Information Architecture of CiteLens: A Visualization Tool for Context and Content Analysis of
References in Traditional Humanities Monographs

by

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Abstract

This thesis investigates new avenues of conducting context and content citation analysis for long-form publications in traditional humanities, an area of scholarly output which has been, to a large extent, ignored by index-based citation analysis studies.

The contributions brought here are twofold: first, I present the information architecture and the features of a prototype citation analysis visualization tool for context and content analysis of citation; second, I discuss the adoption of existing Digital Humanities tools and methodologies for the creation of a Problem Solving Environment geared towards collecting, enhancing, and analyzing citation data extracted from the full text of humanities monographs.

The thesis identifies two significant gaps in citation analysis for humanities research: (1) the scarcity of such studies, caused primarily by the absence of comprehensive citation data in this area of knowledge and by the characteristics of humanities research that make it less suited to traditional, index-based citation analysis; (2) the absence of consistent research methodologies and reliable tools for content and context analysis of citation – the area of citation analysis research that I argue is best suited for studying humanities citation patterns.

After examining the particularities of research and referencing in the humanities, I outline how they inform the requirements for the creation of a visualization tool for context analysis of citation. The information architecture of such a prototype tool is described in detail, with a focus on its technical specifications and the markup schema developed to enable the analysis and visualization of humanities monographs for content and context analysis of citations.

Future directions identified include the creation of a proto Problem-Solving Environment for

citation analysis in traditional humanities rooted in Digital Humanities tools and methodologies that can be employed to collect, enhance, analyze and disseminate humanities citation data.

I conclude that this methodological approach can lead to a better understanding of citation practices in traditional areas of the humanities, which – in turn – may result in improved evaluation strategies for research output in the humanities.

Preface

The prototype described in Chapter 3 of this thesis was designed and built between 2011 and 2013 as part of the work conducted by the Interface Design group of the Implementing New Knowledge Environments (INKE) research initiative, under the leadership of Professor Stan Ruecker (University of Illinois, Urbana-Champaign) and the guidance of Professor Geoffrey Rockwell (University of Alberta). As the lead of the Research Assistants team tasked with the creation of CiteLens, I was responsible for the conceptual design of the tool, which was based on a proposal I had submitted as part of a research paper in late 2009. In addition to scoping out the specifications of the tool, I also conceived the personas and scenarios used in the tool design process. Last but not least, I developed and implemented an XML TEI schema customization that provided the basis for the information architecture of the entire project and I used it to encode a sample document for testing CiteLens, the resulting prototype. Work on the development of the "compare" interface (one of the two modes of the prototype, together with "Contextualize") was completed in 2012 and further support is required at this time to continue the development process and to take the next necessary steps, like user testing and iteration.

As of May 2018, the prototype is still active online at http://labs.fluxo.art.br/CiteLens/, with the code publicly available on GitHub at https://github.com/lucaju/CiteLens and a demo video posted at https://vimeo.com/91534798.

Between 2011 and 2014 I presented various papers describing the different stages of the design and development process at the Digital Humanities and CSDH conferences. Said papers were coauthored with the team involved in the design and development of CiteLens, though I was responsible for the writing and presentation portions of the work. These papers inform to a certain extent the description of the tool included in chapter 3.

The literature review that informed parts of Chapter 1 and Appendix B is based on the final paper of a directed study course in citation analysis conducted in 2011 under the supervision of Professor Dangzhi Zao.

Due to the interdisciplinary nature of this thesis, I considered it worthwhile to include in Appendixes B and D brief pieces on the history and theoretical frameworks defining the two major areas of research that intersect in this thesis – citation analysis and digital humanities. I also included in Appendix C a segment on the meaning of humanities in an academic context, in order to highlight certain characteristics of this area of knowledge that

inform the research and writing practices of its practitioners.

Acknowledgements

I am particularly grateful to my supervisors – Geoffrey Rockwell, Stan Ruecker and Dangzhi Zhao – who, during my protracted graduate career at the University of Alberta, provided unwaivering academic guidance and support and to Susan Brown – who fuel my interest in interoperability and provided a great work environment in which I could thrive both academically and professionally.

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My warmest thanks go to the newest members of my examining committee, Tami Oliphant and Harvey Quammen who undertook their tasks on such a short notice.

Last but not least, I could not have completed this work without the support, encouragement and motivation provided by my closest family members – my husband, my mother and my daughter respectively.

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Abbreviations

A&HCI = Arts & Humanities Citation Index

DH = Digital Humanities

LISA = Library and Information Science Abstracts

LOD = Linked Open Data

PSE = Problem Solving Environment

SCI = Science Citation Index

SS&H = Social Sciences and Humanities

STEM = Science, Technology, Engineering & Math

TEI = Text Encoding Initiative

XML = eXtensible Markup Language

XSL = eXtensible Schema Language

Glossary of Terms[1]

Bibliometrics

> The science that analyses statistical data of publication outputs and citation.

Citation analysis

> Citation analysis is, together with publication analysis, a major part of bibliometrics, defined as "the quantitative treatment of the properties of recorded discourse and behaviour appertaining to it" for the study of science and scholarly communication (Fairthorne 1969, p.3, after Zhao & Strotmann, 2015, p.17).

Citation context analysis

> Citation context analysis is the branch of citation analysis which analyses the context in which each citation is made inside the citing text.

In-text citation data

> Raw citation data, as found in the text of scholarly works, that has not been included into a citation index and that can be harvested through automatic and manual means to be used in different types of citation analysis.

Problem Solving Environment (PSE)

> A PSE is a sophisticated, modular, and powerful software system that enables all the digital affordances (both computational and storage) necessary to solve a target class of problems and that is calibrated for the needs and level of technical expertise of its users.

Scientometrics

> The study of measuring and analysing science, technology and innovation, often used interchangeable with bibliometrics, though with differences in

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[1] The Glossary does not contain definitions provided at length inside the body of the thesis or its appendices (e.g. monograph, traditional humanities, citation, reference, etc.)

scope and focus (Zhao & Strotmann, 2015)

Introduction

To paraphrase a very famous object of study for humanities scholars, it is a truth universally acknowledged, that a text in possession of references and a bibliographic list, must be a scholarly work. Though novelists like Tim O'Brien (see *In the Lake of the Woods*, 1994) have employed fictional footnotes as literary instruments, references remain the domain of "serious" scholarship and serve as proofs of extensive research and documentation. The frequency, length and nature of the references included in a text inspire confidence or distrust in the validity of the data and ideas presented and influence the way in which we receive and absorb the information offered.

Since the Enlightenment and even before that, citing one's sources has been an integral part of both scientific and humanist writing. It is no wonder then that the act of citing has in its turn given rise to interest and research from different areas of knowledge, such as bibliometrics, philosophy of science, discourse analysis, and philosophy. However, this common interest fails to converge into interdisciplinarity. More often than not, both the "why" and "how" vary significantly, not only from one discipline to another but also from one school of thought to another within the same discipline. If there is anything that everyone tends to agree on though, it is the understanding that the citation practices of the humanities are more difficult to assess than those of STEM disciplines, for a variety of reasons which will be detailed in this thesis.

Chief among these reasons is the fact that referencing is a very important component of the discourse in the humanities and that the context in which a citation occurs is always crucial to understanding the role said citation plays in building the scholarly argument within the citing work. For practical reasons that will be discussed in chapter 1 of this thesis, citation context analysis is very infrequent compared with other applications of citation analysis. Therefore, citation analysis for the humanities never quite took off, despite some growth in the 70's and 80's. The primary reason for this stagnation is the lack of tools and data available. As Ardanuy points out, under a quorter of the existing studies on citation in the humanities employ a database and only 16% include analyses of citations from books (2013). This bears consideration given the humanities' predilection for monograph publication (Thompson, 2002). A recurrent question is what could be done to mitigate this lack of data in order to provide a more solid methodology for citation analysis and contribute to a better understanding of the research and writing processes in the humanities (Linmans, 2010; Moed, 2005).

I will argue here that Digital Humanities (DH) methodologies and instruments can be successfully employed to gather, enrich, and analyze humanities research output for in-context citation analysis. More specifically, I will outline the requirements and specifications that informed the conception of a TEI-based markup schema and the design and implementation of CiteLens, a prototype visualization tool that can be used in conjunction with it to tag and analyze references in large-scale monographs.

The first chapter of the thesis outlines the context and significance of the proposed work; it highlights current gaps in citation analysis for the traditional humanities – specifically the lack of reliable citation data and the absence of consistent research methodologies and reliable tools. These gaps have led to a scarcity of research studies which, I argue, can and should be remediated in order to lend credibility to citation analysis in the humanities.

The second chapter will describe the characteristics of referencing in the humanities that make them poor candidates for "traditional", index-based citation analysis. It will also outline the specifications of the markup schema and visualization tool I propose that will address these particularities and inform the design of the visualization tool and the customization of the markup.

The third chapter of the thesis will describe the resulting prototype and markup schema.

The fourth and last chapter will propose future directions of development for the described approach to citation analysis for traditional humanities scholarship by outlining a Problem-Solving Environment for citation analysis in traditional humanities based on existing DH tools and methodologies.

Ch. 1. Context and Significance of the Project

The science of and about referencing[2]

A brief discussion on the formalization of referencing as well as a concise review of the major theoretical paradigms that shape citation research in general are significant for the body of research included in this thesis. They provide a context and help shape the conversation around the gaps in citation analysis for the humanities that CiteLens and the methodology developed around it hope to fill.

Formalization of citation practices and styles

One of the primary ways in which methods that are embraced by the DH community can contribute to the study of referencing in the humanities is facilitating the collection of in-text citation data. This is possible primarily because the act of citing has been fully formalized across all areas of humanities research.

Though referencing in its current forms is a modern invention, the need to acknowledge past contributions can be traced back to Sumerian texts and the Old Testament. In most of these first examples, references are attributed to mythical authoritative figures. Ancient Greece witnessed the birth of science close to what we understand by this term today. Thinkers developed the habit of citing past authorities to validate their own ideas, to illustrate or comment on a different opinion, or to display their knowledge in a particular field. This phenomenon repeated itself independently in different time periods and societies, determined by the same reasons but allowing for local variations. The first substantial change in the extent and manner of assigning credit since Antiquity took place in the 13th century, with the works of Thomas Aquinas, rich in references to classic authors (Hauptman, 2008).

However, the most important evolution in the practice of referencing took place later, in the Renaissance, and was tightly connected to the invention and spread of the printing press. If in the first decades of the Gutenberg era printed books emulated the way manuscripts dealt

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[2] I am using the word "referencing" in this context to distinguish between the two ends of the citation act and to give weight to active act of citing, as it is viewed through the prism of citation context analysis. For a more detailed discussion of the significance of this distinction, please refer to Appendix B.

with glossae and attributions, by displaying them as marginal notations, gradually the transition was made to the first instances of footnotes and endnotes during the 16th and 17th centuries. This evolution in form was mirrored by a transformation in content: the critical apparatus of annotated works started to differentiate more clearly between dialogic or substantial notes – which contained additional threads of reasoning that could not be included in the main body of the text for fear of encumbering the writing style – and reference notes, which contained references (Connors, 1998).

During the 19th century, the formalization of references continued in the flourishing German academic environment and spread across the Atlantic to the North American universities, strongly influenced by German scholarship at that time. This increased formalization led to the appearance of the first style manuals at the beginning of the 20th century (Connors, 1998).

The oldest major style guide is the one made available by the University of Chicago Press, published for the first time in 1906. Currently at its 17th edition, the *Chicago Manual of Style* is one of the most flexible style guides in use, allowing both parenthetical citation and the use of footnotes. It is the only major style guide that still endorses the usage of footnote references and serves as the basis for most humanist and arts publications.

The proliferation of psychological literature at the beginning of the 20th century led to the publication of several style guides that gradually marked the dissociation from the footnote and the adoption of a parenthetical citation form, in the hope of bringing the format of psychology papers closer to scientific clarity and objectivity. The first separately printed APA Publication Manual, released in 1959, marks the establishment of the name/year system that remained virtually unchanged throughout the following five editions of the Manual. APA style is currently the preferred style of not only the American Psychological Association, but of many social sciences journals and associations as well, with very good prospects of generalization in the future (Connors, 1999).

The Modern Language Association (MLA) started publishing its own style recommendations for the humanities in 1951, under the strong influence of the Chicago Style Manual. Its endorsement of the usage of footnotes and then of endnotes lasted up to the first separately printed Handbook in 1977. As a reaction to the proliferation of the APA style guide among journals and professional associations in the humanities, the second edition of the MLA Handbook published in 1984 abandoned the endnote system in favour of a parenthetical citation style similar to the one employed by APA. Currently, the MLA style

guide is adopted by only the moderate part of the journals and associations in the humanities, while the traditional wing composed of history, classics, religious studies and political science uses the Chicago Style and most of the interdisciplinary and self-proclaimed modernist journals adopted the APA style (Connors, 1999).

The short historical overview of citation provided here illustrates the principal tendencies in the development of citation, the gradual formalization of citation practices throughout the 20th century and, more recently, the tendency towards a convergence of form (Connors, 1999).

This double tendency is particularly significant for studying referencing in the humanities because it facilitates the collection of bibliographical data from full text electronic documents.

Traditional, index-based citation analysis is not the most viable option for analysing references in the humanities, primarily because of the insufficient coverage of this area of knowledge in the existing citation indexes (Moed, 2005). In-text citation data, harvested automatically from electronic texts with parenthetical citations (mainly APA), has proved very successful for author-based citation analysis like mapping and ranking, if supported by rigorous name disambiguation. (Zhao & Strotmann, 2014). However, in the case of non-parenthetical citation styles, as favoured by the more traditional disciplines in the Humanities, as well as when more than author-based citation is desired, the harvesting and cleaning of citation data becomes more complex. Though the formalization of all references (be they parenthetical or note-based) makes automated pattern recognition possible, additional steps need to be taken to link the references with the entries in the referencing work's bibliography and to enrich the citation data collected with additional information like frequency, position, and context in the citing work. With that last in mind, it is hoped that continuous progress in Natural Language Processing areas, such as sentiment analysis (Sula & Miller, 2014), will lead to the automated collection, indexing and annotation of references. This progress is expected to contribute to the development of citation context analysis for disciplines where large scale monographs with extensive foot-noted references are still the norm (Kousha & Thelwall, 2009)

The lack of visualization tools for citation context analysis

As scholars of information science and the sociology of science became interested in referencing, the mechanisms and reasons of citation were analyzed based on a relatively

large number of frameworks (Luukkonen, 1997) which can roughly be grouped into two theoretical schools[3]:

1. The normative theory of citation

   The first theoretical school emerged from Robert Merton's contribution to the sociology of science. According to the normative theory, citations are determined by academic acknowledgement and reflect the value or the weight of the work cited; as Merton himself states, they are "designed to provide the historical lineage of knowledge and to guide readers of new work to sources they may want to check or draw upon for themselves. In their moral aspect, they are designed to repay intellectual debts in the only form in which this can be done: through open acknowledgment of them."(1979, p. vi) This view on the role and nature of citations contributed to the creation of the ISI citation indexes in the 60's and 70's, and provided the foundation for a new discipline, citation analysis. The premise that citations represent a positive indicator of the value of the cited documents led to citation counts being employed as performance indicators for academic departments, scholars, or periodicals.
   Paradoxically, as citation analysis in its quantitative form was taking off in the 70's and 80's, Merton's theories on the sociology of science were starting to lose ground to constructivist approaches to explaining the scientific research process.

2. The rhetorical function of citation

   A new current gradually developed, that rejected the use of citation as measurements of quality or importance. New studies, focused on the context and content of citations seemed to support the idea that references are in a greater measure instruments of self-legitimation for the citing scholar than tributes to prior research. The predominantly rhetorical role of citations is strongly supported by the heterogeneity of citation practices across disciplines (Garfield, 1980), specialties (Murugesan & Moravcsik, 1978), time periods (Larivière, Gingras, & Archambault, 2009) and even national boundaries (Cullars, 1989, 1989; Kaplan, 1965). One of the most well-known supporters of the rhetorical function of citation is Bruno Latour who, in his book, "Science in action", argues that citations are used as "allies" or

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[3] For a more detailed description of the theoretical landscape, please refer to Appendix B.

instruments of persuasion in what he refers to as "science in the making". (1987)

The two major theories mentioned above led to the development of two strongly opposing ideological schools. Though this dichotomy is deplored by a good number of scholars (Connors, 1999; H. Small, 1987), it is unlikely that the tentative attempts towards an unified theory of citation will be successful, due primarily to the gap between the quantitative methods employed in bibliometrics and the analytical approach in the sociology of science, as well as to the fact that the adepts of the rhetorical function of citation do not condone the use of citation indexing as a performance measure. (Luukkonen, 1997).

The theoretical divide between the two ideological schools is reflected in the type of scholarship produced: quantitative analyses of large sets of data derived from citation indexes (Leydesdorff, Hammarfelt, & Salah, 2011) and co-citation studies (Lin, White, & Buzydlowski, 2003; H. White, 2015) on one hand, and context and content analyses (Frost, 1979; Hammarfelt, 2011; Sula & Miller, 2014), interviews and surveys of authors (Case & Higgins, 2000) on the other.

In terms of the type of literature being analyzed, the focus in traditional index-driven citation analysis falls on the sciences, while – in my observation - content and context studies have a slightly higher interest in the social sciences and humanities (SS&H) than is habitual in bibliometric research, though still, other areas of knowledge prevail. The lower number of bibliometric studies concerning the SS&H is partially caused by the lower level of indexing of SS&H publications (Ardanuy, 2013; Kousha & Thelwall, 2009) and by the preference for monograph publishing (Thompson, 2002), which raise the difficulties and costs of indexing (Garfield, 1980). However, the same characteristics that make the humanities so difficult to digest by traditional bibliometrics – the preference for monographs, the rich references, and the use of arcane citation styles – make them particularly interesting for context and content analysis of citation.

The clear distinction between the two scholarly approaches to studying citation is further propagated into the methodologies adopted for manipulating the data and disseminating the results. It is no surprise that visualization tools derived from citation indexes have been around since the 90's (Mackinlay, Rao, & Card, 1995), given the generally accepted assumption that graphic representations enhance and focus statistical data (Tufte, 2001)

It is surprising, however, that, to my knowledge, little to no effort has been put into creating visualization tools for a context and content analysis of citations. This conspicuous

absence can be blamed on the rather "boutique" nature of context and content analyses of citation, which, even when relatively large-scale either by the breadth of their area of focus or the depth of the inquiry, tend to be one-off studies with distinct methodological variations thus unable to justify the effort required to produce a full-scale visualization tool.

Nevertheless, I will argue below that context and content analysis of citations in the humanities lends itself well to employing visualization tools as an instrument of inquiry and dissemination, especially so when tackling the referencing patterns of large-scale monographs.

To provide a field-appropriate point of reference for CiteLens, the context and content citation analysis visualization tool that I will discuss in the following chapters, I have reviewed existing citation visualization tools.

Citation analysis visualizations

Citation analysis visualizations draw their data from citation indexes, which dictate to a large extent the design confines of a traditional citation analysis and place it in a quite different design paradigm than a visualization tool for context analysis. Any content and context analysis of citation visualization tool needs to be designed to focus on the individual text and its referencing patterns. Therefore, the resemblance one could find between one such tool and traditional citation visualizations is faint, and one could better claim a conceptual indebtedness than a visual one. Based on their outcome, existing citation visualizations can be divided into two major categories:

Citation trackers. This category includes visualization tools built to facilitate literature searches by visualizing citation chains. By displaying one or more generations of works cited by or citing an individual tile in the citation index, they allow the user to access related bibliography on a subject of interest.

One of the most complex early examples of citation trackers is the Bibliographic Visualization Tool with Enhanced Citation Interactivity (BIVTECI), developed by a group of researchers at the University of Toronto in the early nineties. The tool supports three bibliographical information views, based on queried attributes like title, author(s), year, location, journal/proceedings, publisher, subject/area, and keywords. The general view shows the chronology, citation relationships, and attributes of the matching bibliographical entries after running a query on one or more of the specified attributes. The specific view

focuses on the relationship of a selected bibliographical item with its cited and citing entries (Fig. 1). The third view is organized by attributes, mainly keywords, and tries to group articles according to their relevance to the queried subject or keyword in a non-hierarchical layout (Fig 2). Views can be independent or synchronized, and most of the features included – various filters, article aggregates based on the above-mentioned attributes, and virtual references – are available in each of the application's views. Great attention was given to ensure the interactivity of the tool and the ease of customization. One of the most interesting features of the tool was its virtual reference capability, which allowed the user to see as virtual citations similar articles that were not cited or citing the queried article, based on matching subject and keywords (Modjeska, Tzerpos, Faloutsos, & Faloutsos, 1996).
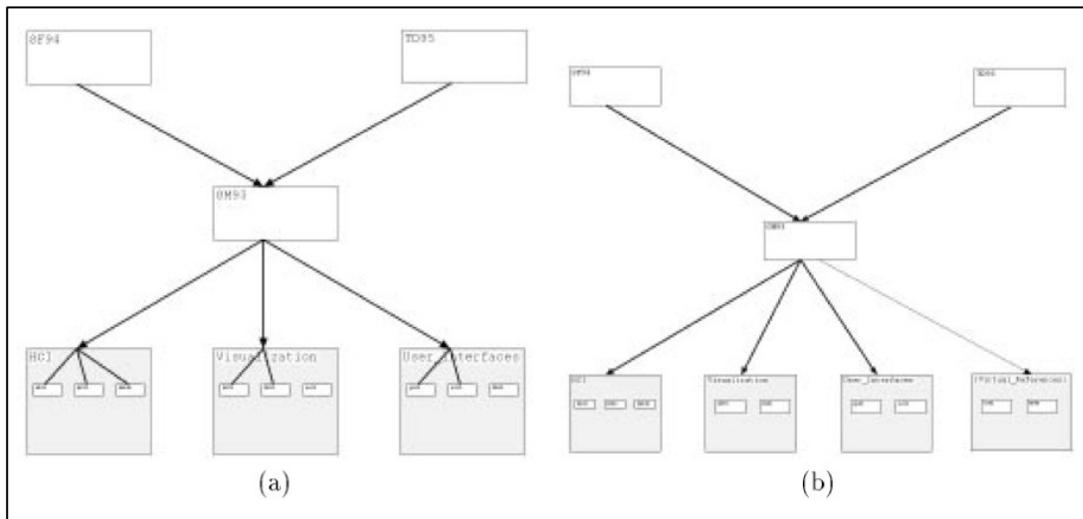
Figure 1. BIVTECI specific view. Middle row – main articles; top row – citing articles; bottom row – cited groups and virtual references. (after Modjeska et al., 1996)

VISUALIZATION
●
LS88

WR93   MM90

GM93   GG91

HCI   DT91
●   DM95

FW92

SG93

BJ94
QR93
FW95

●
USER INTERFACES
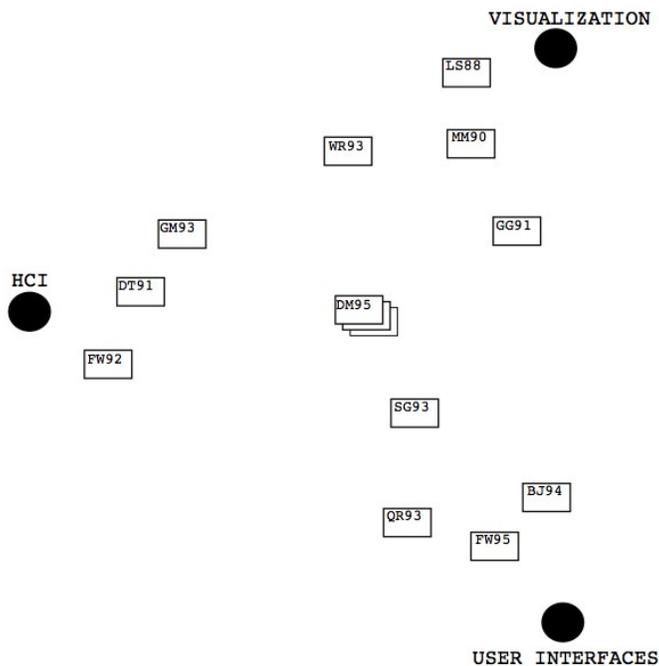
Figure 2. BIVTECI relevance view. Items arranged by
keyword relevance to three topics. (after Modjeska et al.,
1996)

The second example, HistCite, is a fully developed, marketed bibliographical visualization
software released by Eugene Garfield in 2007(Garfield, 2007). The tool works with the Web
of Science databases to create visual representations of literature searches. It is able to
generate both visual and text based representations of the results of a query and is
targeted at a large variety of users like researchers, students, educators, publishers, and
professionals in search of expert opinions in various fields of science ("HistCite -- Home,"
n.d.). The visual representations display chains of citations in their sequential order; the
circles represent individual articles, while their size is proportionate to the number of
citations received (Fig. 3)

Figure 3. HistCite representation of the citations received by Derek
Price contributions to citation analysis (after Garfield, 2009)

Another citation tracker visualization based on the Web of Knowledge data is the Thomson
Reuters Citation Map, available for every indexed article/book in the Web of Knowledge
("Citation Mapping," 2009). The citation mapping tool tracks the citations received and
given by the selected item up to two generations, allowing the database users to analyse
the item's academic genetics (Fig. 4). The tool affords color-coding, reorganization, and
export of the resulting citation map, thus enabling the discovery of related literature and the
identification of trends in citation activity.

Figure 4. Citation map of the titles cited by or citing Eugene Garfield's 2009 article mentioned above, colour-coded by area of research.

Citation maps. The other category of citation visualizations includes a variety of citation maps, built on co-citation, direct citation, co-authorship or clickstream data, aggregated by individual articles, authors or journals and intended to visualize clusters of interconnected areas of scientific activity, in an effort to identify old and new patterns in the organization of knowledge.

One of the most complex tools of this type is CiteSpace, a Java-based application developed by Chaomei Chen (2013). The tool facilitates the structural and temporal analysis of collaboration networks, author co-citation networks, and document co-citation networks, as well as that of networks based on variables like subject terms, institutions, and countries. Functionalities like the automatic labeling of clusters allow the users to identify and interpret both new areas of interest as well as historical patterns. CiteSpace can be used to generate geographic Google Earth overlays based on the locations of authors, thus highlighting geospatial patterns of collaboration. (Fig. 5)
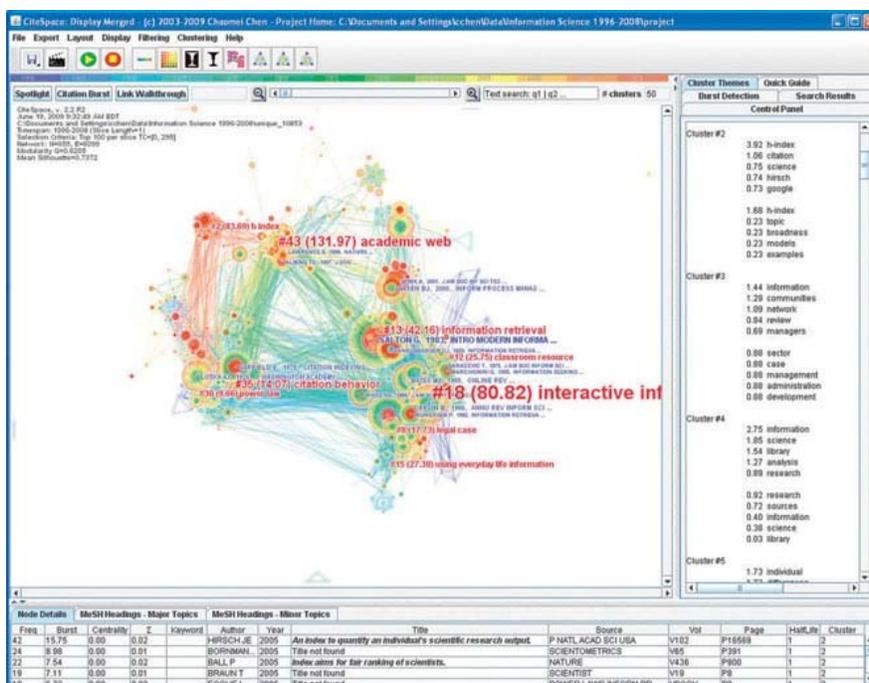
Figure 5. A multiple- perspective document co-citation analysis of
the field of information science between 1996 and 2008, created
using CiteSpace (after Chen, Ibekwe-SanJuan, & Hou, 2010).

A similar tool is the VOSviewer, built at University of Leiden (van Eck & Waltman, 2018). In addition to applying an innovative mapping technique (van Eck, Waltman, Dekker, & van den Berg, 2010), the tool also employs heat maps as visual instruments to highlight high-density areas (Fig. 6).

VOSviewer

(Nees Jan van Eck & Ludo Waltman, VOSviewer,
Bibliometric mapping of the computational intelligence field. *International Journal of
Uncertainty, Fuzziness and Knowledge-Based Systems*, 15(5):625-645, 2007)

Figure 6. VOSviewer. Concept density map in the field of
computational intelligence (after Eck & Waltman, 2007).

As an alternative to citation maps like the two ones described above, some scientists offer maps based on login information (sequences of user requests or clickstreams). Such is the case of Johan Bollen and his colleagues whose study employed data from over 1 billion interactions collected in 2007 and 2008. The clickstreams were compiled using a first-order Markov chain, and then compared for validation with the Getty Research Institute's Architecture and Art Thesaurus (Fig. 7). The authors of the visualization recommend it as a viable, accurate and fast alternative for citation data interpretation in identifying the most current trends in scientific research interests (Bollen et al., 2009).

Figure 7. Map of knowledge derived from clickstream data. Individual dots represent journals (after Bollen et al., 2009).

Characteristics of citation visualization tools

This short overview of citation visualization tools allows us to identify several common traits and features. Existing citations visualization tools support the graphic rendition of data compiled from citation indexes, and just like the indexes themselves and citation analysis in general, are built on the assumption that all citations carry identical weight and significance. All the examples reviewed are article-focused tools that emphasize interdependencies between papers listed in citation indexes, or in the case of the last one, login affinities on e-journal sites. Another common trait is their targeted audience, which consists of expert and novice researchers, publishers, conference organizers, performance evaluators, etc. The

shared focus and intended audience lead to a similarity of features that include but are not limited to: general and hierarchical views, timeline representations, ability to work with various subsets of data, and increased emphasis on the interactivity of the tools.

These specific traits are significant because they helped place into direct light the conceptual differences between index-based citation analysis and context & content-based citation analysis and forced me to seek inspiration for a content and context citation visualization tool in other areas of knowledge, such as text analysis.

The underrepresentation of humanities-focused citation studies

In 2013, the *Journal of the American Society for Information Science and Technology* published an overview of the past six decades of citation analysis research in the humanities (Ardanuy, 2013). The author collected a total of 162 studies that deal to a greater or lesser extend with citation analysis for the humanities. Though some regional and language limitations need to be considered, the size of the sample is still very small when compared to the over 2,000 hits retrieved when searching "citation analysis" in the LISA database. Ardanuy proceeds to analyse the corpus of papers in terms of publication types, professional status of the authors, country of origin, date of publication, subject, and data sources employed. He finds, for example, that citation analysis for the humanities experienced growth in the 70's and the 80's, with a small decrease in the 90's, followed by another period of growth in the first decade of the current century. Another important find is that almost 70% of the 162 publications analysed were journal articles, with a significant 18% being represented by thesis and dissertations. The percentage of thesis and dissertations is consistent, with over 15% of the works included being written by students. Though the emergence of Arts & Humanities Citation Index (A&HCI) can be linked to an increased interest in citation analysis for the humanities in the 70's and 80's, barely a fourth of all studies included in the analysis use it or another citation index as data source. The rest (over 77%) were based on the manual extraction of references from documents - a time-consuming technique that tends to discourage professional research staff and might explain the high degree of involvement of students in this area of research. Of significance to this thesis is the fact that only 16% of the works retrieved by Ardanuy include analyses of citations from monographs and other books, which can be connected to the low percentage of indexed books available and to additional difficulties in the selection of monographs. The low number of citation analysis studies of humanist literature, combined with the multitude of research approaches attempted seem to "confirm once again the lack of good tools in the

humanities when compared with those in science and may explain the absence of growth in these types of studies" (2013, p. 1754).

One can argue also that what is a good tool for studying citation in another area of knowledge is usually less successful when applied to the humanities. One of the first and most eloquent examples comes from Eugene Garfield. In 1980 – upon the completion of the A&HCI, he ran a simple analysis that he had previously conducted for the Science Citation Index, but with dramatically different results. Garfield combed the journals included in the A&HCI to create a list of the one hundred most cited authors in humanist scholarship and compared it with the 300 authors list compiled in 1978 for the science journals. The difference between the two lists was striking: while the oldest author included in the SCI list was born in 1899, the oldest and in the same time most cited author in the A&HCI list was Homer, assumed to have lived in the ninth century BCE, with 68 of the authors included born before 1900 (Garfield, 1980). As Garfield himself points out, this result does not imply that the humanities are static or that the most complete or recognition-worthy contributions to the humanist branch of knowledge were brought long ago. It does, however illustrate one of the problems of applying basic citation analysis methods to the humanities, a problem that to some extent is responsible for the relative scarcity of such studies to this day: traditional citation analysis, developed for and applied primarily to the exact sciences, where only previous research results are cited , does not seem to work very well for humanist scholarship, where authors and works can be cited as primary sources (i.e. objects of study). The two questions that arise at this point are why this is so and what can be done about it from the perspective of scholars interested in studying citation and referencing patterns in the Humanities.

Before attempting to address these two questions, a few considerations on the theoretical aspect of citation analysis are needed to understand the dichotomy between index-based citation analysis for the sciences and what we can call text-based citation analysis for the humanities. Firstly, the original normative model of citation developed by Merton (Merton, 1957) is not enough to explain the particularities of citation patterns identified across a large spectrum of disciplines, geographical locations or media of publication. Secondly, as Small pointed out, the construction of meaning during the citation process is impossible outside a normative, defined system. (Small, 2004) Lastly, the way normative and rhetorical principles combine in the citation process is still a question open for discussion, especially when we extend the question of citation functions and interpretation to areas of knowledge less formulaic than the hard and natural sciences, like the arts, humanities or

even the social sciences.

Though the statistical analysis of citation data is considered an acceptable practice – within reasonable margins – in the case of the first group of disciplines, not even the most ardent adepts of bibliometrics can extend the same courtesy to other areas of knowledge (van Raan, 1998). As a case in point, two comprehensive publications about different aspects of bibliometrics published within the past 10 years avoid discussing citation analysis as it applies to the humanities (Cronin, Sugimoto, & ASIS&T, 2015; De Bellis, 2009). In addition to this, all the theoretical models briefly discussed below in Appendix B were drawn from observation of case studies drawn from natural or hard sciences, and the extent to which they apply to understanding the practice of citation in the humanities is questionable. They are, however the main models available and they inform in a conscious or unconscious manner the relatively few citation analysis studies having as subject the "softer" area of knowledge.

To understand the extent to which any of the models developed apply to the "humanist" side of the knowledge spectrum, one should analyze in detail the writing process in these disciplines as well as the citation etiquette and practice that characterizes them.

The study of citation can take one of two main directions, depending on the theoretical framework it is based on: while the normative theory mostly informs statistical analysis of a large number of citations, focusing on the receiving end of the citation act, the rhetorical (or not) function of references can be asserted only by analyzing them in their natural environment, the citing text, thus focusing on the giving end of the citation act. While the first approach is hampered in the arts and humanities by the scarcity of citation data and other technical impediments (Garfield, 1980), the second approach is more accessible and likely to bring invaluable insights not only in the citation practice of this area of knowledge but also in its research and writing process.

The analysis of referencing behaviour is essential to understanding the functions played by references in the citing text, be they normative or rhetorical in nature. The two major methodologies employed for this purpose consist of context and content analyses on one hand and surveys or interviews with scholars on the topic of their citing behaviour on the other. (Bornmann & Daniel, 2008) Though surveying and interviewing are valid approaches to the question of referencing behaviour, they are susceptible to issues like retrospective reasoning, recall and lack of honesty by respondents. (Case & Higgins, 2000) Alternatively, the context and content analyses of citation can be affected by a different array of issues,

the most obvious being the absence of a unified methodological approach, the wide variety of design, and the difficulties met when trying to replicate their results (Bornmann & Daniel, 2008).

Both context and content analysis of citations seek to identify the relationship between the citing and cited texts by devising a classification of references; the major difference between them is more a matter of the depth of inquiry (Case & Higgins, 2000): while in context analysis it is necessary to study in detail the areas of the citing text surrounding the references in order to assert their function (Cronin, 1984), in content analysis the same attention is passed on to the content of the cited documents which are read in order to identify the role they might play in the citing text (Chubin & Moitra, 1975).

