DH4MA - (Digital Humanities for Marginal Areas). Tangible and Intangible heritage digitalization to promote marginal areas and rural development

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The first edition of the Digital Humanities for Marginal Areas (DH4MA) workshop aims to investigate the state of the art of tangible and intangible heritage digitization in marginal and rural areas and their accessibility. DH4MA will be held in conjunction with the DH2023 conference and is organized in the framework of the KiNESIS Erasmus+ project. The KiNESIS (KNowledgE alliance for Social Innovation in Shrinking villages) project is a three-year initiative (2021-2023, extended to June 2024) co-funded by the European Union's Erasmus+ Programme. Its primary objective is to establish a Knowledge Alliance among academia, NGOs, communities, local authorities, and businesses to develop a program of multidisciplinary activities in shrinking areas that promotes and fosters entrepreneurship, projects, workforce, productivity, and attractiveness. The KiNESIS project's aims are: revitalizing depopulated areas, creating local living laboratories for exchanging knowledge and experiences, experimenting with innovative approaches in teaching and learning, and facilitating the flow of knowledge at local and global levels. One of the most important initiatives promoted by the KiNESIS project was the Wiki Loves Monuments Terre dell'Ufita, developed within the International photografic competition Wiki Loves Monuments1 (WLM). The aim of WLM is to highlight the heritage sites of the participating countries to encourage people to capture pictures of these monuments, and to put them under a free licence on Wikimedia Commons. The Ufita Valley edition made it possible to collect 73 photos of monuments in the geographical area of interest, thus fostering a spread of knowledge about them and a more shared use of digital technologies, in an area where to be considered sensitive issues are both the depopulation of rural areas, but also the difficulty caused by the digital divide. Thanks to the cooperation between the KiNESIS project, Wikimedia Italia and Terre dell'Ufita NGOs, local communities and students have acquired knowledge in creating open contents online in order to disseminate local history and cultural heritage2, trying to reduce the digital gap.

The digital divide issue affects several areas all over the world, including those that despite being part of the most developed countries, are behind the times of the digital revolution. In light of the above, Digital Humanities (DH) techniques represent an opportunity not to be missed to raise awareness about cultural heritage and to overcome the digital divide.

This topic was investigated through the various contributions that were received, in the form of extended abstracts (500 words max.), from authors with different research centres, scattered around the world.

The field of digital history and heritage is rapidly evolving, paving the way for new methods of preserving, documenting, and promoting cultural heritage. Although there is a lack of research on using digital tools to preserve Cultural Natural Heritage (CNH) in composite rural areas, as digital technologies continue to advance, there is growing recognition of their potential to bridge the divide and promote CNH-led strategies for remote and rural regions. The study proposed by Farzaneh Aliakbari and Rosa Tamborrino from the Interuniversity Department of Regional and Urban Studies and Planning of the Politecnico di Torino (Italy), entitled Review mapping of digital tools and applications in Cultural Natural heritage landscapes, aims to provide a comprehensive overview of the digital tools and applications used in CNH sites, as well as identifying existing digital gaps and potential future paths in digitalization of CNH landscapes. The study will contribute to the promotion of digital heritage-led strategies for rural and remote areas by providing insights into preserving tangible and intangible heritage values.

One of the key challenges in the digitization of cultural heritage is the lack of research and resources available in certain regions. In order to fill this gap, Serena Autiero, Frederik Elwert, Cristiano Moscatelli, Jessie Pons, from the Center for Religious Studies, proposed the digitization of Buddhist heritage in the Mountain Valleys of Khyber Pakhtunkhwa (Pakistan). As explained in their proposal Digitization of Buddhist Heritage in the Mountain Valleys of Khyber Pakhtunkhwa (Pakistan): results and perspectives, the BMBF-funded eHeritage project (2021-2024) Digitization of Gandharan Artefacts (DiGA) is working to digitise almost 2,000 Buddhist sculptures from the historical region of Gandhara in Pakistan. By making these sculptures accessible, the project offers new avenues for research on Gandharan styles, Buddhist iconographies, and the interplay between literary and visual documents. Additionally, the project creates bridges between traditional research and the Digital Humanities, digitised collections and other projects, and European research landscape and cultural heritage institutions in Khyber Pakhtunkhwa.

