

MAPPING EPIGRAPHIC METHODOLOGICAL LITERATURE THROUGH CITATION NETWORKS

1. INTRODUCTION

Epigraphy, as a field of study at the crossroads of several disciplines, does not have a prominent methodological tradition, unlike other historical academic disciplines such as History, Philology and Archaeology. Nevertheless, several scholars over the decades have felt the need to tackle methodological questions. A special focus was devoted, not so much to methods – mostly derived from philology and archaeology – as to the nature of the object of study.

The most acknowledged object of study is the epigraph, of course, i.e. a written text normally inscribed on a durable material and made to be directly read by an audience. Despite this apparently easy definition, the overall landscape is manifold. For instance, texts on durable objects like coins are seldom studied by epigraphists and fall within Numismatics. *Ostraka*, i.e. fragments of pottery carrying short texts, are often studied by papyrologists. Even within the traditional Epigraphy, variability can be significant, as fixed epigraphs on monuments are very different from *instrumenta domestica*. This high variability in the nature of what can be considered an epigraph has prompted questions and doubts among scholars, as well as several attempts to precisely define it.

The research carried out during the H2IOSC project (<https://www.h2iosc.cnr.it/>) at ISPC-CNR laid the ground for the present work (SCARPA, VALENTE, ROSSI 2025). The exact definition of the epigraphic object, one of the special focuses of a pilot project within H2IOSC, and a central concept during the process of creating an ontology for Heritage Science, proved to be particularly challenging and prompted further research on the nature of epigraphs and ultimately of Epigraphy itself. Within this frame, this paper aims to analyse a selection of the most relevant methodological works in Epigraphy using bibliographic references and citation networks to provide a first preliminary survey of the interest in methodological issues among epigraphists.

2. MATERIALS AND METHODS

A citation network analysis was the chosen approach. A citation network allows for the analysis and visualization of the reciprocal citations in scientific literature, finding foundational works, trends and communities while mapping targeted scientific fields. A pool of twenty-eight core bibliographic resources was selected for this aim (WALTZING 1892; RICCI 1898; CALABI LIMENTANI 1968, 1996; MALLON 1961; FAVREAU 1969, 1989; PETRUCCI

1981, 1994; SUSINI 1982, 1989; GARCÍA LOBO 1991, 2001; BANTI 1995; PANCIERA 1998, 2012; DE SANTIAGO FERNÁNDEZ 2004, 2020; RAMÍREZ SÁNCHEZ 2005; PANCIERA *et al.* 2006; KOCH 2007; VELÁZQUEZ SORIANO 2008; RODRÍGUEZ SUÁREZ 2012; GROSSI 2016; FELLE 2017, 2022; BODEL 2023; TEDESCHI 2023). The selection criteria were mainly grounded on the presence within them of methodological sections that discuss the nature of epigraphic sources, the methods, and the scope of the discipline. The cited references in these sources were manually inserted into a Zotero collection;