Citation analysis in the humanities. A brief taxonomy

Though there are fewer citation analysis studies in the humanities than in the natural and social sciences, they are numerous and diverse enough to allow for an application-based classification based on the one proposed by Zhao and Strotmann (2015). Most of the citation analysis studies that focus on referencing in the humanities and that I reviewed for this thesis fall within one of the following six categories:

   1. *Evaluative citation analysis studies*

In its most unadulterated form, evaluative citation analysis is the most direct application of the normative theory of citation. Derived primarily from citation indexes, it collects and counts citation instances to measure the impact a certain work, author, journal, or other group has on the scholarly output in a certain area of knowledge. Unsurprisingly the most disputed application of citation analysis, it is consistently employed to inform decisions regarding journal acquisition and performance assessments. Though less used for evaluating humanities scholarly output than for evaluating scientific research, evaluative citation analyses can be adapted to this area of knowledge, provided alterations to its methodologies are included to compensate for the research, referencing and publication practices that distinguish this area of knowledge from the sciences (Nederhof, 2006).

The infrastructure difficulties of studying citation in the humanities (e.g. the reduced percentage of indexed books, the persistence of arcane citation style), not to mention the particularities of humanist writing and research that I will discuss in more detail in the next chapter (e.g. use of references as contextualizing instruments, a different understanding of

originality than in the sciences, the use of footnotes) make analysing referencing in the humanities difficult, with often unpredictable results. This encourages hybrid methodologies, such as combining citation counts with other measurements in an effort to come up with a unified path to assessing scholarly output in the humanities. Most of these solutions involve the measurement of library holdings (H. D. White et al., 2009) or library loan statistics (Cabezas-Clavijo et al., 2013). Others involve a complex set of variables like Linmans' attempt to establish new bibliometric indicators for the assessment of humanist research by employing three distinct parameters: the citation to the oeuvre (i.e. the entire work of an author), library holdings and productivity (i.e. number of pages published per year) (2010). Though some correlations between conventional citation data and these parameters could be noticed, the mere point that their use was considered necessary by citation analysts and library professionals alike only underlines the fact that traditional bibliometric measurements fail when faced with humanist scholarship.

2. Disciplinary mapping

When various measurements of interconnectedness – primarily inter-citation, co-citation and bibliographic coupling frequencies – are measured to examine the structure and characteristics of research communities, the most employed type of output is the citation map.

Co-citation is the most frequently used technique ((Zhao & Strotmann, 2015); it records the instances of two publications being cited together and is meant to measure the degree of similarity between the two publications. Like other citation analysis instruments, it is scalable to author, article or journal level. One of the most frequent outcomes of co-citation analyses is the creation of disciplinary maps which illustrate the relationships and groupings within a network of researchers or publications. Though the method is more frequent in the sphere of the natural sciences, attempts have been made to apply it to the "softer" area of knowledge. Such is the case of Leydesdorff and Salah's study of two fine arts journals, which concluded that, unlike journals in the hard sciences which are at the core of research advancement in their disciplines, arts journals tend to play more of a disseminator role, with most of the citations received by the two ones analysed coming from outside their areas of expertise (2010).

Though co-citation is the preferred method for citation mapping, knowledge maps can also be generated using direct citation coupling. For example, a study based on citation data extracted from the A&HCI creates a map of the humanities which was then compared to

different cognitive and departmental organization models in European and North-American institutions (Leydesdorff et al., 2011).

3. *Tracking knowledge flows and the diffusion of ideas*

This is a more boutique form of citation analysis in which the researcher tracks the flow of ideas and theories within a certain area of knowledge by identifying one or more seminal papers where the new idea/theory/methodology is first employed and charting the citations of those papers in subsequent scholarship with an eye to identifying geographic, temporal or subject area distribution. A good example for our area of interest is the study of Eugene Sterud, who demonstrated the paradigmatic shift of American archaeology in the post WWII era by tracking the citation of processual studies in the "American Antiquities" journal (1978).

4. *Studying users and uses of scholarly information*

By tracking the citation behavior of a group of authors (i.e. types of publications, languages, countries, subject areas), this type of citation study profiles the information behavior of said group and compare it to the information behavior of related groups to ascertain its particularities.

One area of citation research in which this approach is frequently employed is the study of citation practices in isolated or niche humanities fields, such as Catalan literature (Ardanuy, Urbano, & Quintana, 2009), Near Eastern studies (Yitzhaki, 1986), or Swedish literary studies (Hammarfelt, 2012). The degree of isolation varies within the group, by parameters like age of the field, language, or subject of interest. Yitzaki's comparative study of Near Eastern and Biblical Studies citation patterns suggests that the age of the field, much younger for the former than the later, places a discipline on the citation spectrum closer to the social sciences model or to the humanities one (1986). Alternatively, when the language of interest is the isolating factor, like in the study of national language literatures, the communication patterns can be described as "rural" (Becher & Trowler, 2001) because the audience is smaller and consequently the potential citers are fewer (Hammarfelt, 2012). Another common consequence of small scholarly communities is the increased incidence of self-citations, compared to other, larger fields (Ardanuy et al., 2009).

Another category of citation study that Zhao and Strotmann describe consists of studies that assist with information organization, representation and retrieval. (2015) The results of

evaluative bibliometrics, as well as citation trails and citation maps can all be used to enhance the discoverability of relevant scholarship through search refinements and visualizations (see as examples the visualization tools described in the previous chapter). I was unable to find a specific example of such study with significant applications in the humanities, but this is likely because the information seeking and retrieval behavior of humanities scholars is quite different than in the sciences (Lönnqvist, 2007).

There are, however two additional application-based categories that, though not mentioned in the classification of citation studies I used as a model, are frequent enough within the small area of humanities citation analysis to warrant their own entries in our taxonomy:

5. *Studying non-serial publication forms impact (with an eye towards improving library acquisition policies for the humanities)*

A good example of this approach is the study by Knievel and Kellsey on the impact of monographs in academic journals belonging to eight humanist disciplines, where the parameters analysed are the time and language of publication, as well as citation frequency; but the conclusion reached is that disciplinary differences in citation practices within the humanities are sufficiently large to preclude generalizations(2005). Another representative example of bibliometric analysis was conducted by Larivière, Archambault, Gringras, and Vignola-Gagné in 2006. Their study tried to assess the share of various types of publications within disciplines in the humanities, social sciences, natural sciences, and engineering to determine the role of non-serial publications in the general scholarly output of each discipline. The authors found that the proportion of citations to serials in the social sciences and the humanities is half of that in the natural sciences and that variations from one discipline to another are greater in the humanities and social sciences than in the natural sciences. In addition, the same study showed that a great number of humanities fields display a decreasing percentage of references to journals.

6. *Classifications of citation functions and their application in context*

One of the earliest classifications of citation functions in scientific research output belonged to Lipetz and was intended to increase the effectiveness of information retrieval in the sciences (1965). During the 70's, several classification schemes were produced, most of them focused on the natural sciences, like high energy physics (Moravcsik & Murugesan, 1975) or nuclear physics (Chubin & Moitra, 1975). The only notable exception since that time is the classification developed by Caroline Frost for citation functions in literary studies

(1979), which, due to its focus on an humanist area of research, differs in many ways from its counterparts in the sciences. Frost identifies three criteria at the basis of her classification: the distinction between primary and secondary sources, the question of whether the cited work is used as a basis for a statement of fact or of opinion, and – when the cited work is a secondary source – whether the citing author agrees or disagrees with the statement in the cited work. A simplified version of this classification is employed by Cullars in his series of articles on the characteristics of citation in humanist monographs. Another good example of citation function classification and its application can be found in Hyland's article on the role of citation in constructing disciplinary knowledge (1999). Though not specifically geared towards the humanities, his approach of analysing the reporting verbs employed ultimately results in a classification of citation functions which lends itself very well to the study of citation in humanist writings.

This taxonomy is relevant because it highlights all the different approaches researchers employ in their endeavor to understand humanist referencing, but it also helps bring into stark light the limitations of the approaches employed so far.

Significance of study

Ardanuy's analysis of the six decades of humanities-focused citation analysis, as well as basic observation of the field of citation analysis, lead to a very important question: Why do traditional citation analyses either fail or end up offering a rather incomplete, fragmented image of humanist citation patterns? The answer may be manifold. One of the reasons, as Ardanuy points out, may be "the lack of good tools", presumably the lack of sufficient indexed scholarship (2013).

Another reason may be the difference between referencing in the humanities and referencing in the sciences, which stem from differences in writing and researching in general. If the citation behaviour of humanities scholars is to be understood, bibliometrics studies are less likely to give a complete picture due to the very diverse disciplinary landscape and relatively low degree of citation indexing.

According to Bjorn Hellquist, who wrote one of the most insightful papers on the subject, the causes can be either of a technical nature or of an epistemological one. The first category of causes are perhaps the most obvious ones: the high cost and difficulty of compiling comprehensive citation indexes for the humanities (Garfield, 1980); the fact that publication in national languages is still a common practice, especially in regional or isolated

humanist disciplines (Ardanuy et al., 2009; Hammarfelt, 2012); the preference for monograph publishing (Tang, 2008; Thompson, 2002); the large number of citations from primary sources (Frost, 1979) or the persistence of "archaic or arcane" citation systems (Garfield, 1980, p. 44). However, these obvious traits are – to some extent – the logical consequences of the more profound ones, the how, when and why to cite - questions derived from the inner nature and purpose of researching and referencing in the humanities, the epistemological factors that Hellqvist describes and which - I will argue later - should be viewed as meta-causes of the particularities of referencing in the humanities (2009).

Another important reason for the failure to create a complete picture of referencing in the humanities is the almost unanimous focus on the receiving end of the citation act – on the citations and not the references. This *modus operandi* fails to account for the contextualizing role of references in the humanities and for their methodological relevance relative to the main text. As a case in point, to my knowledge, there is no content and context study of complex footnotes and the most preeminent publication form in the humanities – the monograph – is still, to a large extent, ignored.

Even when this is not the case and the researchers do acknowledge the importance of monographs in the humanities, few citation analysis studies that discuss humanist monographs do so by analysing the citation patterns inside said monographs. Most of them, possibly because of the better availability of indexed journals compared to indexed monographs, focus on the receiving end of the citation act, by analyzing the way in which monographs are cited in academic journals. A good part of them are comparative analyses of sets of monographs from different areas of knowledge or from different disciplines within the same area of knowledge. Usually, the comparison focuses on certain aspects of the citation behaviour. For example, a 2008 study on the way in which monographs are cited in six disciplines from various areas of knowledge explores the recency and obsolescence patterns in those disciplines (Tang, 2008). Other times, the citation parameters analysed are more diverse, while the disciplines targeted are closer on the knowledge spectrum. Such is the case with Knievel and Kellsey's study of monograph citations in academic journals belonging to 8 humanist disciplines. Here, the parameters analysed are the time and language of publication, as well as citation frequency, but the conclusion reached is that disciplinary differences in citation practices within the humanities are sufficiently large to preclude generalizations (Knievel & Kellsey, 2005).

Studies that analyze referencing patterns in monographs, thus focusing on the giving end of

the citation act, are much fewer. Among these, of remarkable consistency and detail is the series of four articles published by John Cullars between 1989 and 1996. He researches the characteristics of citation in either literary (1989; 1990) or fine arts (1992, 1996) monographs and focuses primarily on distinguishing the national traits of referencing within individual areas of knowledge (1996; 1989; 1990). The dominant method used is comparison, either between sets of monographs from different countries (i.e. Germany, France, Spain and Italy) or between sets of monographs in different disciplines (1992). Referencing similar studies on other disciplines creates an additional layer of comparison. The parameters analyzed include publication type, language, source type (primary vs. secondary) and age of the cited material. Another citation characteristic Cullars is interested in is the function of citation in the citing text; he employs a simplified version of Frost's classification of citation functions (1979) in three of the studies in the series (1990; 1992; 1996) in order to assert the role played by references in the analyzed monographs, but he is somewhat sceptical about the objectivity of such a classification. The main conclusion drawn from all four studies is that while national context of research and disciplinary paradigms do influence citation practice, the diversity of citation in the humanities precludes the implementation of a universal cost-saving methodology in managing humanities and fine arts library collections, one of the outcomes desired by Cullars for his multi-stage research.

Cullars' research on citation in humanist monographs, though very comprehensive in its selection of titles, is forced by time and financial constraints to apply random sampling on its corpus of monographs (i.e. only a predefined randomly selected number of references are included from each book). This is understandable because the effort of collecting and indexing all references from each of the monographs included would have been gargantuan and exceeded by far the financial resources allocated to such a research project. Cullars is always careful to collect a substantial-enough sample of references to conserve the statistical relevance of the studies conducted.

Nevertheless, random selection of a limited number of references from each monograph – though appropriate for statistical purposes – is without a doubt less relevant when the focus falls not only on the bibliographic characteristics of the works cited but also on the function of said references and ultimately on the way argumentation is built inside the citing text. For such a study, the context in which a citation occurs, as well as the way in which it connects to the central argument and its subsidiaries is of paramount importance.

Though Cullars' studies on citation in humanist monographs differ from others in terms of their focus on large scale writings as citing texts, they are also consistent with the common practices of citation analysis for the humanities in general in their focus on the bibliographical metadata of the cited texts and to a lesser extent on the relationship of the cited documents with the citing text.

For reasons I will explain in the next chapter, referencing in the humanities, like humanities writing and researching in general, is different from its sciences counterpart. If the citation behaviour of humanities scholars is to be understood, bibliometrics studies are less likely to give a complete picture due to the very diverse disciplinary landscape and relatively low degree of citation indexing. Under these circumstances, it is only fitting that, in the humanities, content and context analyses of citation play a central role in analysing the writing and citation pattern of scholars; finding the answer to questions like "How do humanities scholars cite" and "Who (or what) do they cite" is of paramount importance for understanding the economics of scholarly acknowledgement in this area of knowledge. However, as I mentioned earlier, major issues facing content and context analyses of citation are the wide variety of design and the absence of a unified methodology. The need for a coherent approach is even more acute when the subject of study is very complex and diversified, as is the case with the citation practice of humanist disciplines. This want of transferable tools and methods is one of the strongest reasons why I advocate for a DH infusion in the methodologies applied in content and context analyses of citations, especially when the preferred and ubiquitous context we are faced with is the lengthy monograph.

It is my contention that to succeed in bringing forward an accurate image of citation patterns in the humanities in general and in humanist monographs in particular, citation analysis needs to expand its scope in two directions. It needs to burrow deeper into the "native" environment of references, the citing text in general and the footnotes in particular, and it needs to expand its research to complete sets of references (especially in the case of monographs) in order to identify how references relate to each other and to the citing text, "contextualize" the writing, and contribute to the argument building process.

The research that informed the creation of CiteLens and the adoption and customization of the codification standard I employed for analysing citations in humanities monographs is predicated on the need to overcome some of the limitations of traditional citation analysis with regards to the humanities, namely the absence of an unified standard/code for in-context analysis of citation, the preference for sampling – which equalizes all references,

and the lack of interest in studying complex footnotes – which sidelines a significant portion of the argument building process in traditional humanities.

Furthermore, as a project started by and led from within the digital humanities community exclusively, CiteLens and the research that surrounded its creation and implementation enjoy the welcome legitimacy of subject knowledge, an important advantage of any citation analysis study, but even more so for context and content citation analyses.

As illustrated by some of the scholarship cited in the following chapter, the subject of how people organize arguments and the role citations play in the construction of the scholarly work has preoccupied humanities scholars in the past, but in a less formalized way and in relative isolation from the sociology and history of science or scientometrics.

The work described in this thesis attempts to bridge this divide and provide a humanities-tailored approach to studying humanities specific citation patterns.

Ch. 2. Requirements analysis and specification

In the process of designing the functional architecture of CiteLens and the encoding schema it supports, I conducted a requirement analysis that involved identifying characteristics of research, writing, and referencing in the humanities and matching them with visualization affordances that I believed would facilitate their study. The requirement analysis, as well as the personas and scenarios I created for this project, based on my understanding of citation analysis research and consultations with supervisors and peers, informed the conceptual design of CiteLens and helped guide the customization of the XML schema employed for encoding the text of the sample document.

Prior though to discussing the requirements and specifications of this project, it is important to clearly establish the parameters in which the tool is intended to operate by defining a couple of terms:

Traditional humanities

Throughout this thesis I use the term "traditional humanities" to refer to the fields of academic knowledge that existed since the formation of the modern universities in the 19th century and in some cases since the emergence of the first universities in the Middle Ages. These are the fields that have been at the centre of Western education for hundreds of years, and in some cases preceded the conception of humanism, which crystallized around the study of classics (history, art, culture, language and literature of antiquity), medieval history, philosophy, comparative linguistics and philology (Tymoczko, 2001). Gradually the study of more modern subjects was included, culminating with the explosion of interdisciplinary research witnessed in the last decades, but as Hauptman points out these more recent disciplines and interdisciplinary groups veer away from the referencing tradition that is still alive in long-established disciplines. (2008)

While citation analyses for the traditional humanities do exist (see Cullar's series of articles), they are scarce compared to those focusing on other areas of knowledge. Furthermore, it is to be surmised that the traditionalism of these fields makes them ideal test beds for studying how the characteristics of researching and referencing in the humanities influence the citation practice of humanist fields.

Two of the most important traits of humanist publications that are very well entrenched in the traditional humanities are the preference for monograph publication and the ubiquity of

footnote-based citation styles. Both these traits contributed extensively to the scarcity of readily available citation data and to the absence of a unified, generally accepted and adopted methodology for citation analysis in the humanities.

This observation is particularly significant for this thesis because, as I will argue in the last two chapters of this thesis, the ubiquity of the monograph and the persistence of footnote can both be mitigated by the adoption of well-established DH tools and methodologies, not the least among which are visualizations that would facilitate the identification of citation patterns.

Humanist monographs

The other term that requires a definition in the context of the current research is "monograph". Though in library science and bibliography the term has come to designate any non-serial publication, with only one or a few volumes at most, I prefer to use the word "monograph" in its primary sense, that of "detailed written study of a single specialized topic (distinguished from general studies in which the topic is dealt with as part of a wider subject)" ("Monograph [Def.1]," n.d.). The definition adopted is based on two main criteria: the cohesion of subject and the degree of detail or "specialization" with which said subject is treated. These criteria exclude other types of lengthy writings from the conversation on humanist monographs. For example, a handbook in humanist disciplines usually serves an introductory purpose in relation to an area or subject, and consequently, is not specialized or detailed enough to be considered a monograph. Similarly, while an edited collection could have a certain degree of topic cohesion, as well as high scholarly relevance and degree of specialization, it lacks the cohesion, or the unitary flow of writing, if you will, to be included in the definition adopted in this thesis for monographs.

A primary consequence of this rather restrictive definition applied to the term monograph is the possibility that existing studies on monograph publishing and citation analysis may not overlap completely with the scope of our definition, especially since in the fields of bibliography and citation analysis the wider definition of the term, that of non-serial lengthy publication, is more likely to be embraced. Reviewing such studies, it has been my experience that the meaning of the term monograph is rarely provided and that – consequently, the equivalency between book and monograph is often assumed.

Such is the case for Jenifer Thompson's article on the evolution of academic publishing in the field of 19th century British and American literary studies, which tries to answer the

question of whether monograph publishing in the humanities is turning obsolete or not by analyzing citation patterns in the targeted field. Her findings, particularly the percentage of cited monographs, suggest that the replacement of monographs with scholarly articles in the economics of humanist research is highly unlikely in the close future, but though the author talks extensively about publication formats and describes in detail her methodology, going so far as to define the terms of primary and secondary source in the context of her research, she does not specify what she means by "monograph" in the same context. However, her occasional alternative use of the words book and monograph suggest that she subscribes to the wider definition of the term (Thompson, 2002). Similarly, Knievel and Kellsey's comparative study of the citation practices of eight humanist disciplines found that after excluding primary sources and non-published materials, books made out three quarters of the materials cited in the disciplines' most representative journals, without any distinction being made between monographs and other types of books. (2005)

The examples could go on, and they leave unanswered the question of how relevant a discussion of citation patterns in monograph writing is – "monograph" in its more restrictive sense – in the current humanist landscape. Is it possible that most books published and discussed in studies of citation analysis for the humanities are either edited collections, handbooks, or scholarly editions? I tried to answer this question myself at the beginning of this research but I was not able to find any studies on the subject. Since it was felt that an answer would be instrumental in assessing the usefulness of developing tools and methodologies for the study of referencing in monographs, a small experiment was conducted. Using as source the "Choice" Outstanding Academic Titles Lists from 2006 to 2010, I collected forty-five books in the fields of Ancient History and Classics, books that were acknowledged by this well-respected bibliographic publication for their excellence, relevance to the field, originality and value to undergraduate students. Out of these forty-five titles, eighteen qualified as monographs after excluding other types of lengthy publications (handbooks, scholarly editions, etc.), and out of them fifteen employed footnotes as vehicles of reference. The proportion seems to be even higher in the 2016 list, the most recent I accessed, where of the 9 books included in the same two categories, all 7 monographs listed employed either footnotes or endnotes.

Though these results are by no means scalable to humanist writings in general, they do hint at the importance and pervasiveness of monographs in humanist scholarship, as do the general acceptance of published books as signs of academic eminence and even the fact that the PhD dissertation, a substantial piece of writing on a single subject – in essence a

monograph - is still the definitive proof that one has reached full academic maturity.

Despite the fact that the importance of monographs in humanist scholarship has been discussed repeatedly from a citation analysis perspective (Knievel & Kellsey, 2005; Thompson, 2002), little mention is made of the way humanities scholars employ different types of publications to convey different messages or to reach different audiences. It has been noted however that journal articles and monographs may be employed to present distinct forms of scholarship to distinct audiences. For example, journals may be the preferred vehicle of dissemination for the arts, with most of the citations received by some of the most prestigious ones originating from other areas of knowledge like the cognitive and natural sciences (Leydesdorff & Salah, 2010), while humanist monographs, tend to reach their citation peak earlier than their counterparts in the natural sciences and are more central to the scholarly communication in their fields (Tang, 2008).

Other areas in which monographs may be different from shorter forms of publication in general and journal articles in particular is the internal structure of the main text and the way in which an argument is built around a central idea. Academic articles, especially the ones reporting on experimental research, tend to have a clear, recognizable structure with a short exposition followed by a thesis, literature review, methodology, results section, a discussion of results and conclusion. Humanist articles can be very diverse, from papers reporting on archaeological excavations to essays defining a new paradigm, to historical, narrative recounts of the discovery of a forgotten manuscript. Though the basic structure of such texts is identifiable (i.e. exposition, thesis, body of text, conclusion), they are usually less formulaic than scientific literature. In the case of humanist monographs, due primarily to their size, the structure of argumentation is often more complex. In a well-written monograph, the central idea permeates the writing, as the body of the text - together with its apparatus (i.e. the notes) - supports it, but usually within individual writing subunits (i.e. parts, chapters, etc.) the process is repeated on a smaller scale, with different aspects of the main idea being treated individually. They are the recipients of their own argumentation process, with nods to the "general picture" or to the main idea of the book. This complex argumentation structure, favoured by the size of the monographs, is significant when evaluating the role of referencing in humanist large-scale writing, because, together with the context-provider role played by references, it is liable to influence the way said references are selected and deployed in text.

Researching and referencing in the humanities

As referencing is an integral part of the research process in humanities (Unsworth, 2000), it is safe to assume that the particularities of referencing pointed out by citation studies over the past five decades (Frost, 1979; Garfield, 1980; Huang & Chang, 2008; Leydesdorff & Salah, 2010) derive from or are strongly influenced by the characteristics of the research practices employed in humanist scholarship. Apparently, the English-speaking scholars' view of humanities in opposition to STEM is not only an ideological standpoint but the result of empirical observation since both research in general and referencing in particular seem to differ greatly between the two branches of knowledge.

Understanding how an in-text citation visualization tool, as well as other DH methodologies for data collection and visualization, can enrich citation analysis for the humanities is possible only if one understands what is expected of citation analysis in the area of humanities. These expectations need to be calibrated against the characteristics of referencing in the humanities and the particularities of humanist research in general.

Humanities as low dependency fields

In 1984 Richard Whitley introduced the concept of "mutual dependency" as a means to study the intellectual organization of research fields. The term defines in his perspective both the extent to which a field is dependent upon knowledge produced elsewhere in order to bring its own contribution to science, and the measure in which scientists depend on each other to advance and complete their research work. Based on this duality, Whitley identifies two types of dependency – functional and strategic. While the latter is determined by the degree to which researchers have to persuade their peers of the importance and validity of their own research in order to achieve a high degree of acknowledgement in their field, the former corresponds to the degree to which researchers have to base their work on already established practices and ideas in their area in order for their claims to be accepted and fit in with the rest of their field (Whitley, 2000).

Whitley proceeds to demonstrate in his book how the mutual dependency in both its aspects, together with another measurement he coins, "task uncertainty", can be used to describe clusters of intellectual fields. The description he gives for the fields that are low on both strategic and functional dependency fits well with the humanities in general. He refers to this rather peculiar group of disciplines located at one extremity of his chart of intellectual fields as "fragmented adhocracies" in which diverse but equally important audiences

impeded the development of a codified language and standardized research process (Whitley, 2000).

This diversity of audiences has as a direct consequence the coexistence of varied types of publication. Empirical studies of citation patterns in the humanities highlight the existence of a much more diverse publication landscape in humanist research than in the sciences, where academic journals play an unquestionably dominant role (Crossick, 2007; Huang & Chang, 2008).

To complicate understanding of research in the humanities even further, it seems that in addition to assorted audiences, the diversity of subjects is also a characteristic of humanist scholarship. This is perhaps one of the reasons why the humanities seem difficult to define by themselves, outside the opposition to sciences. As Samuel Weber points out, the contrast between the drive to generalize/universalize which is specific to the sciences, and the humanities push to preserve variety and uniqueness is perhaps the most important component of this dichotomy. To illustrate the manner in which knowledge of the particular could come about, Weber turns to the Kantian concept of reflective judgment, which is illustrated in the context of humanities by aesthetic judgments in which the particular imposes itself over generalizations. This rejection of generalizations makes establishing disciplines (read here "codified language" and "standardized research processes") difficult. However, it is possible to view humanistic endeavours from the perspective of the Derridean concept of iteration, which entails not only repeatability but also alteration. This iteration requires – in the case of aesthetic judgments – learning by example, which is in itself problematic when the main purpose is that of preserving the particular. Weber points out that an artificial demarcation is often applied to the humanities. This happens in an ambivalent context of both preserving the particular and defining common grounds (1985).

It is no wonder then that in this fluid environment of diverse audiences, research processes and subjects, the role of creating and defining a clear context for individual research papers is usually filled in by the references included. As Hyland points out, the use of references in the humanities can be understood as a dialogue with the community of scholars to which the author belongs to, intended not only to record the trail of research for the reader's benefit, but also to establish the paradigmatic context in which the work was written (1999). The abundance of references and the predilection for dialogical footnotes are easier to understand if references in the humanities serve as contextualizing instruments, just as the methods section in the natural sciences, , and if indeed disciplines guided by multiple

paradigms (as most humanities tend to be) cite more than single-paradigm ones (Hellquist 2009). To offer only one example, Eugene Sterud's paper which demonstrated the paradigmatic shift of American archaeology in the post WWII era by analyzing the content of the most cited works in the field in different time periods, is evidence of the paradigm-marker role that references often play in humanist research (1978).

In fact, references and the way they are employed in the humanities – disciplinary traditions and archaic or arcane systems included – can be viewed to some extent as a codified language or standardized methodology if you will, the exact thing Whitley was deploring the absence of in his "fragmented adhocracies" description (2000).

See for example this footnote, attached to the translation of an ancient inscription:

> 38. Frey, *Corpus inscriptionum iudaicarum*, vol.2, no.741 = *Die Inschriften von Smyrna*, 1, ed. Georg Petzl (Bonn: Habelt, 1982), no. 295
> (Rebillard, 2009b, p. 21)

The codification is there, manifested through the double citation, a well-established practice in ancient history scholarship when referencing an epigraphic inscription.

Another, more palpable example of codification is provided by the citation code words that pepper traditional humanities footnotes and raise dread in cohorts of students on their first assignments: *ibidem*, *idem*, *passim*, etc.

If in the sciences codification is manifest primarily in the structure of the research, in the humanities it is manifest in the treatment of sources and the ritualized gestures of the citation act. The code, as explained here, vouches for the solidity of the research in the same way the methodology section of a scientific paper bears witness to the validity of the experiment and ensures its replicability.

It is therefore important that any tool and/or methodology employed to study citation practice in the humanities be able to highlight not only the references themselves, but also the way in which they are introduced, how they connect to the body of the text through contextualizing keywords (e.g. "see", "see also", "unlike", etc.) and how they connect to other references included in the same note – in other words the environment in which the reference is introduced.

The contextualization function of references in humanist research is particularly significant if

we want to understand the humanist research process in general and the referencing practices in particular. Together with the high diversity of publication media, audiences and subject matters, it influences greatly the information seeking behaviour and writing patterns of humanist researchers, as well as the concept of originality in humanist research.

Information seeking, originality and individualism in the humanities

A study conducted in 2007 attempted to identify and classify the research processes common to four humanist disciplines (archaeology, philosophy, art history and languages & linguistics) through a series of in-depth interviews with scholars of all ages and academic status. The author identified seven types of research processes, with distinct differences according to discipline, but also between scholars active within the same research field. One of the most important finds of the study is the fact that humanist research does not always proceed in linear stages. Though it is true that the most common research process identified, the "Bee", was systematically linear, many variations were recognized, up to and culminating with the "Sphinx Moth" type which displayed a dogmatic dismissal of systematic research. Furthermore, the amount of variability within the same field was surprising, as was the fact that the scholars interviewed didn't seem to consider information searching as a clearly identifiable stage in an articulated research process (Lönnqvist, 2007).

The manner in which information searching is usually conducted is also significant: while subject searching is much more common in the sciences, where subject relevance is most important in establishing facts, humanist researchers tend to employ browsing and chaining much more often. Wandering through libraries, or sifting through journals, or reading the sources of a particularly interesting or relevant piece of scholarship is more likely to render results of paradigmatic relevance, required for establishing the context of the current research (Hellqvist, 2009).

To complicate matters even further for citation analysis, primary and secondary sources are read with different objectives in mind (Brockman, Neumann, Palmer, & Tidline, 2001): while primary sources are viewed as means of establishing the "historical, auctorial, generic or cultural" context of the subject (Ways of Reading, para.3), secondary sources are read because they provide a background by describing the most significant and current contributions to the field, be they methodological, paradigmatic or subject-related, or simply because they might provide references to related research as a step in the chain reading process. It is often common for an author to cite a primary source, along with one or more secondary sources that discussed it before, within the same footnote:

79. CIL 8.9585, with commentary in Yvette Duval, *Loca Sanctorum Africae: le culte des martyrs en Afrique du IVe au VIIe siècle,* Collection de l'École française de Rome 58 (Rome: École française de Rome,1982), 1:380-83, no.179*.*
(Rebillard, 2009b, p. 31)

The importance of reading in humanist research is overwhelming; if – as Hellqvist argues – the interpretation of text is the primary research procedure in the humanities, and footnotes and references can be compared to the methodology section of science papers (2009), then reading is unquestionably one of the most important components of humanist research. Adding to that the fact that information searching and writing are often overlapping or iterative (Lönnqvist, 2007), it is no surprise that scholars author independently most of the time, and that collaboration in writing is far less common than in the sciences, as numerous researchers have noted (Al, Sahiner, & Tonta, 2006; Ardanuy et al., 2009; Cullars, 1996; Franceschet & Costantini, 2010).

Though humanities scholars collaborate a lot by circulating drafts, presenting and receiving feedback at conferences, or exchanging ideas and sources, the activity of writing is, to a very large extent, individual (Brockman et al., 2001). This is due in part to the fact that reading and writing are so much intertwined in the humanities, but can also be explained by the inherently subjective nature of text interpretation as research procedure. If we add to that the humanities' predilection to conserve the particular (Weber, 1985), it is no wonder then that the humanist author is still, to some extent, a solitary figure.

The same reasons, coupled with the diversity of audience and subjects, has led to the development of an understanding of originality that is inherently different in the humanities than in the "hard" sciences. As Garfield points out, natural sciences are evolutionary in essence, in the sense that what has already been proven is scarcely revisited and that new research builds on older work but needs to bring new empirical findings in order to be considered original (Garfield, 1980). By contrast, originality in the humanities is not fact-bound; here, the concept has a more nuanced meaning, which incorporates new approaches to a subject, the application of new theories to an old topic, the "rediscovery" of an old text or the application of new methods. These forms of originality are often more valued than the originality of data and results (Guetzkow, Lamont, & Mallard, 2004).

It is therefore desirable that any tool or methodology employed for studying citation patterns in the humanities enable researchers to study the concept of originality and individualism by allowing them to make the distinction between what is original thinking and

what is retelling of previous ideas in the text and by allowing them direct access to the full extent of the work at any given time.

To understand what makes humanist research so different than research in the sciences and inherently so difficult to assess by statistical means like bibliometrics, it is sufficient to recap some of its major characteristics described so far in this chapter: the diversity of audiences, subjects and research approaches, the predilection for individual study and writing, a more intricate view on originality. All these particularities of the humanist research process are bound to influence the writing and referencing practices of humanist fields and should be accounted for when performing citation analysis in the "softer" area of knowledge.

Writing and referencing in the humanities

Writing humanist works differs from writing scientific literature in one major aspect. While in the sciences writing the paper usually occurs after the experiment is completed and serves primarily a reporting role, writing in the humanities, in most instances, coincides with the research process. This essential difference is reflected in the role played by references in text; if scientific writing is primarily fact-making, as Latour argues (1987), the role of the references is either to persuade – as the constructivist theory of citation argues – or to support the facts presented with the weight of the research work that built up to it – as the normative theory contends. By contrast, the role played by references in the humanities is much more nuanced: here, either normative or constructivist explanations can be correct in different instances, but if we limit the explanation to only one of these roles we fail to account for the part of context providers references often play in humanist research.

In humanist scholarship, as context providers, references are more explicitly rhetorical than in the sciences. Whether they provide a historical context to the subject, help place the scholarship within an established or emerging paradigm inside the discipline, or showcase the author's proficiency around the subject, the references included, related to the main text and often to each other, form a secondary discourse, always deeply rooted in and subordinated to the main text.

Consider for example:

> 49. Compare William Horbury and David Noy , eds., *Jewish Inscriptions of Graeco-Roman Egypt: With an index of the Jewish Inscriptions of Egypt and Cyrenaica* (Cambridge: Cambridge University Press, 1992), 4; against Charles Simon Clermont-Ganneau ,

> "L'antique nécropole juive d'Alexandrie" Comptes rendus de l'Académie des Inscriptions et Belles-Lettres (1907): 236-39, 375-76 .
>
> (Rebillard, 2009b, p. 23)

Or

> 11. For the traditional hypothesis, see Pierre Wuilleumier, *Tarente des origines a la conquête romaine*, Bibliothèçque des Ecoles françaises d'Athènes et de Rome 148 (Paris: De Boccard 1939), 548-549. Pier Giovanni Guzzo, " Altre note tarantine," Taras 12 (1992): 135-141, esp. 135-136 excludes the possibility of it being Archytas's tomb. See Enzo Lippolis, *Catalogo del Museo nazionale archeologico di Taranto*. 3,1 *Taranto, la necropoli: aspetti e problemi delia documentazione archeologico tra VII e I sec. A.C.* (Taranto: La Colomba, 1994), 58.
>
> (Rebillard, 2009a, p. 16)

The references included in these examples are illustrative of the referencing author's knowledge of both sides of a scholarly argument and, more importantly, demonstrate the method by which the author reached his own conclusion on the matter under dispute.

At this point in the discussion I am forced to bring in and support a statement that might be contested by some humanist scholars, especially those active in fields that view themselves closer to the sciences than humanist tradition in one way or another: writing in the humanities is intrinsically a subjective endeavour. Though "science envy" is often discussed in relation to the perceived humanities crisis, and a desire to be considered "scientific" in one's research can result either in the adoption of a disciplinary jargon (Friedrich, 2003), or a preference for parenthetical citation styles (Connors, 1999), it is difficult to deny the fact that due to their predominantly solitary character, strong interpretative component, and flexibility of context, humanist writings are less formulaic than scientific ones and more subjected to the scholar's authorial decisions. In fact, unlike the sciences where convention dictates that in the process of "fact-making" the author needs to be inconspicuous, in the humanities, the voice of the author is often quite loud, as he or she is the one who must decide on and ultimately justify the selection of subject, the preferred approach and the general context in which the research is being conducted.

