on these changeable and fluid properties, Susannah Radstone also points out the necessity of locatedness of the transnational memory in its local character-

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33 As an example, see Laura Kajetzke and Markus Schroer, “Spaces Studies,” in *Kultur. Von den Cultural Studies bis zu den Visual Studies*, ed. Stephan Moebius (Bielefeld: transcript, 2012), 196–215; see also, for example, Simon Schama, *Landscape and Memory* (New York: Knopf, 1995); Karl Schlögel, *Im Raume lesen wir die Zeit. Über Zivilisationsgeschichte und Geopolitik* (Frankfurt: Fischer, 2006); Ernst Hanisch, *Landschaft und Identität. Versuch einer österreichischen Erfahrungsgeschichte* (Vienna, Weimar: Böhlau, 2019).

34 Doreen Massey, “Space, time and political responsibility in the midst of global inequality,” *Erdkunde* 60(2) (2006): 89–95.

35 Doreen Massey, *For Space* (London: Sage, 2005), 177–180, see also Michel de Certeau, *Kunst des Handelns* (Berlin: Merve, 1988).

36 Generally, with regard to national places of memory, see Pierre Nora, ed., *Les lieux de mémoire*, 7 vols. (Paris: Gallimard, 1984–1994).

37 See, for example, Daniel Levy and Natan Sznaider, *The Holocaust and Memory in the Global Age* (Philadelphia: Temple University Press, 2006); Chiara De Cesari and Anne Rigney, ed., *Transnational Memory: Circulation, Articulation, Scales* (Berlin: De Gruyter, 2014); Lucy Bond et al., “Introduction: Memory on the Move,” in *Memory on the Move* (New York: Berghahn, 2017), 1–26.

38 Jeffrey K. Olick, *The Politics of Regret: On Collective Memory and Historical Responsibility* (New York: Routledge, 2007), 84.

39 Astrid Erll, “Travelling Memory,” *Parallax* 17(4) (2011): 4–18, DOI: 10.1080/13534645.2011.605570.

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



istics, its “condensations and displacements”.<sup>41</sup> It is not surprising that these views are formulated in times of the digitalisation of all spheres of life: Digital practices, connectivity, and own technology-assisted media production and distribution are making cultures of remembrance and reconstructions of the past more varied. Hegemonic narratives are being expanded, while divergent narratives are becoming (more) visible. Anna Reading has coined the term “global memory”, which means a memory that uses mobile digital technologies to connect different spaces and public spheres – the local to the (trans-)national, the individual to the collective, and the private to the public.<sup>42</sup>

In spatial research, the introduction of digital technologies has resulted in new questions and evaluation possibilities as well. For example, tools of the digital humanities are used in order to visualise the process of progressing ghettoisation in Budapest based on large volumes of (registration) data.<sup>43</sup> The mediation project of the digital reconstruction of no-longer-existing barracks at the memorial site Bergen-Belsen with the help of survivors led to new findings regarding the accommodation of the prisoners.<sup>44</sup> In this context, Silvana Mandolesi makes reference to the “forensic turn” that is characteristic of the post-eyewitness era: “[W]here the truth is obtained by examining the material traces of violence”.<sup>45</sup> When it comes to a spatial localisation of historic events, digital technologies now make it possible to display both space and time – either directly on site using georeferenced apps embedding contents that recreate history, or with the help of maps such as those suggested in the concept of multi-layered “Deep Maps”.<sup>46</sup>

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41 Susannah Radstone, “What Place Is This? Transcultural Memory and the Locations of Memory Studies,” *Parallax* 7(4) (2011): 109–123, DOI: 10.1080/13534645.2011.605585, 120.

42 Anna Reading, “Globalisation and Digital Memory: Global Memory’s Six Dynamics. On Media Memory: Collective Memory in a New Media Age,” in *On Media Memory. Collective Memory in a New Media Age*, ed., Motti Neiger et al. (Basingstoke: Palgrave, 2011), 241–252, 243.

43 Tim Cole, “Holocaust Landscapes. Mapping Ghettoization in Hungary,” 2014, <https://simon.vwi.ac.at/index.php/simon/article/view/140/62>, accessed on 14 March 2023; see also Anne Kelly Knowles et al, *Geographies of the Holocaust* (Bloomington: Indiana University Press, 2014).

44 See <http://www.belsen-project.specs-lab.com>, accessed on 14 March 2023; Paul F. Verschure, “Spatializing experience: a framework for the geolocalization, visualization and exploration of historical data using VR/AR technologies,” *Proceedings of the 2014 Virtual Reality International Conference*. ACM, April 2014.

45 Anstett and Dreyfus (2015) and Dziuban (2017), cited in Silvana Mandolessi, “Challenging the placeless imaginary in digital memories: The performance of place in the work of Forensic Architecture,” *Memory Studies* 4(3) (2021): 622–633, <https://doi.org/10.1177/17506980211010922>.