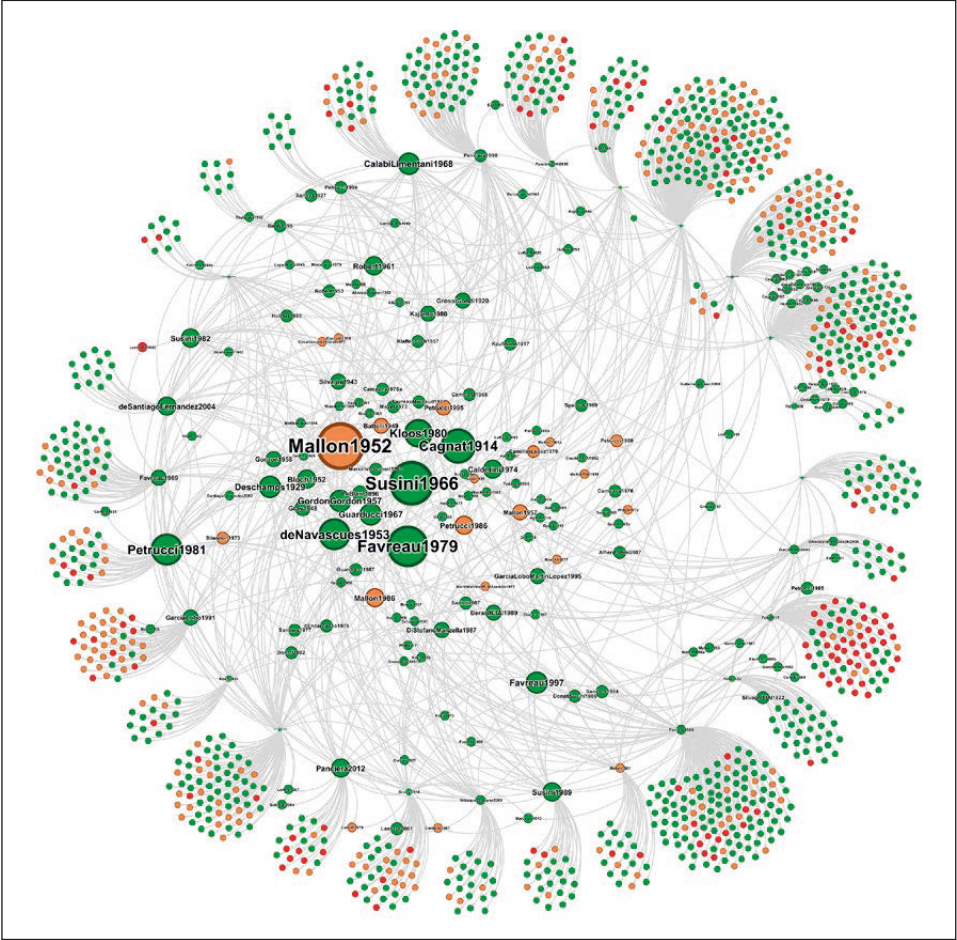


Fig. 1 – Complete citation network. Legend: green = AI_E; orange = AI_A; red = AI_N. The twenty-eight selected contributions are arranged in circle. The DE NAVASCUÉS, GÓMEZ MORENO 1953 node is shown as deNavascues1953.

manual retrieval was chosen instead of an automatic extraction from OCR digital texts due to the high heterogeneity of citations that – especially for references older than fifty years – are often partial or missing many elements. Unpublished or in-press texts, theses, manuscripts, large epigraphic *corpora*