This intrinsic acceptance of subjectivity in humanist writing is seamlessly transferred to the way in which references are treated in text. A study of the use of integral references and discourse reporting verbs in various disciplines showed that the humanities not only cite

more than the sciences, but they also tend to employ more integral references, in which the name of the cited author is mentioned in the main text of the citing work. Humanist writings are also more likely to employ direct quotes and discourse reporting verbs and, unlike the sciences, they are more comfortable with contrastive referencing (Hyland, 1999) because the nature of humanist writing and research is such that dialogue is welcome and opposite ideas spark discussion, sometimes even beyond the publication of the referencing work:

> 66. Leonard V. Rutgers , in a review of the French version of this book, states that "the sources do not forbid explicitly the burying together of Jews and non-Jews simply because it was self-evident from the beginning that this was not normal procedure" (*Vigiliae Christianae* 59, no. 2 [2005]: 214). This is the kind of assumption I am challenging in this book.
> (Rebillard, 2009a, p. 26)

It is therefore important that any visualization tool for content and context analysis of citation in traditional humanities should enable scholars to work with and be able to asses the subjectivity and the discourse making role of references – which can both be construed as high-level analysis endeavours. Grouping and filtering references by both formal and semantic criteria, comparing and weighing said references either individually through close reading, or cumulatively as sets of references that meet certain criteria predetermined by the researcher can throw light on the ways in which references are used as discursive instruments and provide an easily customizable, yet powerful tool kit.

The acceptance of agency in humanist scholarship, combined with the references' role as context-makers, led to footnotes' continuing acceptance as the preferred form of referencing in many traditional humanist disciplines.

Footnotes[4] in humanist writing

It is almost impossible to discuss referencing in humanist scholarship without talking about the most distinct vehicle employed by references in such writings, the ubiquitous footnote –

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[4] I will pause here for a moment to mention that – though I primarily refer to footnotes throughout the thesis, the reference is meant to encompass endnotes as well, the other type of notes, placed at the end of the chapter or the monograph. The anecdotal origin of the endnote (Grafton, 1999) as a cheaper substitute for the footnote in the times before the invention of personal computing and text processors, when page setting was more expensive, underscores its structural and symbolic indebtedness to the footnote.

almost extinct in the natural sciences but still thriving in traditional humanist fields.

Anthony Grafton believes that the main difference between referencing at the bottom of the page and parenthetical citation (inside the main text) consists of the degree of intrusion in the flow of the argument. He argues that parenthetical or in-line citation confers a degree of urgency to the reference, making it difficult to ignore since it is, for all intents and purposes, welded to the content it supports. By contrast, placing the same reference at the bottom of the page is supposed to cut down on the urgency of the reference, to relegate it to a secondary role in relation to the main text (Grafton, 1999). However, the formal distinction between parenthetical and footnoted referencing does not automatically equal a difference in importance. This is especially visible in hybrid citation styles, where the use of parenthetical citations is recommended for references to secondary sources, while footnotes are employed as vehicles for referencing and often commenting on primary sources. Here, the distinction between the two referencing styles, employed together, is more methodological than reflective on urgency or degree of importance.

A look at the content of typical footnotes in traditional humanist scholarship shows that a distinction between different footnotes based on their purpose is often just as doubtful as a distinction between parenthetical and footnoted references on criteria of immediacy. Footnotes are superficially classified by purpose and content as being either discursive or citational. In theory, the first category includes notes intended to support the argument of the main text, by means of developing a secondary argument, bringing additional "proof" or refuting an already stated or anticipated counter-argument, while citational footnotes are vehicles for providing references in relation to the statements or sources included in the main text:

> 54. Leon, *The Jews of Ancient Rome*, 54, and chap. 7, *passim.*
> (Rebillard, 2009a, p. 24).

However, simple observation shows us that the two types of footnotes are not always distinct: in many cases, the footnote provides both the bibliographical reference and a commentary on how it relates to the content of the main text.

> 87. Antonio Ferrua, *Le pitture della nuova catacomba di via Latina*, Monumenti di antichità Cristiana 2, no. 8 (Vatican City: Pontificio Istituto di Archeologia Cristiana, 1960), 89-91. See De Rossi Giovanni Battista , *La Roma sotterranea cristiana*, 1:84 1864, on the distinction between common and private burial places; and Pasquale

Testini *, Le catacombe e gli antichi cimiteri cristiani in Roma, Roma cristiana 2*
(Bologna: Cappelli, 1966), 141-43.
(Rebillard, 2009a, p. 34)

Employed initially as a vehicle of source criticism, the footnote is, according to Derrida, a text commenting on the main text, to which it is subordinated through a complex hierarchical organization. However, the author (or the annotator) can and will sometimes intentionally invert this hierarchy, by relegating the main message to the footnote. This inversion is possible partially because the topological apartness of the footnote "assures a sort of framing, a delimitation in the space that gives it a paradoxical independence, a freedom, an autonomy" (1991, p. 194). As Derrida points out, the reversal of role is perhaps most evident in polemical texts, where footnotes are often the stage for attacks and counter-arguments. It is also strongly justified by the context-providers role that references play in low dependency fields like the humanities. The need to offer a clear paradigmatic, authorial, or historical context is met with the help of the footnote, or - to be more precise - with the help of a multitude of footnotes, many of them complex in content and structure, which not surprisingly end up occupying a sizable portion of space in the economy of the scholarly work.

It is no wonder then that due to its important role in humanist writing the footnote is, to all intents and purposes, the norm in many traditional fields, like classics, art history or religious studies. A simple perusal of the most recently defended doctoral dissertations at prestigious universities in North America and Europe shows that footnotes, often verbose and abundant, remain "de rigueur" in humanist scholarship[5]. The detailed note – whether placed at the bottom of the page, at the end of the chapter or in a small window displayed when hovering over its signifier (the superscript index at the "location" in text of the note) in the case of electronic texts – is an important pillar of writing and referencing in the humanities. This fact is significant for studying and understanding citation patterns in humanist scholarship.

The reason why footnotes are particularly important when trying to understand citation in the humanities is tied into their potential for complexity. For example, the following footnote

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[5] I conducted such a perusal myself several times over the past few years, focusing my attention on the dissertations included in the ProQuest Database, on subjects such as Classic History, Mediterranean Archaeology, Theology, Art History, etc.

and the paragraph of text to which it is connected are extracted from the same monograph on the burial practices of Late Antiquity that contained all the other footnotes included as examples in this chapter: here, the citing author contests Juster's opinions on the subject at hand (segregated burial for Jews in the Roman World). He doesn't stop, however, at that, but also cites and explains the basis of Juster's conclusion, by referencing the very examples his adversary has employed. Furthermore, following a common practice in epigraphy, he cites an alternative source for two of the inscriptions cite (Fig. 8). By stating in this footnote the relationship between the six references included (the citation connection from Jouster's book to the three inscriptions he used to build his argument, the two equivalencies to standard catalogues in the field for the most relevant ones, along with a very brief summary of their content, as well as a short statement dismissing the third as being an invalid choice), Rebillard builds a support for his argument against Jouster's opinion.

> "At the beginning of the twentieth century, Jean Juster held that "religious segregation of the dead" was characteristic of Jews. The only justification given to support this statement were a few inscriptions whose wording found numerous parallels in both Christian and pagan inscriptions relating to *ius sepulchri* and not "religious segregation." [60]
>
> ———————————————
>
> 60. Jean Juster, *Les juifs dans l'Empire romain: leur condition juridique, économique et sociale,* vol. 1 (Paris: Geuthner, 1914), 480, and n. 4, which cites the three following inscriptions: Noy, *Jewish Inscriptions of Western Europe,* vol. 2, no. 378 = Frey, *Corpus inscriptionum iudaicarum,* vol. 1, no. 220, where a wife chooses a *loculus* next to her husband's; *Tituli Asiae minoris.* 2, 2, no. 612 = Frey, *Corpus inscriptionum iudaicarum,* vol. 2, no. 757, where a funerary monument is given to the Jews of Tlos; and *CIL* 6.10412, which is no longer identified as Jewish.

Figure 8. Complex footnote (main reference – blue; main reference's sources – green; alternative sources – red). (Rebillard, 2009a, p. 14)

The example showed above, though slightly more elaborate than the average humanities footnote, is by no means exceptional, as notes of this size and complexity are quite common in humanist scholarship. The frequency of such intricate referencing vehicles is

particularly significant for citation analysis, since they make it clear why traditional citation analysis - the counting of lines connecting citing works to referenced ones - fails to provide an accurate image of referencing in the humanities. For instance, in fig. 8, the six references included in the footnote are not all equal in their degree of relevance to the text and their relationship with the main argument: Jouster is cited to be contradicted, his sources are cited to support Rebillard's rejection of Jouster, and their equivalents in epigraphic corpora are cited to observe a common practice in the study of ancient inscriptions. The references included inside the same footnote share not only a spatial, subordinated relationship to the main text, but also, through the way they relate to each other in the micro-universe of the footnote, they could provide insights into how argumentation is built in humanist writing and how sources are employed as rhetorical and contextualization instruments.

Humanist footnotes as we know them today – complex, numerous, and often occupying an impressively large portion of the scholarly text – are able to survive and even thrive in modern humanist scholarship due primarily to another important characteristic of humanist writing, the predilection for monographs. These often-massive examples of scholarship offer a perfect environment for the footnote, by providing the writing space that is often at premium in academic journals and by nurturing complex argumentation and context building opportunities.

It is important therefore that a tool used for visualizing references in monographs enable in-depth inquiry into the structure and content of footnotes.

Specifications and design features

The primary intention behind the design of a visualization tool for context analysis of citations should be the creation of an environment meant to facilitate the visualization of references in context. This visualization in context entails, on one hand, simultaneous access to the bibliographical data of the reference and to its surroundings in the citing text, and on the other, where the reference is included in a footnote, a visually significant representation of the note in which said reference is made. Additional desirable features include allowing users to visualize and compare other indicators of in-text citation analysis, such as the frequency of occurrence and position of reference in the citing text. Of particular interest for context and content analysis of citations and – not surprisingly – the most difficult to translate into specific design features is the predilection for using footnotes as complex rhetorical instruments and ways in which these footnotes relate to the complex

structure of scholarly argumentation in traditional monographs. A combination of these affordances is likely to offer insights into the manner in which referencing contributes to argument construction in a particular work, and from there, in humanist writing in general.

Personas and scenarios

To help with this conceptual phase of the design, but also to provide support to the larger design and development team who were unfamiliar with citation analysis in general, I devised three personas to facilitate the team's understanding of the intended tool and its prospective users. The personas were created as a representation of the anticipated audience, intended to create a common language about the specifics of the tool and to engender the design team's interest and empathy towards users (Pruitt & Adlin, 2012).

The primary persona created was a citation analysis specialist, knowledgeable of both traditional citation analysis methods and the current state of research in humanist citation practices. I assigned a complex series of tasks to this persona, and ran several scenarios varying both the purpose and complexity of the analysis involved. The most developed scenario pertained to the persona's main research interest in the development of scholarly argument in a large scale monograph, while the secondary scenario positioned an administrative application of the tool. Finally, the tertiary scenario speculated on the possible applications in classrooms of a tool such as CiteLens.

Another persona created was meant to represent a potential secondary category of users, young scholars in the field of the monograph being analyzed who might use the tool to identify the unwritten rules of scholarly writing in their discipline by observing the model provided by a presumably representative work in the field.

The third persona tentatively included stands in for the increasingly large number of young readers unfamiliar with the "archaic" citation style of the footnote and who might find it meaningful and beneficial to be able to play around with the references included in a large-scale monograph and to have them displayed into a more visual manner.

A detailed description of the personas employed and the scenarios implemented can be found in Appendix A.

As part of the process of designing the information architecture of CiteLens, as well as the markup schema employed for tagging citation data in the sample text, I used the scenarios and personas as points of reference.

Some of specifications mentioned below draw directly from existing citation analysis research while others are geared towards aspects of studying referencing patterns in context that I considered opportune to include here due to the individual characteristics of writing and referencing in humanist monographs discussed in the previous chapter. The traits to be included can be grouped under one or the other of the following five desired functionalities.

The ability to follow the construction of the argument in the text

One of the central and most complex affordances of any visualization tool for content and context should be being able to focus on the construction of argument within the monograph, as opposed to the statistical account of the number and type of references included.

These are some of the features that should be included in the visualization tool and/or the markup schema to support this affordance:

- Marking and showing the location of a selected reference in the text; the location of a reference in the text is one of the parameters most employed when weighing references. It is also useful to keep the reference together with the fragment of the text (i.e. the portion of the argument) that it is brought in to support., as it makes it easier for the user to identify the function played by the reference in the argumentation process. This would enable, for example, our main persona to follow with her students the construction of the argument in the turn-point monograph (tertiary scenario).

- Contrasting the fragments of text where the author expresses original ideas with fragments of text that are supported by references; this is also a feature that can contribute to the users' understanding of the argument-building ability of references: for example, a user like our main persona could look at the way in which concentration of references varies in the different sections of the book and what kind of references are employed in the sections of the book where most of the heavy lifting of the argument takes place. This feature would support the main study cases for all three CiteLens personas, with the added benefit that for the primary persona, this ability would actually serve a central role in the research process

- Deconstructing the internal structure of complex footnotes and presenting them in a

visual form; this is another new feature in the landscape of content and context analysis and requires both intuitive design on the visualization tool front, and rather complex tagging in the XML document. This feature would support both the complex research needs of the first persona, such as being able to breakdown contrastive references in complex footnotes, as well as the much more modest reading comprehension goals of the tertiary persona.

Permanent access to the full text of the work being analyzed

One could hardly talk about context analysis of references if the context of said references – the citing text – were absconded somewhere else. For this reason, I believe it necessary to include in any visualization tool for context and content analysis of citation a basic text reading area that is fully navigable and has the following additional feature:

- When a certain reference is selected in the bibliographic list (which is to be displayed as a separate panel), highlight the context of said reference, i.e. the portion(s) of text to which said reference is connected through the footnote or in-text reference.

Full access to the text of the monograph at any given time while using the visualization tool is a feature that would enable all the use cases assigned to the three personas created and facilitate the corroboration of the visual patterns identified in the distribution of references with the actual content of the document.

Analysis, reorganization, and filtering options for references

Since the primary focus of the envisioned citation analysis tool is to enable the study of referencing patterns, it should be equipped with both the full bibliographic list of the analysed text and the means to handle it through sorting, searching, and filtering. This is a very important feature in the context of studying humanities monographs which tend to have very well-developed citation apparatuses.

The vehicle for analysis should be designed as a faceted browser interface with filtering options that would allow the users to create sets of citations with common traits for comparison purposes. The facets to be included can be grouped into two major groups:

- Bibliographic traits

  o Publication type; the classification of publication types I recommend includes

both traditional bibliographical categories as well as less frequent publication types that are, nevertheless, more commonly employed as references in the humanities than in the social sciences, such as letters, diaries, or codices.

- o Language of referenced materials is one of the parameters frequently recorded in content and context analysis studies of citation (Cullars, 1989, 1990, 1992, 1996) and the sample document analysed referenced resources in no less than seven languages.

- o Country of publication, where identifiable, is another valuable source of evidence about the information seeking and referencing habits of scholars.

- o Date of publication; this is another parameter that has been long used in citation analysis. As Tang has found, age-related measurements of citations are another aspect by which humanist monographs differ from their science counterparts and serial publication (2008).

Though less relevant for the secondary personas and the use cases assigned to them, the features mentioned in this category bridge the distance between index-based citation analysis (where especially the age of the reference and the type of publications cited are measurements often employed) and content analysis of citation, where such variables are also commonly used, especially to infer the information-seeking behaviour of the citing author and are likely part of the primary persona's study of humanist referencing patterns.

- • Citation functions (i.e. the functions filled in by the cited text in relation to the citing text.)

This is a more delicate inquiry since it involves a certain degree of interpretation on behalf of the person who encodes the mark-up of the analysed text. The classification in the function facet is based on the classification developed by Caroline Frost for the functions of citations in literary research and it attempts to assess four parameters: type of resource, factuality, relationship with the citing text and status (i.e. further reading).

Identifying the functions references play in the citing text is one of the most important components of the use cases assigned to the primary.

All facets outlined above are to be consistently applied as markup to any CiteLens compliant text. The method for applying the markup will be described in detail as part of the next chapter.

Reference weight

Unlike index-based citation analysis where all citations are essentially equal, since no information of the function, position and frequency of the reference in the citing text is recorded, content and context analysis of citation can record all these details and weigh references accordingly (Zhang, 1990). This is especially important in the traditional humanities where references are often used as rhetorical instruments actively involved in the argument-building process, and where complex footnotes with multiple references are often the norm.

Two of the features that could enable weighing references are:

- Citation counts (i.e. the number of time a certain bibliographic reference is mentioned within the citing text)

  This measurement is particularly significant when weighing references inside a monograph, as influential sources are more likely to be cited multiple times.

- Identifying the position of references in text (i.e. the visualization of a reference's position on a graphic representation of the full text)

  Being able to place references in the text can help with weighing the importance of said references in the argument-building process. For example, a work cited in the preface can have a tangential or paradigmatic conection to the citing work, where as a book cited in the discussion section is more likey to be closely related to the subject at hand.

Comparison of user-generated reference sets

According to John Unsworth, selection and comparison are two of the most basic research acts, conducted in all areas of scientific activities and veritable functional primitives of research in the humanities in particular (2000). In a visualization tool for content and context analysis of references, the selection is achieved through the faceted search of references, which leads to the creation of sets of references that meet the same filtering

criteria (i.e. language, type, origin, function). These sets of citations can then be compared to each other in terms of size and location in text. It is hoped that this comparison could help uncover referencing patterns and provide an image of how argumentation is built in text.

Here is an example. (Fig 9) In this case, the user is trying to determine if there are any identifiable patterns in negative citations. In the first image, she has selected to see the distribution in text of negative citations (i.e. references with which the citing author disagrees) and to see if any noticeable distribution patterns emerge from the proportional or spatial distribution of negative citations to books versus journal articles:
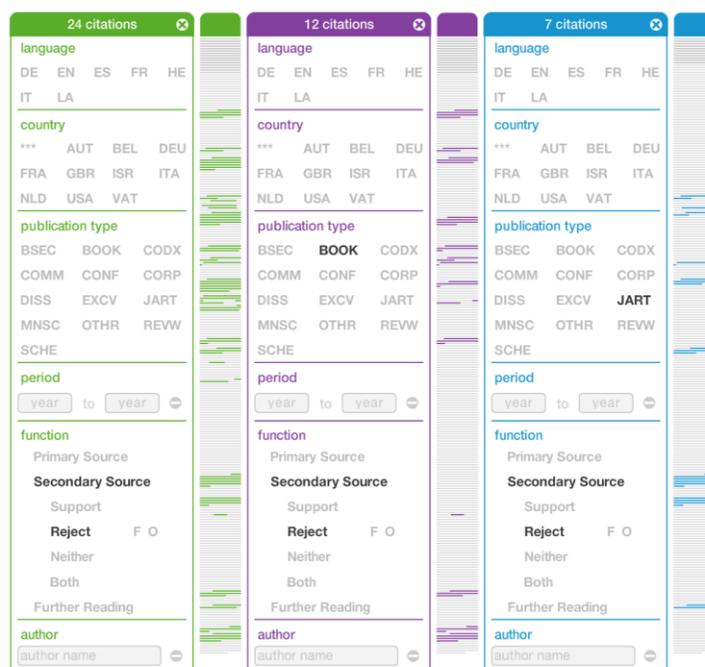
Figure 9. Comparison example. In-text distribution of negative citations (all – green, books – purple, articles – blue)

Then the user can choose to compare, within that set of negative citations the ones that reference factual information from the cited source versus those that reference opinions/interpretations provided by the cited author

It is easy to see from Figure 10 a and b below that when contradicting journal articles, the citing author is roughly equally likely to contradict factual information included by the cited

author as well as the cited author's opinion/interpretation, whereas when he contradicts monographs he is far more likely to contradict an opinion than factual information. This observation could be coincidental, but it is also likely that monographs, as long form scholarly works are more often vehicles of interpretation and opinion than journal articles. The latter are more likely to be used like "white papers" in the sciences, to record excavation reports, new archeological findings, etc. Further testing of this hypothesis would have to involve additional encoded monographs, but it is illustrative of the power of a visualization tool to focalize potential patterns that I was able to identify this interesting distribution of negative citations.
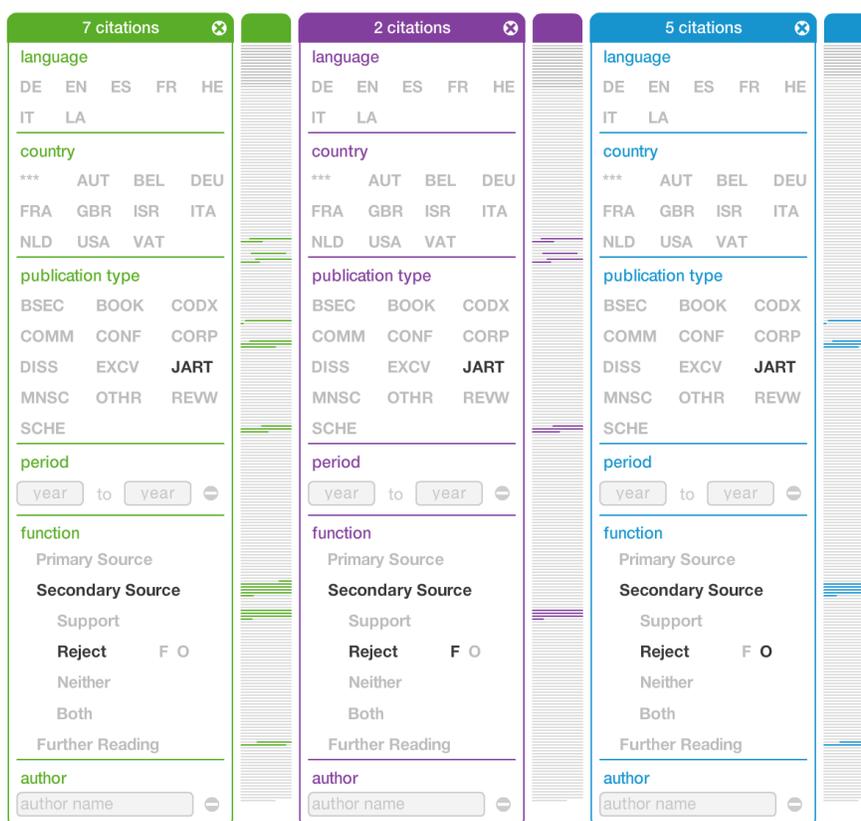
Figure 10 a. Comparison example. In-text distribution of negative citations (all journal articles – green, factual information – purple, cited author opinions/interpretation – blue)
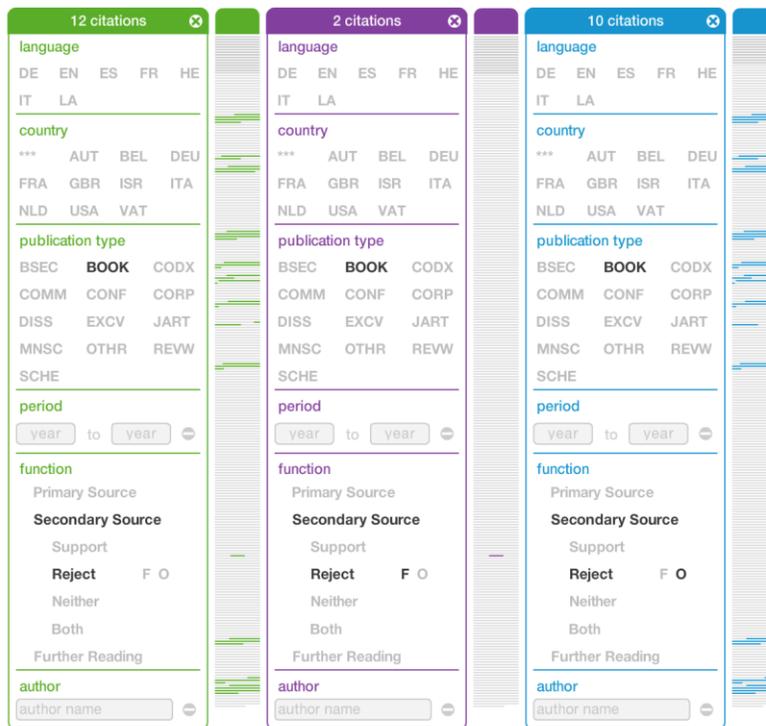
Figure 10 b. CiteLens. In-text distribution of negative citations (all monographs – green, factual information – purple, cited author opinions/interpretation – blue)

The comparison feature is perhaps one of the most useful features of a content and context visualization tool, especially when dealing with large critical apparati, and a function of the tool that would be handy in the main use cases described for the primary and secondary personas created.

Ch. 3. Design and Prototyping

The requirement analysis and specifications described in the previous chapter informed the design of CiteLens, a prototype for the in-text analysis of citation, and the design of the XML markup schema CiteLens was intended to work with.

Markup design and encoding

Text visualization is made possible by specialized computer programming that is able to parse said text in a meaningful way. The ability to do so in an unmediated manner, generally referred to as Natural Language Processing (NLP), is still incipient, largely inaccessible for wide research use, and prone to unreliability when complex texts are involved. The best way to ensure that semantic aspects of a text are properly parsed by computer algorithms is to encode them and render them machine-readable using markup. In fact, it is through markup enrichments of the text that faceting such as the one described in the previous chapter in the "comparison of user-generated citation sets" example is possible. In that particular case, codified markup embeddded into the sample document and meant to catalogue the specific traits of each of the references included in the sample document was harvested by the tool and turned into filters that enabled the creation of the comparison sets.

In order to achieve this level of complex encoding, I opted to use XML, the most ubiquitous markup language for this purpose, and more specifically the Text Encoding Initiative standard which is the most widely used XML specification for the encoding of Humanities texts.

TEI is a very complex XML schema that is flexible enough to cover primarily structural but also semantical tagging of very different types of texts, from dramas to cookbooks and from poems to manuscripts. To make the schema easier to use by specialists in different areas, there are several versions of TEI called customizations that contain only a subset of the tags available in TEI, usually the general ones and one or two discipline-specific modules. For example, TEI Corpus is the TEI customization for Corpus linguistics and contains all the TEI modules necessary for encoding linguistic corpora. Similarly, there are also TEI customizations contributed by communities of scholars that have become *the* encoding standard for their respective discipline. One such example is EpiDoc, the TEI customization maintained by the STOA consortium, which has become the encoding standard for

paleography and its sub-disciplines.

As I was expecting at the beginning of my research, I was unable to identify any specific TEI customization that would have allowed me to encode all the characteristics of the text and references informed by the requirements and specifications outlined in the previous chapter, so I proceeded to the creation of a TEI customization for content and context analysis of citation.

TEI schema customization for citation analysis

The Text Encoding Initiative maintains an on-line tool that provides a GUI for modifying TEI and allows users to generate and download new customizations, based on the canonical version of the schema, on the customizations provided by the Initiative (e.g. Corpus) or on community-contributed customizations (e.g. EpiDoc) (Mittelbach, Rahtz, & Bernevig, n.d.). Starting from TEI Lite, a very light-weight customization of TEI, I added a few attributes and added some pre-set values to some of the new and existing attributes of the <bibl> tag, the TEI tag used to encode bibliographic references.

Based on the enumeration of features for the content and context analysis of citations, this is the full list of elements and attributes employed in the encoding of footnotes, references and fragments of text attached to said notes:

In order to facilitate **following the construction of the argument,** I encoded the following features of the text:

- The fragments of the text directly connected with the footnote, marked up with **<ref type="noteSpan">**, where noteSpan is one of the two restricted values for the @type attribute in this tag. Ref ("TEI element ref (reference)," n.d.) is a commonly used tag that I decided to use to point the fragment of text supported by the note to the note and not the other way around, since the focus of the markup employed is referencing.

- The location in the text at which the note signifier is placed, marked with **<ref type="noteLoc">**.

- The footnotes, recorded with **<note place="foot">** to distinguish them from the

rare in-line references included in the text.[6] Additional attributes included with the note element consisted of identifiers (**@xml:id** and **@n** where the former marks the unique identifier for that note, while the later marks the footnote number as printed in the book) and **@anchor**, used to specify that the current note is anchored to the text)

- **<ab type="citation">** is used to tag individual acts of referencing inside the footnote; each ab unit may consist of one bibliographic reference, its contextual introduction (often "see" or "see also" but sometimes more consistent) and the related items mentioned with it.

  E.g. <note>
      <ab type="citation"> See
        <bibl>Reference</bibl>
        <seg function="contextualization"> for a full discussion of the
        topic</seg>
      </ab>
      <ab type="citation">(…)</ab>
    </note>

  [for an actual example, see Appendix E, Note 15, lines 739-783]

- **<bibl>** is the basic referencing unit and identifies a single source; all the filtering options specified in the specifications included at the end of the previous chapter are recorded in the markup as either attributes or children of bibl (see description below)

- **<seg type="contextualization">** is used to markup the brief author interventions inside the note that serve as contextualization instruments for the references.

- **<relateItem>** is used to mark the relationship between references included inside the same footnote, if said relationship can be inferred from context; these citations within citation can be classified by their relationship to the main reference included in the note, to which they play a subordinate role; the **@type** attribute values restricted in the TEI customization to cited / citing / supports / contradicts / alternative are employed to mean the different relationship types.

  E.g.: <note>

---

[6] The only such in-line references included in the sample monograph are canonical Bible citations (e.g. Gen 49:29-31)

```
<ab type="citation"> See
     <bibl>Reference 1</bibl>
     <seg function="contextualization"> who disagrees with</seg>
     <relatedItem type="contradicts">
            <bibl>Reference 2</bibl>
     </relatedItem>
</ab>
<ab type="citation">(…)</ab>
</note>
```

[for an actual example, see Appendix E, Note 4 – lines 185-265]

Filtering and comparison of reference sets is facilitated mostly by attribute values attached to the **<bibl>** element and limited in the schema to a limited array of values

- Bibliographic traits

  - Publication type: **@type** attribute on <bibl>, with the following present values: "book section", "book", "journal article", "conference paper", "conference proceedings", "thesis", "PhD Dissertation", "manuscript", "report", "corpus", "excavation report", "scholarly edition", "review", "letter", "commentary", "website", "diary codex", "newspaper", "magazine article", "other". Out of the over 20 classification terms included in the XML schema customization created for CiteLens, over 12 were encountered in the sample document used for CiteLens.

  - Language of referenced materials: **@xml:lang** attribute on <bibl>, with values conformant to ISO 639-1

  - Country of publication: **<pubCountry>** element as child of <bibl>; customarily not a child of bibl in TEI, I decided to include it in this schema customization because this information can prove valuable in understanding the information-seeking behaviour of scholars (Ardanuy, 2009)

  - Date of publication: **<date>** element as child of <bibl>

- Citation functions. (i.e. the functions filled in by references in relation to the citing text.)

  For this group of reference facets, I decided to add several new attributes to the TEI schema customization because I was already using the @type attribute for

the type of publications and the only other type-like attribute available, @subtype was not appropriate given the meaning assigned to its implied subordination to the @type attribute and its values;

- o Type of source: **@sourceRole** attribute, newly created, with values restricted to "primary" or "secondary"; the attribute distinguishes between original material to be studied and discussed, and secondary material, usually a piece of scholarship that discusses the subject at hand, usually based on the study of primary sources.

- o Factuality: **@contentType** attribute, newly created, with values restricted to "fact" and "opinion"; the attribute differentiates between facts and subjective statements (i.e. opinions)

- o The relationship between the citing and cited texts: **@reason** attribute, newly created, with values restricted to: "support", "reject", "neither", "both"

- o Whether or not the reference is included as a recommended further reading: **@furtherReading** optional attribute, newly created, with "true" or "false" values

In addition to these encoding tasks, I also assigned unique identifiers to all the notes and references within the text.

This is an example of the encoding put into tagging a rather complex note and the portion of the text it is attached to, the same note included in Figure 8 above. The XML comments included in the fragment are part of the markup description conducted in this chapter of the thesis and provide a running commentary of how some elements and attributes were used in the markup process:

```
<p>
    <ref type="noteSpan" corresp="#note_61">
        <!—Element ref @type "noteSpan" encapsulates the fragment of the citing text that
        critiques a previously held opinion-->
        At the beginning of the twentieth century, Jean Juster held that "religious segregation of the dead" was
        characteristic of Jews. The only justification given to support this statement were a few imniptiom whose
        wording finds numerous parallels in both Christian and pagan inscriptions relating to ius sepulchri and
        not "religious segregation."<ref type="noteLoc" target="#note_61"><!—Element ref
        @type="noteLoc" is mostly but not necessarily placed at the end of the note span-->
        60</ref>
    </ref> (…)
</p>
<note xml:id="note_61" place="foot" anchored="true" n="60">
```

```xml
<gi>60. </gi>
<!--Generic identifier; used to markup the number of the footnote-->
<ab type="citation">
<!—single reference group consisting in this case of the primary reference and five related items nested 2-2-1.-->
        <bibl sourceRole="secondary" contentType="opinion" reason="reject" xml:lang="FR" type="book"
    xml:id="bibl_79">
            <author><name type="first">Jean</name> <name type="last">Juster</name></author> ,
            <title level="m">Les juifs dans l'Empire romain: leur condition juridique, économique et
            sociale</title>
             , vol.<biblScope type="vol">1</biblScope>
            <pubPlace>Paris</pubPlace>:
            <publisher>Geuthner</publisher>,
            <date>1914</date>),
            <pubCountry xmlns="http://www.example.org/ns/nonTEI">France</pubCountry>
            <biblScope type="pp">480</biblScope>, and n. <biblScope type="note">4</biblScope>
            <seg function="contextualization"> which cites the three following inscriptions: </seg>
            <!—beginning of the first nested, related citation, as introduced by the previous
            <seg> element -->
            <relatedItem type="cited">
            <!-- -->
                <bibl sourceRole="primary" contentType="fact" xml:lang="EN" type="corpus"
                reason="neither" corresp="#bibl_44">
                    <author><name type="last">Noy</name> </author>,
                    <title level="m">Jewish Inscriptions of Western Europe</title>,
                    vol. <biblScope type="vol">2</biblScope>, no. <biblScope
                    type="catNo.">378</biblScope> =
                    <relatedItem type="alternative">
                    <!-- the second related item in the note is just another way of
                    referencing the same inscription mentioned in the first related item, so it
                    is nested within it-->
                        <bibl sourceRole="primary" contentType="fact" xml:lang="LA" type="corpus"
                        reason="neither" corresp="#bibl_46">
                            <author><name type="last">Frey</name></author>
                            <title level="m" type="short">Corpus inscriptionum iudaicarum</title>,
                            vol. <biblScope type="vol">1</biblScope>, no. <biblScope
                            type="catNo.">220</biblScope>
                        </bibl>
                    </relatedItem>
                    <!--end of the second related item-->
                    <seg function="contextualization"> where a wife chooses a loculus next to her
                    husband's; </seg>
                </bibl>
            </relatedItem>
            <!--end of the first related item-->
            <!--start of the third related item-->
            <relatedItem type="cited">
                <bibl sourceRole="primary" contentType="fact" xml:lang="LA" type="corpus"
                reason="neither" corresp="#bibl_47">
                    <title level="m">Tituli Asiae minoris</title>.
                    <biblScope type="vol">2, 2</biblScope>, no.<biblScope
                    type="catNo.">612</biblScope> =
                    <!--start of the fourth related item-->
                    <relatedItem type="alternative">
                        <bibl sourceRole="primary" contentType="fact" xml:lang="LA" type="corpus"
                        corresp="#bibl_46" reason="neither">
                            <author><name type="last">Frey</name></author>
                            <title level="m" type="short">Corpus inscriptionum iudaicarum</title>,
                            vol. <biblScope type="vol">2</biblScope>, no. <biblScope
                            type="catNo.">757</biblScope>
                        </bibl>
```

```
            </relatedItem>,
            <!--end of the fourth related item-->
            <seg function="contextualization">where a funerary monument is given to the Jews
            of Tlos; </seg>
        </bibl>
    </relatedItem>
    <!--end of the third related item-->
    <!--start of the fifth related item-->
    <relatedItem type="cited">
        <bibl sourceRole="primary" contentType="fact" xml:lang="LA" type="corpus"
        reason="neither" corresp="#bibl_25">
            <title level="m"><abbr>CIL</abbr><expan>Corpus Inscriptionum
            Latinarum</expan></title>
            <biblScope type="vol">6</biblScope>. <biblScope
            type="catNo.">10412</biblScope>,
            <seg function="contextualization">which is no longer identified as Jewish.</seg>
        </bibl>
    </relatedItem>
    <!--end of the fifth related item-->
</bibl>
    <!--end of the primary reference in the citation unit-->

</ab>
<!--end of the citation unit-->
</note>
```

The full encoded sample chapter has been appended to the end of this thesis (see Appendix E). The TEI XSL schema customization, as well as the customization file that would allow further refinement of the schema if the project is revisited, and the Oxygen-generated schema documentation are all publicly available at https://github.com/ilovan/CiteLens-Documentation.

Procuring sample texts

In order to obtain representative samples of humanist writing for the initial testing of CiteLens, a chapter was randomly selected from one of the monographs included in the OAT lists for 2006-2010 (see above, chapter 2), (Rebillard, 2009). It contains 96 footnotes citing 138 titles in 24 pages.