46 See, among others, John Bodenhamer, John Corrigan and Trevor M. Harris, *Deep Maps and Spatial Narratives Deep* (Bloomington: Indiana University Press, 2015); Dennis Wood, “Mapping Deeply,” *Humanities* 4(3) (2015): 304–318.

The above-mentioned connection between different spaces and public spheres also overcomes the idea of a clear separation of online and offline worlds that was dominant for a long time. In the present phase, which is referred to as “post-digital” and in which the digital revolution is already considered to have occurred, such a distinction is becoming increasingly obsolete.<sup>47</sup> In many areas of life, digital and analogue elements have already become so inextricably linked that hybridity is perceived as a matter of course. Accordingly, concepts of historical representation, discussion, and participation are becoming hybrid as well.

The space-related approach is particularly appropriate for the implementation of hybrid concepts: Physical sites, heterogeneous actors, and technologies are connected to enable the permeation of what Massey describes as the “polyphonic” space. In other words, a physical place is not just augmented digitally but – and this is important – different components of representation, discussion, and participation are connected and related to each other in a meaningful way. When it comes to such “mergers”, “assemblage” (“assembler” is French for “merge” or “put together”) seems to be an apt term. It originates from the fine arts and has – based on the philosophical and theoretical considerations of Gilles Deleuze und Félix Guattari<sup>48</sup> – evolved into a term that is flexibly and widely used in the cultural, social, and urbanistic disciplines with different interpretations and definitions. What the various interpretations have in common is that they refer to the relational behaviour of certain heterogeneous actors within a social and/or cultural fabric.<sup>49</sup> Manuel DeLanda defines an “assemblage” as

a multiplicity which is made up of many heterogeneous terms and which establishes liaisons, relations between them, across ages, sexes and reigns – different natures. Thus, the assemblage’s only unity is that of a co-functioning: It is a symbiosis, a ‘sympathy’.<sup>50</sup> [ . . . ] It is this type of irreducible social whole produced by relations of exteriority, a whole that does not totalise its parts. [ . . . ] We can refer to these social wholes as “assemblages”.<sup>51</sup>

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47 See, for example, Nicholas Negroponte, “Beyond digital,” *Wired* (12 January 1998), <https://web.media.mit.edu/~nicholas/Wired/WIRED6-12.html>, accessed on 14 March 2023; Florian Cramer, “What Is Post Digital?,” in *Postdigital Aesthetics: Art, Computation and Design*, ed., David M. Berry and Michael Dieter (London: Palgrave Macmillan, 2015), 12–28.

48 Gilles Deleuze and Felix Guattari, *Mille Plateaux* (Paris: Les Editions de Minuit, 1980).

49 See Ian Buchanan, *Assemblage Theory and Method: An Introduction and Guide* (London: Bloomsbury Publishing, 2020).

50 Manuel DeLanda, *Assemblage Theory* (Edinburgh: Edinburgh University Press, 2016), 1.

51 DeLanda, *Assemblage Theory*, 11.

These non-hierarchical components of “different natures” – which, in turn, form a functioning “social entity” – can be people, towns, or communities<sup>52</sup> but also things<sup>53</sup> or “technological agents”.<sup>54</sup> With regard to tourist places, for example, Germann-Golz says that these turn into “hybrid assemblages” whose different components interact with one another: “[T]ourist places are now likely to be hybrid assemblages of physical and virtual environments in which bodies, technologies, virtualities, and materialities become entangled with one another”.<sup>55</sup>

## 4 History of the quarry

The commercial use of the granite quarry, differing shares of which has been owned by the villages of Roggendorf and Groß-Reipersdorf as well as the respective leaseholders, goes back to 1870.<sup>56</sup> The region located away from any larger economic centres was connected to the railway network in 1872, and the improved transport conditions made it profitable to exploit the area’s many quarries. The quarry premises were usually leased by large firms from Vienna and its vicinity, which operated construction and quarry companies in various locations throughout Austria. The “Granitwerk Roggendorf” [Roggendorf granite plant] experienced its heyday from the mid-1920s: Approximately 300 quarry workers were employed there to produce crushed rock, sand, and gravel.<sup>57</sup> The workers settled in the surrounding villages and communities with their families. Work at the quarry was dangerous and (fatal) accidents happened again and again. The poorly remunerated quarry workers were not regarded very highly in this region characterised by agriculture but found themselves at the lower end of the regional social hierarchy.<sup>58</sup> Insufficient sales during the time after the global economic crisis forced the quarry company into bankruptcy in 1930. Three years

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52 DeLanda, *Assemblage Theory*, 19.