About the Italian scenario, Vincenzo Colaprice from the University of Bari "Aldo Moro", proposes the creation of a digital atlas (A digital Atlas for Italian "borghi") to present the specificities of each territory through various indicators. The author reflects on the fact that the Italian National Recovery and Resilience Plan (PNRR) provides strategic interventions for villages (cfr. 'borghi') in marginal areas, but not for many other smaller centres. The aim of this innovative atlas is to offer useful data and information to multiple communities of users and support public institutions in defining policies that might activate the regeneration processes of villages in marginal areas. By integrating quali-

tative and quantitative data, this atlas provides an organised and easily usable ecosystem.

The archaeological map of the upper Tammaro valley as a tool for governance and planning of the cultural heritage of a marginalized rural area. (Benevento, Campania region, Italy) is the title of a study focused on the rural landscape of the upper valley of the Tammaro river in Campania, Italy, from the IV BC to the VI AD century. The author, Oriana Cerbone, from the University of Salerno (Italy), reflects on the importance of giving uniformity to the archaeological data available while considering the environmental and human factors that influenced the landscape's development. The methodology involves creating an archaeological territorial information system and implementing it through mapping tools. The results of this study can be used to protect cultural heritage, support sustainable rural development, and encourage active citizenship and local tourism.

Another area where digital technologies are making an impact is in the study of medieval Hebrew manuscripts, as demonstrated by Gila Prebor, from the Bar-Ilan University (Israel). Using Machine Learning-Based Methods to Forecast the Production-Date of Hebrew Medieval Manuscripts is the title of the proposal in which the author describes the development of a reliable and efficient method for dating ancient manuscripts. This development will enable a broader audience of researchers to date manuscripts without the need for extensive codicological knowledge, enriching the understanding of mediaeval Hebrew manuscripts and their historical context. Furthermore, the understanding of the impact of different data on the dating of manuscripts can aid in the identification of trends and developments in the production of Hebrew manuscripts throughout the years.

However, the use of digital tools and applications in preserving cultural heritage is not without challenges. The paper The Rhetoric Gaze of Mehrangarh Fort by Sayan Sanyal, from the IDRP, IIT Jodhpur (India), highlights the complex relationship between art, architecture, and culture, and how they shape our perceptions of the world. Using the Mehrangarh Fort as an example, the paper explores how images and cultural heritage have been perceived and represented over time. It emphasises the importance of adopting a critical and nuanced perspective when analysing cultural heritage and using digital technologies to study it. By doing so, we can gain a deeper understanding of the past, present, and future of cultural heritage and promote its preservation for future generations.

According to Olga Terenstka (Europeana Foundation), the digitization of cultural heritage offers new opportunities for a better understanding of the cultural past, raises awareness about cultural heritage, and promotes its preservation for future generations. The author, with the contribution entitled Instrumentalization of culture in politics, fake cultural narratives, war crimes, Ukraine, proposes to increase the voice of the digital cultural heritage of Ukraine abroad and overcome the digital divide created by insufficient effort aimed at educating EU people regarding Ukrainian cultural history topics in a non-censored way. Through the collection of several projects focused on the digitization of Ukrainian tangible and intangible heritage, the author offers an elaboration of best practices of collaboration between people/teams with different backgrounds across the EU.

The DH4MA workshop was organized by

- Johanna Monti, full Professor at the University of Naples "L'Orientale" (Italy) (SSD L-LIN/02), where she is the head of

the UNIOR NLP Research Group of the Department of Literary, Linguistic and Comparative Studies, active in the field of Computational Linguistics and Automatic Natural Language Processing (NLP) and local node of the National Laboratory of Artificial Intelligence and Intelligent Systems of CINI. She is also the Third Mission delegate at the same University and is responsible for national and international research projects in the field of NLP.

- Antonio Pascucci, PhD in Literary, Linguistic and Comparative Studies at the L'Orientale University of Naples with a thesis titled Does style characterize haters? An investigation on an Italian hate speech corpus. His research interests focus on Computational Stylometry and Forensic Linguistics. His other interests include tourist promotion of internal areas and finding solutions to develop rural areas. He is involved in the Erasmus+ KiNESIS project, which focuses on creating connections among research institutes and businesses to fight the phenomenon of depopulation;
- Carola Carlino, PhD in Literary, Linguistic and Comparative Studies at the L'Orientale University of Naples with a thesis titled Musei Liquidi. Digital Storytelling, Social Media, Multilinguismo. Her research interests focus on Cultural Heritage Digitization processes and Communicative strategies by Cultural Institutions.
- Raffaele Manna is a PhD candidate in Natural Language Processing at the UniOR NLP Research Group. His research interests concern computational stylometry and computational methods for emotion recognition from texts.

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