At the time when CiteLens was developed in 2012 the OxGarage conversion tool curated by the TEI Consortium and using TEI as the pivot format for various text formats transformations was not yet available, so a lot of the transformation work from the PDF book to the TEI document was done using the "find and replace" functionalities of the Oxygen XML Editor and regular expressions. After the text was turned into valid TEI XML, I proceeded to the enrichment of the citation tags (<bibl>) with bibliographic markup (i.e. author, title, place of publication, etc.). As a final stage of the sample text preparation I

proceeded to the markup of the text fragments associated with the individual footnotes and the documentation of the citation functions derived from Frost's classification (Frost, 1979) as XML attributes.

CiteLens design and implementation

Concept & sources of inspiration

Information visualization, like scientific visualization, is a form of information design which can be defined as "concern[ing] itself with external representations for amplifying cognition" (Card, 2012, p. 520). This umbrella definition covers not only a multitude of cognitive processes with different degrees of complexity (i.e. Internet shopping vs. conference presentation), but also a quite large variety of information visualization techniques. Visualizations amplify cognition by employing representations and enabling perceptual inferences which ultimately enable the users to detect patterns faster and to keep an overview of the general while focusing on details. They reduce search times and facilitate the exploration of large amounts of information by producing abstract representations of information through the selective manipulation of data (Card, Robertson, & Mackinlay, 1991).

In studying citation patterns in humanist monographs, the large scale of the texts to be analyzed, the complexity of the citation apparatuses and the sheer number of references are traits that make the use of an external cognitive aid (i.e. a visualization) a welcome innovation. In addition, the benefits of information visualization enumerated by Card, Robertson and Mackinlay were observed in multiple studies in bibliometrics, discourse analysis, and text analysis, the three research fields closest to context citation analysis.

As established in chapter one of this thesis, CiteLens is – to my knowledge – a pioneer visualization tool, with no direct predecessors in the area of in-text citation analysis visualization. It is, however, genetically indebted to both citation analysis and text analysis interactive visualizations. Through its focus on text visualization, as well as its "place of birth", a DH project, CiteLens is situated closer to some DH tools that I will describe below than to the citation analysis visualizations that were also considered and evaluated as sources of inspiration in the first chapter. Though lack of citation data is always cited as one of the primary reasons for the perceived failure of traditional citation analysis methods when applied to humanities scholarship, it is also important to bear in mind that in-text citation analysis could also benefit from text analysis tools and expertise.

One frequent approach to text analysis in digital humanities consists of employing visualization tools in both the analysis and dissemination stages of the research.

Text analysis visualizations

In this section I will briefly review a few DH text analysis visualizations, with a nod towards features and affordances that could be incorporated in a visualization tool for the in-context analysis of citations.

Text analysis visualizations draw their data either from the texts themselves, be they literary (in most cases) or academic, or from the metadata that accompanies them. Among the most frequent parameters translated into visualizations in text analysis are collocation and repetition, which lend themselves to a surprisingly diverse landscape of visual approaches. Though some of the text analysis visualization tools are geared towards large text corpora, a great number of them are geared towards analyzing the content or metadata of individual texts. Their focus on the content of a single text at a time, as well as their visual originality, makes them a valuable source of inspiration for any in-context citation analysis visualization.

One such tool is TextArc, a very rich collocation instrument that lets users visualize the distribution of words in texts that lack structural metadata (i.e. table of contents, etc.). In TextArc, the text itself, shrunken to fit along the margins of the visualization twice, once on the outside (as lines) and once on the inside (as words), becomes an element of design. Inside the ellipse of the text, individual words are drawn only once at their average position and connected by rays to their locations in text (Fig.11). The tool has been successfully employed to analyze both literary texts like Hamlet or Alice in Wonderland, but also as an instrument of discourse analysis in the history of science (Paley, 2011).

As a take-away for a citation analysis visualization, I will note the representation of the full text of the work being analyzed and the ability of the user to move back and forward between the collocation visualization and the full text.

Figure 11. TextArc visualization of "Alice in Wonderland". Rays are drawn from "Alice" to everywhere she appears ((Paley, 2002) .

Another visually rich text analysis tool is the Mandala Browser (Ruecker et. al, 2009). Mandala is a rich-prospect browser for any XML document or collection of XML documents. The tool displays the document(s) around the periphery of a mandala in the form of dots, and the user has the ability to create any number of colourful magnets inside, while assigning them values extracted from the metadata or the text of the document(s) being analyzed. The magnets draw the dots into the center space and the position of the dots relative to different magnets provides visual information about the structure and the content of the texts included. The mandala is flanked by a customization panel on the left and a results panel on the right where the results queried are listed and can be located in text. Clear, organized areas and uncluttered spaces create an intuitive structure that is easy to interact with upon first encounter (Fig. 12).

As a take-away from the Mandala Browser to a citation analysis visualization, we can note the rich-prospect browser concept (Ruecker, 2003), which can be applied to a context and content citation analysis tool by providing instant access to both the full text and the complete list of references as well as any subset defined by the user.
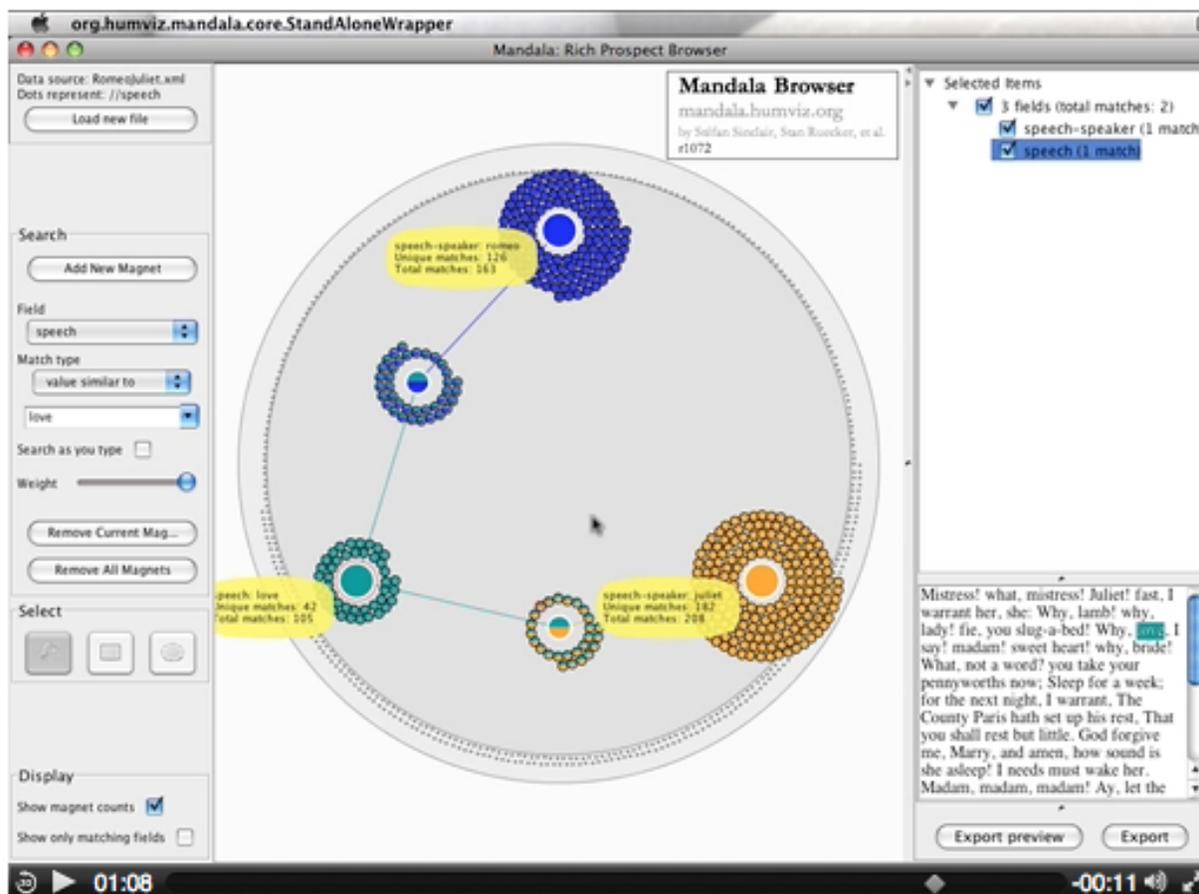
Figure 12. Mandala visualization of Romeo and Juliet. The blue magnet represents speeches by Romeo, the yellow magnet represents speeches by Juliet, while the green one represents the word "love" (after Ruecker, n.d.).

Bubblelines is a text analysis tool that visualizes the frequency and repetition of words inside either a single document or a corpus of texts (Fiorentino & Giacometti, 2008). The individual documents are represented as horizontal lines, divided into segments of equal length. Users can input one or more terms to be searched in the documents displayed. Each selected word is represented as a bubble with the size of the bubble matching the word's frequency in the corresponding segment of text. Users can also change the number of segments the texts are divided into, thus increasing or decreasing the granularity of the

tool. In this case, the linearity of the text, as well as the ability of the user to grasp both position and frequency are promising takeaways for a citation analysis visualization (Fig. 13).
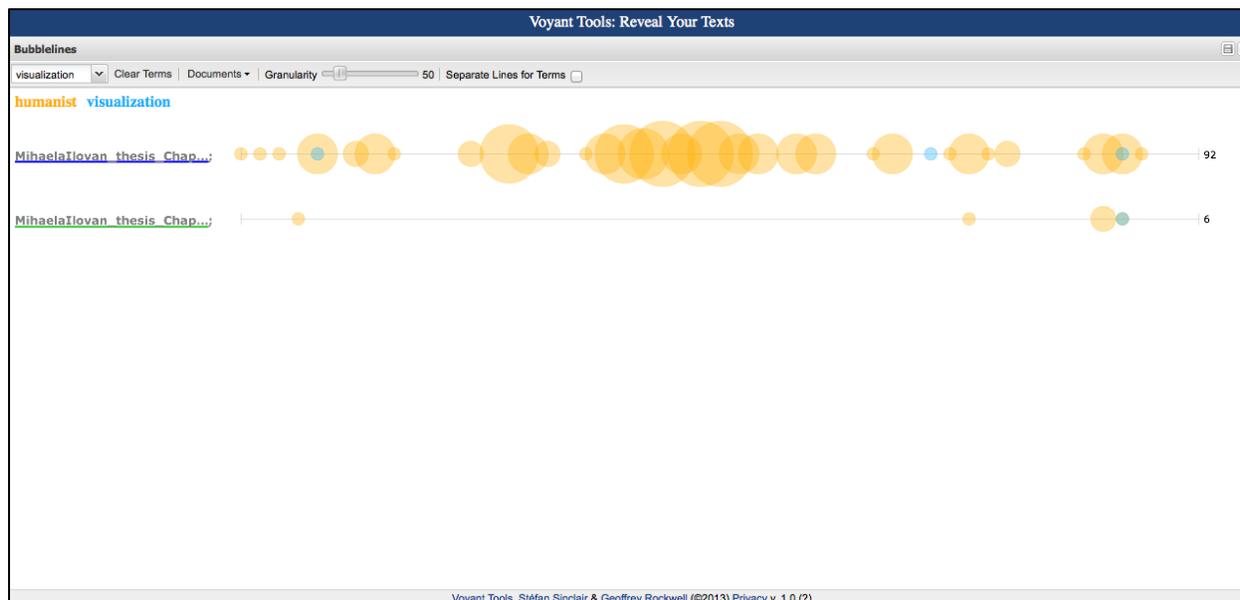
Figure 13. Bubblelines visualization of the use of the terms "humanist" and "visualization" in the first two chapters of this thesis.

Perhaps the closest tool to meet the requirements for a citation analysis visualization tool detailed in previous sections, both conceptually and aesthetically, is the Dynamic Table of Contexts (DToC) (Fig. 14). The DToC is an online reading environment for digitally encoded texts that facilitates complex searches employing various metadata components (table of contents, semantic XML tagging, index terms). Developed as a way to publish DH-enhanced scholarly books, it resembles an e-reader interface that allows users to browse, search and filter based on each of the metadata components mentioned above, while keeping in focus the actual text of the document. In its various affordances (filtering, searching , visualizing the frequency and location of index terms in text, etc.) the DToC parallels for index terms some of the affordances that CiteLens supports for in-text citation analysis (Sinclair et al., 2018)

Figure 14. DToC visualization of a research collection. Text area to the right, full representation of text in the middle, followed by the table of contents and the list of index terms to the very far left.

CiteLens structure and layout

Based on the specifications outlined in chapter 2 and informed by the markup architecture described above, CiteLens was designed to provide the three personas I created with a means of analysing citations in context by applying any or all of the facets and affordances described in the Requirements analysis. Since it was feared that the number and complexity of the desired functionalities for CiteLens would generate a visual overload if included in a single view, I decided to split the functions between two main views, labeled "Compare" and "Contextualize" respectively: to draw a somewhat artificial distinction between the two views, we can say that "Compare" supports all of the filtering options and the comparison of user-generated reference sets, while the "Contextualize" view is better suited to facilitate tracking the construction of argument and reference weight, with both views allowing access to the full text of the work in any given time.

"Compare" view. The "Compare" view is the default interface of the tool (Fig. 15). As the landing page of the tool, the "Compare" view allows the user to become familiar with the text, bibliographical apparatus and structure of the visualization, searching and filtering

references, and creating reference sets that can be compared to each other.

Figure 15. CiteLens "Compare" view – web-based version (Frizzera et al., 2013)

The bibliographic panel lists the bibliographic sources cited in the analysed document, displaying the author, title, and year of publication for each reference. The number in the top-left corner indicates the number of times the title was cited in text. Default sorting is by location of the first reference in text; user can choose to activate or disactivate three other sorting options (i.e. by author name, title and date of publication); the list of references is scrollable. A counter is located at the bottom of the panel, giving the total number of works listed. As users interact with the tool and create their comparison sets, the bibliography panel is filtered to display only the titles that meet the filtering criteria and the counter at the bottom of the list is modified accordingly.

The search box at the top of the bibliographic panel allows the dynamic, autocomplete-enabled search of authors or titles. The autocomplete panel shows the first matches up to a maximum of 6 items. Once the search is completed, only the results are listed in the panel, while the other references are hidden. The "x" at the right corner of the search box, visible only when there is a string inside the box cancels the search and restores the bibliographic panel to the state prior to the search.

Figure 16. CiteLens bibliographic panel (Ilovan et al., 2013)

The user has the option to select a single title in the bibliographic list by clicking on it. The selected title will then be displayed in white text on red background, with the individual citation occurrences listed below with the functions of said citations specified when identified by the XML (Fig. 16). When the reference selection is active, the text fragments to which

the reference is connected to are displayed in red inside the reader panel, as are the footnotes in which the reference is mentioned. Furthermore, the full text visualization to the far right of the screen will also highlight the location in text of the individual instances of citation for the selected reference (Fig. 17).

Figure 17. CiteLens reference highlighted (Frizzera et al., 2013)

The central stage of the default view is held by the comparison panel which holds the faceted search panels that enable the creation of comparison sets and, once the filtering is conducted, the visual representation of the user-generated sets. Initially, only two panels are displayed, with the option to add a third if desired. If three comparison sets are active, the user has the option to turn off anyone of them by clicking on the "x" at its top right corner, thus returning to a two-term comparison (Fig. 18).

Figure 18. CiteLens comparison panel (Frizzera et al., 2013).

The facets included in the filtering panel mirror the features described in the specifications outlined in chapter 2 and operate based on the markup values enumerated in the encoding section of this chapter.

They can be grouped into two major categories, bibliographic and semantic. The first category includes publication information, such as language, country and type of publication, as well as period of publication and author. The user has the option to input one or more time-periods for publication period, or to select one or more authors. Period and

author entries can be removed by the user from the filtering options. The semantic category of facets is represented by the function filtering options. (Fig. 18).

As a faceted browser, the filtering panel of the "compare" view is an exploratory search mechanism, which offers an iterative way to refine search results by a prescribed taxonomy. (Wei et al., 2013). In essence, a faceted browser offers the precision of a complex Boolean query without necessitating the user to input one. This is the case with the CiteLens filtering panel, where every facet selected narrows the results, while selecting multiple values within the same facet has a cumulative effect.

Similarly, when one or more comparison sets are active, the bibliography panel will display only the titles that are included in at least one of the comparison sets created. For example, in Figure 18, the first comparison set contains thirty-five references, while the second only seven. The bibliographic panel though does not display forty-two references (the sum of thirty-five and seven), but thirty-nine, because three of the references fit both sets of filtering criteria.

By clicking on either of the two or three visualization columns, they are all rearranged to the right next to the reader panel, in order to have a better visual comparison.

The reading panel itself is split in two distinct areas, one for the main text, and the other for the footnotes. Both areas can be scrolled independently and, by clicking on a note index in the main text, the footnote area will automatically scroll to that footnote. The reading panel is connected to both the bibliographic list and to the full text visualization. As the user scrolls through the main text, the current location is highlighted in the full text visualization (Fig. 19). Conversely, if a reference in the bibliography panel is selected, the fragments of text to which said reference is connected, as well as the footnotes in which the reference is made, will be displayed with red ink in the reader.

The full text visualization located at the far-right side of the CiteLens space is meant to be a navigation aid, a representation of the full text with the areas supported by citations mapped in black and the areas of original contributions to the text highlighted in light gray. When a reference is selected in the bibliographic panel, the areas of text to which said reference is connected are highlighted in red in the full text visualization.

Figure 19. CiteLens reading panel (Frizzera et al., 2013) .

"Contextualize" view[7]. If the first CiteLens view is dedicated to the exploration of bibliographic information to gain insight into citation patterns, the second view is designed to focus on the context of the selected citations (Figs. 20 and 21) In the "contextualize" view the connections between text and references are visually represented. Here, the sets of references delineated in the "compare" view are kept in the foreground; however, the list of references is replaced by a list of individual instances of citation, displayed in the order they show up in text, with no sorting options. The scene in the middle is taken over by the representation of the full text. Spans of text, either supported by references (black, colour-

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[7] The second view of CiteLens hasn't been implemented yet and the figures included in this chapter section are reproductions of the final design iterations (Fall 2012).

coded) or containing original contributions (light gray), are lined up in their natural order in the document. The dots to the left of the text segments represent the number of individual references attached to the same segment of text (i.e. included in the same footnote). When the user selects an individual citation in the list at the far-left, the corresponding span of text is revealed in the context panel, in the body of the text, in the footnote inside the e-reader and at the far-right side on the full text visualization.

Figure 20. CiteLens "Contextualize" view (*by Piotr Michura*)

When more than one dot is attached to the same string of text, that indicates the presence of a complex footnote. I considered it beneficial to include in our tool a form of representing not only the relationship of references with the citing text but also, where need be, the relationship between different items cited together in the same note.

From the initial model of a branching footnote, the design evolved towards nesting when, after encoding the first sample document, I realised that co-cited references can be in three types of explicitly stated relationships: "citing", "cited by", and "alternative".

Figure 21. CiteLens "Contextualize" view. Expanded footnote. (by Piotr Michura)

As you can see from this example, both the relationship with the citing text and the relationships inside the footnote are marked. The designer employed the metaphor of the sticky notes to represent the references included in the same footnote, and their position relative to each other corresponds to the relation they share. In this particular case, 5 different references are included in the same footnote, with the second being an "alternative" to first and the last one being "cited" by the fourth. The relationship of an individual reference to the citing text (i.e. their function) is represented by the small labels placed at the bottom-left corner of the corresponding sticky note. (Fig. 21)

To preserve the unity of form of the "Compare" and "Contextualize" views, some elements of the interface like the title of the monograph being analysed, the bibliography and reading panels and the full text visualization to the far right are present in both views.

The argument for CiteLens

Based on the nature of the project they support, prototypes can be divided into three main categories: production-driven prototypes, experimental prototypes, and "provotypes" or provocative prototypes (Ruecker, 2015). CiteLens falls within the second category, as it is a research-question-driven prototype which attempts to provide valid visualization approaches to in-text citation analysis.

Experimental prototypes are very interesting from a scholarly perspective because they are built to test potential ways in which a specific research question could be addressed, tested and potentially answered. Together with the provotypes, they are also the prototypes that could best fit the suggestion that digital objects in general and prototypes in particular can embody an argument, in this case the feasibility of text visualization as a means to study in-text citation analysis (Galey & Ruecker, 2010).

If we are to see CiteLens as an argument for visualizing in-text analysis of citation, it needs to pass some of the well-established tests any scholarly argument needs to pass in order to be accepted as valid, so it needs to be contestable, defensible and substantive (Booth, Colomb, & Williams, 2008).

As a contestable argument, a prototype should include a completely new affordance, or at least an affordance that is employed in an innovative way in the current prototype (Galey & Ruecker, 2010). In the case of Cite Lens, we can identify at least two such affordances: the most important affordance in question is the ability of the user to easily grasp the frequency and position in text of any user-generated set of references; perhaps as importantly, the user is able to compare up to three such sets and to refine them based on a number of criteria provided within the interface of the prototype.

As a defensible argument, a prototype needs to reasonably pass a heuristic evaluation of the new affordances identified (Galey & Ruecker, 2010). CiteLens was never subjected to a formal heuristic evaluation involving multiple user experience and subject experts, but the design and development process had multiple checks in place, based on established heuristics such as Jacob Nielsen's "10 Usability Heuristics for User Interface Design" (1995) and Bruce Tognazzini's "First Principles of Interaction Design" (2014). To the extent that it was possible, these heuristics, as well as the personas and scenarios created at the onset of the design process, informed the design and development of the prototype.

Last but not least, determining whether a prototype is a substantive argument or not can be more difficult, since this determination rests on the intellectual and practical value of the prototype, which are especially difficult to assess in the early stages of a prototyping project (Galey & Ruecker, 2010). CiteLens is just as difficult to assess from this perspective, as its practical value has yet to be solidly tested; intellectually though, an in-text citation analysis tool built within the DH community and indebted conceptually and esthetically to both text analysis and citation analysis can only strengthen the argument that DH methodology and resources can positively contribute to the advancement of in-text citation analysis of

traditional humanist monographs.

Furthermore, as I will demonstrate in chapter four of this thesis, other DH tools & methodologies could bring a valuable contribution to this area of citation analysis by providing a workflow for the buildup and analysis of citation data in said monographs.

Ch. 4. Future directions

The primary reason why Humanities are – to a significant extent – a lost cause for index-based citation analysis sub-disciplines (co-citation analysis, network citation analysis, etc.) is the fact that the existing citation indexes don't cover humanities research output in a representative way, especially when it comes to niche subjects, scholarly output in languages other than English, and monographs.

CiteLens, as the first visualization tool for content and context analysis of references, cannot be successful without substantial, consistent, and rich materials to employ it on. Without consistent means of producing said citation data, context and content analysis of citation cannot move forward and the jump from prototype to production is not in the cards for CiteLens. Zhao and Strotman rightly point out that the kind of automatic extraction of citation data from the full texts of the citing documents that characterizes in-text citation analysis works best with strictly parenthetical citation styles, such as APA or MLA. They also point out that such extraction requires additional efforts of author name disambiguation and that errors of identifying and parsing in-text citation do occur (2015). However, as I will argue in this chapter, resources are available within the substantial Digital Humanities toolkit to produce and enhance high quality datasets for citation analysis in the humanities.

Without falling into the pitfall of trying to define Digital Humanities, we can safely say that it is a community of practice that thrives on scholarly challenges and that it is very well-placed to approach both interdisciplinary and transdisciplinary research projects. In-text citation analysis fits both labels, as it draws on both statistical and textual indicators to identify referencing patterns.

1. DH-enabled full-text monograph harvesting

The first and perhaps easiest difficulty to counter is the unavailability of full-text scholarly contents. Though it is true that most scholarly output, be it journal article or monograph, still resides behind a copyright firewall, I can identify two tendencies that are likely to make it less of an issue from the point of view of citation analysis.

One can observe a tendency towards multi-format publishing of scholarly monographs, where university presses have begun to consistently publish monographs both in print and electronic formats (usually PDF, EPUB, MOBI or any combination of the three). To give just one example, out of Choice Magazine's sixteen Outstanding Academic Titles for 2016 in the

category of Classics, there were thirteen titles that met the conditions to be considered monographs[8]; out of these, eight were published in both print and at least one electronic format, which is over 60% of the monographs on the list. Though by no means statistically significant, these numbers do support the assertion that the publication of traditional humanities monographs is embracing the digital format as complementary to the ubiquitous print options. This tendency is important because it makes available to the researchers, under certain conditions of course, digital versions of the newly published monographs. As mirrors of the printed monographs, these digital versions are held to the same standards for publishing as their print counterparts, with both contents and metadata curated by the publisher. Unlike the problematic quality of Google Books (James & Weiss, 2012), these monographs, if sourced directly from the publishers or indirectly from one of the large digital libraries such as EBSCO or DPLA, can reliably provide a starting point for a citation-enriched version for in-text analysis.

Obtaining these electronic texts for the purpose of conducting any kind of content and/or metadata research is possible and Digital Humanities projects have achieved such access in the past. One such example is the collaboration between the Canadian Research Collaboratory and the University of Alberta Press that resulted in the open-access experimental publication of a conference volume that had been published in print and "vanilla" e-book format by the press less than a year before. (Brown et al., 2016) Another great example is the collaboration between the Minessota University Press and the CUNY Digital Scholarship Lab that resulted in the Manifold Scholarship, a platform for iterative, networked monographs ("Manifold Scholarship," n.d.). Both these examples illustrate the willingness of publishers to collaborate with DH projects towards new forms of book publishing even though they require a more involved level of commitment on the part of the publisher than simply providing the raw files for DH experimental research.

More than publishers, though, I can see digital libraries being willing to collaborate with the DH community towards creating and curating reliable citation data for scholarly monographs, as any results obtained from researching the referencing practices of humanities scholars could help inform library acquisition strategies in the humanities.

In addition to the increased willingness of publishers and digital libraries to supply content

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[8] See chapter 2 above for a discussion of the criteria used to establish the monograph status of a book for the purpose of this thesis.

for DH text analysis and visualization projects, we could also count as a possible source of monographs the institutional repositories managed by universities themselves, and which usually hold if not the final version of a published monograph, then at least a very advanced version of it (e.g. the PhD dissertation that is eventually turned into a published monograph).

All these sources can provide edited, clean versions of monographs which can serve as perfectly respectable starting points for DH enriched texts ready to support in-text citation analysis.

2. DH-enabled text conversion and cleanup

The next important step in the production of high quality citation data from traditional humanities monographs consists of converting these files into machine readable text formats.

Digital Humanities have a strong relationship with the study of the written text, dating back to the dawn of humanities computing and compounded over and over again across multiple disciplines and textual sources. As being able to enforce some semblance of interoperability to discrete collections of digitally processed texts was seen as necessary in the early days of the internet revolution, the DH community embraced the XML standard and the Text Encoding Initiative (TEI) guidelines as the most widely used format for encoding both the semantic and the structural characteristics of text produced in different humanities disciplines, ranging from manuscript studies to drama to epigraphy.

The TEI consortium provides, in addition to the Guidelines, a suite of tools which facilitate the customization of the Guidelines ("Roma: generating customizations for the TEI," n.d.), as well as the transformation of TEI documents to and from other text formats such as Word, PDF, or HTML (Rahtz & Stadler, 2015). This last tool in particular can play an important role in the cleanup and standardization of the monographs in preparation for the next stage of the citation data enrichment process.

Transforming the texts of the monographs into TEI docs – though not a required step in the citation data enrichment/extraction process – has some undeniable benefits. Employing XML, a well-established W3C standard, TEI encoding opens the text to multiple exploration avenues, since the format is "read" by a considerable number of readily available DH tools. Furthermore, since TEI is the text encoding norm embraced by the DH community,

practitioners familiar with it represent a statistically significant group that can be called upon/enticed to engage with the citation data enrichment process. As Zhao and Strotmann point out, in the case of in-text citation analysis, the data cleanup process is effort-driven and relies on iterative acts of citation disambiguation, context and frequency analysis (2015). It is therefore preferable that the text preparation process be automated wherever possible, and that - for the portions of the work that require human intervention (e.g. author disambiguation, ensuring that a reference was parsed properly, etc.) – said intervention be facilitated by a common language (in this case TEI).

3. Text enrichment

Once the text has been transformed to a standard encoding format and cleaned up, the next step in the data enhancement process would consist of labeling and inventorying the references. This process can be sped up by employing named entity recognition (NER) tools like the Stanford NER (Finkel, Klein, Manning, & Rafferty, 2005). Employing advanced natural language processing tools such as this can help expand the scope of in-text citation analysis to monographs with non-parenthetical citation styles, since named entities (i.e. mostly persons, organizations, places and titles) can be identified and labeled notwithstanding their position inside the text, at the bottom of the page or in an endnote.

Figure 22. Stanford Named Entity Recognition

After identifying and labeling named entities, the next step in the process of citation data curation would be disambiguating the references to authors and titles. It is an increasing practice in DH scholarship to do so by linking said references to dereferenceable URIs stored in named authority files such as the Virtual International Authority File (VIAF) or DBpedia.

In the context of in-text citation analysis, as in many other cases when dealing with "messy" humanities texts, it is recommended that a vetting mechanism is available to further curate both the entity recognition and the linking instances. Here again, we can draw on existing DH tools, such as Recogito – the online collaborative document annotation platform developed by Pelagio Commons. Recogito allows users to upload plain text and runs automatic entity recognition and linking processes for persons and places. Users have the option to collaboratively curate these computer-generated annotations, add their own linkage and annotations, and export everything as Linked Open Data (LOD) compliant files (Simon, 2018).
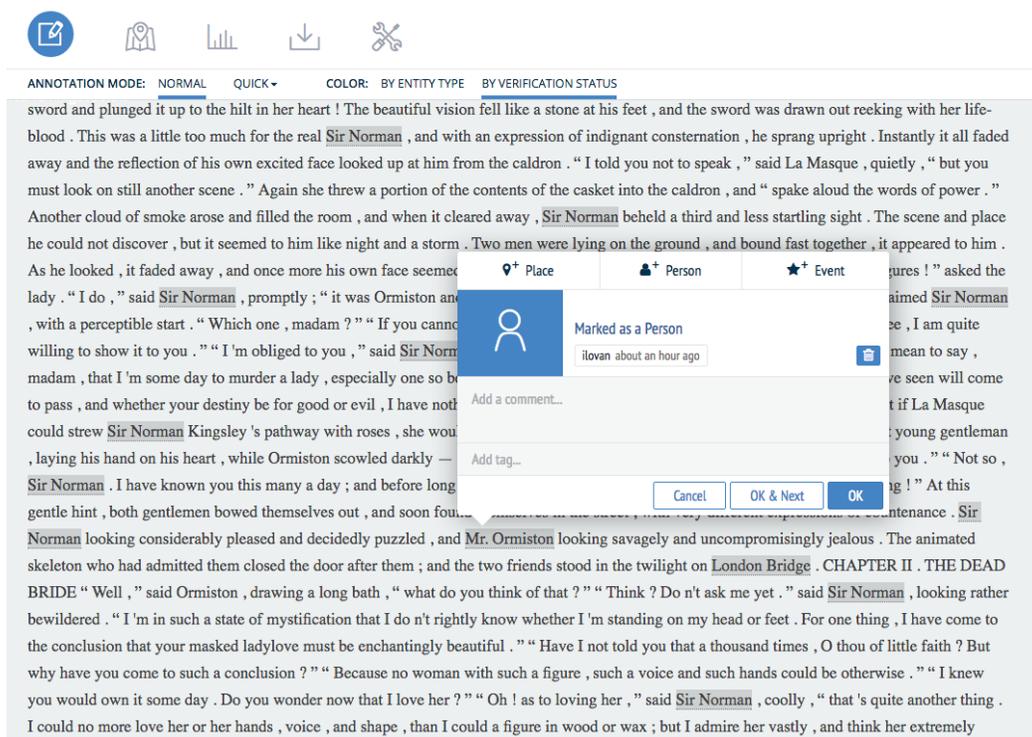
Figure 23. Recogito

Another promising tool, though currently in alpha stage, is the Named Entity Recognition and Vetting Environment (NERVE) (Brown & Armstrong, 2018) developed by the Canadian

Writing Research Collaboratory (CWRC). NERVE allows users to upload TEI XML documents and to run the Stanford NER to identify references to persons, organizations, places and titles. Users have the option to link the entities to a few external authority files, to merge two separate entities and to apply links automatically to all instances of the same entity within the text.
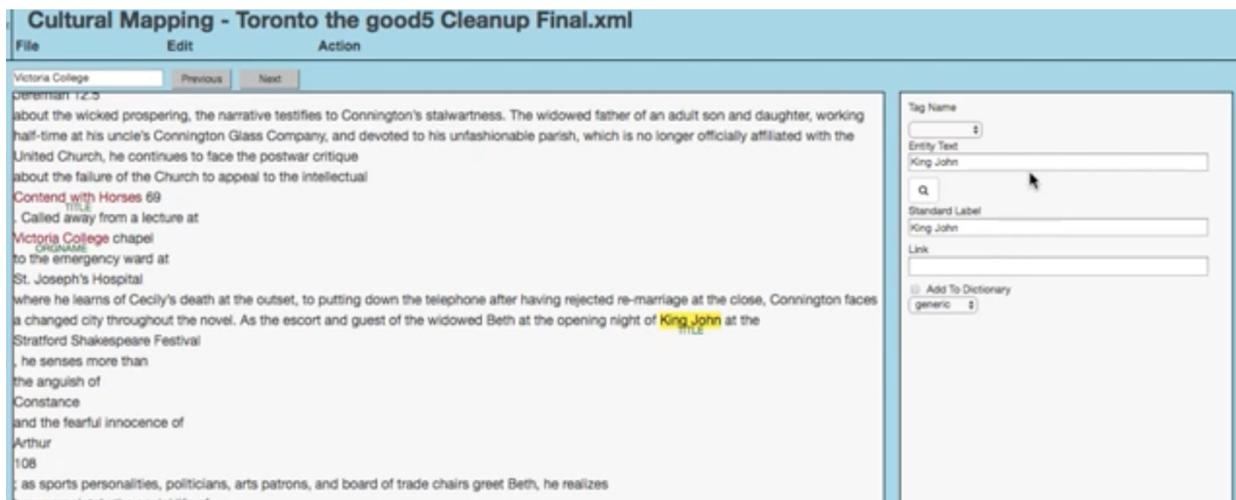
Figure 24. Named Entity Recognition and Vetting Environment (Nerve)

4. Citation data markup

After enriching the text with disambiguated author names, titles, places of publishing, etc., researchers can proceed to marking up the bibliographic references and their role in the citing text. This can be done either using TEI – if going the TEI route – or in RDF if going the Linked Open Data (LOD)-only route. If the TEI route is taken, citation functions can be added as customized semantic tagging to the XML, while if the LOD approach is preferred, CiTO, the Citation Typing Ontology can be leveraged to assign citation functions ("SPAR Ontologies - CiTO," n.d.) An XML /RDF editor like the CWRC-Writer could be employed to produce both TEI markup and LOD annotations. Developed by CWRC, this online editor can be run off GitHub and fosters collaborative editing (Brown et al., 2017/2018).
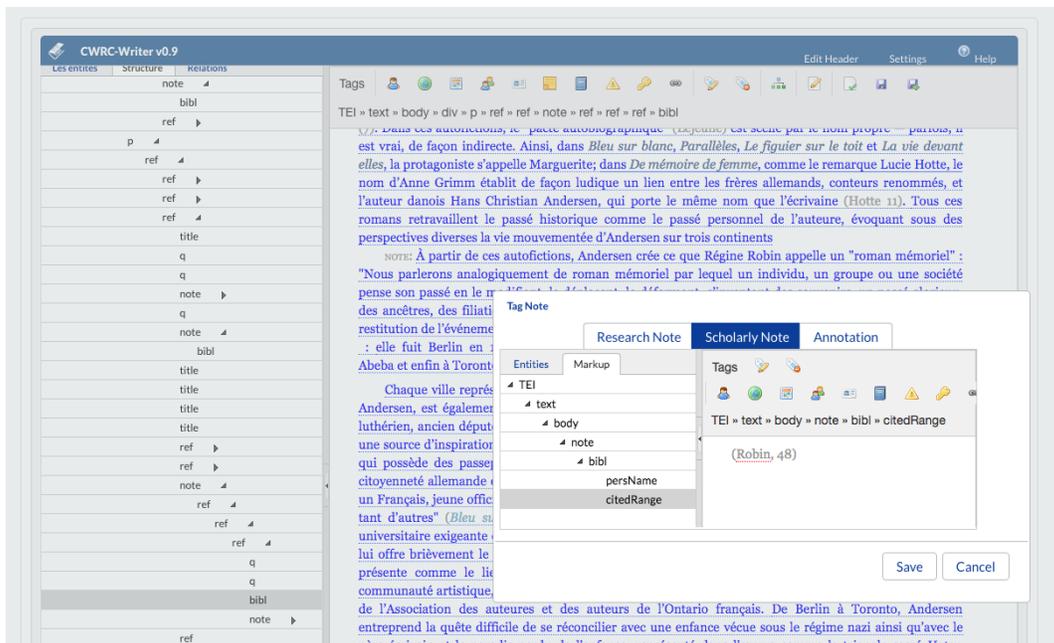
Figure 25. CWRC-Writer Note annotation popup.