53 In research on material cultures, for example, “assemblage” is used to refer to open and dynamic relationship structures between objects of different materiality that behave towards one another in specific ways in specific situations (thanks to Thomas Kühtreiber for this information).

54 Paul Frosh and Amit Pinchevski, “Media witnessing and the ripeness of time,” *Cultural Studies* 28(4) (March 2014).

55 Jennie Germann Molz, *Travel Connections. Technology and Togetherness in a Mobile World* (London, New York: Routledge, 2012), 43.

56 Alois Fuchs, *150 Jahre Pfarre Roggendorf* (Eggenburg: Preßvereins-Druckerei, 1934), 50.

57 Police chronicles Röschitz, entry from August 1931 (police station Eggenburg).

58 See, for example, Oral history interviews with Gerhard Gschwandtner (Pulkau, 10/05/2022); Friedrich Daffert (Roggendorf, 19/08/2022).

later, the enterprise was reopened by the well-known Viennese banker and industrialist baron Leopold Popper-Podhragy.<sup>59</sup> The resumption of business was, however, not particularly successful: By 1934, there were only 25 workers employed in the granite factory.

After the “Anschluss” in 1938, Leopold Popper-Podhragy sought exile in England as he was classified as “half Jew” and “subject to political prosecution for concrete acts of persecution against him during the Austrian occupation”, as the Restitution Commission found in 1950.<sup>60</sup> In 1941, the quarry enterprise was leased to Franz Geisler from the nearby community of Zellerndorf without the approval of Popper-Podhragy. Later that year, the quarry workers called up for service in the Wehrmacht were replaced by civil forced labourers from Ukraine and Poland, and later by Soviet prisoners of war.<sup>61</sup>

They were most likely accommodated in a closed-down brickyard in Groß-Reipersdorf, very close to the quarry premises.<sup>62</sup> Starting from November 1944, an additional 29 abducted Jews from Hungary and the Vojvodina region, which was occupied by Hungary at the time, were taken to the quarry for forced labour, among them several families.<sup>63</sup> Those who were able to work had to do extremely hard physical labour as well. In the spring of 1945, the Jewish forced labourers fled west to escape the ordered “evacuation”. Based on the current state of sources, it cannot be reconstructed with certainty whether the then operations manager Franz Liko or the overseer Anton Wechselberger was involved in their escape.<sup>64</sup>

In 1946, the quarry enterprise was leased by the Hattey family and work was resumed with 50 labourers.<sup>65</sup> However, the business had to be shut down in 1950 when Leopold Popper-Podhragy sued for the right to lease out the premises and

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59 Police chronicles Röschitz, entry from 10/07/1933 (police station Eggenburg).

60 Decision of the Restitution Commission before the Regional Court of Vienna, 14/06/1950, Zhl 50 RK 1090/48-22 (RKb 355 50-21), operation facilities act of the granite works Roggendorf/Zellerndorf, BH Hollabrunn, Gruppe XII, Niederösterreichisches Landesarchiv.

61 Litschauer, *Ungarisch-jüdische ZwangsarbeiterInnen*.

62 Litschauer, *Ungarisch-jüdische ZwangsarbeiterInnen*, 209. Herta Wieninger, who lived in the brickyard with her family, cannot remember whether the prisoners of war accommodated in the brickyard worked in the quarry or not; see oral history interview with Herta Wieninger (Groß-Reipersdorf, 10/05/2022).

63 See “list of Hungarian Jews in the granite works F. Geisler on 31 January 1945,” interview with Magda Katic-Pantic, Novi Sad 1998, USC Shoah Foundation, Visual History Archive, <https://vha.usc.edu>.

64 See video interview with Magda Berger (Großberger), Belgrade 1998, USC Shoah Foundation, Visual History Archive, <https://vha.usc.edu>; interview with Wilhelm Liko (Kappl, 08/08/2022), Litschauer, *Ungarisch-jüdische ZwangsarbeiterInnen*, 211.

65 Waldviertler Post, 16/06/1946, 3.

obtained satisfaction from the Restitution Commission.<sup>66</sup> The continuation of quarry operations was not realised then.<sup>67</sup> The factory buildings fell into disrepair and nature reconquered the area. In the post-war period, a scattering created a natural pond that the young people from the surrounding area used as a place for bathing. The quarry premises became a source of recreation and adventure for generations of children and adolescents.<sup>68</sup> In the 1980s, granite exploitation was resumed for a short time and the water vein was scattered again, which caused the pond to run dry. Subsequently, the former quarry premises were and are still used as a venue for cultural and other events.

Today, the place retains few material traces of its past – a transformer building with well-preserved structure and some ruins of quarry operation buildings, among them the building that the Jewish forced labourers were accommodated in. The “Stein-Arena”, a small stage with adjacent event room, was built in place of the dilapidated former machine hall.

