Memorise: New digital approaches for Nazi persecution storytelling
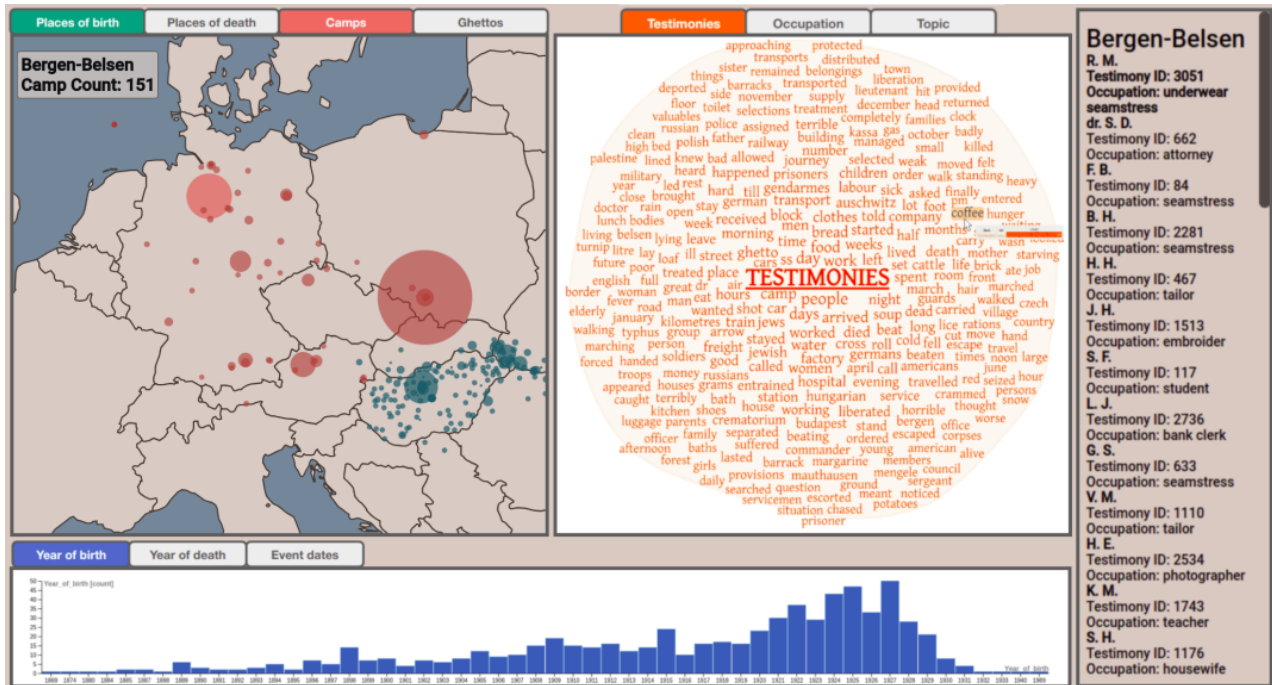
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Figure 1: HNP portal for unguided exploration of written memories

Stefan Jänicke, Professor of Data Science at the University of Southern Denmark, introduces MEMORISE, a project focusing on new digital approaches to storytelling about Nazi persecution

As time moves on and contemporary witnesses disappear, it is becoming increasingly important to develop new ways of communicating and passing on the memory and legacy of the Holocaust. Since the start of the Israeli-Hamas war in October 2023, the level of anti-Semitism has risen, and we witness implicit and direct references to the history of Nazi persecution.

This not only underpins the recent discourse on potential failures in Holocaust education, [1,2] it proves once again the necessity and importance of increased historical education that sheds light on the crimes of National Socialism.

In response to this need, the Horizon Europe MEMORISE [3] project is developing new, digitally supported educational strategies to keep memories of Nazi persecution alive, which is particularly important for a growing generation of digital natives.

The MEMORISE Approach

Heritage of Nazi Persecution (HNP) appears in various forms. Textual memories include diaries and letters, which have usually been handwritten close to the time of the reported experiences. Another form of textual memories are testimonies, which were written down or recorded much later than experiences were made, influenced by the witness' certainty to have survived.