As I pointed out in the previous chapter, it is important for the study of humanist citation patterns to understand and account for the context of each citation act, including the position in text, frequency of reference and the function fulfilled by the reference in the citing text. This necessity has proven so far to be the Achiles' hill for citation analysis in the humanities, as it requires substantial researcher involvement and can prove prohibitively time-consuming. Steps have been taken to automate both the extraction of citations and the functional assessment.

BILBO is an automatic reference annotation tool based on Conditional Random Fields (CRFs) which uses manually annotated TEI XML files as input data from which labels are extracted for each reference field. Once the CRF model is learned, it can be run for labeling new data, with high rates of success in annotating social sciences and humanities scholarship: around 90% accuracy for labeling bibliographic lists and 84% accuracy in identifying and labeling bibliographic references in footnotes and endnotes (Bellot, Bonnefoy, Bouvier, Duvert, & Kim, 2014).

Steps have also been taken to assess the applicability of sentiment analysis for the identification of citation functions. From the citation analysis community, Sulla and Miller applied a naïve Bayes classifier in order to identify positive and negative citation contexts, with promising results in a multidisciplinary study that highlighted the need for further

refinement and testing (2014). Digital Humanities researchers are also experimenting with sentiment analysis as a method of text analysis (see Sprugnoli, Tonelli, Marchetti, & Moretti, 2016) and existing tools could be further adapted to support the automation of citation function assignments. The Text Analysis Portal for Research (TAPoR) lists a few sentiment analysis tools that are publicly available and that could be tweaked for basic citation function analysis (see for example Complex Sentiment Analysis).

Digital Humanities, more than any other information-spectrum areas of expertise, has a long-standing tradition of dealing with "messy", textual information and turning it into "smart" data, understood as structured or semi-structured data, enriched with metadata, annotations and/or markup (Schöch, 2013). Digital Humanists are also aware of the subjectivity of this transformative process. As Johana Drucker points out, the process of creating what she names "capta" ("that which is taken" as opposed to data –"that which is given") involves a series of decision-making processes which construct the enriched materials on which further inherently subjective decisions are applied during the analysis process (Drucker, 2011).

This awareness of indebtedness to the subjective humanities is often paired in the context of Digital Humanities with an understanding of the power of statistical evaluation and computational work that renders DH a fertile environment for building on existing in-text citation analysis methodologies and practice.

As I have shown above, existing DH tools, methodologies and standards can help make citation data in the humanities "smarter" while also minimizing – to the extent that this is possible – the amount of human effort needed to tease out that information from unstructured sources.

It is my contention that DH knowledge and expertise can also contribute beyond the data production stage, into the citation analysis process. Two of the areas of strength of the Digital Humanities consist of text visualization and prototyping, as the examples provided in the previous chapter can easily prove.

A potential Problem-Solving Environment for context and content analysis of citation

The tools mentioned here are by no means the only ones of their kind in the DH community. TAPoR gathers and catalogs almost 500 text analysis tools, and though not all of them

would be appropriate for citation data extraction or usable out of the box by inexperienced users, the number of said tools, as well as their quality (measured as robustness of code, interoperability, adherence to W3C standards, etc.) is growing, as is the interest in the larger DH community to support research outside the traditional boundaries of digital humanities research.

The workflow illustrated above would successfully allow researchers to take full text monographs and to extract high quality citation data with the minimum amount of effort possible, given current natural language processing (NLP) barriers and the pioneering role such process would hold. As mentioned when discussing avenues to take for named entity recognition and disambiguation, to produce high quality data, human vetting is iimperative given the "messiness" of the humanities. I anticipate the time required by the vetting process could still deter some researchers from embarking on this type of work. However, the silver lining to this initial effort is the fact that the more such enriched monographs are created, the more accurate the tools that produce them can become (i.e. by using the curated monographs as training sets). This improvement in tool effectiveness would improve the automatic extraction accuracy, thus cutting down on the time required for human intervention.

A few years ago, the necessity and specifications of an ideal Problem-Solving Environment (PSE) for scholarly communication research were discussed from the perspective of index-based citation analysis and the affordances that would need to be included in such an environment to support index-based citation analysis. Some of the facilities required - those pertaining to the collection and enhancement of citation data in particular – are also required for a potential PSE geared towards context and content analysis of citation. Furthermore, the characteristics envisioned by Zhao and Strotmann (2013) are identical with the ones I think would be required of a PSE enabling content and context citation analysis: a highly flexible, open, modular, and powerful environment that would be able to integrate with heterogeneous scholarly resources and tools and that would provide complex data extraction options (such as automatic topic extraction and named entity recognition) along with options to visualize the citation data (such as the ones provided by CiteLens). As a lot of the tools I described in this chapter are already available and in use within the DH research community, it is safe to assume that the bones of such a content and context citation analysis focused PSE are already in place and that the most natural path forward would be to implement, test and standardize the hypothetical DH tool-based workflow described in order to be able to demonstrate the value of implementing such a PSE.

Advantages of a DH approach

There are without a doubt a few substantial advantages to embracing a DH approach to in-text citation analysis in traditional humanities monographs:

Chief among them is the expertise in text analysis that such an involvement could bring to the analysis of referencing practices, and the relatively high level of comfort with the subjectivity of humanist data in general and the subjectivity of the act of referencing in the humanities in particular. DH practitioners can understand this subjectivity as humanities scholars themselves. This knowledge of the subject(s) on which the citation analysis process is to be applied is another point in favor of a DH approach, as it is likely to contribute to an improved citation data set and to the identification of hard to see referencing patterns.

The existence of readily available standards for creating "smart" data (e.g. TEI, various ontologies, etc.) can be seen as another advantage of a DH approach, as it could ensure a level of interoperability that is rare at this point in in-text citation analysis practice. Adopting standard ways of encoding the citation data would help scaling up individual citation analysis research projects. For example, new datasets could be added to CiteLens if other TEI documents, generated for different research projects, could be enhanced with citation data. Conversely, citation data curated for use with CiteLens could be repurposed to other text or citation analysis tools.

Last but not least, DH thrives on collaboration, interdisciplinarity and transdisciplinarity. These are all characteristics of a way of doing research that encourages discovery and could influx a relatively stale area of research (i.e. citation analysis for the humanities) with a breath of new ideas, methods, and intellectual curiosity.

Next steps

Though the current chapter presented a virtual workflow for enriching large scale texts and turning them into viable data for in-text citation analysis, the methodology described here was not applied when the first sample text for CiteLens was created because most of the tools described were not yet created or were at that point outside my reach (e.g. one-off prototypes, behind institutional firewalls, etc.) This led to a relatively time consuming, mostly manual process of encoding the citation data, which once again highlighted the main problem with in-text citation analysis: good data is expensive and hard to "grow". Unfortunately, I did not keep track of the amount of time spent on preparing the single

sample, but I did recently try to repeat the process with the same text using the workflow described above, wherever the tools described were available to me or did not require extensive tweaking. This way, I was able to tag the entire chapter in significantly less time than when CiteLens was built and – by using disambiguation affordances – increase the quality of the citation data amassed.

If CiteLens is to have a second iteration, some aspects of its development and system architecture would need to change. Chief among these is the way it loads the sample, as for the first prototype, there was no back-end repository of texts to call on to switch and compare different monographs.

Another important development that needs to happen is the implementation of the "Contextualize" view, as it is this portion of CiteLens that allows users to look more closely at footnotes as reference contexts. The next logical step would be user testing, which would inform the next version of the tool.

Built as a Flash tool, CiteLens is currently technologically obsolete, so it would also need to be re-engineered as a HTML5-compliant or a JavaScript application that could be plugged into a pipeline for citation analysis. This pipeline could contain multiple plug-in tools for citation data enhancement and analysis and sit on top of a repository that would allow users – both citation analysis and digital humanities scholars – to share and aggregate citation data while collaborating at different stages of the research process. In essence, I am advocating for the creation of a DH-powered PSE for content and context analysis of citation, with the awareness that in order for these ambitions plans to come to fruition, further programming support and scholarly backing is needed.

Conclusions

This thesis explored the characteristics of citation analysis as applied to the traditional humanities and identified the researching and referencing traits that render index-based citation analysis a poor proposition for understanding humanities citation practices. Among these traits, the preference for monograph publishing, the use of complex footnotes, the argument-building role that references play in the scholarly discourse call for a comprehensive and consistent context and content citation analysis methodology.

The thesis also identified and proposed to mitigate two major gaps in citation analysis for the humanities: the relative scarcity of studies about this subject and the absence of digital tools for the context and content analysis of citation, which I have argued is the preferred approach to study referencing practices in the humanities.

The first gap mentioned has been discussed at length recently (Ardanuy, 2013) and is usually attributed primarily to the lack of comprehensive, high quality citation data in the humanities. I have argued here that the lack of citation data could be rectified with the help of a Problem Solving Environment (PSE) built for extracting, enriching and analysing in-text citation data from humanities scholarship, more specifically from long form scholarship such as monographs. I outlined in this thesis a potential workflow as supported by existing and available Digital Humanities (DH) tools and I argued that DH methodology and domain knowledge of the humanities could infuse and give new impetus to in-context analysis of citations for the humanities.

As a novel component of this proposed PSE, I described CiteLens, a prototype visualization tool for context and content analysis of citation that was developed based on the information architecture I produced for marking up and analysing referencing in traditional humanities monographs – a tool and markup combination that has the potential to provide a consistent methodology for studying the referencing practices of humanities scholars.

The importance of this endeavour can be appreciated in the light of the constant pressure humanities departments around the globe face from research assesments that are often based on prescribed evaluative bibliometrics methods. Evaluative bibliometrics, though generally accepted in the sciences, are contentious at best in the humanities where they don't fit in with the research and referencing patterns of the majority of scholars and where they have encountered a lot of justified opposition from the very early stages of their implementation. However, they are unlikely to be eliminated completely from the research

assessment process, but rather adapted to the particularities of researching and referencing in the context of humanities scholarly writing. (Ochsner, Hug, & Daniel, 2016) This endeavour is only possible if the referencing behaviour of humanities scholars is better understood and accounted for in the evaluation process.

The information architecture and PSE proposed in this thesis outline a viable and achievable path towards this end goal by providing the technological and methodological means by which this understanding can be achieved, potentially with additional and welcome involvement from DH scholars who could contribute much-needed domain knowledge to the citation analysis of humanities scholarship.

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Appendix A: CiteLens personas and scenarios

I.   Erica Folk, PhD – citation analysis specialist

Erica holds an MLIS (Master of Library and Information Studies) and an interdisciplinary PhD in Science, Technology and Society. Her research is focused on studying the development and evolution of academic networks of research, from both historical and contemporary perspectives. She is familiar with the field of citation analysis, which she finds significant from the point of view of her research. She has published some articles describing emerging nuclei of scholarly research in interdisciplinary fields and has supported her findings with citation data extracted from ISI Web of Science. She is also familiar with large scale visualizations of citation patterns like HistCite or CiteViz, which she finds interesting and useful for her own research.

More recently, she is increasingly interested in annotation as a mean of identifying trails of scholarly thought and the social aspects of scholarly research, with a view on humanist research where she believes that due to the customary ample critical apparatuses the genome of a scholarly work might be easier to trace.

Erica is aware of the shortfalls of traditional citation analysis when studying humanist writings with non-parenthetical citations and hopes that our tool will help her overcome these difficulties by allowing her a more nuanced and complex view of the way knowledge and argument are built in the humanities.

She is also:

- teaching an undergraduate class in Science, Technology and History about the development of 19th century scientific thought and its impact on other areas of knowledge, and

- facilitating a graduate seminar on theoretical aspects of scholarly research.

Goals

- Have a visual, interactive interface to track the references included in a lengthy monograph

- Have continuous access to the text of the monograph while the visualization runs

- Have the possibility to analyse and visualize both

    o   the bibliographic characteristics of the works cited and

    o   the semantic characteristics of the citations (i.e. context in which the citation occurs, function of the citation, and the relationship with other works cited in the location)

- Be able to add additional monographs to the database of the tool, using an XML editor preloaded with the tool's schema.

- Be able to modify the semantic portion of the mark-up of the visualized monograph, (i.e. tags that relate to the context and function of the citation; this could be done if users would login and work on their own copies of the deposited document?)

Scenarios

1. Erica uses the tool for her research on "annotation as a primary scholarly instrument in the age of scientific humanism". She is studying the role of citations within the larger context of a monograph's argument. She is interested in the construction of argument in large-scale works and wants to see if:

- she can identify citation patterns in humanist monographs (that can be predicted), and

- she can trace the development of the argument and its supporting annotations in large-scale humanist works.

She performs various inquiries using the visualization tool to compare different citation features (both syntactic and semantic) at different locations in the document.

Details:

Erica analyzes a literary history monograph on the sources of the Victorian novel. After loading the document, the tool defaults to the comparison view. Here Erica has the list of cited works in a format similar to that at the end of the book (author, title, date).

She first explores this list visually, by experimenting with the sorting options: she sorts the

list alphabetically by author names, looking for the ones that were previously identified as the essential names in the subfield of the monograph (maybe in a previous traditional citation analysis study). She then sorts it by date of publication to see what's the most recent study cited and to get a feel of whether a singular period is better represented than the rest. If she can identify such a period, she checks if she was right by filtering the list to show one or more periods of publication.

She might also be interested in getting a feel of how much of the list of references (or the list after she applies the "filter by period") consists of monographs vs. articles, so she might want to compare the two categories. She might notice when doing this comparison that the citations from articles are mostly grouped in the first part of the monograph, while the citations from monographs are predominant in the second part. A quick look at the text of the monograph loaded into the visualization tells her that the first part (the one where citations from articles are concentrated) is where the bulk of the data is included and where the context of the author's theory is built with information that might or might not be connected with the subject of the monograph in an obvious way (e.g. Articles from newspapers of the time written by the first war correspondents from the Crimean War might be cited to illustrate the development of a journalism style, which the author might later argue that influenced the style of the Victorian novel in the second half of the century). On the other hand, the part where citations from monographs are more common is the discussion portion of the work. Erica decides to have a more in-depth view of this discussion, so she switches to the second view of the tool (the note span) where she zooms in to the portion of the monograph she is interested in by clicking on the representation of that portion in the column representing the entire text of the monograph. located to the far right of the window. She is left then with the list of citations included in that portion of the monograph and with the visual representation of the note spans and the text spans that are not supported by citations on the main scene. She notices that the lengthiest span of text is preceded by a succession of complex footnotes with more than two citations. She skims through both the span of text with no citations (which she identifies as the location where the author describes her theory about the sources of the Victorian novel) and the note spans that precede it and which contain references to competing ideas from the field. To get a clear idea about how these references relate to each other and to the ideas of the citing author, Erica switches to the third view (hierarchical view) where she can see these relations more clearly.

By going back to the second view of the tool and repeating the analysis for the second

largest span of text with no citations, she discovers that the author of the monograph used two different approaches: in the first, she described at length in text the views that might undermine her theories, cited them amply and included in the footnotes works and authors that didn't agree with those ideas, only to dissect and disprove them at length in the text span where she exposes her own opinions and ideas on the matter, while in the second case she discussed at length both the ideas for and against her theory, with an emphasis on the ideas that were closer to her own.

By repeating this analysis for other portions of the monograph as well as for other monographs in the field, Erica might get an idea about how argument is built in the field of Victorian novel studies.

2. Erica is asked to consult with the Social Sciences and Humanities Research Council for the development of a set of standards for a potential Canadian version of the UK Research Assessment exercise, in which scholars, departments and universities are assessed periodically in terms of academic performance and scholarly excellence. Her task is to assess the weigh citation counts should play in the analysis of academic performance in the humanities and to support her recommendations in front of a board composed of non-specialists. She is employing the visualization to demonstrate the complexity of attribution in the humanities in terms of role, origin, and time span of sources cited. She uses comparison to determine the degree of predictability of citation patterns in humanist scholarship, thus the relevance of citation counts for measuring academic performance.

3. For the graduate seminar she is facilitating, Erica uses the visualization tool to map the development of the argument in the discussion chapter of an archaeology monograph for the benefit of her students who have very diverse backgrounds. She has gathered information about the significant, controversial, or often cited works in said chapter and is using the tool to illustrate how the monograph represents a turning point from one school of archaeological thought to another by visualizing aspects of citation like language, age, type of publication, function in context, etc – while going back and forward between the text of the monograph and the graphic visualizations of citations.

II.   Raheem Premji – PhD student in Ancient History

Raheem is a 1st year PhD student in Ancient Mesopotamian History. He is still in the initial

phase of his PhD studies but is quite advanced in gathering sources for his intended research. He usually takes detailed notes when reading and keeps them organized by subject of interest and intended purpose. Raheem is still adapting to the North-American scholarly environment and norms, and is a little uncertain about what is appropriate / desirable to cite in his field or not. (i.e. How can he demonstrate his expertise on the subject as a young, emerging scholar?)

Raheem is quite interested in visualization and is aware of some projects that apply this technique to his field but would characterize himself as a novice in the area of information visualization. He heard of CiteLens from a talk on campus and he is aware that the database of monographs linked to the tool includes some writings in his area of interest.

Goals

- Have a visual, interactive representation of the sources cited in a monograph

- Have continuous access to the text of the monograph while the visualization runs

- Be able to filter, locate in text and compare different features of the materials cited (e.g. date of publication, type of publication, function, etc.)

- Be able to contrast and compare the function of citations from different authors (positive or negative view)

Scenarios

1. Recently, Raheem has been invited to contribute a book chapter on the subject of "Neo-Babylonian slave selling contracts" and he is a bit anxious as this is his first substantial contribution. He is a little worried about attribution because in his field, aside from a number of passing, often conflicting recommendations from his research supervisors and peers, there doesn't seem to be a clear, widely accepted attribution policy (if you discount the citation conventions for primary sources). He is using our visualization tool to look at significant monographs in his field (which are included in our collection of marked up monographs) hoping that the visualization will help him identify the do's and don't of citation from consecrated authors in his field. Some of the things he is looking at are whether or not it is appropriate to cite older secondary sources, or to which extent are digital sources (like the database of Neo-Sumerian texts) cited in "serious" scholarship. On the finer

points of the argument, Raheem is also looking at how much space is customary to spend disproving opposed theories and how much of the discussion is usually relegated to the footnote.

III. Lidia Silverio – undergraduate science student

Lidia is a 2nd year Pre-med student. She is fulfilling her humanist classes requirements by taking a class in 19th century English novel. She is far more used to reading scientific literature containing parenthetical citations and finds the long readings in her humanist class difficult to follow, especially because of the extensive endnotes which she feels are interrupting her reading flow thus hampering her understanding of the arguments.

Goals

2. Have a visual, interactive representation of the sources cited in a monograph

3. Being able to switch smoothly between the full text of the monograph and the visualization of citations

4. Being able to visualize at a glance the structure of complex footnotes with multiple citations. (which would increase her understanding of the text – or at least the speed of her understanding)

Scenarios

1. She heard from a colleague that one of the required readings in the English novel class is included in this visualization tool. As she is quite familiar with other forms of information visualization from her Biology classes, she decides to give it a try in the hope that using the tool as a reading aid will help her navigate the annotations more easily and understand and read the text faster.

Appendix B. Citation analysis primer

A Brief History

Contrary to the general belief, citation analysis was not born in the second half of the 20th century. Though the development of computers and the creation of the Science Citation Index (SCI) in the 60's were essential for the creation of the discipline, the practice of citation analysis was common among research librarians since the first decades of the same century, when painstakingly collected citation counts of journals were used to determine the usefulness of subscriptions. (Wouters, 1999) Furthermore, since the second half of the 19th century, citation indexes were used by lawyers to determine precedents in common law cases across the United States and the culmination of this practice was the creation of the Shepard's Citator in the first half of the 20th century. (Wouters, 1999)

During the same period, scientists and librarians deplored what they called the *library crisis,* which was a content management problem that stimulated a lot of thought on the matter (Levy, 2008). One of the most preeminent thinkers of the time Vannevar Bush propositions the development of a personal information management device, which would solve the proliferation of research as specialization extends. (Bush, 1945) A less ambitious solution proposed after WWII was the use of computerized subject indexing as planned by the Welch Medical Indexing Project at John Hopkins University in Baltimore. The combination of talents and expertise developed in both this pioneering computerized indexing project and the Shepard's Citator led after a decade of work and persuasion to the creation of the Science Citation Index (SCI) by a team led by Eugene Garfield. The publication of the Index in 1964 was cautiously received in the beginning (Wouters, 1999) but soon the interest in this new instrument grew and possible applications were raised into discussion, including but not limited to management analytics (Abelson, 1966).

The commercial success of the SCI ensured its perpetuation and supported the creation of a second index, the Social Sciences Citation Index (SSCI) in 1972 and even a third one in 1978 – the Arts & Humanities Citation Index (A&HCI). The Web of Knowledge, SCI's current incarnation, still produces some of the most comprehensive and accurate indexes, though good alternatives have cropped up. SCOPUS is a strong competitor, while Google Scholar and CiteSeer, though less structured, offer enhanced search functionalities and, especially Google Scholar, cover a wider range of publication formats. These features, coupled with the availability of the full text publications, make web-based citation data sources such as

these a viable basis for a wide range of citation analysis approaches, though the data provided may require additional cleanup (Zhao & Strotmann, 2015). Oftentimes, these alternative data sources are used in contrast to or in conjunction with the ISI indexes for information studies (Bar-Ilan, 2008; Jacso, 2005; Noruzi, 2005).

In parallel with the development of citation indexes, citation analysis emerged as a new branch of the sociology of science. In 1965, Norman Kaplan delivered the first theoretical framework for the new discipline, by providing a Mertonian explanation of citations as tokens of recognition, and consequently directly proportional to the value of the works cited (1965). The establishment of a theoretical framework was accompanied by the development of a technical vocabulary, the creation of concepts and the adoption of clearly defined research methods that sit at the basis of modern bibliometrics.

In terms of establishing a clearly defined vocabulary, one of the new science's first adepts, Price, recommended the distinct use of the terms *citation* and *reference,* depending on whether the focus of the discussion is on the cited or citing document respectively (Price, 1963).

In terms of establishing research methods for the analysis of citation data, even before the publication of SCI, Michael Kessler popularized the notion of bibliographic coupling, where a coupling unit between two documents is a reference used by both documents (Kessler, 1963). Building on this library science concept, Irina Marshakova and Henry Small independently developed the concept of co-citation in 1973 (Wouters, 1999). This indicator records the instances of two publications being cited together and is meant to measure the degree of similarity between the two publications.

While initially raw citation counts were employed for citation analysis, gradually they were replaced by more complex indicators, like the impact factor popularized by Garfield (2006) or the Price index which measures the recency of the literature cited by a certain article, journal or specialty (Price, 1970) – to mention only two of the most well-known ones.

As bibliometric research took off in the 70's and 80's – it became clearer than ever that significant differences in citation practices between specialties rendered the use of citation indicators like the ones mentioned above unreliable for cross-disciplinary analyses. To increase the statistical significance of their results, citation analysts devised and applied various normalization procedures, like the Jaccard coefficient and Small's fractional citation counting (Wouters, 1999).

An important characteristic of the research tools devised is the fact that most of the more preeminent ones, like the impact factor, Price Index or co-citation indicators, can be scaled to different levels of inquiry: author, publication, specialty, or even national research output. This increases greatly the spectrum of research approaches available to bibliometric scientists but the unit of analysis, the cited item (article, author, or publication venue), remains the same (Wouters, 1999). This single-focused perspective is due mainly to the often-tacit acceptance of the normative role of citations specific to the ideological school that birthed the citation index as instrument of performance evaluation and adopted almost exclusively statistical evaluation of citation data as methodology.

Though bibliometric research is primarily a statistical undertaking, citation analysis as a discipline makes use of a far greater variety of research methods and instruments. From the point of view of this thesis, it is important to understand the variety of the existing approaches to studying citations and the tight relationship between them and their theoretical frameworks – with an emphasis on content and context analysis of citations.

Theories and practice in the study of citation

Merton's theory on the system of science sits at the basis of the sociology of science. According to the system proposed, ownership of knowledge in science is communal, as scientists build their research on the work of others. In this communal system, unlike in technology where ideas are secreted and protected by patents, scientists have to give away their ideas in the form of publications in order to claim credit for them. (Merton, 1957) The need to claim ownership of ideas is accompanied by the need to establish priority, which is illustrated in practice by the publication of submission dates as time stamps of the described discoveries or ideas. Once property and priority have been established, the author is entitled to identify with those ideas and hopes to receive recognition from peers, not the least in the form of citations. Recognition is desirable and both giving and receiving it legitimates scholars and their contributions. (Merton, 1973) Though giving credit may diminish the claim to originality, acknowledging previous research is not only the just thing to do but also a trade-in of "present value" (priority and originality) for "future income" – the recognition of one's peers. (Small, 2004, p. 73) This recognition exchange-market and cooperation are made possible by the existence of norms of publication and acknowledgement, through which the socially validated structures of science move along.

One of the primary inferences from the normative theory concerns the role of citations and their implied significance for the value of the cited work. If the normative theory were one

hundred percent correct, the citation behaviour of scientists should be consistent (Hauptman, 2008) and no other factor should influence the decision to cite a certain document in detriment of another than the value and relevance of said document to current research in general and the topic at hand in particular. However, the ideal of consistent citation behaviour is, at best, far-removed from the reality described by empirical studies. Norman Kaplan, in the same paper that roots citation theory in the normative universe of the sociology of science, remarks the significant variations in citation practice across disciplines and national boundaries as they emerged from the preliminary study of the Science Citation Index (1965).

In addition to these rather explicable inconsistencies dictated by geographical and intellectual distance, other subjective factors were proven to affect the citation behaviour, thus stretching, or bending the norms of citation. Merton himself identifies two such phenomena. One of them he referred to as "obliteration by incorporation" (OBI) a process through which at some point in the development of a discipline, some ideas pass from "accepted" status into common-use and their contributors stop being cited (1979). In other words, as Bruno Latour pointed out, no modern chemist cites Lavoisier's paper when using the H_2O formula for water (1987). Though completely common sense, OBI demonstrates how perfectly valid citations, from the point of view of the normative theory, can be lost. The other phenomenon identified by Merton is the snowball effect of citations received, or the Matthew effect as he coined it. (Merton, 1973b). Here the pattern is simple: once a paper is cited, other authors can see that it is, and the recognition already received increases their interest and the chances that they might cite it in their turn. Another well document phenomenon that seems to contradict the normative interpretation of citation is the halo effect, or the increased chances of a document to be cited if it was published by a prestigious journal or written by a recognized author (Cole & Cole, 1973). Last but not least, in citation practices as well as in publication and funding, a bias against female researchers seems to persist to this day (Larivière, Ni, Gingras, Cronin, & Sugimoto, 2013).

All these subjective factors, as well as geographical, disciplinary and even temporal differences in citation practice, seem to indicate that the use of citation counts as measurements of scientific productivity and acknowledgement should be, at best, conducted with caution. As Martin and Irvine noticed, the reasons for citing are blatantly more complex than what an oversimplified, strictly normative view on the role of citations seems to suggest and factors like availability, language barriers and external pressures, not to mention the variations of value and intent in citations, render a purely normative model into

a "grossly oversimplified and possibly highly misleading representation of reference-giving" (Martin & Irvine, 1983, p. 69).

The answer of the bibliometric community to this critique and similar ones was the creation and adoption of normalization procedures like the ones mentioned in the previous section of this chapter in an effort to cancel out the effects such phenomena might have on the validity of citation data being collected and analyzed. In addition to this, one of the preferred arguments of the researchers who condone the use of citation counts for scientific output evaluation is the "power in numbers" argument. As van Raan passionately argues, the peculiarities of individual citations resulting from one or more of the phenomena described above are inconsequential in the larger picture, as long as the citation behaviour is not completely deviant (van Raan, 1998).

In the 70's and early 80's – when increasingly more objections against the use of bibliometrics for evaluative purposes were raised – other ideological movements came up with different interpretations of citation and its role, often in opposition to the established dogma of the normative theory of citation.

One of the first thinkers to stress out the rhetorical role of citation was the French philosopher Michel Callon who depicted science as the "war of words" in which published papers are weapons employed by scientists to impose their knowledge claims through means of persuasion. (Callon, Law, & Rip, 1986) The accent in this interpretation falls on the texts (both citing and cited) and to a lesser extent on the authors (Cozzens, 1989).

Another French thinker who delved on the role of citation and the creation process of scientific output is Bruno Latour. According to his view, citations are the main way of supporting knowledge claims, and the knowledge itself is the result of a social process determined by the fact that authors cannot control the later usage of their texts. This turns citation into a required rhetorical instrument with tremendous power over the fate of an academic paper and implicitly over the direction of scientific research:

> "The presence or the absence of references, quotations and footnotes is so much a sign that a document is serious or not that you can transform a fact into fiction or a fiction into fact just by adding or subtracting references." (Latour, 1987, p. 33)

The proliferation of the new ideologies in the sociology of science and technology reverberated through the citation analysis community. One of its most preeminent

members, Henry Small, who developed co-citation analysis, suggested in the 70's that citations consist of associations between particular ideas and documents and that they should be perceived as symbols for the ideas they are associated with, in a manner that would not exclude, but complement the functional, social and political interpretations of citations (H. G. Small, 1978).

This approach is very similar to the actor-network theory as applied to co-word analysis by Callon, Law and Rip. They contend that articles form networks of problematizations, which can be identified and drawn by studying and quantifying the associations between words. Their method calls for what they refer to as "qualitative scientometrics", a methodology that combines the qualitative analysis of scientific writings meant to identify relevant word associations with counting the frequency of said associations in the body of texts sampled in order to measure the strength of the connections inside the network (Callon et al., 1986).

During the same decade, Susan Cozzens proposed a three-pronged system in which citation rests at the intersection of a rhetorical model, in which authors try to persuade each other of the validity of their knowledge claims, with a recognition model, through which credit is allocated. A third model, that of communication, can influence citation decisions through factors like language, dynamics of publication or nature of audience. Though this view seems equitably balanced in the normative vs. rhetorical debate, Cozzens concludes that due to the fact that citations are only one part of the recognition system, while presenting and defending knowledge claims is the primary objective of scientific papers, "citations should be seen primarily as rhetoric and only secondarily as recognition" (Cozzens, 1989).

More recently, two Spanish researchers, María-del-Mar Camacho-Miñano and Manuel Núñez-Nickel, proposed an alternative theoretical reconciliation between the normative and social constructivist theories of citation. (2009) They devised a three-layered model of citation selection, in which various factors take turn in influencing the decision of the author in choosing the papers to cite. (Fig. 26) It is notable though that while the model proposed by Cozzens gave priority to the rhetorical system, the referencing process outlined by Camacho-Miñano and Núñez-Nickel reverses that and places the first two levels of selection completely under normative impediments while only the layer of preferential selection is susceptible to rhetorical choices.
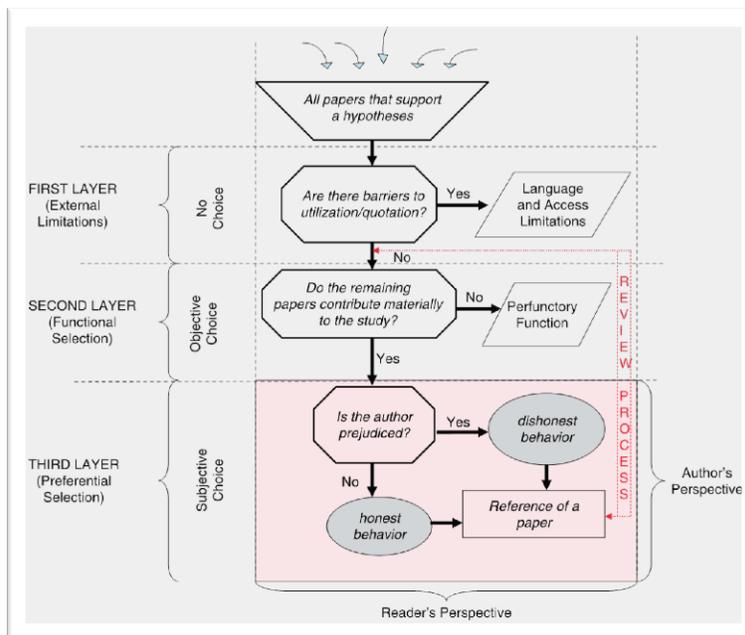
Figure 26. Model of the referencing process (after Camacho-Miñano & Núñez-Nickel, 2009)

A more balanced view is adopted by Henry Small who, in 2004, under the influence of actor-network theorists like Latour and Callon, revises his model of citations as concept symbols to focus on the degree of reinterpretation a text suffers when being cited. Small envisions two measurements that define the role a citation plays, the degree of literalness, or the degree of agreement between the citing and the cited author on the subject matter for which the citation is included – and the degree of consensus, or the measure in which the citing author's interpretation of the cited text coincides with the generally accepted interpretation in the field. According to these two coordinates, different types of citations – types being based primarily on a functional classification – can be labeled as either normative or rhetorical. (Fig. 27)

> "When the constructed meaning is coincident with the author's original message as well as common usage, we may say that there is strong normative compliance. (…) When the constructed and original messages diverge, we have what is for a normative sociologist deviant practice on the part of the citing author, but perhaps normal behaviour for a constructivist." (Small, 2004, p. 76)

Literalness	Low	CONSTRUCTIVE	CONSTRUCTIVE

The table in the figure:

		Consensus Low	Consensus High
Literalness	Low	CONSTRUCTIVE misattribution, reinterpretation, idiosyncratic negative, revolutionary	CONSTRUCTIVE ritual negative, common misattribution, conventional transformation, obliteration by incorporation
	High	NORMATIVE substantive, organic, creative connection, unusual quotation	NORMATIVE perfunctory, ceremonial, common direct quotation, conventional interpretation, paradigmatic

Figure 27. Bi-dimensional representation of the citation cube (after Small, 2004).

The number and diversity of citation theories available make the development of a unified theory of citation very difficult and numerous scholars in the field have deplored the absence of such a unified theory. (Hauptman, 2008, p. 116; Cronin, 1998, p. 46; Small, 1978, p. 327).

In fact, the number of theories developed in citation analysis is sufficient to form a taxonomy, based on the functions and role they assign to citations. Cronin divides the theories of citation into three different perspectives: the functionalist one – which focuses on the role of citation, the normative one – which tries to define the rules behind citation from a sociological perspective, and the phenomenological one – which tries to quantify and qualify the residual subjectivity inherent to the citation process, challenging by this the validity of evaluative bibliometrics. He also distinguishes "two metatheories of citation", one that supports the analysis of citation in a moral and economical context, and another one that is focused on establishing a state of equilibrium between existing interpretations of citation (Cronin, 1998).

Citation versus reference

This overview of the theoretical aspects of citation analysis would not be complete without a short discussion on the terms employed. The distinction between the two ends of the citation act is very interesting from a semiotic perspective. As I mentioned earlier, efforts have been made to create separate vocabularies for the act of citing and the state of being cited. (Price, 1970) Though the convention was periodically reaffirmed and put into practice, the distinction is still vague and far from being generalized in the field, where well-established authors choose conscientiously to use the terms of citation and reference interchangeably (Small, 2010) or simply ignore the convention altogether(Thompson, 2002).

Perhaps one of the most complete treatments of the distinction between "reference" and "citation" belongs to Wouters who views references as belonging to the citing text, a semiotic sign of a representational system with the cited text as its referent, while citations are the inverted signs produced from references and included in a representational system in which the citing text is the referent. The process of inversion is in fact the symbolic act of shifting the perspective and the citation index is its most common embodiment. Though he concedes the fact that natural language allows for the use of the term "citation" for both the reference sign and the citation sign, Wouters concludes that the distinction is important for creating a semiotic framework for citation analysis as the statistical study of citation indexes (1999).

Cronin agrees with most of Wouters' assertions about the semiotic value of the distinction and goes a step further by analyzing references, citations and acknowledgements by applying Peirce's sign triad (sign-vehicle, interpretant, referent) as root typology for a semiotic analysis of the academic recognition system. He argues that the social significance of referencing can only be grasped if the production processes and consumption practices associated with these signs are fully understood, within various disciplinary, geographical, or temporal circumstances. Without this deeper understanding of the referencing process, evaluative bibliometrics is empty of content (2000).

Both Wouters and Cronin view the distinction from the perspective of its importance to bibliometric analysis; they also agree that the agent end of the citation process, the citing text and author, are not only connected, but of essential value to the inner workings of bibliometrics.