While the history of the quarry with its significance for the economy of the place is anchored in the local memory,<sup>69</sup> the history of forced labour was not until recently. In 2006, the artist Maria Theresia Litschauer published a book in which the history of Jewish forced labour in the quarry was reconstructed for the first time.<sup>70</sup> In 2021, an information board on the history of the place was erected on the former quarry premises, which refers to forced labour during the NS regime as well.

## 5 Implementation of the project “Making Traces Readable in the NS Forced Labour Camp Roggendorf/Pulkau”

For the goal of visibility – this means researching, representing, and making the history of forced labour at the quarry accessible – a concept was developed that combines the physical site with artistic and specialist approaches, participatory memory work and digital technologies. This combination of “components of different nature”,<sup>71</sup> which form a social whole in relation to each other and in joint

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66 Litschauer, *Ungarisch-jüdische ZwangsarbeiterInnen*.

67 Litschauer, *Ungarisch-jüdische ZwangsarbeiterInnen*.

68 Interview with Erwin Röck (Pulkau, 03/06/2023, interviewer: Martin Krenn).

69 Erwin Röck, “Wirtschaft,” in *Pulkau, Stadtgeschichte, Kunst, Kultur*, ed., Herbert Puschnik and Herta Puschnik (Pulkau: n.p. 1998), 174–180, 179–180.

70 See Litschauer, *Ungarisch-jüdische ZwangsarbeiterInnen*, 209–212.

71 DeLanda, *Assemblage Theory*, see above.

action, can be described as an “assemblage”, as described above. In order to capture the changing history of the location in its synchronous and diachronous complexity, the focus was on the question of how these different components can be meaningfully related to each other (entangled) using their respective “added value” and become a collaborative social process.

A key starting point for the discussion was the physical location, which, as already described, was used as an anchor point for the reference to historical events and experiences. The changing history of the quarry – formerly an industrial site and an important economic factor for the region, a “horror site” of forced labour under the Nazis, and a recreational and event location reclaimed by nature – led to the decision to work not only on the phase of the Nazi era, but on the entire “biography” of the site and the associated memories and perceptions. This holistic approach also supported the work with the local Citizen Scientists, who – as is often the case in places ‘burdened’ with Nazi history – feared a hallmarking as a site of National Socialist crimes.<sup>72</sup>

Heterogeneous actors dealt with the topic in a transdisciplinary way: The project team consisted of artists, historians, and digital/creative media technologies experts without a direct connection to the location. For this reason, there was intensive on-site cooperation with the municipality of Pulkau<sup>73</sup> and the local educational association “Bildung hat Wert”. The local contact persons provided the premises, did valuable communication work, supported the search for contemporary witnesses and archives, and sent out information letters as well as calls for collections. A history workshop (see figure 2) was set up on site, in which mainly older people with an interest in local history took part.<sup>74</sup> Scientifically researched information was made available to the participants, and they were invited to discuss the history of the quarry. The exchange with the project team took place on site at the five set dates of the history workshop. In addition, local experts were consulted regarding individual issues. A school project also involved 13- to 14-year-old students from the Neue Mittelschule Pulkau. The students there were introduced to the basic techniques of oral history and subsequently interviewed parents and grandparents about their memories of the quarry.

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<sup>72</sup> Discussion “Geschichtswerkstatt” (history workshop), 24/06/2022, town hall Pulkau, concept and management: Wolfgang Gasser.

<sup>73</sup> Especially mayor Leo Ramharter.

<sup>74</sup> Seventeen participants in the beginning.



From the scientific-historical side, research was conducted in (inter)national archives and local private collections and, additionally, oral history interviews with local contemporary witnesses were conducted.<sup>75</sup>



**Figure 2:** Citizen Science Workshop, Pulkau (photo by Alexander Schlager).

The researched and prepared material was made available to the participants of the history workshop as well as to the participating artists as an impulse for their own further work. All participants were also able to access the material collected in the local “Topothek” (see below).

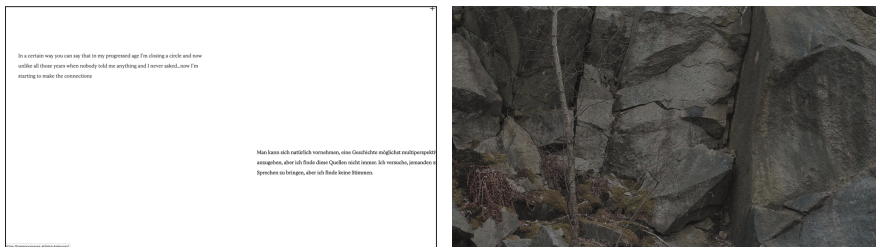
In the course of the research, contacts were established with descendants of people who were directly involved in the events of forced labour during the Nazi era (operators of the quarry as well as former detainees). One of the later contacts of the project was integrated into an artistic project, reflections from the perspective of the affected families will be included in the planned publication.