We find a similar differentiation for visual materials. Historical photographs depict actual moments in time, and paintings documenting the hardships and feelings of concentration camp life were either created during imprisonment or after liberation. Our project develops a knowledge graph infrastructure that interlinks all these diverse materials through metadata (e.g., datings, georeferences) and extracted features (e.g., topics or named entities in machine-readable texts, tagged or recognised objects in visual materials). Textual similarity algorithms help find similar experiences potentially made at different locations and times.

Of particular importance is connecting witnesses' memories with the geographical space they relate to. For that purpose, the creation of 3D models depicting contemporary and historical states plays a central role. All of the assets mentioned above are used by a broad palette of interactive tools that combine visual storytelling techniques both unguided (by visitors) and guided (by experts or witnesses).

Figure 2: 3D prisoner artwork of an interior scene in Bergen-Belsen

Visitor-driven storytelling with the HNP-Portal

To allow users to explore HNP freely, we develop tools for unguided exploration. Our central component is the web-based HNP portal that will enable visitors to browse textual materials using metadata and thematic features. To meet a diversity of potential user interests, the HNP portal supports personalised experiences. In a nutshell, visual interfaces display data features that a visitor could personally identify with, and they allow

for filtering to limit results to a specific theme within HNP. For example, a user may be interested in filtering for testimonies that relate to their place of birth, occupation or thematic interests.

The prototype in Figure 1 shows the state of the portal in which the user applied filters only to show testimonies relating to Bergen-Belsen that include the word "coffee".

Expert-driven storytelling to explain 3D prisoner artworks

Next to textual materials, a vast body of drawings and paintings depict scenes of concentration camp life. Interior drawings are of particular importance, as there is a lack of photographic material. Whilst preserving the authenticity and originality of the artists' works, we produce 3D models on the basis of 2D paintings. (4) Figure 2 shows the 3D version of an interior scene painted by Ervin Abadi, who was imprisoned in Bergen-Belsen. The 3D model is enhanced by an ordered sequence of annotations created by experts in our team. They use the 3D realm to tell details of the painter's biography and provide interesting background information about the scene depicted. Just like written testimonies, 3D prisoner artworks will be integrated into 3D contemporary models as visual testimonies witnessing the hardships of concentration camp life.

Ferramonti 3D: An example for witness-driven storytelling

Ferramonti di Tarsia, an internment camp for Jews in southern Italy, was in operation from June 1940 to September 1943. Compared to German camps, the situation in the camp was acceptable. Prisoners were not tortured or killed, and they were allowed to organise and participate in cultural activities. This is not only reported in a number of testimonies and diaries; in fact, photographs of the cultural life were taken and compiled as a photo album structured by themes such as sports, theatre, religion, etc. This artefact is not accessible to the general public, but an exhibition in the former guard buildings informs about life in Ferramonti.

In 1967, a highway was built across the former campsite, leaving behind the former prison area as abandoned farmland. Since no digital educational solutions exist, a MEMORISE team created a digital reconstruction of the former campground, consisting of a contemporary model that combines photogrammetry and Lidar scans, overlaid with a 3D CAD reconstruction of the former barrack buildings. By thematic linking of testimonies and photographs, and by geolocating these composites by local experts, we can now tell the stories within the digital realm at the places the memories relate to. In other words, users are guided by witness memories through the digital model. Our results are not only an extension to the onsite physical exhibition, but the model can also be used for remote educational purposes.

Figure 3: Ferramonti 3D conceptual overview with a 2D map and a 3D zoom to a selected photograph of men playing cards, connected to a thematically related excerpt from a testimony by Dr David Ropschitz

MEMORISE vision

Just like the crafting of 3D prisoner artwork, designing and implementing tailored digital solutions such as Ferramonti 3D requires a considerable amount of work. This may not be affordable for many memorial sites, which might benefit from educational digital tools. We, therefore, develop easily adaptable workflows that support memorial sites to create and annotate 3D models on their own at a low cost. In addition, we allow them to share and interface their data with our knowledge graph to support comparatively analysing their materials in a bigger context and to facilitate revealing relations across different sites of Nazi persecution.

References

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