Though Wouters pushes the vocabulary distinction even further by discriminating between "being cited" and "receiving a citation", I believe such precision of vocabulary, though necessary when discussing the semiotics of citation analysis, might seem pedantic here. I have, therefore, confined myself to employing the reference–citation distinction between the active end of the citation act (where the reference is given) and the passive end (where the citation is received). Furthermore, since in natural language the distinction between the verb equivalents of the two terms, "referencing" and "citing", is quasi-indistinguishable, I referred to the act of crediting a source by the term "citing" and used the terms "citation analysis" and "citation patterns" to name the analysis of - or patterns identifiable in - the citation process (with an emphasis on the role of the agent, the citing author, and on the function the reference plays in the citing text).

Appendix C. Humanities scope

Any discussion about the humanities requires an understanding of humanism[9] as a concept that permeated European history since Roman Antiquity, but gained prominence in Modern times, when its meaning was enriched by cultural and philosophical developments which transformed and adapted it to local demands. This local adaptation is significant, as it sometimes precludes a meaningful international dialogue about humanism and the place of the humanities in general.

As Samuel Weber pointed out, the very terms that define the area of knowledge we call humanities illustrate different epistemological approaches in different cultures. Weber notes the fact that while the English language term is always defined in opposition to science, this dichotomy is missing in French where the generic term is "Sciences humaines" ("Human sciences") or in German where the discipline of literary studies is designated as "Literaturwissenschaft" ("the science of literature"). It can be argued, as Weber does, that the English idea of humanities is similar to the ideal of Renaissance Humanism, which drew emphasis on the development of a *homo politicus*, infused with social and civic virtues (1985).

Despite the inherent differences, German influences in English language humanism are significant, especially when we look at the methodological paradigms adopted over the past 150 years. Though the idea of a rigorous methodology for humanities was in the beginning a German development, it was embraced full-heartedly by the American universities at the end of the 19th century and led among other things to the formalization of citation and the birth of the first style manuals (Connors, 1998).

However, the essence of German humanism seems to be different than that of English humanism: while the latter is perceived as the opposite of science, the former is more difficult to conceptualize. Its origins are less monolithic and it can be argued that its development was strongly connected to the emergence of the modern University and the need for an organizational, academic structure. Since Kant's "*Streit der Fakultäten*" in 1778, going through Fichte's ideas of an intellectual and social elite factory, and culminating with

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[9] "Humanism" is used here to refer to the cultural and educational tradition that emerged during Renaissance and spread through the Western World during modern times, and not to secular humanism.

Humboldt's support of a completely autonomous University, German Modern thought is permeated by the idea of a "knowledge of life" which is expressed in the term assigned at the time to disciplines that did not study practical, material, "natural" matters. The concept "Geistwissenschaft" with its plural "Geisteswissenshaften" illustrates a heterogeneous amalgam of disciplines of the spirit (Geist in German). It was coined by the German philosopher Wilhelm Dilthey and collectively denoted the fields of history, philosophy, religion, psychology, art, literature, law, politics, and economics. Later, on the cusp of the 20th century, Heinrich Rickert replaced the term with that of Kulturwissenschaften ("science of culture"), attempting to emphasize the unifying ingredient of apparently heterogeneous fields, while in the same time contrasting it against the sciences of nature (Pfeiffer, 1994).

If the example of German humanism taught us anything, it's that the label of "humanist discipline" can be, and is applied in other cultural contexts to slightly different content than what some might expect. (I particularly found noteworthy the fact that Dilthey's notion of Geisteswissenschaften included professional fields like law, as well as social sciences like psychology and economy.)

Tradition and institutional constraints, as well as other non-specified reasons can determine the placement of a discipline or another as either belonging to the humanities, social sciences, or the arts. Citation analysis studies illustrate nicely how for some disciplines this placement varies from author to author. A good example is history, which is placed in turn in the ranks of the social sciences by Ucak (2009) or in those of humanities by Linmans (2010) and Knievel (2005). Alternatively, psychology is viewed either as a social science (Tang, 2008), or as a humanist field (Yang, Qiu, & Xiong, 2010). These exchanges are not limited to humanities and social sciences. A just as active corridor seems to exist between the humanities and the arts. For example, music is included by Knievel and Kelsey in the ranks of humanities (2005), while Wiberley labels art theory and criticism as humanities (2003).

The place of a discipline on the map of knowledge is apparently movable. It can be influenced by both internal factors like the subject of study, methodological paradigms, or history, as well as by external factors like institutional organization, scholarly tradition, and individual preferences. In other words, any effort to classify disciplines of study is under pressure from both social and intellectual organization models of knowledge. It is customary for example to place the study of language within the field of humanities, even though recent subfields like computational linguistics uphold methodologies that are closer to the

ones common in the hard sciences. The differences between traditional and non-traditional humanities are particularly relevant for citation analysis, as a field's self-assumed position on the tradition spectrum is often influential of that fields' researching and referencing practices. For example, the use of a parenthetical citation style might signal a self-proclaimed modernist or interdisciplinary humanist field, while traditional disciplines like classics are likely to uphold more conservative note-based styles like Chicago or Turabian (Connors, 1999).

Appendix D. Digital Humanities primer

A discussion of the merits of applying DH know-how in a citation analysis context needs some contextualization and an understanding of what DH is (to the extent that this is possible in a field that continues to redefine itself periodically).

Early history

DH under its modern (read here "past 15 years") meaning has a rich 20th century history that has unfolded in parallel with the development of citation analysis.

The first mention of non-numerical applications for computing technologies belongs to Ada Lovelace, who in 1843 speculates over the possible applications of Babbage's Differential Engines to areas such as music composition (after Vanhoutte, 2013). After the advent of the first computers mid 20th century, it was initially hoped that they could be employed for machine translation. As this avenue was soon deemed impractical for the times, interest and energies were focused on the emergence and development of computational linguistics and lexical text analysis. Considered one of the earliest adopters and the parent of humanities computing, Father Roberto Bussa developed the *Index Tomisticus* (a lemmatized concordance of all the words in the works of Thomas Aquinas) and published it around the same time the ISI Citation Indexes were published by Garfield. It is interesting to note also, that in the early decades of the computer era, producers of equipment and storage actively sought and supported the involvement of humanists by sponsoring conferences and collaborations that explored new applications for computing. Both Father Busa's Concordance and John W. Ellison's concordance of the Bible were born of such collaborations (Vanhoutte, 2013).

Since mid 60's, but especially during the 70's and the 80's, an increasingly active community was taking shape around the first institutionalized organisms: the Literary and Linguistic Computing Centre founded at Cambridge in 1964, the Association for Literary and Linguistic Computing, founded in 1973 and the first publications which will eventually become the *Literary and Linguistic Computing* journal in 1986, the precursor of the modern "Digital Scholarship in the Humanities". While the focus of research for these European association and journal fell on the analysis of language in literary form, the North American correspondents (i.e. The Association for Computers and the Humanities and the *Computers and the Humanities* journal), founded around the same time, explored a more varied

landscape of computer-aided studies of language in both its literary and non-literary forms. (Vanhoutte, 2013).

The institutionalization of the field through the 70's and the 80's coincided with the term "Humanities Computing" (coined in the 60's) slowly gaining traction. The publication of the Humanities Computing Yearbook and the Research in Humanities Computing series led to the term being established as the name for this new area and/or methodology of inquiry (Vanhoutte, 2013).

During these decades of growth and experimentation it became increasingly clear that the computer-assisted exploration of text required some form of markup standardization. The movement towards standardization began with the COCOA encoding schema in the 70's and culminated with the creation of the Text Encoding Initiative and the adoption of its Guidelines in early 90's. (Vanhoutte, 2013) This particular development in the area of computer-aided humanities studies has been touted by some researchers as the single most important event in the history of humanities computing (Hockey, 2004), though other major developments were soon to follow.

Early 90's and the advent of World Wide Web marked a new era in the history of Humanities Computing. Internet opened new avenues of collaboration and provided an ideal place for publication and gaining new adepts. It also provided the impetus for new projects, some of them still active, that have become the standard in DH work: Perseus, the Rossetti Archive and the Orlando Project have all had their beginnings in this decade and contributed to the popularization of the technology's involvement in the humanities, albeit in the limited sense of putting material onto the Web. Another major change that influenced the development of the field was the increased availability of multimedia technology, which paved the way to analyzing and publishing non-textual cultural objects. This development opened up new avenues of research and encouraged the expansion of the field to new areas of inquiry (Hockey, 2004).

Perhaps as a direct consequence of the increased visibility and expansion of the filed, one of the most visible developments of the 90's and early 2000's was the introduction of various academic programs – a sure indication of the acceptance by the larger academic community and a catalyst for further institutional developments that continue to this day (Hockey, 2004).

(Re)defining DH

Mid 2000's and the advent of the Web 2.0 coincided with a discursive shift from humanities computing to digital humanities. One of the reasons for this shift can be traced back to a preference for placing the emphasis on the humanities and not on the computing aspect of the work (Brett Bobley after Kirschenbaum, 2010), while others' recounts of the shift place it in a more pragmatic perspective (John Unsworth, after Kirschenbaum, 2010). Nevertheless, the shift was in the making for a while, as demonstrated by gradual emergence of the new term in the "Humanist" discussion group at the beginning of the current century. (Svensson, 2009), and "digital humanities" gained pre-eminence as the self-identifying term. This "take-over" is demonstrated by the inclusion of the new term in the name of many of the newly founded organizations, journals, and institutes. The proliferation of these institutional nuclei continued through the last decade when it has become common to have a DH centre operating (often in conjunction with academic libraries) at numerous universities across the world. [10]

Though not quite extinct nowadays, "humanities computing" is far less used than "digital humanities". The persistence of the old terminology has two main aspects; pragmatically, the term has endured because by the time of the shift some institutional framework was already in place, bearing the name. One such academic structure is the Humanities Computing program at the University of Alberta, established in 2001.

More significantly though, "humanities computing" persisted (for a while at least) due to a perceived epistemological distinction between the two terms. Patrik Svensson argues that Humanities Computing is rooted in methodological inquiry and the focus on texts as objects of study, while the digital humanities are wider in scope, defined more by a community of practice than by consistent methodologies or disciplinary affiliation (2009).

The distinction is less clear-cut in the view of other scholars who tend to treat "digital humanities" as an organic progression of "humanities computing". Among them, Ray Siemens argues that the notion of the methodological commons, asserted by Willard McCarty and Harold Short (Fig.28) and understood as a "a loosely modeled and iteratively evolving series of convergence points among disciplinary groups that support the ways in

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[10] CenterNet, the international network of digital humanities research centers currently sports 193 members from all over the world

which they represent, analyze, and disseminate the knowledge that lies at their core" (Siemens & Sayers, 2015, p. 153) is rooted primarily in content and process modeling – understood as inquiries into the manners of data collection, representation and interpretation. According to the same scholars, current DH is evolving from this data-focused modeling to something that could be described as problem-based modeling and that is characterized by large scale collaboration projects, interest in linked open data and non-empirical inquiry, a willingness to experiment with physical computing and fabrication, and a predilection for computational culture studies spanning the distance between social justice issues and the hands-on study and production of digital artifacts (Siemens & Sayers, 2015).
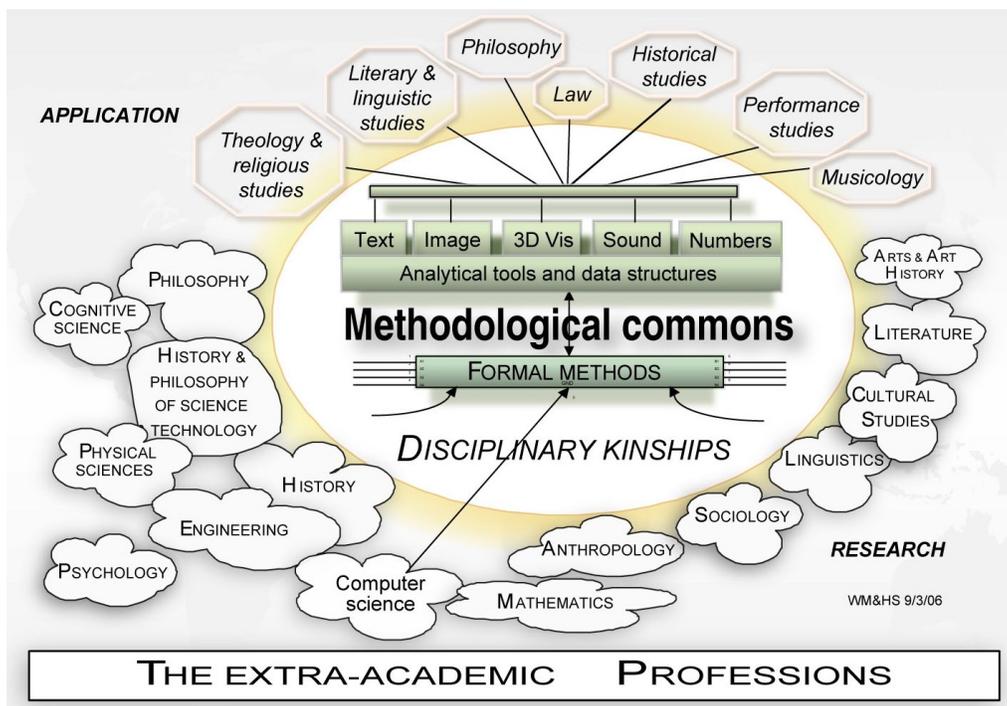
Figure 28. 2006 revised intellectual and disciplinary map of humanities computing by Willard McCarty and Harold Short (after Siemens, 2014)

The "Digital Humanities Manifesto 2.0", a collective document published in 2009 reinforces the role of DH as a custodian/influencer/creator of culture in a world where traditional knowledge economics are upended by the "digital turn":

> "Digital Humanities is not a unified field but an array of convergent practices that explore a universe in which: a) print is no longer the exclusive or the normative medium in which knowledge is produced and/or disseminated; instead, print finds itself absorbed into new, multimedia configurations; and b) digital tools, techniques,

and media have altered the production and dissemination of knowledge in the arts, human and social sciences." ("The Digital Humanities Manifesto 2.0," 2009, 2)

The manifesto also mentions the "utopian" quality of DH as manifested in its preoccupation with the democratization of culture and scholarship, while also referring to the integration and generative practices of DH as "building of bigger pictures out of the tesserae of expert knowledge". It marks one of the poignant moments in what was clearly becoming a Digital Humanities preoccupied with issues of scholarly, academic, and social inclusiveness. As the framing of Digital Humanities as an inclusive environment took off and continued during the past decade[11], institutionally, the field became more rooted, with new international high-profile initiatives such as the Digging into Data program, started in 2011 and currently run by the Trans-Atlantic Platform for the Social Sciences and Humanities. [12]

Perhaps more important for the argument I am trying to make in this thesis is the incorporation of different models of scholarship into modern DH. As the same manifesto states, Digital Humanities can and should embrace both the scientific model of scholarship and the esthetic judgements of the Humanities preoccupied with the unique and subjective:

> "Modern scientific models of scholarship have prided themselves on the equation between rigor and the affect-neutral relaying of disembodied information. Yet this Enlightenment myth has long done battle with aestheticizing or styled forms of scholarly communication in ways that have become distinctive to the Humanities, and sometimes pitted them against prevailing practices in the social and natural sciences. Digital Humanities does not preclude one or the other flavor of scholarship. It accommodates both. But by emphasizing design, multimediality, and the experiential, it seeks to expand the compass of the affective range to which scholarship can aspire." ("The Digital Humanities Manifesto 2.0," 2009, 5)

This deliberate approach in DH scholarship, of combining methodologies more common in the social or computational sciences with the humanities focus and esthetics is relevant

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[11] The subject of inclusiveness in the Digital Humanites is extensive and - in most aspects - outside the scope of the current thesis. For more detailed discussions of this, as well as aspects of DH activism, theories and methods in current DH, see the two volumes of "Debates in the Digital Humanities".

[12] T-AP itself is an unprecedented international collaboration and it is, I believe, telling that its first major granting program is dedicated to DH initiatives.

because it helps visualize how DH research can be not only interdisciplinary (in the sense of creating a synthesis from different disciplines) but also transdisciplinary (in the sense of being able to transcend different areas of knowledge).

This flexibility would, in my opinion, facilitate the fulfilment of one of the conditions acknowledged by citation analysis specialists as necessary for the development of high-quality in-text citation analysis studies of humanities scholarship: subject knowledge (Zhao & Strotmann, 2015). As Digital Humanities practice already straddles traditional disciplines and methodological paradigms, DH scholars are well-positioned to explore the content of the literature to be analyzed, as well as the best avenues for citation data extraction, enrichment, and analysis.

Appendix E. Sample XML markup for citation analysis

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1   <?xml version="1.0" encoding="UTF-8"?>
2   <?xml-stylesheet type="text/css" href="css%20for%20citelens.css"?>
3   <TEI xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4    xsi:schemaLocation="http://www.tei-c.org/ns/1.0 schema/CiteLens-
5   customization.xsd"
6    xmlns="http://www.tei-c.org/ns/1.0">
7    <teiHeader>
8    <fileDesc>
9     <titleStmt>
10    <title xml:lang="EN">The Care of the Dead in Late Antiquity</title>
11    <author>
12     <name type="first">Éric</name>
13     <name type="last">Rebillard</name>
14    </author>
15    </titleStmt>
16    <publicationStmt>
17    <publisher>Cornell University Press</publisher>
18    <pubPlace>Ithaca</pubPlace>
19    <pubCountry xmlns="http://www.example.org/ns/nonTEI">United
20   States</pubCountry>
21    <pubPlace>London</pubPlace>
22    <pubCountry xmlns="http://www.example.org/ns/nonTEI">United
23   Kingdom</pubCountry>
24    <date>2009</date>
25    </publicationStmt>
26    <notesStmt>
27    <note place="TEI-header">Original text: <biblFull>
28     <titleStmt>
29      <title xml:lang="FR">Religion et sépulture: L'Église, les vivants et les morts
30   dans l'Antiquité
31      tardive</title>
32     </titleStmt>
33     <publicationStmt>
34      <date>2003</date>
35      <publisher>L'École des hautes études en sciences sociales</publisher>
36      <pubPlace>Paris</pubPlace>
37      <pubCountry
38   xmlns="http://www.example.org/ns/nonTEI">France</pubCountry>
39     </publicationStmt>
40    </biblFull>
41    </note>
42    </notesStmt>
43    <sourceDesc>
44    <p>Available at: <ref
45   target="http://www.cornellpress.cornell.edu/book/?GCOI=80140100102790"
46     >Cornell University Press</ref></p>
47    </sourceDesc>
48    </fileDesc>
49    </teiHeader>
50    <text>
```

```
51    <body>
52     <div type="chapter" n="2">
53     <pb n="13"/>
54     <head type="chapter"><title level="a">Burial and Religious Identity: Religious
55   Groups and
56     Collective Burial</title></head>
57     <p>
58     <ref type="noteSpan" corresp="#note_1"> In Les Origines du culte des martyrs,
59   Hippolyte Delehaye
60     writes, <q>"The custom that quickly spread of not mingling Christian tombs with
61   pagan ones, but
62      instead setting aside separate areas, was hardly unprecedented. Other
63   associations or groups
64      had introduced this type of solidarity in death into their practices."</q><ref
65   type="noteLoc"
66      target="#note_1">1</ref>
67     </ref> This statement needs verification, for, besides the obvious relevance to
68   Christianity, it
69     raises the issue of the social behavior of religious groups whose differentiation is
70   one of the
71     characteristics of late antiquity. </p>
72     <p> Religious development in Late Antiquity is often described as an inevitable
73   movement toward
74     monotheism, according to a point of view that approaches religion on the basis of
75   beliefs. <ref
76     type="noteSpan" corresp="#note_2">By adopting a point of view based instead
77   on social practice,
78     we shift the emphasis to the development of religious pluralism.<ref
79   type="noteLoc"
80      target="#note_2">2</ref></ref> Without attempting to go back to the origins
81   of this phenomenon,
82     we can say with confidence that in the third century the Roman Empire was a
83   true "marketplace of
84     religions." Not only were Jews, Christians, and pagans competing with each other
85   but, within
86     paganism, <pb n="14"/>a plurality of religious groups appeared, weakening the
87   monopolistic
88     position of civic religion. </p>
89     <p>
90     <ref type="noteSpan" corresp="#note_3">From this standpoint, John North has
91   noted that one of the
92     most sensitive criteria for evaluating the impact of these groups in traditional
93   Greco-Roman
94     society involves tracing areas of conflict with members' families.<ref
95   type="noteLoc"
96      target="#note_3">3</ref> Here, the study of funerary practices is
97   decisive.</ref>
98     <ref type="noteSpan" corresp="#note_4">Statistical studies regarding burial
99   inscriptions of civil
100     populations in the Western Roman Empire have shown that, when the
101   relationship was mentioned, 80
102     percent of commemorators were wives, parents, children, or cousins of the
103   deceased individual
```

104   honored in the epitaph. This percentage increased in the fourth century, but the
105   samples used
106   for Late Antiquity were all Christian and therefore less representative.`<ref`
107   `type="noteLoc"`
108   `target="#note_4">`4`</ref>`
109   `</ref>` Even if commemoration with an epitaph did not extend to every level of
110   Roman society, the
111   numbers allow us to conclude that it was traditional in the Roman Empire for the
112   family, in fact
113   the nuclear family, to maintain the tombs of its members. Did the appearance of
114   new cults and
115   subsequent religious groups lead to tensions between a family and a religious
116   group over the
117   choice of a grave? `</p>`
118   `<note xml:id="note_1" n="1" anchored="true" place="foot">`
119   `<gi>`1. `</gi>`
120   `<ab type="citation">`
121   `<bibl type="book" sourceRole="secondary" reason="both" xml:lang="FR"`
122   `xml:id="bibl_1"`
123   `contentType="opinion">`
124   `<author>`
125   `<name type="first">`Hippolyte`</name>`
126   `<name type="last">`Delehaye`</name>`
127   `</author>`, `<title level="m">`Les Origines du culte des martyrs`</title>`,
128   `<series>`
129   `<title level="s">`Subsidia hagiographica`</title>`
130   `<biblScope type="vol">`20`</biblScope>`
131   `</series>` (`<pubPlace>`Brussels`</pubPlace>`: `<publisher>`Société des
132   Bollandistes`</publisher>`,
133   `<date>`1933`</date>`), `<biblScope type="pp">`30`</biblScope>`. `<pubCountry`
134   `xmlns="http://www.example.org/ns/nonTEI">`Belgium`</pubCountry>`
135   `</bibl>`
136   `</ab>`
137   `</note>`
138   `<note xml:id="note_2" n="2" anchored="true" place="foot">`
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140   `<seg function="contextualization">`This is the point of view adopted in`</seg>`
141   `<bibl sourceRole="secondary" xml:lang="EN" type="book" xml:id="bibl_2"`
142   `contentType="opinion"`
143   `reason="neither">`
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145   World`</title>`, ed. `<editor>`
146   `<name type="first">`Judith`</name>`
147   `<name type="last">`Lieu`</name>`
148   `</editor>`, `<editor>`
149   `<name type="first">`John`</name>`
150   `<name type="last">`North`</name>`
151   `</editor>`, and `<editor>`
152   `<name type="first">`Tessa`</name>`
153   `<name type="last">`Rajak`</name>`
154   `</editor>` (`<pubPlace>`London`</pubPlace>`:
155   `<publisher>`Routledge`</publisher>`, `<date>`1992`</date>`).
156   `<pubCountry xmlns="http://www.example.org/ns/nonTEI">`United

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157    Kingdom</pubCountry>
158      </bibl>
159      </ab>
160      </note>
161      <note xml:id="note_3" place="foot" anchored="true" n="3">
162      <gi>3. </gi><ab type="citation">
163      <bibl sourceRole="secondary" reason="neither" contentType="opinion"
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165       type="bookSection" xml:id="bibl_131">
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167       <name type="first">John</name>
168       <name type="last">North</name>
169       </author>, " <title level="a">The Development of Religious Pluralism</title>,"
170    in <editor>
171       <name type="last">Lieu</name><name type="first"
172    rend="false">Judith</name>, </editor>
173       <editor>
174       <name type="last">North</name><name type="first"
175    rend="false">John</name>, </editor>
176       <editor>
177       <name type="last">Rajak</name>
178       <name type="first" rend="false">Tessa</name>, eds. </editor>, <title
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180       Pagans and Christians in the Roman World</title>, <biblScope
181    type="pp">184</biblScope>.
182      </bibl>
183      </ab>
184      </note>
185      <note xml:id="note_4" place="foot" anchored="true" n="4">
186      <gi>4. </gi><ab type="citation">
187      <seg function="contextualization">See</seg>
188      <bibl sourceRole="secondary" reason="both" contentType="fact" xml:lang="EN"
189       type="journalArticle" xml:id="bibl_3">
190       <author>
191       <name type="first">Richard</name>
192       <name type="last">Saller</name>
193       </author>
194       <author>
195       <name type="first">Brent D.</name>
196       <name type="last">Shaw</name>
197       </author>, "<title level="a">Tombstones and Roman Family Relations in the
198    Principate:
199       Civilians, Soldiers and Slaves</title>," <title level="j">Journal of Roman
200       Studies</title><pubCountry
201    xmlns="http://www.example.org/ns/nonTEI">United
202       Kingdom</pubCountry>
203       <pubCountry xmlns="http://www.example.org/ns/nonTEI">United
204    Kingdom</pubCountry><biblScope
205       type="vol">74</biblScope> (<date>1984</date>): <biblScope
206    type="pp">124-156</biblScope>
207      </bibl>; </ab>
208      <ab type="citation">
209      <bibl sourceRole="secondary" reason="both" contentType="fact" xml:lang="EN"
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211      <author>
212      <name type="first">Brent D.</name>
213      <name type="last">Shaw</name>, </author> "<title level="a">Latin Funerary
214  Epigraphy and Family
215      Life in the Later Roman Empire</title>," <title
216  level="j">Historia</title><pubCountry
217      xmlns="http://www.example.org/ns/nonTEI">Germany</pubCountry>
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219  type="pp"
220      >457-497</biblScope>. </bibl></ab>
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223      xml:lang="EN" type="journalArticle" xml:id="bibl_5">
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225      <name type="first">Dale B.</name>
226      <name type="last">Martin</name>
227      </author>, " <title level="a">The Construction of the Ancient Family:
228  Methodological
229      Considerations</title>," <title level="j">Journal of Roman Studies</title>
230      <pubCountry xmlns="http://www.example.org/ns/nonTEI">United
231  Kingdom</pubCountry><biblScope
232      type="vol">86</biblScope> (<date>1996</date>): <biblScope type="pp">40-
233  60</biblScope>
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235      <relatedItem type="contradicts">
236      <bibl sourceRole="secondary" reason="both" contentType="fact"
237  type="journalArticle"
238      corresp="#bibl_3"><author>
239      <name type="last">Saller</name>
240      </author> and <author>
241      <name type="last">Shaw</name>
242      </author>;</bibl>
243      </relatedItem></bibl></ab><ab type="authorIntervention">yet this does not
244  affect the part of
245    their research I use here. </ab>
246      <ab type="citation">
247      <seg function="contextualization">See</seg>
248      <bibl sourceRole="secondary" reason="neither" contentType="fact"
249  furtherReading="true"
250      xml:lang="EN" type="PhD disertation" xml:id="bibl_6">
251      <author>
252      <name type="first">Jonathan S.</name>
253      <name type="last">Perry</name>
254      </author>, <title level="u">A Death in the 'Familia': The Funerary Colleges of
255  the Roman
256      Empire</title>
257      <date>1996</date>
258      <biblScope type="pp">170 ff</biblScope>
259      <publisher>University of North Carolina-Chapel Hill</publisher>
260      <pubCountry xmlns="http://www.example.org/ns/nonTEI">United
261  States</pubCountry>
262      </bibl>
```

```
263    <seg function="contextualization">for a thorough discussion of the topic.</seg>
264    </ab>
265    </note>
266    <div type="chapterSection">
267    <head type="chapterSection">Mystery Cults, Oriental Cults, and New
268  Cults</head>
269    <p>The success of the oriental cults in the Roman Empire has often been viewed
270  as preparation for
271    the rise of Christianity. Because of their common origin in the East, of the
272  mystery surrounding
273    their rites, and of the initiation that separated their members from the rest of
274  society, the
275    comparison was appealing. The cults and their beliefs, as well as their
276  organization, have long
277    been analyzed through the reference system of Christianity. <ref
278  type="noteSpan"
279    corresp="#note_5"> Walter Burkert, who constantly emphasizes the
280  discontinuity between oriental
281    cults and Christianity, has thus attacked the causal relationship between
282  eschatological
283    beliefs and collective burial grounds postulated by <seg
284  function="indirectCitation">Franz
285    Cumont</seg> at the beginning <pb n="15"/>of the twentieth century.<ref
286  type="noteLoc"
287    target="#note_5">5</ref></ref></p>
288    <note xml:id="note_5" place="foot" anchored="true" n="5">
289    <gi>5. </gi><ab type="citation">
290    <bibl sourceRole="secondary" reason="neither" contentType="opinion"
291  xml:lang="EN" type="book"
292    xml:id="bibl_7">
293    <author>
294     <name type="first">Walter</name>
295     <name type="last">Burkert</name>, </author>
296    <title level="m">Ancient Mystery Cults</title> ( <pubPlace>Cambridge,
297  MA</pubPlace>:
298    <publisher>Harvard University Press</publisher>, <date>1987</date>)
299  <biblScope type="chap"
300     >chap. 1</biblScope>
301    <pubCountry xmlns="http://www.example.org/ns/nonTEI">United
302  States</pubCountry>
303    </bibl>
304    </ab>
305    </note>
306    <p>
307    <ref type="noteSpan" corresp="#note_6">Of the mysteries of Mithras, Cumont
308  wrote, <q>"In these
309    closed churches, where everyone knew and supported each other, there reigned
310  the intimacy of a
311    large family. ... In death, probably, all rested in a common graveyard. Although
312  no one has
313    yet discovered a single Mithraic cemetery, the special beliefs of this sect about
314  the
315    afterlife and its very distinctive rites make it very likely that, like most of the
```

```
316  Roman
317   sodalicia, it formed not only religious associations but also burial ones."</q><ref
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325   <author>
326   <name type="first">Franz</name>
327   <name type="last">Cumont</name>, </author>
328   <title level="m">Les mystères de Mithra</title>, <edition>3rd ed.</edition> (
329   <pubPlace>Brussels</pubPlace>: <publisher>Lamertin</publisher>,
330  <date>1913</date>) <biblScope
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343   <name type="last">Cumont</name>, </author>
344   <title level="m">Textes et monuments figures relatifs aux mystères de
345  Mithra</title>, vol.
346   <biblScope type="vol">1</biblScope>, <biblScope
347  type="chap">Introduction</biblScope> (
348   <pubPlace>Brussels</pubPlace>: <publisher>Lamertin</publisher>,
349  <date>1899</date>) <biblScope
350   type="pp">328</biblScope>. <pubCountry
351  xmlns="http://www.example.org/ns/nonTEI"
352   >Belgium</pubCountry>
353   </bibl>
354   </ab>
355   </note>
356   <p>
357   <ref type="noteSpan" corresp="#note_8">The origin for claims of this type is to
358  be found in a
359   document dating from the fifth century BCE that has remained the necessary
360  starting point for
361   all discussion of the funerary practices of these cults. It is the famous inscription
362  of Cumae
363   (today Cuma, in Italy), which seems to reserve a burial place for initiates of a
364  cult of
365   Bacchus. The text announces in fact that it is forbidden for a noninitiate to
366  repose there,
367   using a vocabulary that exceeds human law and evokes a religious sanction.
368  Many scholars, <ref
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369   type="noteSpan" corresp="#note_7">after Cumont<ref type="noteLoc"
370   target="#note_7"
371   >7</ref></ref> have seen in it proof that Dionysian associations had their own
372   cemeteries.
373   Recent discussions have attempted to determine if this document concerned a
374   Dionysian or Orphic
375   cult; for our purposes, that debate is less important than trying to reconstitute
376   the
377   archaeological context of the inscription.<ref type="noteLoc"
378   target="#note_8">8</ref></ref>
379   Actually, this inscription was not carved on a stele but on the inner face of a
380   stone slab that
381   must have been used to cover a tomb. This means that the inscription could not
382   have been read
383   from the outside. The inscription of Cumae, despite its strong religious defense,
384   thus probably
385   did not have a function very different from the Orphic inscriptions on gold tablets
386   whose
387   primary purpose was to proclaim salvation. <ref type="noteSpan"
388   corresp="#note_9">Rather than an
389   interdiction, this inscription, notes Jean-Marie Pailler, is like <q>"a hyphen
390   between
391   initiation and afterlife."</q><ref type="noteLoc"
392   target="#note_9">9</ref></ref>
393   <ref type="noteSpan" corresp="#note_10">Moreover, archaeology has provided
394   cases showing that a
395   separate tomb was not the <pb n="16"/>rule; on the site of Hipponium (today
396   Vibo Valentia, in
397   Italy), for example, the tomb of an Orphic initiate was found among tombs of
398   noninitiates in
399   the same necropolis.<ref type="noteLoc" target="#note_10">10</ref></ref>
400   <ref type="noteSpan" corresp="#note_11">It has similarly been thought that a
401   cluster of some one
402   hundred tombs at Tarentum (today Taranto, in Italy) laid out regularly and very
403   simply,
404   constituted the cemetery of a Pythagorean community. Archaeologists thought
405   they had found at
406   the center of this necropolis the tomb of Archytas, a Pythagorean general at
407   Tarentum in the
408   fourth century BCE. It has now been proven that this was a woman's tomb from
409   the beginning of
410   the second century BCE; there is nothing to suggest a connection between this
411   cluster of tombs
412   and Pythagorism.<ref type="noteLoc" target="#note_11">11</ref></ref> This
413   very early evidence
414   does not support the notion of the separation of the dead by religion. </p>
415   <note xml:id="note_7" place="foot" anchored="true" n="7">
416   <gi>7. </gi><ab type="citation">
417   <seg function="contextualization"> See, for instance, </seg>
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420   xml:id="bibl_10">
421   <author>

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422        <name type="first">Franz</name>
423        <name type="last">Cumont</name>, </author>
424      <title>Lux perpetua</title> ( <pubPlace>Paris</pubPlace>:
425    <publisher>Geuthner</publisher>,
426        <date>1949</date>), <biblScope type="pp">253</biblScope>, <biblScope
427    type="pp"
428        >405-6</biblScope>. <pubCountry
429    xmlns="http://www.example.org/ns/nonTEI">France</pubCountry>
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431      </ab>
432      </note>
433      <note xml:id="note_8" place="foot" anchored="true" n="8">
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439      <date>1903</date> by <author>
440      <name type="first">Antonio</name>
441      <name type="last">Sogliano</name>
442      </author> ( <title level="j">Notizie degli scavi di antichità</title>,
443    <date>1905</date>,
444      <pubCountry
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447      >380</biblScope>) <seg function="contextualization">is published in</seg>
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454      <name type="last">Sokolowski</name>, </author>
455      <title level="m">Lois sacrées des cités grecques. Supplément.</title>,
456    <series>
457      <title level="m">Ecole française d'Athènes. Travaux et mémoires</title>
458      <biblScope type="vol">11</biblScope>
459      </series> ( <pubPlace>Paris</pubPlace>: <publisher>De
460    Boccard</publisher>, <pubCountry
461      xmlns="http://www.example.org/ns/nonTEI">France</pubCountry>
462      <date>1962</date>) <biblScope type="pp">202-203</biblScope>, no.
463    <biblScope type="catNo."
464      >120</biblScope>. </bibl>
465      </relatedItem></bibl>
466      </ab>
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471      <author>
472      <name type="first">Robert</name>
473      <name type="last">Turcan</name>, </author>
474      <title level="a">Bacchoi ou bacchants? De la dissidence des vivants à la
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475    ségrégation des
476      morts</title>, <title level="m">L'association dionysiaque dans les sociétés
477      anciennes</title>, <series>
478      <title level="s"> Collection de l'École française de Rome </title>
479      <biblScope type="vol">89</biblScope> ( </series>
480      <pubPlace>Rome</pubPlace>: <publisher>École française de
481    Rome</publisher>, <date>1986</date>),
482      <biblScope type="pp">227-246</biblScope>, <pubCountry
483      xmlns="http://www.example.org/ns/nonTEI">Italy</pubCountry>
484      </bibl>
485      <seg function="contextualization">proposes to read it as an orphic
486    document,</seg>
487      </ab>
488      <ab type="citation"><seg function="contextualization">while <name
489    type="first">Jean-Marie</name>
490      <name type="last">Pailler</name> sustains the traditional interpretation of a
491    dionysian
492      document; see </seg>
493      <bibl sourceRole="secondary" reason="neither" contentType="opinion"
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496      <author>
497      <name type="last">Pailler</name>, <name type="first" rend="false">Jean-
498    Marie</name>
499      </author>
500      <title level="a">Sépulture interdite aux non bachisés: dissidence orphique et
501    vêture
502      dionysiaque</title>," in <title level="m">Bacchus: figures et pouvoirs</title>
503      <series>
504      <title level="s">Histoire</title>
505      </series> ( <pubPlace>Paris</pubPlace>: <pubCountry
506    xmlns="http://www.example.org/ns/nonTEI"
507      >France</pubCountry><publisher>Les Belles Lettres</publisher>,
508    <date>1995</date>) <biblScope
509      type="pp">111-126</biblScope>. </bibl>
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516      <author>
517      <name type="first">Angelo</name>
518      <name type="last">Bottini</name>, </author>
519      <title level="m">Archeologia della salvezza: l'escatologia greca nelle
520    testimonianze
521      archeologiche</title>, <series>
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524      <pubPlace>Milan</pubPlace>: <publisher>Longanesi</publisher>,
525    <date>1992</date>) <biblScope
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536          <author>
537           <name type="last">Pailler</name>, " </author>
538          <title level="a" type="short">Sépulture interdite aux non bachisés</title>, "
539    <biblScope
540           type="pp">118</biblScope>. </bibl>
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542          </note>
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545          <bibl sourceRole="secondary" reason="support" contentType="fact"
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559          <bibl sourceRole="secondary" reason="reject" contentType="opinion"
560    type="book" xml:lang="FR"
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562          <author>
563           <name type="first">Pierre</name>
564           <name type="last">Wuilleumier</name>, </author>
565          <title level="m">Tarente des origines a la conquête romaine</title>, <series>
566          <title level="s">Bibliothèçque des Ecoles françaises d'Athènes et de
567    Rome</title>
568          <biblScope type="vol">148</biblScope>
569          </series> ( <pubPlace>Paris</pubPlace>: <publisher>De Boccard</publisher>
570          <date>1939</date>), <pubCountry
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579           <name type="last">Guzzo</name>, " </author>
580          <title level="a">Altre note tarantine</title>," <title
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583 <biblScope type="vol">12</biblScope> (<date>1992</date>): <biblScope
584 type="pp"
585 >135-141</biblScope>, esp. <biblScope type="pp">135-136</biblScope>
586 </bibl>
587 </relatedItem>
588 <seg function="contextualization"> excludes the possibility of it being Archytas's
589 tomb.</seg></bibl>
590 </ab>
591 <ab type="citation">
592 <seg function="contextualization">See</seg>
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596 <author>
597 <name type="first">Enzo</name>
598 <name type="last">Lippolis</name>, </author>
599 <series>
600 <title level="s">Catalogo del Museo nazionale archeologico di Taranto.</title>
601 <biblScope type="vol">3,1</biblScope>
602 </series>
603 <title level="m">Taranto, la necropoli: aspetti e problemi delia documentazione
604 archeologico
605 tra VII e I sec. A.C.</title> (<pubPlace>Taranto</pubPlace>: <publisher>La
606 Colomba</publisher>, <date>1994</date>), <pubCountry
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608 >Italy</pubCountry>
609 <biblScope type="pp">58</biblScope>. </bibl>
610 </ab>
611 </note>
612 <p> As for the cult of Mithras, Cumont considered it highly likely that places of
613 collective
614 burial existed, even though none are known. <ref type="noteSpan"
615 corresp="#note_12">At
616 Gross-Krotzenburg, near Hanau in Germany, the tombs that were discovered
617 very near the
618 Mithraeum cannot be the remains of a Mithraic cemetery organized around the
619 sanctuary as they
620 reuse stones from the sanctuary's walls and postdate its destruction.<ref
621 type="noteLoc"
622 target="#note_12">12</ref></ref>
623 <ref type="noteSpan" corresp="#note_13">Some epitaphs of Mithriasts are
624 known in Italy or Gaul,
625 but they contain no prescription specific to the cult of Mithras, and the dedicators
626 were
627 always relatives of the deceased.<ref type="noteLoc"
628 target="#note_13">13</ref></ref>
629 </p>
630 <note xml:id="note_12" place="foot" anchored="true" n="12">
631 <gi>12. </gi><ab type="citation">
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633 <bibl sourceRole="secondary" reason="support" contentType="fact"

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634    type="book" xml:lang="FR"
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636      <author>
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639      </author> " <title level="m">Textes et monuments figurés relatifs aux
640    mystères de
641      Mithra</title>," vol. <biblScope type="vol">2</biblScope>
642      <title level="m">Textes et monuments</title> (
643    <pubPlace>Brussels</pubPlace>:
644      <publisher>Lamertin</publisher>, <date>1896</date>), <biblScope
645    type="pp">353</biblScope>.
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655      <author>
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657       <name type="last">Vermaseren</name>
658      </author>, <title level="m">Corpus inscriptionum et monumentorum religionis
659      Mithriacae</title>, vol <biblScope type="vol">2</biblScope>, ( <pubPlace>The
660    Hague</pubPlace>:
661      <publisher>Nijhoff</publisher>, <date>1960</date>), no. <pubCountry
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671      coresp="#bibl_20">
672      <author>
673       <name type="last">Vermaseren</name>
674      </author>
675      <title level="m">Corpus inscriptionum et monumentorum religionis
676    Mithriacae</title>, vol.
677      <biblScope type="vol">1</biblScope>, ( <pubPlace>The Hague</pubPlace>:
678      <publisher>Nijhoff</publisher>, <date>1960</date>), nos. <pubCountry
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682      <biblScope type="catNo.">511</biblScope>
683      <biblScope type="catNo.">623-624</biblScope>
684      <biblScope type="catNo.">708</biblScope>
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687     </ab>
688     </note>
689     <p>
690     <ref type="noteSpan" corresp="#note_14">Worshippers of the Thracian god
691 Sabazius also did not
692     specify their religious affiliation in their epitaphs.<ref type="noteLoc"
693 target="#note_14"
694     >14</ref></ref> Nevertheless, they may have formed associations that
695 provided tombs for their
696     members. <ref type="noteSpan" corresp="#note_15">A first century BCE stele
697 from Rhodes is
698     dedicated to one Aristo of Syracuse and honors him for his devotion and the care
699 he took of the
700     tombs of the association. This was found in a small funerary monument
701 consisting of two
702     adjacent rooms that might well have belonged to this Sabazian association.<ref
703 type="noteLoc"
704     target="#note_15">15</ref></ref> Still, there is not <pb n="17"/>sufficient
705 evidence to allow
706    us to assume that Sabazian cemeteries as such existed. Nothing there indicates
707 any particular
708     concern for a separate burial. <ref type="noteSpan"
709 corresp="#note_16">Another piece of evidence
710     attests that an association of Sabazians at Teos in Asia Minor (today Sigacik in
711 Turkey) also
712     provided tombs for spouses of members although they were not members of the
713 cult
714     themselves.<ref type="noteLoc" target="#note_16">16</ref></ref>
715     </p>
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720 xml:lang="EN"
721     xml:id="bibl_21">
722     <author>
723      <name type="first">Eugene N.</name>
724      <name type="last">Lane</name>
725     </author>
726     <title level="m">Corpus cultus Iovis Sabazii</title>, vol. <biblScope type="vol"
727     >2</biblScope>, <title level="m">The Other Monuments and Literary
728 Evidence</title>, <series>
729     <title level="s">Etudes préliminaires aux religions orientales dans l'Empire
730 romain</title>
731     <biblScope type="vol">100</biblScope>, </series>no. <biblScope
732 type="catNo.">2</biblScope> (
733     <pubPlace>Leiden</pubPlace>: <publisher>Brill</publisher>,
734 <date>1985</date>). <pubCountry
735     xmlns="http://www.example.org/ns/nonTEI">Netherlands</pubCountry>
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744       <author>
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746       <title level="m">Corpus cultus Iovis Sabazii</title>, vol. <biblScope type="vol"
747       >2</biblScope>, <biblScope type="pp">22</biblScope>, no. <biblScope
748    type="catNo."
749         >46</biblScope>. </bibl>
750       </ab>
751       <ab type="citation">
752        <seg function="contextualization">See especially the thorough commentary
753    of</seg>
754        <bibl sourceRole="secondary" reason="support" contentType="opinion"
755    xml:lang="FR" type="corpus"
756       xml:id="bibl_22">
757       <author>
758        <name type="first">Vassa</name>
759        <name type="last">Kontorini</name>, </author>
760       <title level="m">Inscriptions inédites relatives a l'histoire et aux cultes de
761    Rhodes au IIe
762         et ou Ier s. av. J-C.</title>
763       <series>
764        <biblScope type="vol">1</biblScope>, <title level="s">Rhodiaka</title>,
765    </series>
766       <series>
767        <title>Archaeologia transatlantica</title>
768        <biblScope type="vol">6</biblScope>, </series>
769       <series>
770        <title>Publications d'histoire de l'art et d'archéologie de l'Université catholique
771    de
772         Louvain</title>
773        <biblScope type="vol">42</biblScope> ( </series>
774        <pubPlace>Louvain-La-Neuve</pubPlace>: <publisher>Institut supérieur
775    d'archéologie et
776         d'histoire de l'art, College Erasme</publisher>, <date>1983</date>),
777    <pubCountry
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781         >X-XI</biblScope>. </bibl>
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793    >2</biblScope>, no. <biblScope type="catNo.">28</biblScope>
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802     <name type="last">Lane</name>, </author>
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804    >3</biblScope>, <title level="a">Conclusions</title>
805    <series>
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807  romain</title>
808     <biblScope type="vol">100</biblScope>, no. <biblScope
809  type="issue">3</biblScope>
810    </series> ( <pubPlace>Leiden</pubPlace>: <publisher>Brill</publisher>,
811  <date>1985</date>),
812     <pubCountry
813  xmlns="http://www.example.org/ns/nonTEI">Netherlands</pubCountry>
814     <biblScope type="pp">45</biblScope>, </bibl>
815     <seg function="contextualization">for male membership in Sabazius's
816  cult.</seg>
817    </ab>
818    </note>
819    <p> The cult of Cybele has provided more evidence. It was neither a new cult
820  nor a true oriental
821    one, since it was officially introduced as a public cult in Rome in 204 BCE. The
822  cult, closely
823    linked to that of Attis, was organized around priests attached to the sanctuary
824  (the galli), as
825    well as associations with official roles in the large annual festival held in March
826  (dendrophori
827    and cannophori). <ref type="noteSpan" corresp="#note_17">The epitaphs are
828  for the most part
829     those of galli, or members of the associations, but some inscriptions indicate that
830  worshipers
831     of Cybele and Attis sometimes marked their affiliation by identifying themselves
832  as
833     religiosi.<ref type="noteLoc" target="#note_17">17</ref></ref>
834    <ref type="noteSpan" corresp="#note_18">Of particular interest is one
835  inscription from Pozzuoli
836    in Campania and dating from around the second century CE. It mentions a "field
837  of believers"
838    (ager religiosorum) in which Gaius Julius Aquilinus built a portico and benches at
839  his own
840    expense.<ref type="noteLoc" target="#note_18">18</ref></ref>
841    <ref type="noteSpan" corresp="#note_19">What exactly does this expression
842  ager religiosorum
843    mean? It could designate one of those funerary gardens, known from epitaphs,
844  in which there
845    stand, beside the funerary monument, various structures intended for the cult of
```