Digital technologies were used both to represent the historical events and experiences on site and as a tool for collecting photographs and documents. Today,

<sup>75</sup> In addition to the aforementioned oral history interviews, there are further interviews with Erwin Lustig (Rohrendorf an der Pulkau), Helene Schneider, Helga Knell and Johanna Prekl (Pulkau), Maria Engel, Helene Schneider (Groß-Reipersdorf), accessible at <https://pulkau.topothek.at>, accessed 14 March 2023; Maria Manschein (Roggendorf).

the quarry is a largely “empty” place whose historical layers are barely legible. Mobile digital technologies can be used to create historical spaces at the quarry site that represent and narrate the present location in longitudinal time. Based on the historical research, the artistically curated on-site georeferenced web application “DER STEINBRUCH, DAS LAGER UND DIE ORTSCHAFTEN”<sup>76</sup> (the quarry, the camp, and the villages) makes stories, perceptions, and memories from different times accessible on site and thus visible and audible by means of historical photographs and documents, supplemented by a voice from offstage. Through the physical and sensual experience of wandering through the site, the app’s images and texts interweave the eventful history of the former quarry with the current appearance of the area. The creation of “mixed realities” through technologies such as augmented reality was deliberately avoided here, and the media narrative remains recognisable as such.

The second art project (as shown in figure 3),<sup>77</sup> which deals with Jewish forced labour at the quarry, focuses on the fragmentary and changeable character of memory and reconstruction of the past as well as on voids that remain despite historical reconstruction. Traces in the quarry are recorded in a digital memory space, audio files and texts connect the local memory with traditional family memories from Israel to form a transnational memory. The process of constructing the past also becomes visible in the project itself, when participating researchers talk about their approach to the search for traces.



**Figure 3:** Memoryspaces.at (screenshot and photo by Rosa Andraschek).

Digital technologies were also used as tools and repositories for collecting and documenting. The project team’s suggestion to implement the technically very low-threshold, collaborative online platform “Topothek” was implemented by

<sup>76</sup> Martin Krenn, see [granitsteinbruch.at](http://granitsteinbruch.at).

<sup>77</sup> Rosa Andraschek, see [memoryspaces.at](http://memoryspaces.at).

the participants of the history workshop.<sup>78</sup> The “Topothek” is a nationwide bottom-up initiative in which, according to its own definition, “locally historically relevant material and knowledge that is in private hands is secured, made accessible, and made visible online”.<sup>79</sup> Organised locally in each case, interested parties independently upload historical images and documents, comment on them, and keyword them. The digital artefacts contributed can be accessed in georeferenced form via digital maps.

## 6 Results and conclusion

The project “Making Traces Readable in the NS Forced Labour Camp Roggendorf/Pulkau” produced two artistic projects in the form of a mobile web app and a digital memory room, a historical documentation of the history of the quarry from 1870 to the present day, 12 oral history interviews with contemporary witnesses between the ages of 86 and 96,<sup>80</sup> several short interviews by pupils, three contributions by local citizen scientists, and the establishment of the digital collection platform “Topothek Pulkau”. Three events held in Pulkau for the public (kick-off event, presentation of content results, presentation of artistic results) were met with very high interest.

The developed guidelines and handouts have been made available via the project’s webpage and offer numerous helpful tips for communities looking to carry out similar projects. The lab setting also made it clear that certain partial performances of the project require professional instruction. A community’s confrontation of its own past is often associated with local areas of conflict and negotiation processes that need extensive moderation and guidance. Moreover, support is certainly needed in the management and in the collection and licencing of data, as everyone involved needs to have a clear understanding of the circumstances and the purposes that the collected data may be used for.

All in all, it is a very complex project which cannot, in its entirety, be applied to all “forgotten” places but requires appropriate promotion and resources. It can be carried out only with extensive support and interest from the concerned community, as is the case here.

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<sup>78</sup> <https://pulkau.topothek.at>.

<sup>79</sup> See <https://www.topothek.at/de/was-ist>, accessed 14 March 2023.

<sup>80</sup> Eleven video interviews and two audio interviews; nine video interviews available in the Topothek Pulkau.

Although the invitation of confrontation extended to the entire “biography” of the quarry, all three contributions that were worked out and presented at the end of the project deal with Nazi era topics. The chosen topic was, however, not the quarry itself but issues that allowed for individual reference (forced labour in one’s own home community, or the fate of people belonging to one’s own family).

