

Case Study

Medieval History Informing Science and Heritage



RESEARCHER

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THE OVERVIEW

The *Imprint* project used innovative scientific techniques and historical research to bring the past alive in new ways, and to contribute to key developments in forensic investigation. Funded by the Arts and Humanities Research Council (AHRC), the project led to new discoveries about the practice of sealing and its implications for ideas of personal identity.

By informing practices in archives and conservation, it expanded heritage preservation and interpretation. This pioneering analysis of medieval finger and handprints has also contributed to the development of cutting-edge forensic equipment and furthered forensic science practice.



THE RESEARCH

Impressions of seal matrices in disks of wax, deliberately preserved with their parent documents as part of the legal process of authentication, survive in great numbers in British archives.

Since, by the thirteenth century, institutions and individuals across society owned and used seals, their motifs and text provide invaluable evidence about identity and representation. The back of the wax on which such seal impressions are found often retains handprints (finger, thumb or palm) but these have previously been neglected as a source of information. *Imprint* (www.imprintseals.org) analysed 1000 images of such prints and discovered that assumptions made about the links between seals and the identities of matrix owners - that an individual needed to impress their own matrix into the wax which they also held - were only part of the picture. Instead a third party sometimes held the wax into which they or the seal owner impressed the matrix. This also suggests that the authentication and the performance of the exchange itself was becoming separated in terms of sealing.

Prior to *Imprint*, there was no way to investigate handprint evidence on wax seals. The need for combining specialist forensic, historical and palaeographical skills made them a closed book not just to the general public, but even to specialists.

To remedy this situation, the project produced a database of approximately 1500 seals, including high quality images of the handprints on the wax made with cutting-edge forensic equipment and colour photographs of both the matrix impressions and the documents. These are all connected through a relational database which provides detailed information about the wording and motifs on the seals, and the nature and quality of the handprints. It also links impressions of the same matrix and of the same handprints, drawing on forensic techniques. Research which was once impossible can now be completed in a matter of minutes. Unlocking the information in this pioneering way has democratised the use of seals in all their elements for everyone interested in medieval history.



THE IMPACT

INFLUENCING THE DEVELOPMENT OF FORENSIC EQUIPMENT AND PRACTICE

As a result of the research, the forensic partners on the *Imprint* project, Forensic Focus, discovered new information about the way in which prints survive, and can be identified, upon wax mixed with different chemical components.

Imprint's use of the multispectral Crime-lite Imager (CLI) - designed for crime-scene analysis - in unusual circumstances also allowed the equipment's creators, Foster & Freeman Ltd, to discover more about the way the equipment worked in different environments and make significant improvements to both the hardware and software of the CLI.

EXPANDING HERITAGE PRESERVATION AND INTERPRETATION

Imprint worked with its partner heritage institutions to expand professional knowledge of their collections. The project ran a series of knowledge-transfer and training workshops for heritage professionals (some of which were open to the general public). Feedback from the events evidence *Imprint's* impact on professional practice and ways of working with medieval seals.

Work with Exeter and Hereford Cathedrals also led to impact on heritage preservation. During *Imprint* the CLI was used to uncover new information about significant cultural items including the Exeter Book (which has UNESCO Memory of the World status), the Exon Domesday (one of the most informative surviving documents of the Domesday Inquest), and the Hereford Gospels (the oldest surviving manuscript produced in Wales), enabling a recalibration of key archival material and otherwise obscured text to be revealed.

Imprint also worked with The National Archives (TNA) at Kew informing their practices relating to their wax seal collections, which has also greatly expanded heritage conservation.