846   the dead or
847   simply for social gatherings.`<ref type="noteLoc"`
848   `target="#note_19">`19`</ref></ref>`
849   `<ref type="noteSpan" corresp="#note_20">`However, the term could just as well
850   designate a meeting
851   place, where porticos and benches are frequently mentioned.`<ref`
852   `type="noteLoc"`
853   `target="#note_20">`20`</ref></ref>` As the inscription was found out of any
854   context, we simply
855   cannot know for certain. `</p>`
856   `<note xml:id="note_17" place="foot" anchored="true" n="17">`
857   `<gi>`17. `</gi><ab type="citation">`
858   `<seg function="contextualization">`See`</seg>`
859   `<bibl sourceRole="primary" contentType="fact" reason="neither"`
860   `xml:lang="EN" type="corpus"`
861   `xml:id="bibl_23">`
862   `<author>`
863   `<name type="first">`Maarten Jozef`</name>`
864   `<name type="last">`Vermaseren`</name>`
865   `</author>`, `<title level="m">`Corpus cultus Cybelae Attidisque`</title>`
866   `<series>`
867   `<title level="s">`Etudes préliminaires aux religions orientales dans l'Empire
868   romain`</title>`
869   `<biblScope type="vol">`50`</biblScope>`
870   `</series>`
871   `<publisher>`Brill`</publisher>`
872   `<pubPlace>`Leiden`</pubPlace>`
873   `<pubCountry`
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875   `<date>`1977-1989`</date>` vol. `<biblScope type="catNo.">`3`</biblScope>`, no
876   `<biblScope`
877   `type="catNo.">`337`</biblScope>`(Rome), vol `<biblScope`
878   `type="vol">`4`</biblScope>`, no. `<biblScope`
879   `type="catNo.">`105`</biblScope>` (Larinum), vol.`<biblScope`
880   `type="vol">`5`</biblScope>`, no.
881   `<biblScope type="catNo.">`142`</biblScope>` (Sitifis). `</bibl>`
882   `</ab>`
883   `</note>`
884   `<note xml:id="note_18" place="foot" anchored="true" n="18">`
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887   `xml:lang="EN" type="corpus"`
888   `corresp="#bibl_23">` Ibid. vol. `<biblScope type="vol">`4`</biblScope>`, no.
889   `<biblScope`
890   `type="catNo.">`16`</biblScope>`. `</bibl>`
891   `</ab>`
892   `<ab type="citation">`
893   `<seg function="contextualization">`See also`</seg>`
894   `<bibl sourceRole="secondary" contentType="fact" furtherReading="true"`
895   `reason="neither"`
896   `xml:lang="FR" type="book" xml:id="bibl_24">`
897   `<author>`
898   `<name type="first">`Vincent`</name>`

```
899        <name type="last">Tam Tinh Tran</name>, </author>
900        <title level="m">Le culte des divinités orientales en Campanie en dehors de
901    Pompéi, de Stabies
902         et d'Herculanum</title>
903        <series>
904        <title level="s">Etudes préliminaires aux religions orientales dans l'Empire
905    romain</title>
906        <biblScope type="vol">27</biblScope>
907        </series> ( <pubPlace>Leiden</pubPlace>: <publisher>Brill</publisher>,
908    <date>1972</date>),
909        <pubCountry
910    xmlns="http://www.example.org/ns/nonTEI">Netherlands</pubCountry>
911        <biblScope type="pp">107</biblScope>, no. <biblScope type="catNo.">C9
912    </biblScope>
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917        <title level="m"><abbr>CIL</abbr><expan>Corpus Inscriptionum
918    Latinarum</expan></title>
919        <biblScope type="vol">10</biblScope>.<biblScope
920    type="catNo.">1894</biblScope>)<pubCountry
921         xmlns="http://www.example.org/ns/nonTEI">Germany</pubCountry></bibl>
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926        <gi>19. </gi><ab type="citation">
927         <seg function="contextualization">See the data gathered in</seg>
928        <bibl sourceRole="secondary" contentType="fact" reason="neither"
929    xml:lang="EN" type="book"
930        xml:id="bibl_26">
931        <author>
932         <name type="first">Jocelyn M. C.</name>
933         <name type="last">Toynbee</name>
934        </author>, <title level="m">Death and Burial in the Roman World</title>
935         (<pubPlace>Baltimore</pubPlace>: <publisher>John Hopkins Universiry
936    Press</publisher>,
937        <date>1996</date>), <pubCountry
938    xmlns="http://www.example.org/ns/nonTEI">USA</pubCountry>
939         <biblScope type="pp">94-100</biblScope>. </bibl>
940        </ab>
941        </note>
942        <note xml:id="note_20" place="foot" anchored="true" n="20">
943        <gi>20. </gi><ab type="citation">
944         <seg function="contextualization">See the inventory of meeting places owned
945    by collegia
946         in</seg>
947        <bibl sourceRole="secondary" contentType="fact" reason="neither"
948    xml:lang="FR" type="book"
949        xml:id="bibl_27">
950        <author>
951         <name type="first">Jean-Pierre</name>
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952      <name type="last">Waltzing</name>, </author>
953      <title level="m">Étude historique sur les corporations professionnelles chez les
954   Romains
955       depuis les origines jusqu'à la chute de l'Empire d'Occident</title>, 4 vols., (
956      <pubPlace>Louvain</pubPlace>: <publisher>Peeters</publisher>,
957   <date>1895-1900</date>),
958      <pubCountry
959   xmlns="http://www.example.org/ns/nonTEI">Belgium</pubCountry>
960     <biblScope type="pp">4:447ff.</biblScope>
961     </bibl>
962    </ab>
963    </note>
964    <p><ref type="noteSpan" corresp="#note_21">Another inscription at Pozzuoli
965   mentions a field of
966     seven jugeri (more than one hectare) belonging "<q>to members of the
967   association of followers
968     of Jupiter Heliopolitanus.</q>" Here again, the funerary purpose of the land is
969   not <pb n="18"
970     />explicit; the inscription mentions a cistern and taverns and, notably, specifies
971   the
972     conditions for access to the field, but says nothing of the use that could be made
973   of it. To
974     call it a "private cemetery" is questionable.<ref type="noteLoc"
975   target="#note_21"
976     >21</ref></ref>
977    <ref type="noteSpan" corresp="#note_22">On the strength of this inscription,
978   Felix Hettner
979     postulated a similar cemetery for the worshipers of Jupiter Dolichenus (from
980   Doliche, today
981     Duluck in Turkey) on the Aventine in Rome, where a temple has provided a great
982   deal of
983     evidence. The only inscription that he related to this cemetery cannot, however,
984   be explicitly
985     linked to this cult. The force of his entire argument thus depends upon the
986   example of
987     Pozzuoli.<ref type="noteLoc" target="#note_22">22</ref></ref>
988    <ref type="noteSpan" corresp="#note_23">No epitaph of a simple follower of
989   Jupiter Dolichenus is
990     known, and the three extant epitaphs of priests contain no indication on the
991   location of the
992     grave.<ref type="noteLoc" target="#note_23">23</ref></ref>
993    </p>
994    <note xml:id="note_21" place="foot" anchored="true" n="21">
995    <gi>21. </gi><ab type="citation">
996     <seg function="contextualization">This is contra</seg>
997     <bibl sourceRole="secondary" contentType="opinion" reason="reject"
998   xml:lang="FR" type="book"
999     corresp="#bibl_24">
1000     <author>
1001      <name type="last">Tam Tinh Tran</name>
1002     </author>
1003     <title level="m" type="short">Le culte des divinités orientales en
1004   Campanie</title>,
```

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1005        <biblScope type="pp">133</biblScope>
1006      </bibl>; <seg function="contextualization">see pages <bibl
1007    sourceRole="primary"
1008      contentType="fact" reason="neither" type="book" corresp="#bibl_24">
1009        <biblScope type="pp">149-50</biblScope> for the text of the inscription (=
1010    <relatedItem
1011      type="alternative">
1012      <bibl sourceRole="primary" contentType="fact" reason="neither"
1013    type="corpus"
1014       corresp="#bibl_25">
1015       <title level="m"><abbr>CIL</abbr><expan>Corpus Inscriptionum
1016    Latinarum</expan></title>
1017        <biblScope type="vol">10</biblScope>.<biblScope
1018    type="catNo.">1579</biblScope>)</bibl>
1019      </relatedItem> and its translation.</bibl></seg>
1020      </ab>
1021      <ab type="citation">For <bibl sourceRole="secondary" contentType="opinion"
1022    reason="neither"
1023      xml:lang="FR" type="book" corresp="#bibl_27">
1024      <author>
1025       <name type="last">Waltzing</name>
1026      </author>, <title level="m" type="short">Étude historique sur les
1027    corporations</title>
1028      <biblScope type="otherLoc">4:448</biblScope>
1029      </bibl>
1030      <seg function="contextualization">it was a meeting place.</seg>
1031      </ab>
1032      </note>
1033      <note xml:id="note_22" place="foot" anchored="true" n="22">
1034      <gi>22. </gi><ab type="citation">
1035      <bibl sourceRole="secondary" xml:lang="LA" contentType="opinion"
1036    reason="reject"
1037      type="PhD disertation" xml:id="bibl_28">
1038      <author>
1039       <name type="first">Felix</name>
1040       <name type="last">Hettner</name>
1041      </author>, <title level="u">De Iove Dolicheno</title>
1042    (<pubPlace>Bonn</pubPlace>:
1043      <date>1877</date>), <pubCountry
1044    xmlns="http://www.example.org/ns/nonTEI">Germany</pubCountry>
1045      <biblScope type="pp">17</biblScope>. </bibl>
1046      </ab>
1047      <ab type="citation">
1048      <seg function="contextualization">This inscription is not listed in the inventory
1049    of</seg>
1050      <bibl sourceRole="secondary" contentType="fact" reason="neither"
1051    xml:lang="DE" type="corpus"
1052      xml:id="bibl_29">
1053      <author>
1054       <name type="first">Monika</name>
1055       <name type="last">Hörig</name>
1056      </author>
1057      <title level="m">Corpus cultus Iovis Dolicheni</title>
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1058        <series>
1059         <title level="s">Études préliminaires aux religions orientales dans l'Empire
1060    romain</title>
1061         <biblScope type="vol">106</biblScope>
1062        </series> ( <pubPlace>Leiden</pubPlace>: <publisher>Brill</publisher>,
1063    <date>1987</date>).
1064         <pubCountry
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1066        </bibl>
1067       </ab>
1068       </note>
1069       <note xml:id="note_23" place="foot" anchored="true" n="23">
1070       <gi>23. </gi><ab type="citation">
1071        <bibl sourceRole="primary" contentType="fact" reason="neither"
1072    xml:lang="DE" type="corpus"
1073      corresp="#bibl_29">
1074        <author>
1075         <name type="last">Hörig</name>
1076        </author>, <title level="m">Corpus Cultus Iovis Dolicheni</title>, nos.
1077    <biblScope
1078        type="catNo.">3</biblScope>, <biblScope type="catNo.">67</biblScope>,
1079    and <biblScope
1080        type="catNo.">123</biblScope>. </bibl>
1081       </ab>
1082       <ab type="citation">
1083        <bibl sourceRole="secondary" contentType="opinion" reason="neither"
1084    xml:lang="FR" type="book"
1085      xml:id="bibl_30">
1086        <author>
1087         <name type="first">Pierre</name>
1088         <name type="last">Merlat</name>
1089        </author>
1090        <title level="m">Jupiter Dolichenus: essai d'interprétation et de
1091    synthèse</title>, <series>
1092         <title level="s">Publications de l'Institut d'art et d'archéologie de l'Université de
1093        Paris</title>
1094         <biblScope type="vol">5</biblScope>
1095        </series> ( <pubPlace>Paris</pubPlace>: <publisher>Presses universitaires de
1096        France</publisher>, <date>1960</date>) <pubCountry
1097    xmlns="http://www.example.org/ns/nonTEI"
1098         >France</pubCountry>
1099        <biblScope type="pp">190-210</biblScope>, </bibl>
1100        <seg function="contextualization">gives no indication about funerals and burials
1101    for the
1102       followers of Jupiter Dolichenus.</seg>
1103       </ab>
1104       </note>
1105      <p> It is thus clear that among the documents attesting to the presence or the
1106    spread of a
1107      particular cult, epitaphs are very few and most often refer to priests, not to
1108    simple followers.
1109       <ref type="noteSpan" corresp="#note_24">Walter Burkert has concluded that
1110    <q>"individual
```

1111   distinctiveness prevailed over group identity."</q><ref type="noteLoc"
1112 target="#note_24"
1113   >24</ref></ref> I would like to add that membership in this type of cult does
1114 not seem to have
1115   been relevant information for the wording of epitaphs, which in turn suggests that
1116 the new cults
1117   did not lead to conflict with families over the burial choices of their members. No
1118 document
1119   relating to the new and rapidly multiplying cults in the empire indicates a
1120 religious preference
1121   in burial practices . </p>
1122   <note xml:id="note_24" place="foot" anchored="true" n="24">
1123   <gi>24. </gi><ab type="citation">
1124   <bibl sourceRole="secondary" contentType="opinion" reason="support"
1125 xml:lang="EN" type="book"
1126   corresp="#bibl_7">
1127   <author>
1128   <name type="last">Burkert</name>
1129   </author>, <title level="m">Ancient Mystery Cults</title>, <biblScope
1130 type="pp"
1131   >48</biblScope>. </bibl>
1132   </ab>
1133   </note>
1134   </div>
1135   <div type="chapterSection">
1136   <head type="chapterSection">The Jew</head>
1137   <p> That Jews were buried together and apart from non-Jews has long been
1138 considered beyond
1139   discussion. Jewish studies basically described the Jews of the Diaspora as living in
1140 total
1141   isolation from, and in opposition to, the surrounding communities. It is only
1142 recently that
1143   Jewish documents and monuments have begun to be compared systematically to
1144 other, contemporary,
1145   documents and monuments; as long as these were studied in isolation, <pb
1146 n="19"/>historians
1147   necessarily concluded that the Jews were isolated. <ref type="noteSpan"
1148 corresp="#note_25">Today
1149   it is possible to have a more nuanced view on the degree of integration of Jews
1150 in the Roman
1151   Empire and on the degree of interactions with other groups.<ref type="noteLoc"
1152   target="#note_25">25</ref></ref> Whenever some degree of interaction has
1153 been considered,
1154   close examination reveals that the Jews did not live in isolation. <ref
1155 type="noteSpan"
1156   corresp="#note_26">Tessa Rajak has thus shown that the Jewish system of
1157 honorary titles
1158   functioned in the same way as the patronage system in any Greco-Roman city,
1159 which made it
1160   possible, as she emphasizes very provocatively, to attract non-Jewish patrons to
1161 the
1162   synagogue.<ref type="noteLoc" target="#note_26">26</ref></ref>
1163   <ref type="noteSpan" corresp="#note_27">Leonard V Rutgers, with a very

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1164   different perspective,
1165      has tried to show that artifacts found in Jewish catacombs in Rome had come
1166   from workshops that
1167      also made artifacts for non-Jews, pagans as well as Christians.<ref
1168   type="noteLoc"
1169      target="#note_27">27</ref></ref>
1170      <ref type="noteSpan" corresp="#note_28">Such examples show clearly that
1171   Jews in the Roman Empire
1172      were not living in ghettos as the nineteenth-century historians had tended to
1173   imagine.<ref
1174      type="noteLoc" target="#note_28">28</ref></ref>
1175      </p>
1176      <note xml:id="note_25" place="foot" anchored="true" n="25">
1177      <gi>25. </gi><ab type="citation">
1178       <seg function="contextualization">See</seg>
1179       <bibl sourceRole="secondary" contentType="opinion" reason="support"
1180   xml:lang="EN"
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1182       <author>
1183        <name type="first">Judith</name>
1184        <name type="last">Lieu</name>, </author>
1185       <author>
1186        <name type="first">John</name>
1187        <name type="last">North</name>, and </author>
1188       <author>
1189        <name type="first">Tessa</name>
1190        <name type="last">Rajak</name>
1191       </author>
1192       <title level="a">Introduction</title> in <editor>
1193        <name type="last">Lieu</name><name type="first"
1194   rend="false">Judith</name>, </editor>
1195       <editor>
1196        <name type="last">North</name><name type="first"
1197   rend="false">John</name>, and </editor>
1198       <editor>
1199        <name type="last">Rajak</name><name type="first"
1200   rend="false">Tessa</name>, eds. </editor>
1201       <title level="m" type="short">The Jews among pagans and
1202   Christians</title><pubCountry
1203      xmlns="http://www.example.org/ns/nonTEI">United Kingdom</pubCountry>,
1204   <biblScope type="pp"
1205      >1-8</biblScope><date rend="false">1992</date>
1206      </bibl>and <bibl sourceRole="secondary" contentType="opinion"
1207   reason="support" xml:lang="EN"
1208      type="book" xml:id="bibl_31">
1209      <editor>
1210       <name type="first">Martin</name>
1211       <name type="last">Goodman</name>, ed., </editor>
1212      <title level="m">Jews in a Graeco-Roman
1213   World</title>(<pubPlace>Oxford</pubPlace>:
1214      <publisher>Clarendon Press</publisher>, <date>1998</date>). <pubCountry
1215      xmlns="http://www.example.org/ns/nonTEI">United Kingdom</pubCountry>
1216      </bibl>
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1217      </ab>
1218      </note>
1219      <note xml:id="note_26" place="foot" anchored="true" n="26">
1220      <gi>26. </gi><ab type="citation">
1221       <bibl sourceRole="secondary" contentType="opinion" reason="both"
1222    xml:lang="EN"
1223        type="journalArticle" xml:id="bibl_32">
1224        <author>
1225         <name type="first">Tessa</name>
1226         <name type="last">Rajak</name>, " </author>
1227        <title level="a">Archisynagogoi: Office, Title and Social Status in the Greco-
1228    Jewish
1229          Synagogue</title>," <title level="j">Journal of Roman Studies</title>
1230        <pubCountry xmlns="http://www.example.org/ns/nonTEI">United
1231    Kingdom</pubCountry><biblScope
1232         type="vol">83</biblScope> (<date>1993</date>): <biblScope
1233    type="pp">75-93</biblScope>.
1234       </bibl>
1235      </ab>
1236      </note>
1237      <note xml:id="note_27" place="foot" anchored="true" n="27">
1238      <gi>27. </gi><ab type="citation">
1239       <bibl sourceRole="secondary" contentType="opinion" reason="neither"
1240    xml:lang="EN"
1241        type="journalArticle" xml:id="bibl_33">
1242        <author>
1243         <name type="first">Leonard Victor</name>
1244         <name type="last">Rutgers</name>, " </author>
1245        <title level="a">Archeological Evidence for the Interaction of Jews and Non-Jews
1246    in Late
1247          Antiquity</title>," <title level="j">American Journal of Archeology</title>
1248        <pubCountry xmlns="http://www.example.org/ns/nonTEI">United
1249    States</pubCountry><biblScope
1250         type="vol">96</biblScope> (<date>1992</date>): <biblScope
1251    type="pp">101-118</biblScope>.
1252       </bibl>
1253      </ab>
1254      <ab type="citation">
1255       <seg function="contextualization">See also</seg>
1256       <bibl sourceRole="secondary" contentType="opinion" reason="neither"
1257    furtherReading="true"
1258        xml:lang="EN" type="book" xml:id="bibl_34">
1259        <author>
1260         <name type="first">Leonard Victor</name>
1261         <name type="last">Rutgers</name>, </author>
1262        <title level="m">The Jews in Late Ancient Rome: Evidence of Cultural
1263    Interaction in the Roman
1264          Diaspora</title>
1265        <series>
1266         <title level="s">Religions in the Greco-Roman World</title>
1267         <biblScope type="vol">12</biblScope>
1268        </series> (<pubPlace>Leiden</pubPlace>: <publisher>Brill</publisher>,
1269    <date>1995</date>).
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1270        <pubCountry
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1276     <gi>28. </gi><ab type="citation">
1277      <seg function="contextualization">About Jewish historiography, see </seg>
1278      <bibl sourceRole="secondary" contentType="fact" reason="neither"
1279   xml:lang="EN" type="book"
1280     corresp="#bibl_34">
1281      <author>
1282       <name type="last">Rutgers</name>, </author>
1283      <title level="m" type="short">The Jews in Late Ancient Rome</title>, chap.
1284   <biblScope
1285      type="chap">1</biblScope>. </bibl>
1286     </ab>
1287     </note>
1288     <p>
1289     <ref type="noteSpan" corresp="#note_29">What do we know about funerary
1290   practices of the Jews of
1291      the Diaspora and of the organization of their burial?<ref type="noteLoc"
1292   target="#note_29"
1293      >29</ref></ref> To start, we must consider the practice of being buried in
1294   Palestine. <ref
1295      type="noteSpan" corresp="#note_30">There are cases, at Beth She'Arim, of
1296   wealthy Jews from Asia
1297      Minor having their remains repatriated to the land of their ancestors.<ref
1298   type="noteLoc"
1299      target="#note_30">30</ref></ref>
1300     <ref type="noteSpan" corresp="#note_31">Rabbinical teachings on this subject
1301   are not found
1302      before the third century and the practice, if only for logistical reasons, was rather
1303      marginal.<ref type="noteLoc" target="#note_31">31</ref></ref> Most Jews in
1304   the Diaspora were
1305      buried where they lived. <ref type="noteSpan"
1306   corresp="#note_32">Archaeologists, as well as
1307      epigraphists, are more prudent than in the past about <pb n="20"/>identifying a
1308   Jewish tomb or
1309      inscription.<ref type="noteLoc" target="#note_32">32</ref></ref> These
1310   efforts, and the
1311      removal of prejudices about Jewish isolationism, have revealed that the mixing of
1312   Jewish and
1313      non-Jewish tombs in the same burial areas was very common. </p>
1314     <note xml:id="note_29" place="foot" anchored="true" n="29">
1315     <gi>29. </gi><ab type="citation">
1316      <seg function="contextualization">See the general introduction in </seg>
1317      <bibl sourceRole="secondary" contentType="fact" reason="neither"
1318   xml:lang="EN" type="book"
1319      xml:id="bibl_35">
1320      <author>
1321       <name type="first">Rachel</name>
1322       <name type="last">Hachlili</name>, </author>, <title level="m">Ancient
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1323    Jewish Art and
1324      Archaeology in the Diaspora</title>, <series>
1325      <title level="s">Handbuch der Orientalistik</title>. <biblScope
1326    type="vol">1</biblScope>, </series>
1327      <series>
1328      <title level="s">Nahe und Mittlere Osten</title>
1329      <biblScope type="vol">35</biblScope>
1330      </series> ( <pubPlace>Leiden</pubPlace>: <publisher>Brill</publisher>,
1331    <date>1998</date>),
1332      <pubCountry
1333    xmlns="http://www.example.org/ns/nonTEI">Netherlands</pubCountry>
1334      <biblScope type="pp">263-310</biblScope>. </bibl>
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1336      <ab type="citation">
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1338      <bibl sourceRole="secondary" contentType="opinion" reason="neither"
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1340      type="journalArticle" xml:id="bibl_71">
1341      <author>
1342      <name type="first">B. H.</name>
1343      <name type="last">Williams</name>, </author>
1344      <title level="a">The Organization of Jewish Burials in Ancient Rome in the Light
1345    of Evidence
1346      from Palestine and the Diaspora</title>
1347      <title level="j">Zeitschrift für Papyrologie und Epigraphik</title><pubCountry
1348      xmlns="http://www.example.org/ns/nonTEI">Germany</pubCountry>
1349      <biblScope type="vol">101</biblScope> (<date>1994</date>): 165-182
1350    </bibl>. </ab>
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1356      <author>
1357      <name type="first">David</name>
1358      <name type="last">Noy</name>
1359      </author>, <title level="a">Where Were the Jews of the Diaspora
1360    Buried?</title> in <editor>
1361      <name type="last">Goodman</name>
1362      <name type="first" rend="false">Martin</name>, ed., </editor>
1363      <title level="m">Jews in a Graeco-Roman World</title>, <biblScope
1364    type="pp">75-89</biblScope>
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1374      <name type="first">Tessa</name>
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1376        <title level="a">The Jewish Community and Its Boundaries</title> in <editor>
1377         <name type="last">Lieu</name><name type="first"
1378    rend="false">Judith</name>, </editor>
1379        <editor>
1380         <name type="last">North</name><name type="first"
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1382        <editor>
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1385        <title level="m" type="short">The Jews among Pagans and Christians</title>
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1402    (<pubPlace>Jerusalem</pubPlace>:
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1414       <author>
1415        <name type="first">Isaiah</name>
1416        <name type="last">Gafni</name>
1417       </author>, " <title level="a">Reinternment in the Land of Israel: Notes on the
1418    Origin and
1419        Development of the Custom</title>," <title level="m">Jerusalem
1420    Cathedra</title>
1421        <pubCountry xmlns="http://www.example.org/ns/nonTEI">United
1422    States</pubCountry><pubCountry
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1424    type="vol"
1425        >1</biblScope> (<date>1981</date>): <biblScope type="pp">96-
1426    104</biblScope>. </bibl>
1427       </ab>
1428      <ab type="citation">
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1434       <name type="last">Noy</name>
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1436    buried?</title>" <biblScope
1437       type="pp">78-79</biblScope>. </bibl>
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1454      <author>
1455       <name type="first">Ross Shepard</name>
1456       <name type="last">Kraemer</name>
1457      </author>, " <title level="a">Jewish Tuna and Christian Fish: Identifying
1458    Religious
1459      Affiliation in Epigraphic Sources</title>," <title level="j">Harvard Theological
1460      Review</title><pubCountry
1461    xmlns="http://www.example.org/ns/nonTEI">United States</pubCountry>
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1464      >141-162</biblScope> ; </bibl> and <bibl sourceRole="secondary"
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1468       <name type="first">Jan William</name>
1469       <name type="last">van Henten</name>
1470      </author> and <author>
1471       <name type="first">Alice J.</name>
1472       <name type="last">Bij de Vaate</name>
1473      </author>, " <title level="a">Jewish or Non-Jewish?: Some Remarks on the
1474    Identification of
1475      Jewish Inscriptions from Asia Minor</title>," <title level="j">Bibliotlieca
1476      Orientalis</title><pubCountry xmlns="http://www.example.org/ns/nonTEI"
1477      >Netherlands</pubCountry>
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1479    type="pp"
1480      >16-28</biblScope>. </bibl>
1481      </ab>
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1482    </note>
1483    <p> In the case of Italy, with the exception of Rome, data are scattered. <ref
1484  type="noteSpan"
1485    corresp="#note_33">At Venosa, Jewish and Christian hypogea are dug into the
1486  same hillside.<ref
1487    type="noteLoc" target="#note_33">33</ref></ref>
1488    <ref type="noteSpan" corresp="#note_34">At Taranto, as at Syracuse and
1489  Agrigento in Sicily,
1490    Christian and Jewish objects have come from the same cemeteries.<ref
1491  type="noteLoc"
1492    target="#note_34">34</ref></ref>
1493    <ref type="noteSpan" corresp="#note_35">One inscription from Ostia, dated
1494  from the second
1495    century, would attest to a funeral enclosure owned by Jews but situated among
1496  non-Jewish
1497    enclosures.<ref type="noteLoc" target="#note_35">35</ref></ref>
1498    </p>
1499    <note xml:id="note_33" place="foot" anchored="true" n="33">
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1504    type="journalArticle" xml:id="bibl_41 ">
1505    <author>
1506     <name type="first">Harry J.</name>
1507     <name type="last">Leon</name>
1508    </author>, " <title level="a">The Jews of Venusia</title>," <title
1509  level="j">Jewish Quarterly
1510     Review</title><pubCountry
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1514     >267-284</biblScope>
1515    </bibl> , and <bibl sourceRole="secondary" contentType="fact"
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1518    <author>
1519     <name type="first">Cesare</name>
1520     <name type="last">Colafemmina</name>
1521    </author>, " <title level="a">Saggio di scavo in località 'Collina della
1522  Maddalena' a
1523     Venosa</title>," <title level="j">Vetera Christianorum</title>
1524    <pubCountry
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1528  451</biblScope> . </bibl>
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1535        <author>
1536         <name type="first">Eric M.</name>
1537         <name type="last">Meyers</name>
1538        </author>, " <title level="a">Report on the Excavations at the Venosa
1539    Catacombs 1981</title>
1540        <title level="j">Vetera Christianorum</title>
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1551        </author>, " <title level="a" type="short">Archeological Evidence</title>,"
1552    <biblScope
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1558         <name type="first">David</name>
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1563         >1</biblScope>, <title level="a">Italy (Excluding the City of Rome), Spain,
1564    and Gaul</title>
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1566        <pubPlace>Cambridge</pubPlace>
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1568    Kingdom</pubCountry>
1569        <date>1993</date>), <biblScope type="pp">XV-XXI</biblScope>
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1598     function="contextualization">see also</seg>
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1600   furtherReading="true"
1601     xml:lang="EN" type="bookSection" corresp="#bibl_36">
1602     <author>
1603      <name type="last">Noy</name>, </author>, " <title level="a">Where Were
1604   the Jews of the
1605      Diaspora buried?</title>" <biblScope type="pp">80-81</biblScope>. </bibl>
1606     <seg function="contextualization">The first part of the inscription, in which it
1607   says that the
1608     society (synagoga?) of the Jews bought some land and then gave it to C. Iulius
1609   Iustus, who
1610     built a tomb, is solely a montage of hypothetical restitutions.</seg>
1611     </ab>
1612     </note>
1613     <p>
1614     <ref type="noteSpan" corresp="#note_36">In Asia Minor, where Jewish
1615   communities are well
1616      known,<ref type="noteLoc" target="#note_36">36</ref> no Jewish cemetery
1617   has yet been
1618      identified.</ref>
1619     <ref type="noteSpan" corresp="#note_37">An inscription discovered at Tlos, in
1620   Lycia, dating from
1621      the first century, makes a point of mentioning the gift from a certain Ptolemy of
1622   the funerary
1623      monument, which he built at his own expense for himself and his son, to all the
1624   Jews of the
1625      city. This kind of evergetism is rare, though attested elsewhere, and does not
1626   necessarily
1627      evince a communal burial area. Through this gift, the Jewish community ·simply
1628   took ownership
1629      of an individual tomb.<ref type="noteLoc" target="#note_37">37</ref></ref>
1630     <ref type="noteSpan" corresp="#note_38">The private and familial nature of
1631   Jewish tombs is clear
1632      when fines are stipulated in the epitaph against the burial of an unauthorized
1633   body, a practice
1634      that was also common among non-Jews. A good example of this practice is the
1635   epitaph of Rufina
1636      in Smyrna that dates from the third century, at the earliest: "<q>Rufina, a
1637   Jewish woman, built
1638      this <pb n="21"/>tomb for her servants and slaves raised in her house. No one
1639   shall have the
1640      right to bury others here. Anyone doing so shall pay a fine of 1,500 denarii to
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1641   the sacred
1642   treasury and 1,000 denarii to the Jewish people. A copy of this inscription has
1643   been place in
1644   the public archives.</q>"<ref type="noteLoc" target="#note_38">38</ref>
1645   Tombs were usually
1646   reserved for the nuclear family, though sometimes, as in this example, enlarged
1647   to include
1648   freedmen and slaves, but without any explicit religious restrictions.</ref>
1649   <ref type="noteSpan" corresp="#note_39">These fines were sometimes to be
1650   paid to the Jewish
1651   community under a variety of names: synagogue, Jewish nation, Jewish colony.
1652   This might lead us
1653   to think there was a kind of community organization controlling and overseeing
1654   Jewish burials
1655   were it not that, in the same inscriptions, these fines were also directed to the
1656   fiscus, or
1657   the sacred treasury.<ref type="noteLoc" target="#note_39">39</ref></ref>
1658   That tells us that
1659   respect for tombs is as much the responsibility of the city and its institutions as it
1660   is for a
1661   more limited group of coreligionists. </p>
1662   <note xml:id="note_36" place="foot" anchored="true" n="36">
1663   <gi>36. </gi><ab type="citation">
1664   <seg function="contextualization">See</seg>
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1666   xml:lang="EN" type="book"
1667   xml:id="bibl_45">
1668   <author>
1669   <name type="first">Paul R.</name>
1670   <name type="last">Trebilco</name>, </author>
1671   <title level="m">Jewish Communities in Asia Minor</title>, <series>
1672   <title level="s">Monograph series, Society for New Testament Studies</title>,
1673   <biblScope
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1676   <pubPlace>Cambridge</pubPlace>
1677   <pubCountry xmlns="http://www.example.org/ns/nonTEI">United
1678   Kingdom</pubCountry>
1679   <date>1991</date>) </bibl>
1680   </ab>
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1684   <seg function="contextualization">See the text and translation by</seg>
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1688   <author>
1689   <name type="first">Jean-Baptiste</name>
1690   <name type="last">Frey</name>
1691   </author>, <title level="m">Corpus inscriptionum iudaicarum: recueil des
1692   inscriptions juives
1693   qui vont du IIe siècle avant Jésus-Christ ou VIIe siècle de notre ère. </title>

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1694        <biblScope type="vol">2</biblScope>, <title level="a">Asie - Afrique</title>,
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1697      <biblScope type="vol">3</biblScope>
1698    </series> ( <pubPlace>Vatican City</pubPlace>: <publisher>Pontificio Instituto
1699  di archeologia
1700    cristiana</publisher>
1701    <date>1952</date>
1702    <pubCountry
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1712  Lyciae linguis
1713    Craeca et Latina conscripti.</title>
1714    <biblScope type="vol">2</biblScope> ed. <editor>
1715    <name type="first">E.</name>
1716    <name type="last">Kalinka</name>
1717    </editor> ( <publisher>Hoelder</publisher>
1718    <pubPlace>Vindobonae</pubPlace>
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1721    <date>1930</date>), n. <biblScope type="catNo.">612</biblScope>
1722  ).</bibl>
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1734  type="catNo."
1735    >71</biblScope>, <biblScope type="pp">227</biblScope>. </bibl>
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1742    corresp="#bibl_46">
1743    <author>
1744    <name type="last">Frey</name>
1745    </author>, <title level="m" type="short">Corpus inscriptionum
1746  iudaicarum</title>, vol.
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1752        xml:id="bibl_48">
1753        <title level="m">Die Inschriften von Smyrna</title>. <biblScope
1754    type="vol">1</biblScope>,
1755        ed. <editor>
1756        <name type="first">Georg</name>
1757        <name type="last">Petzl</name>
1758        </editor> (<pubPlace>Bonn</pubPlace>: <publisher>Habelt</publisher>
1759        <date>1982</date>),<pubCountry
1760    xmlns="http://www.example.org/ns/nonTEI">Germany</pubCountry>
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1768        <bibl sourceRole="secondary" contentType="fact" reason="neither"
1769    furtherReading="true"
1770        xml:lang="LA" type="corpus" corresp="#bibl_46">
1771        <author>
1772        <name type="last">Frey</name>
1773        </author>, <title level="m" type="short">Corpus inscriptionum
1774    iudaicarum</title>, vol.
1775        <biblScope type="vol">2</biblScope>, nos. <biblScope
1776    type="catNo.">775</biblScope>,
1777        <biblScope type="catNo.">776</biblScope>, <biblScope
1778    type="catNo.">799</biblScope>, etc.
1779        </bibl>
1780        </ab>
1781        <ab type="citation">
1782        <seg function="contextualization">About the Jewish inscription of Hierapolis,
1783    see </seg>
1784        <bibl sourceRole="secondary" contentType="opinion" reason="support"
1785    xml:lang="LA"
1786        type="journalArticle" xml:id="bibl_49">
1787        <author>
1788        <name type="first">Elena</name>
1789        <name type="last">Miranda</name>
1790        </author>, " <title level="a">La comunità giudaica di Hierapolis di
1791    Frigia</title>," <title
1792        level="j">Epigraphica Anatolica</title>
1793        <pubCountry
1794    xmlns="http://www.example.org/ns/nonTEI">Germany</pubCountry><biblScope
1795    type="vol"
1796        >31</biblScope> ( <date>1999</date>): <biblScope type="pp">109-
1797    55</biblScope>, esp.
1798        <biblScope type="pp">148</biblScope> (for funerary fines). </bibl>
1799        </ab>
```

```
1800      </note>
1801      <p>
1802      <ref type="noteSpan" corresp="#note_40">Still, in Asia Minor, whenever
1803  identification is
1804       possible, we find that Jewish tombs are mixed with non-Jewish ones. That is the
1805  case, for
1806       example, at Hierapolis or at Corycus.<ref type="noteLoc"
1807  target="#note_40">40</ref></ref>
1808      <ref type="noteSpan" corresp="#note_41">At Acmonia, the great number of
1809  epitaphs containing
1810       curses against violators of tombs has been used to argue in favour of the
1811  existence of a Jewish
1812       cemetery there.<ref type="noteLoc" target="#note_41">41</ref></ref>
1813      <ref type="noteSpan" corresp="#note_42">As these curses actually refer to
1814  "curses written in
1815       Deuteronomy" or, more generally, to the vengeance of divine justice, they were
1816  unlikely to be
1817       deterrents for non-Jews.<ref type="noteLoc"
1818  target="#note_42">42</ref></ref>
1819      <ref type="noteSpan" corresp="#note_43">However, <pb n="22"/>the curse
1820  was engraved more for its
1821       own performative value than for the fear it would arouse in a tomb violator who
1822  might read
1823       it.<ref type="noteLoc" target="#note_43">43</ref></ref>
1824      </p>
1825      <note xml:id="note_40" place="foot" anchored="true" n="40">
1826      <gi>40. </gi><ab type="citation">
1827       <seg function="contextualization">About Hierapolis, see</seg>
1828       <bibl sourceRole="secondary" contentType="fact" reason="support"
1829  xml:lang="IT"
1830       type="journalArticle" xml:id="bibl_50">
1831       <author>
1832        <name type="first">Tullia</name>
1833        <name type="last">Ritti</name>
1834       </author>, " <title level="a">Nuovi dati su una nota epigrafe sepolcrale con
1835  stefanotico da
1836        Hierapolis di Frigia</title>," <title level="j">Scienze dell'antichità</title>
1837       <pubCountry
1838  xmlns="http://www.example.org/ns/nonTEI">Italy</pubCountry><biblScope
1839  type="vol"
1840        >6-7</biblScope> ( <date>1992-93</date>) <biblScope type="pp">41-
1841  68</biblScope>, esp.
1842       <biblScope type="pp">41-43</biblScope>
1843      </bibl> and <bibl sourceRole="secondary" contentType="fact"
1844  reason="support" xml:lang="IT"
1845       type="journalArticle" corresp="#bibl_49">
1846       <author>
1847        <name type="last">Miranda</name>
1848       </author>, " <title level="a">La comunità giudaica di Hierapolis di
1849  Frigia</title>,"
1850        <biblScope type="pp">146</biblScope> , </bibl>
1851       <seg function="contextualization">which mentions only one case of contiguity
1852  between two Jewish
```