Following the initial introduction and storage of some datasets on the part of the project team, the Topothek was also filled by participants of the *Geschichtswerkstatt*. For example, the datasets of the local photo club were included there. Currently, the online Topothek encompasses more than 7,500 digital artefacts, among them 190 relating to the quarry and 119 artefacts from the period between 1938 and 1945. The difference in narratives (artistic/historical vs. self-motivated in the Topothek) has not been examined yet.

The confrontation of material traces on the spot within the framework of the implementation of the artistic on-site application supports the continuous process of reconstruction: The knowledge gained from archive material and testimonies from contemporary witnesses can be examined and verified based on realities on site. Blank spaces and fragmented knowledge were deliberately addressed in the artistic projects. This promotes the perception of history as a reconstructive process and thus counteracts the expectation of seeing “clear” (technology-supported) pictures of the past.

## Bibliography

- Benjamin, Walter. “Über den Begriff der Geschichte.” [www.textlog.de/benmain/abhandlungen/ueber-den-begriff-der-geschichte](http://www.textlog.de/benmain/abhandlungen/ueber-den-begriff-der-geschichte). Accessed on 14 March 2022.
- Benyon, David. “Presence in Blended Spaces”, *Interacting with Computers* 24(4) (2012): 219–226.
- Blaschitz, Edith. “Digitale Erinnerungstechnologien in der historischen Vermittlungs- und Bildungsarbeit”, *Österreich in Geschichte und Literatur (ÖGL)* 4 (2018): 364–371.
- Blaschitz, Edith. “Mediale Zeugenschaft und Authentizität: Zeitgeschichtliche Vermittlungsarbeit im augmentierten Alltagsraum.” *Hamburger Journal für Kulturanthropologie* 5 (2016): 51–67.
- Blaschitz Edith and Erich Herber. *Mediating The Holocaust Past: Transmedia Concepts at Holocaust Memorials and Museums*. In *Politika Memorije in Pozabe, Načini izročila in Interpretacije / The Politics of Memory and Oblivion, Modes of Transmission and Interpretation*, edited by Jana Babšek, 261–274. Tržič: Muzej Tržič, 2016.
- Bodenhamer, John et al. *Deep Maps and Spatial Narratives Deep*. Bloomington: Indiana University Press, 2015.
- Bond, Lucy, Stef Craps and Pieter Vermeulen. “Introduction: Memory on the Move.” In *Memory on the Move*, edited by Lucy Bond, Stef Craps and Pieter Vermeulen, 1–26. New York: Berghahn, 2017.
- Buchanan, Ian. *Assemblage Theory and Method: An Introduction and Guide*. London: Bloomsbury Publishing, 2020.

