

DIGITAL EXCAVATIONS: TEXT MINING APPROACHES FOR A BETTER ARCHAEOLOGY

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ABSTRACT

Archaeology and associated disciplines from the social sciences stands much to gain from collaboration with experts in the digital humanities. Likewise, digital technologies and experts in computer science are able to benefit through their association with disciplines like archaeology, as these collaborations lead to the asking of diverse questions, thereby encouraging technological innovation. In recognition of this, the preliminary stages of our work together have focused on identifying a number of exciting research areas that will directly benefit from such a cross-disciplinary collaboration, guided by our key overarching research question: how can the application of digital methodologies within archaeology facilitate research that encourages a more critical understanding of the past? In this paper, we will discuss the further research questions our collaboration has targeted, the methods we have used, and how these research initiatives have the potential to impact widely beyond our individual disciplines.

Recent research within archaeology has identified the need to use techniques like text mining to improve our knowledge of the history of archaeology as a discipline and uncover the ways nationalist discourse developed and remains influential (Plets et al. 2021). Our collaboration targets a significant body of published works of *Antiquity*, a journal of world archaeology that has been publishing continuously since 1927, with circa. 7000 articles in its records. The corpus of *Antiquity* comprises a substantial record of the development of archaeological discourse and is ideal for a historiographical study. We will present the initial results of a data-driven discourse analysis on how archaeological thought has evolved, specifically regarding concepts of ethnic and cultural identity of peoples in the past, drawing on a detailed analysis of term frequency and word concordancing. We also explore increasing diversity of

geographic areas of focus over a period of 1920 until 2020; e.g. what is meant by 'World Archaeology'? Which regions are actually being studied, and how does this change over time?

The history of archaeological research has implications beyond academic interest. Archaeology as a discipline has been intimately tied with the nation-state since its origins in the late nineteenth and early twentieth centuries; archaeology both creates and sustains the nation, providing material evidence to support established national narratives and to facilitate the creation of new ones as required by socio-political circumstances. Although there have been a number of critical responses to this relationship, especially over the past three decades, as Plets *et al* (and others) argue, uncritical nationalist dialogue remains embedded in a significant portion of archaeological discourse. Our contribution to the history of archaeology not only reveals the results of our analysis of the development and continued prevalence of banal nationalism within archaeological publications but also demonstrates the value of such cross-disciplinary collaborations and highlights the unique expertise at Linnaeus University, in collaboration with Utrecht and Durham, that has led to this project.

The potential impact within archaeology will be considerable, especially if we are able to transform our results into pedagogical and research tools such as an interactive database or discourse maps. Archaeological research ranges widely both geographically and temporally, and the discipline currently lacks resources which enable the visualization of the history of archaeological thought in the twentieth and twenty-first centuries. We have the ability to deliver these tools, and through our planned collaboration we can achieve a much better understanding of the continued impact of nationalistic thought on our perception of the past.

Keywords: archaeology, text mining, nationalism, discourse analysis

REFERENCES

Plets, G., P. Huijnen & D. van Oeveren, 2021. Excavating Archaeological Texts: Applying Digital Humanities to the Study of Archaeological Thought and Banal Nationalism, *Journal of Field Archaeology* 46(5): 289–302, DOI: 10.1080/00934690.2021.1899889