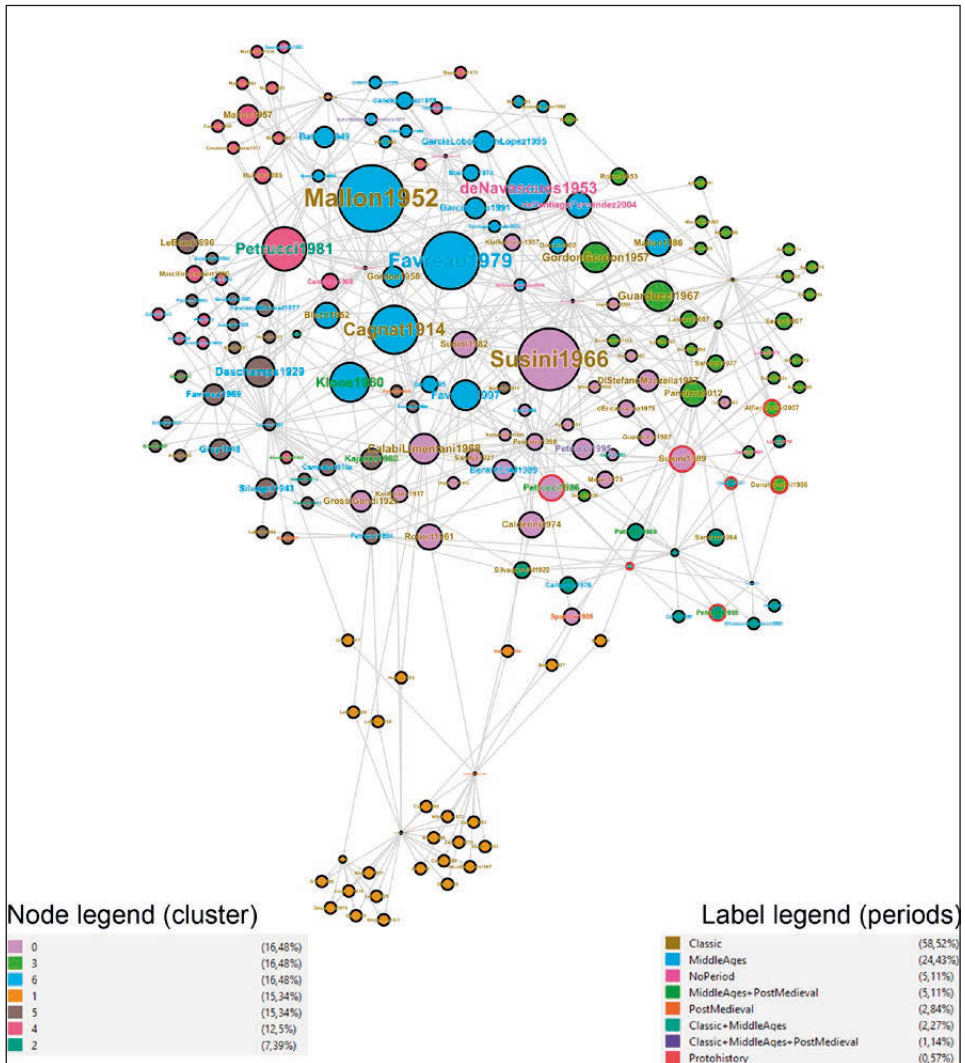


Fig. 2 – Modified citation network. The red edge of some nodes shows that those sources are directly related to the ‘exposed writing’ topic. The DE NAVASCUÉS, GÓMEZ MORENO 1953 node is shown as deNavascués1953.

such as the *CIL*, academic lectures or generic citations of names of series and/or journals were not considered.

At the same time, a table representing reciprocal citations was manually created. Another table containing tags added in the Zotero collection to enrich it with information about chronological periods and the general topic of the publications was exported. Both tables were subsequently uploaded into the software Gephi 0.11, creating a network of 1249 nodes – i.e. distinct bibliographic sources – and 1571 edges – i.e. the connections between the sources. The whole collection was subsequently evaluated using the Large Language Model (LLM) Claude Sonnet 4.6 – by Anthropic, 2025/26, accessed via claude.ai – to identify which works could be considered as ‘epigraphic studies’ and which could not. The analysis comprised automated parsing of RIS-format bibliographic data, web-based verification of selected records, and systematic thematic classification of 1249 bibliographic references. The automatic classification provided three categories: AI_E for epigraphic studies, AI_A for studies from adjacent disciplines and topics, and AI_N for non-epigraphic studies. The use of AI was justified by the need to obtain a sort of ‘objective’ classification of what can be considered epigraphic and what cannot. When directly asked, Claude Sonnet 4.6 defined an epigraphic study as «the analysis of inscriptions as primary historical sources, examining their textual content, material support, graphic execution, social function, and original context of display, with the aim of extracting historical, linguistic, cultural, or archaeological knowledge that cannot be obtained from other document types» and these criteria were used for the classification. The LLM drew on the analysis of the following elements, also using web resources: title, parent publications, authors’ profiles, abstracts, journal or series titles and publishing information. Results can be viewed in Fig. 1.

The estimated indegree value – i.e. the number of connections (edges) that point to a given node in the network – for each node suggested removing those nodes with a value < 2, except for the twenty-eight selected resources that were considered regardless of their indegree values, as some of the most recent works lack any citation. This step reduced the network to 176 nodes and 497 edges. The Girvan-Newman algorithm (GIRVAN, NEWMAN 2002), which is normally considered more appropriate for small networks, was used to estimate the clustering, resulting in seven distinct clusters. The final visualization of the network was created using the ForceAtlas 2 algorithm as shown in Fig. 2.

3. DISCUSSION

Some trends and considerations can be drawn from this bibliometric analysis. The twenty-eight selected contributions were published between 1892 and 2023. However, most of them were produced starting from the second half of the 20th century, with a clear acceleration from the 1980s. This trend

suggests that the interest of the scientific community in the methodological issues related to epigraphy has increased over the last fifty years. Most of the contributions belong to the subfields of Classical (39%) and Medieval (32%) epigraphy, although a relevant percentage (18%) consists of methodological works without an explicit reference period.