- Bundesdenkmalamt ed. Katalog NS-Opferorte in Österreich. <https://www.bda.gv.at/service/denkmal-verzeichnisse/liste-der-ns-opferorte-in-oesterreich.html>. Accessed on 14 March 2022.
- Certeau, Michel de. *Kunst des Handelns*. Berlin: Merve, 1988.
- Cesari, Chiara De and Anne Rigney, ed. *Transnational Memory: Circulation, Articulation, Scales*. Berlin: De Gruyter, 2014.
- Cohen, Erik. "Rethinking the Sociology of Tourism." *Annals of Tourism Research* 6(1) (1979): 18–35.
- Cramer, Florian. "What Is Post Digital?" In *Postdigital Aesthetics: Art, Computation and Design*, edited by David M. Berry and Michael Dieter, 12–28. London: Palgrave Macmillan, 2015.
- DeLanda, Manuel. *Assemblage Theory*. Edinburgh: Edinburgh University Press, 2016.
- Deleuze, Gilles and Felix Guattari. *Mille Plateaux*. Paris: Les Editions de Minuit, 1980 (engl. A Thousand Plateaus, 1987).
- Eminger, Stefan, Ernst Langthaler and Klaus-Dieter Mulley. *Nationalsozialismus in Niederösterreich. Opfer. Täter. Gegner* (Nationalsozialismus in den österreichischen Bundesländern 9), Innsbruck: StudienVerlag, 2021.
- Erl, Astrid. "Travelling Memory." *Parallax* 17(4) (2011): 4–18. DOI: 10.1080/13534645.2011.605570.
- Flacke, Monika, ed. *Mythen der Nationen. 1945 – Arena der Erinnerungen*. Mainz: Philipp von Zabern Verlag, 2004 (catalogue to accompany the exhibition of the same name by the Deutsches Historisches Museums Berlin 2004/05).
- Freund, Florian. NS-Arbeitskräftepolitik in der „Ostmark“. In *NS-Zwangsarbeit in der Elektrizitätswirtschaft der „Ostmark“ 1938–1945*, edited by Oliver Rathkolb and Florian Freund, 8–26. Ennskraftwerke – Kaprun – Draukraftwerke – Ybbs-Persenbeug – Ernsthofen. Vienna: Böhlau, 2014.
- Frosh, Paul and Amit Pinchevski. "Media witnessing and the ripeness of time." *Cultural Studies* 28(4) (March 2014): 594–610.
- Fuchs, Alois. *150 Jahre Pfarre Roggendorf*. Eggenburg: Preßvereins-Druckerei, 1934.
- Gärtner, Reinhard and Sieglinde Rosenberger. *Kriegerdenkmäler. Vergangenheit in der Gegenwart*, Innsbruck: Österreichischer Studienverlag, 1991.
- Germann Molz, Jennie. *Travel Connections. Technology and Togetherness in a Mobile World*. London, New York: Routledge, 2012.
- Hanisch, Ernst. *Landschaft und Identität. Versuch einer österreichischen Erfahrungsgeschichte*. Vienna, Weimar: Böhlau, 2019.
- Hirsch, Marianne. *Family Frames: Photography, Narrative, and Postmemory*. Cambridge, Massachusetts: Harvard University Press, 1997.
- Judt, Tony. "Die Vergangenheit ist ein anderes Land: Politische Mythen im Nachkriegseuropa." *Transit* 6 (1993): 87–120.
- Judt, Tony. "Epilog: Erinnerungen aus dem Totenhaus. Ein Versuch über das moderne europäische Gedächtnis." In *Geschichte Europas von 1945 bis zur Gegenwart*, edited by Tony Judt, 931–966. Munich, Vienna: Hanser, 2006.
- Kajetzke, Laura and Markus Schroer. "Spaces Studies." In *Kultur. Von den Cultural Studies bis zu den Visual Studies*, edited by Stephan Moebius, 196–215. Bielefeld: transcript, 2012.
- Klösch, Christian. *Lagerstadt Wolfsberg. Flüchtlinge Gefangene Internierte*. Dokumentation zur Ausstellung. Wolfsberg: Edition Museum im Lavanthaus, 2013.
- Knowles, Anne Kelly et al. *Geographies of the Holocaust*. Bloomington: Indiana University Press, 2014.
- Köhr, Katja. *Die vielen Gesichter des Holocaust. Museale Repräsentationen zwischen Individualisierung, Universalisierung und Nationalisierung*. Göttingen: V & R unipress, 2012.

- Lappin, Eleonore, Susanne Uslu-Pauer, Susanne, and Alfred Wieninger. *Ungarisch-jüdische Zwangsarbeiterinnen und Zwangsarbeiter in Niederösterreich 1944/45* (Studien und Forschungen aus dem NÖ Institut für Landeskunde 45). St. Pölten: NÖ Institut für Landeskunde, 2006.
- Levy, Daniel and Natan Sznaider. *Erinnerung im globalen Zeitalter: Der Holocaust*. Frankfurt am Main: Suhrkamp, 2001.
- Levy, Daniel and Natan Sznaider. *The Holocaust and Memory in the Global Age*. Philadelphia: Temple University Press, 2006.
- Litschauer, Maria Theresia. 06|44 – 05|45 *Ungarisch-jüdische ZwangsarbeiterInnen. Ein topo|foto|grafisches Projekt*. Vienna: SCHLEBRÜGGE.EDITOR, 2006.
- Mandolessi, Silvana. "Challenging the placeless imaginary in digital memories: The performance of place in the work of Forensic Architecture." *Memory Studies* 14(3) (2021): 622–633. <https://doi.org/10.1177/17506980211010922>.
- Manovich, Lev. "The Poetics of Augmented Space." *Visual Communication* 5(2) (2006): 219–240.
- Massey, Doreen. "Space, time and political responsibility in the midst of global inequality." *Erdkunde* 60(2) (2006): 89–95.
- Massey, Doreen. *For Space*. London: Sage, 2005.
- Negroponte, Nicholas. "Beyond digital." *Wired* (12 January 1998). <https://web.media.mit.edu/~nicho-las/Wired/WIRED6-12.html>. Accessed on 14 March 2022.
- Nora, Pierre, ed., *Les lieux de mémoire*. Paris: Gallimard, 1984–1994.
- Ollick, Jeffrey K. *The Politics of Regret: On Collective Memory and Historical Responsibility*. New York: Routledge, 2007.
- Perkins, Chris. "Mapping Place." In *The Routledge Handbook of Place*, edited by Tim Edensor, 357–366. Ares Kalandides and Uma Kothari. London: Routledge 2020.
- Perz, Bertrand. *Die KZ-Gedenkstätte Mauthausen. 1945 bis zur Gegenwart*. Innsbruck: StudienVerlag, 2006.
- Radstone, Susannah. "What Place Is This? Transcultural Memory and the Locations of Memory Studies." *Parallax* 17(4) (2011): 109–123. DOI: 10.1080/13534645.2011.605585.
- Reading, Anna. "Globalisation and Digital Memory: Global Memory's Six Dynamics. On Media Memory: Collective Memory in a New Media Age." In *On Media Memory. Collective Memory in a New Media Age*, edited by Motti Neiger et al., 241–252. Basingstoke: Palgrave, 2011.
- Röck, Erwin. "Wirtschaft." In *Pulkau, Stadtgeschichte, Kunst, Kultur*, ed. Herbert Puschnik and Herta Puschnik, 174–180. Pulkau: n.p., 1998.
- Rössner, Michael and Heidemarie Uhl, ed. *Renaissance der Authentizität? Über die neue Sehnsucht nach dem Ursprünglichen*. Bielefeld: transcript, 2012.
- Rothberg, Michael. *Multidirectional Memory: Remembering the Holocaust in the Age of Decolonization*. Stanford: Stanford University Press, 2009.
- Schema, Simon. *Landscape and Memory*. New York: Knopf, 1995.
- Schlögel, Karl. *Im Raume lesen wir die Zeit. Über Zivilisationsgeschichte und Geopolitik*. Frankfurt am Main: Fischer, 2006.
- Szita, Szabolcs. *Verschleppt, verhungert, vernichtet: die Deportation von ungarischen Juden auf das Gebiet des annektierten Österreich 1944–1945*. Vienna: Eichbauer Verlag, 1999.
- Uhl, Heidemarie. "Opferthesen, revisited. Österreichs ambivalenter Umgang mit der NS-Vergangenheit." *Österreich. Aus Politik und Zeitgeschichte* 68/34–35 (2018): 47–54.
- Verschure, Paul F. "Spatializing experience: a framework for the geolocalization, visualization and exploration of historical data using VR/AR technologies." *Proceedings of the 2014 Virtual Reality International Conference*. ACM, April 2014.

