



From Digitization to Cybersecurity: Rethinking Cultural Heritage Protection in the Age of Hybrids War

In the era of technological revolution and transformation, cultural heritage is transforming through new tools for its preservation and dissemination. Works of art, archives, museums, and intangible heritage are increasingly being transferred into complex and interconnected digital environments. Digitization, a central tool in recent years, represents a great opportunity: it enables the preservation and promotion of heritage, also allowing accessibility at any time and from remote locations. Among the most significant tools in this process are digital libraries, such as Europeana and the Digital Public Library of America (DPLA). Moreover, the HII's Virtual Museum on Cultural Heritage, recognized by United Nations Human Rights Council Resolution A/HRC/58/L.4/Rev.1, offering an example of digital interpretative exegesis of cultural heritage that combines different digitization models and clearly demonstrates the advantages of digitization in the cultural sector.

These platforms not only promote inclusive access to culture in times of peace, but also play a crucial role in the protection of heritage during conflicts, natural disasters, or environmental degradation. At the same time, digital environments expose these resources to new and increasing cyber threats. It is essential to recognize a fundamental principle of cybersecurity: no IT system can be considered completely invulnerable. Despite the adoption of technical and organizational protection measures, every information system remains potentially exposed to cyber threats and attacks.

In this context, museums and digital libraries could be particularly vulnerable targets, if they do not count on adequately protected technological infrastructures and on cybersecurity experts among their staff. These vulnerabilities often stem from budget constraints that restrict investments in training, system updates, and advanced security solutions, but also from the lack of relevant international and nation legal frameworks. A reflection on communication methods in cybersecurity, across different organizational contexts, is necessary to develop educational programs tailored to diverse corporate cultures. Building a security culture relies on the continuous engagement of employees to promote secure behaviors and to develop best practices.

To mitigate these risks, investing in cybersecurity policies is essential, involving advanced staff training, and collaboration between cultural institutions and cybersecurity experts. The current international legal framework seems to leave significant gaps in the regulation and safeguarding of cultural heritage in the digital era. There is an urgent need for a comprehensive and critical assessment of existing legal provisions, such as the 2003 UNESCO Charter on the Preservation of Digital Heritage.

Additionally, the development of new, forward-looking legal instruments is essential to effectively address the communication technical, and legal challenges posed by emerging technologies in the preservation, use, and dissemination of cultural heritage.

Workshop chairs:

- Sergio Iovino
- Gianluigi Mastandrea Bonaviri
- Emiliano Degl'Innocenti
- Maria Raffaella Mastandrea Bonaviri
- Filippo Ceccotti
- Valentina Gastaldo