Among the other contributions cited by the selected works, the majority belongs to Classical and Medieval Epigraphy as well, which is unsurprising given that most of the citing references come from the same areas. Regarding the first subfield, most of the attention is paid to well-known manuals (CAGNAT 1914; SUSINI 1966); the presence of a manual on Latin Palaeography (MALLON 1952) shows how the boundaries between these two disciplines are blurred. Medieval Epigraphy is represented by one of the most relevant works by FAVREAU (1979). Another relevant presence is that of the key lecture by DE NAVASCUÉS, GÓMEZ MORENO (1953); its importance lies not only in the invitation to widen Epigraphy's boundaries, but also in the fact that it is probably one of the first expressly methodological contributions. The preponderance of Classical Epigraphy is reversed when considering a specific aspect of epigraphic studies, i.e. 'exposed writing', a concept originally coined by PETRUCCI (1980, 1986).

The clustering revealed six main groups. Some of them are very homogeneous: cluster 1, mostly composed of 19th century works, belongs almost entirely to Classical Epigraphy, versus Medieval Epigraphy as do clusters 0 and 3. Clusters 2 and 5 prominently belong to Medieval Epigraphy, while clusters 4 and 6 tend to be mixed. Their position is also indicative. Clusters 1-3 and 5 are generally peripheral and independent, while clusters 0 and 6 are clearly at the centre of the network and share many connections with all the other clusters; they also contain the majority of the most cited contributions of the network. Cluster 4, which also has a peripheral position, is more intertwined with clusters 5 and 6. Although some more isolated clusters exist (1 and, partly, 2 and 3), the overall picture shows a relatively compact distribution that suggests a reciprocal awareness of the most important contributions in the field. The role of Petrucci's works is also interesting; the presence of his six works, including those on 'exposed writing', a key concept in the definition of the object of study in Epigraphy, across four different clusters is a clue of its relevance for different communities for what concerns methodological issues. Other authors whose presence spans more than two clusters are Augusto Campana, Arthur Ernest Gordon, Ernst Willibald Emil Hübner, Walter Koch and Jean Mallon.

4. CONCLUSIONS

Despite some undeniable biases – such as the relatively limited size of the input pool, the use of AI for automatic classification, and the presence of recent works that still do not yet have an impact on citations – the network

analysis of a group of bibliographic resources derived from key contributions in the epigraphic field has allowed us to draw some preliminary conclusions. The fact that only 176 out of 1249 total contributions were considered for the final analysis suggests that the core of relevant studies for epigraphic methodology is relatively well defined. Part of this core is composed by foundational works in Epigraphy, such as those of CAGNAT's (1914), MAL-LON's (1952), SUSINI's (1966) and FAVREAU's (1979) works, but a relevant role is also played by more specific contributions (DE NAVASCUÉS, GÓMEZ MORENO 1953; PETRUCCI 1981) on the nature and scope of Epigraphy, as well as on its connections with adjacent disciplines such as Palaeography. The centralized network and the presence of mixed clusters seem to suggest that contributions from other epigraphic fields are generally considered as useful regardless of the local contexts or chronological periods, presenting a landscape where disciplinary boundaries are not insurmountable barriers. The constant updating of the network will allow us to maintain the current picture of methodological studies in Epigraphy.

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ABSTRACT

The boundaries of epigraphy have long remained the subject of implicit assumptions rather than explicit methodological reflection. While the discipline is traditionally associated with the study of inscriptions, the range of objects, media, practices, and analytical approaches encompassed by epigraphic research has expanded considerably over time, raising questions about the field's conceptual limits and internal coherence. This article investigates how methodological literature has contributed to defining and negotiating the scope of epigraphy. Drawing on citation network analysis, the study examines a corpus of methodological contents that have shaped discussions on the nature, aims, and objects of epigraphic inquiry. By reconstructing patterns of citation and intellectual influence, the article identifies major clusters of scholarship, highlights key reference works, and explores the relationships among different methodological traditions. Rather than treating disciplinary boundaries as fixed or self-evident, the network perspective reveals them as the product of ongoing scholarly interactions and debates. The results suggest that epigraphy is characterized by a plurality of methodological orientations that converge around a shared concern for inscribed texts.