- Walden, Victoria Grace. "Afterword: Digital Holocaust Memory Futures: Through Paradigms of Immersion and Interactivity and Beyond." In *Digital Holocaust Memory*, edited by Victoria Grace Walden. Education and Research. London: Springer International Publishing, 2021.
- Winter, Jay. "The Generation of Memory: Reflections on the Memory Boom in Contemporary Historical Studies." *Bulletin of the German Historical Institute* 27 (2000): 69–92.
- Wodak, Ruth et al. *Wir sind alle unschuldige Täter*. Frankfurt am Main: Suhrkamp, 1990.
- Wood, Dennis. "Mapping Deeply." *Humanities* 4(3) (2015): 304–318.

## Oral History Interviews within the project

Video interviews (accessible at <https://pulkau.topothek.at>): Franz Bischl, Maria Engel, Helene Schneider, Herta Wieninger (Groß-Reipersdorf, 10/05/2022); Erwin Lustig, Erika Thurner; (Rohrendorf an der Pulkau, 10/05/2022); Gerhard Gschwandtner, Helga Knell and Johanna Prekl (Pulkau 10/05/2022).

Further interviews: Erwin Röck (Pulkau, 03/06/2023, interviewer Martin Krenn); Audio-Interviews: Friedrich Daffert, Maria Manschein (Roggendorf, 19/08/2022); Wilhelm Liko (Kappl bei Salzburg, 08/08/2022, interviewer: Martin Krenn, Edith Blaschitz, camera: Georg Vogt).

Unless stated otherwise, interviewed by Edith Blaschitz, camera: Clemens Baumann.

## Video interviews USC Shoah Foundation, Visual History Archive (<https://vha.usc.edu>)

Berger (Großberger), Magda. Belgrade 1998.

Katic-Pantic, Magda. Novi Sad 1998.

## Archives and Collections

Niederösterreichisches Landesarchiv, St. Pölten.

Police chronicles Röschitz (collection police station Eggenburg).  
<https://pulkau.topothek.at>

## Cited digital projects and websites

"Accessing Campscapes." <https://www.campscapes.org>

<http://ungarische-zwangsarbeit-in-wien.at>

<http://www.belsen-project.specs-lab.com>

<https://map.erinnerungszeichen.de>

<https://memento.wien>

<https://verbrannte-orte.de>

<https://www.gedenkplaetze.info>



<https://www.geschichtewiki.wien.gv.at/Zwangsarbeiterlager>

<https://www.historypin.org>

<https://www.mappingthelives.org>

<https://www.zwangsarbeit-in-leipzig.de/karte>

IWalk, <https://iwalk.usc.edu/sites/iwalk>

[ns-lager-niederösterreich.at](https://www.ns-lager-niederösterreich.at)

[www.erinnerungslandschaft.at](https://www.erinnerungslandschaft.at) (DERLA)