1853   sepultures, while the rest of them are scattered along the road.</seg>
1854   </ab>
1855   <ab type="citation">
1856   <seg function="contextualization">For Corycus, see </seg>
1857   <bibl sourceRole="secondary" contentType="fact" reason="support"
1858 xml:lang="DE" type="corpus"
1859   xml:id="bibl_51">
1860   <editor>
1861   <name type="first">Joseph</name>
1862   <name type="last">Keil</name>
1863   </editor>, ed., <title level="m">Monumenta Asiae Minoris antiqua</title>.
1864 <biblScope
1865   type="vol">3</biblScope>, <title level="a">Denkmäler aus dem rauhen
1866 Kilikien</title>, (
1867   <publisher>Manchester University Press</publisher>
1868   <pubPlace>Manchester</pubPlace>
1869   <pubCountry xmlns="http://www.example.org/ns/nonTEI">United
1870 Kingdom</pubCountry>
1871   <date>1931</date>), <biblScope type="pp">120-22</biblScope> , </bibl>
1872   <seg function="contextualization">where there is a description of the necropolis
1873 along the
1874   coast and a map illustration (<bibl sourceRole="secondary" contentType="fact"
1875 reason="support"
1876   type="corpus" corresp="#bibl_51"><biblScope
1877 type="image">46</biblScope></bibl>). Jewish
1878   inscriptions were found in the three areas arbitrarily designated by the editors as
1879 A, B, and
1880   C. </seg>
1881   </ab>
1882   <ab type="citation">
1883   <seg function="contextualization">See</seg>
1884   <bibl sourceRole="secondary" contentType="fact" reason="support"
1885 xml:lang="EN"
1886   type="journalArticle" xml:id="bibl_52">
1887   <author>
1888   <name type="first">Margaret H.</name>
1889   <name type="last">Williams</name>
1890   </author>, " <title level="a">The Jews of Corycus: A Neglected Diasporan
1891 Community from Roman
1892   Times</title>," <title level="j">Journal for the Study of Judaism</title>
1893   <pubCountry
1894 xmlns="http://www.example.org/ns/nonTEI">Netherlands</pubCountry><biblSco
1895 pe
1896   type="vol">25</biblScope> (<date>1994</date>): <biblScope
1897 type="pp">274-86</biblScope>, esp.
1898   <biblScope type="pp">278</biblScope> and <biblScope type="note">notes
1899 23-24</biblScope>.
1900   </bibl>
1901   </ab>
1902   </note>
1903   <note xml:id="note_41" place="foot" anchored="true" n="41">
1904   <gi>41. </gi><ab type="citation">
1905   <bibl sourceRole="secondary" contentType="opinion" reason="reject"

```
1906   xml:lang="EN"
1907     type="bookSection" xml:id="bibl_53">
1908     <author>
1909      <name type="first">Johan H. M</name>
1910      <name type="last">Strubbe</name>
1911     </author>, " <title level="a">Curses against Violation of the Grave in Jewish
1912   Epitaphs of Asia
1913     Minor</title> in <title level="m">Studies in Early Jewish Epigraphy</title>, ed.
1914   <editor>
1915     <name type="first">Jan Willem</name>
1916     <name type="last">van Henten</name>
1917     </editor>
1918     <editor>
1919      <name type="first">Pieter Willem</name>
1920      <name type="last">van der Horst</name>
1921     </editor>
1922     <series>
1923     <title level="s">Arbeiten zur Geschichte des antiken Judentums und des
1924   Urchristentums</title>
1925      <biblScope type="vol">21</biblScope>
1926     </series> ( <pubPlace>Leiden</pubPlace>: <publisher>Brill</publisher>,
1927   <date>1994</date>)
1928      <pubCountry
1929   xmlns="http://www.example.org/ns/nonTEI">Netherlands</pubCountry>
1930      <biblScope type="pp">101-2</biblScope> ; </bibl>
1931      <seg function="contextualization">this is contra </seg>
1932      <bibl sourceRole="secondary" contentType="opinion" reason="support"
1933   xml:lang="EN" type="book"
1934     corresp="#bibl_45">
1935     <author>
1936      <name type="last">Trebilco</name>
1937     </author>, <title level="m">Jewish Communities in Asia Minor</title>,
1938   <biblScope type="pp"
1939     >227</biblScope>, n. <biblScope type="otherLoc">71</biblScope>. </bibl>
1940     </ab>
1941     <ab type="citation">
1942     <bibl sourceRole="secondary" contentType="opinion" reason="support"
1943   xml:lang="EN"
1944     type="journalArticle" xml:id="bibl_54">
1945     <author>
1946      <name type="first">Margaret H.</name>
1947      <name type="last">Williams</name>
1948     </author>, " <title level="a">The Meaning and Function of Ioudaios in Graeco-
1949   Roman
1950     Inscriptions</title>," <title level="j">Zeitschrift für Papyrologie und
1951   Epigraphik</title>
1952     <pubCountry
1953   xmlns="http://www.example.org/ns/nonTEI">Germany</pubCountry><biblScope
1954   type="vol"
1955     >116</biblScope> ( <date>1997</date>): <biblScope
1956   type="pp">256</biblScope> and n. <biblScope
1957     type="note">69</biblScope>, </bibl>
1958     <seg function="contextualization">stresses the weakness of <bibl
```

```
1959    sourceRole="secondary"
1960       contentType="opinion" reason="support" type="bookSection"
1961    corresp="#bibl_53"><author>
1962       <name type="last">Strubbe</name>
1963       </author></bibl>'s arguments; </seg>we find the same comment in <bibl
1964    sourceRole="secondary"
1965       contentType="opinion" reason="support" xml:lang="EN" type="bookSection"
1966    corresp="#bibl_36">
1967       <author>
1968       <name type="last">Noy</name>, </author>, " <title>Where Were the Jews of
1969    the Diaspora
1970       Buried?</title>" <biblScope type="pp">81</biblScope>, n. <biblScope
1971    type="note"
1972       >30</biblScope>. </bibl>
1973       </ab>
1974       </note>
1975       <note xml:id="note_42" place="foot" anchored="true" n="42">
1976       <gi>42. </gi><ab type="citation">
1977       <bibl sourceRole="secondary" contentType="opinion" reason="reject"
1978    xml:lang="EN" type="book"
1979       corresp="#bibl_45">
1980       <author>
1981       <name type="last">Trebilco</name>
1982       </author>, <title level="m">Jewish Communities in Asia Minor</title>,
1983    <biblScope type="pp"
1984       >67-68</biblScope>, <biblScope type="pp">83</biblScope>, <biblScope
1985    type="pp"
1986       >100</biblScope>, </bibl>
1987       <seg function="contextualization">implies that people in cities like Acmonia had
1988    some knowledge
1989       of Jewish law.</seg>
1990       </ab>
1991       </note>
1992       <note xml:id="note_43" place="foot" anchored="true" n="43">
1993       <gi>43. </gi><ab type="citation">
1994       <seg function="contextualization">This is note in</seg>
1995       <bibl sourceRole="secondary" contentType="opinion" reason="support"
1996    xml:lang="EN"
1997       type="bookSection" corresp="#bibl_53">
1998       <author>
1999       <name type="last">Strubbe</name>
2000       </author>, <title level="a" type="short">Curses</title>, <biblScope
2001    type="pp">100</biblScope>
2002       . </bibl>
2003       </ab>
2004       </note>
2005       <p>
2006       <ref type="noteSpan" corresp="#note_44">Two Jewish inscriptions from Asia
2007    Minor also record
2008       funds bequeathed to associations, but there is no indication that these were
2009    exclusively
2010       Jewish. In one of them, from Hierapolis, P Aelius Glykon gives money to two
2011    associations for
```

2012   the placing of wreaths on his tomb-to the purple dyers for the festival of
2013 Passover, to the
2014   carpet weavers for the festival of Pentecost, and for the Calends.`<ref`
2015 `type="noteLoc"`
2016   `target="#note_44">`44`</ref></ref>`
2017   `<ref type="noteSpan" corresp="#note_45">`In the other, from Acmonia, Aurelius
2018 Aristeas gives land
2019   to a neighborhood association, the neighborhood of the First Gate, "`<q>`on the
2020 condition that
2021   each year they deck with roses the tomb of [his] wife`</q>`".`<ref type="noteLoc"`
2022   `target="#note_45">`45`</ref></ref>` To celebrate the rosalia or to crown tombs
2023 were two
2024   traditional commemorative practices in the Greco-Roman world. `<ref`
2025 `type="noteSpan"`
2026   `corresp="#note_46">`Their adoption by Jews suggests once again a degree of
2027 integration that has
2028   often been denied them and would make little sense if funerary segregation were
2029 the rule.`<ref`
2030   `type="noteLoc" target="#note_46">`46`</ref></ref>`
2031   `</p>`
2032   `<note xml:id="note_44" place="foot" anchored="true" n="44">`
2033   `<gi>`44. `</gi><ab type="citation">`
2034   `<bibl sourceRole="primary" contentType="fact" reason="neither" xml:lang="LA"`
2035 `type="corpus"`
2036   `corresp="#bibl_46">`
2037   `<author>`
2038   `<name type="last">`Frey`</name>`
2039   `</author>`, `<title level="m" type="short">`Corpus inscriptionum
2040 iudaicarum`</title>`, vol.
2041   `<biblScope type="vol">`2`</biblScope>`, no. `<biblScope type="catNo."`
2042   `>`777`</biblScope>`(incomplete); `<seg function="contextualization">`new edition
2043 in `</seg>`
2044   `<relatedItem type="alternative">`
2045   `<bibl sourceRole="secondary" contentType="fact" reason="neither"`
2046 `xml:lang="IT"`
2047   `type="journalArticle" corresp="#bibl_49">`
2048   `<author>`
2049   `<name type="last">`Miranda`</name>`
2050   `</author>`, " `<title level="a">`La comunità giudaica di Hierapolis di
2051 Frigia`</title>`,"
2052   `<biblScope type="pp">`131`</biblScope>`, no. `<biblScope`
2053 `type="catNo.">`23`</biblScope>`, `</bibl>`
2054   `</relatedItem></bibl>`
2055   `<seg function="contextualization">`with a detailed commentary, `<bibl`
2056 `sourceRole="secondary"`
2057   `contentType="fact" reason="support" type="journalArticle"`
2058 `corresp="#bibl_49"><biblScope`
2059   `type="pp">`140-45`</biblScope></bibl>`.`</seg>`
2060   `</ab>`
2061   `<ab type="citation">`
2062   `<seg function="contextualization">`See also`</seg>`
2063   `<bibl sourceRole="secondary" contentType="fact" reason="neither"`
2064 `furtherReading="true"`

```
2065       xml:lang="IT" type="journalArticle" corresp="#bibl_50">
2066        <author>
2067         <name type="last">Ritti</name>
2068        </author>, " <title level="a" type="short">Nuovi dati</title>." </bibl>
2069       </ab>
2070       </note>
2071       <note xml:id="note_45" place="foot" anchored="true" n="45">
2072       <gi>45. </gi><ab type="citation">
2073        <seg function="contextualization">See the text, English translation, and
2074    commentary in </seg>
2075        <bibl sourceRole="secondary" contentType="fact" reason="neither"
2076    xml:lang="EN" type="book"
2077         corresp="#bibl_45">
2078        <author>
2079         <name type="last">Trebilco</name>
2080        </author>, <title level="m">Jewish Communities in Asia Minor</title>,
2081    <biblScope type="pp"
2082         >78-81</biblScope>. </bibl>
2083       </ab>
2084       </note>
2085       <note xml:id="note_46" place="foot" anchored="true" n="46">
2086       <gi>46. </gi><ab type="citation">
2087        <seg function="contextualization">According to <bibl sourceRole="secondary"
2088         contentType="opinion" reason="reject" type="book"
2089    corresp="#bibl_45"><author>
2090         <name type="last">Trebilco</name>
2091        </author></bibl>, the association of the Neighborhood of the First Gate would
2092    be a Jewish
2093       association; as for P Ailios Glykon, he was not Jewish but a "sympathizer." In
2094    both cases, the
2095       arguments are hardly convincing:</seg>
2096       </ab>
2097       <ab type="citation">
2098        <seg function="contextualization">neither is the hypothetical reading of
2099    Aphrodisias's
2100       inscription proposed in </seg>
2101        <bibl sourceRole="secondary" contentType="opinion" reason="reject"
2102    xml:lang="EN"
2103       type="journalArticle" xml:id="bibl_55">
2104        <author>
2105         <name type="first">Margaret H.</name>
2106         <name type="last">Williams</name>
2107        </author>, " <title level="a">The Jews and Godfearers Inscription from
2108    Aphrodisias: A Case of
2109        Patriarcal Interference in Early 3rd Century Caria?</title>" <title level="j"
2110         >Historia</title>
2111        <pubCountry
2112    xmlns="http://www.example.org/ns/nonTEI">Germany</pubCountry><biblScope
2113    type="vol"
2114        >41</biblScope>, no. <biblScope type="issue">3</biblScope> (
2115    <date>1992</date>): <biblScope
2116        type="pp">297-310</biblScope> . </bibl>
2117       </ab>
```

```
2118    </note>
2119    <p>
2120    <ref type="noteSpan" corresp="#note_47">The city of Tukrah, Libya (ancient
2121 Teucheira in
2122    Cyrenaica) provides another interesting example, with a total of 440 inscriptions
2123 drawn mostly
2124    from chamber tombs cut in the sides of ancient quarries located east and west of
2125 the city.
2126    Shimon Applebaum was able to identify as Jewish 109 inscriptions, to which he
2127 added 144 others
2128    from chamber tombs in which other Jews have been identified. That presupposes
2129 that within
2130    anyone chamber, only Jewish graves would be found; there is no reason to think
2131 otherwise.
2132    However, and contrary to the old view, Applebaum can show that if one of these
2133 quarries seems
2134    to have been almost exclusively used as a burial place for Jews, others reveal
2135 almost no Jewish
2136    graves and still others reveal small pockets of Jewish graves among those of
2137 non-Jews.<ref
2138    type="noteLoc" target="#note_47">47</ref></ref>
2139    </p>
2140    <note xml:id="note_47" place="foot" anchored="true" n="47">
2141    <gi>47. </gi><ab type="citation">
2142     <bibl sourceRole="secondary" contentType="fact" reason="support"
2143 xml:lang="EN" type="book"
2144    xml:id="bibl_56">
2145    <author>
2146     <name type="first">Shimon</name>
2147     <name type="last">Applebaum</name>, </author>, <title level="m">Jews
2148 and Greeks in Ancient
2149    Cyrene</title>, <series>
2150    <title level="s">Studies in Judaism in Late Antiquity</title>
2151    <biblScope type="vol">28</biblScope>
2152    </series> ( <pubPlace>Leiden</pubPlace>: <publisher>Brill</publisher>,
2153 <date>1979</date>),
2154    <pubCountry
2155 xmlns="http://www.example.org/ns/nonTEI">Netherlands</pubCountry>
2156    <biblScope type="pp">144-160</biblScope>. </bibl>
2157    </ab>
2158    <ab type="citation">
2159    <seg function="contextualization">See also</seg>
2160    <bibl sourceRole="secondary" contentType="fact" reason="neither"
2161 furtherReading="true"
2162    xml:lang="EN" type="journalArticle" xml:id="bibl_57">
2163    <author>
2164     <name type="first">Shimon</name>
2165     <name type="last">Applebaum</name>
2166    </author>, " <title level="a">The Jewish Community of Hellenistic and Roman
2167 Teucheira in
2168    Cyrenaica</title>," <title level="j">Scripta Hierosolymitana</title>
2169    <pubCountry
2170 xmlns="http://www.example.org/ns/nonTEI">Israel</pubCountry><biblScope
```

```
2171  type="vol"
2172    >7</biblScope> ( <date>1961</date>): <biblScope type="pp">27-
2173  52</biblScope>, esp. <biblScope
2174    type="pp">34-35</biblScope> . </bibl>
2175    </ab>
2176    </note>
2177    <p>
2178    <ref type="noteSpan" corresp="#note_48">As these examples show<ref
2179  type="noteLoc"
2180    target="#note_48">48</ref>, Jews usually buried their dead in the same areas
2181  as pagans and
2182    Christians.</ref> Was that also true in the large cities of the empire? <pb
2183  n="23"/>The larger
2184    and stronger Jewish communities have often been credited in the past with their
2185  own separate
2186    burial places. <ref type="noteSpan" corresp="#note_49">However, the ancient
2187  ''Jewish necropolis"
2188    at Alexandria, found at El Ibrahimiya, seems to have been a place where Jews
2189  and some non-Jews,
2190    somehow connected to each other, were buried together.<ref type="noteLoc"
2191  target="#note_49"
2192    >49</ref></ref>
2193    <ref type="noteSpan" corresp="#note_50">In Carthage, the necropolis of
2194  Gammarth is less
2195    extensive than it was thought to be and includes actually about two hundred
2196  tombs. It thus
2197    cannot be the sole ''Jewish necropolis" of Carthage but simply a small group of
2198  hypogea used by
2199    Jews.<ref type="noteLoc" target="#note_50">50</ref></ref>
2200    </p>
2201    <note xml:id="note_48" place="foot" anchored="true" n="48">
2202    <gi>48. </gi><ab type="citation">
2203    <seg function="contextualization">Note the case of villages in the Golan Desert,
2204  where a mixed
2205    population shared the same burial area; see </seg>
2206    <bibl sourceRole="secondary" contentType="fact" reason="support"
2207  xml:lang="EN"
2208    type="journalArticle" xml:id="bibl_58">
2209    <author>
2210    <name type="first">Robert C.</name>
2211    <name type="last">Gregg</name>
2212    </author>, " <title level="a">Marking Religious and Ethnic Boundaries: Cases
2213  from the Ancient
2214    Golan Heights</title>," <title level="j">Church History</title>
2215    <pubCountry xmlns="http://www.example.org/ns/nonTEI">United
2216  Kingdom</pubCountry><biblScope
2217    type="vol">69</biblScope>, no. <biblScope type="issue">3</biblScope> (
2218  <date>2000</date>):
2219    <biblScope type="pp">519-57</biblScope>, esp. <biblScope type="pp"
2220    >547-548</biblScope>.</bibl>
2221    </ab>
2222    </note>
2223    <note xml:id="note_49" place="foot" anchored="true" n="49">
```

```
2224      <gi>49. </gi><ab type="citation">
2225       <seg function="contextualization">Compare</seg>
2226       <bibl sourceRole="secondary" contentType="fact" reason="support"
2227    xml:lang="EN" type="corpus"
2228        xml:id="bibl_59">
2229        <editor>
2230         <name type="first">William</name>
2231         <name type="last">Horbury</name>
2232        </editor> and <editor>
2233         <name type="first">David</name>
2234         <name type="last">Noy</name>
2235        </editor>, eds., <title level="m">Jewish Inscriptions of Graeco-Roman Egypt:
2236    With an index of
2237         the Jewish Inscriptions of Egypt and Cyrenaica</title>
2238        <pubPlace>Cambridge: </pubPlace>
2239        <publisher>Cambridge University Press</publisher>, <date>1992</date>),
2240    <pubCountry
2241         xmlns="http://www.example.org/ns/nonTEI">United Kingdom</pubCountry>
2242        <biblScope type="pp">4</biblScope>; </bibl>
2243        <seg function="contextualization">against</seg>
2244        <bibl sourceRole="secondary" contentType="opinion" reason="reject"
2245    xml:lang="FR"
2246        type="journalArticle" xml:id="bibl_60">
2247        <author>
2248         <name type="first">Charles Simon</name>
2249         <name type="last">Clermont-Ganneau</name>
2250        </author>, " <title level="a">L'antique nécropole juive d'Alexandrie</title>"
2251    <title level="j"
2252         >Comptes rendus de l'Académie des Inscriptions et Belles-Lettres</title> (
2253        <date>1907</date>): <biblScope type="pp">236-39</biblScope>, <biblScope
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2255         >375-76</biblScope>
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2266        <author>
2267         <name type="first">Alfred Louis</name>
2268         <name type="last">Delattre</name>
2269        </author>, <title level="m">Garmant ou la nécropole juive de Carthage</title>
2270    (
2271        <pubPlace>Lyon: </pubPlace><publisher>Mougin-Rusand</publisher>,
2272        <date>1895</date>);<pubCountry
2273    xmlns="http://www.example.org/ns/nonTEI">France</pubCountry>
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2277        type="journalArticle" xml:id="bibl_62">
2278         <author>
2279          <name type="first">Stéphane</name>
2280          <name type="last">Gsell</name>
2281         </author>, " <title level="a">Chronique archéologique africaine</title>,"
2282     <series>
2283          <title level="j">Mélanges d'archéologie et d'histoire</title>
2284          <biblScope type="vol">15</biblScope>
2285         </series> ( <date>1895</date>): <biblScope
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2287        >Rome</pubPlace><pubCountry
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2289         </bibl>
2290         </ab>
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2296         <author>
2297          <name type="first">Yves</name>
2298          <name type="last">Le Bohec</name>
2299         </author>, " <title level="a">Inscriptions juives et judaïsantes de l'Afrique
2300        romaine</title>," <title level="j">Antiquités africaines</title>
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2309         <seg function="contextualization"><bibl sourceRole="secondary"
2310     contentType="opinion"
2311        reason="reject" type="book" corresp="#bibl_61">
2312         <author>
2313          <name type="last">Delattre</name>
2314         </author></bibl> initially thought that Jews and Christians were buried
2315     together in Gamart
2316        before excluding such theory; see the history of the excavations in </seg>
2317         <bibl sourceRole="secondary" contentType="fact" reason="neither"
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2320         <author>
2321          <name type="first">Erwin R.</name>
2322          <name type="last">Goodenough</name>
2323         </author>, <title level="m">Jewish Symbols in the Greco-Roman
2324     Period</title>, vol. <biblScope
2325        type="vol">2</biblScope>, <title level="a">The Archaeological Evidence from
2326     the
2327         Diaspora</title>
2328         <series>
2329          <title level="s">Bollingen series</title>
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2330        <biblScope type="vol">37</biblScope>
2331      </series> ( <pubPlace>New York</pubPlace>: <publisher>Pantheon
2332    Books</publisher>,
2333        <date>1953</date>), <pubCountry
2334    xmlns="http://www.example.org/ns/nonTEI">United
2335        States</pubCountry>
2336      <biblScope type="pp">63-68</biblScope>. </bibl>
2337      </ab>
2338      <ab type="citation">
2339      <seg function="contextualization">For a very cautious evaluation of the basis
2340    for Jewish burial
2341      groupings in North Africa, see </seg>
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2345      <author>
2346      <name type="first">Karen B.</name>
2347      <name type="last">Stern</name>
2348      </author>, <title level="m">Inscribing Devotion and Death: Archaeological
2349    Evidence for Jewish
2350      Populations of North Africa</title>
2351      <series>
2352      <title level="s">Religions in the Graeco-Roman World</title>
2353      <biblScope type="vol">161</biblScope>
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2355    <date>2008</date>),
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2359      type="pp">259-60</biblScope> and <biblScope type="pp">280-
2360    84</biblScope>. </bibl>
2361      </ab>
2362      </note>
2363      <p>
2364      <ref type="noteSpan" corresp="#note_51">The situation at Rome is both better
2365    documented and more
2366      complex.<ref type="noteLoc" target="#note_51">51</ref></ref>
2367      <ref type="noteSpan" corresp="#note_52">Six Jewish catacombs are known:
2368    the catacomb of
2369      Monteverde, on the Via Portuense, which has yielded the most abundant harvest
2370    of inscriptions
2371      but is now destroyed; the catacomb of the Villa Randanini, situated between the
2372    Via Appia and
2373      the Via Appia Pignatelli; the two catacombs of the Villa Torlonia on the Via
2374    Nomentana; and two
2375      smaller hypogea, that of the Villa Labicana on the route of the same name and
2376    that of the Vigna
2377      Cimarra on the Via Appia.<ref type="noteLoc"
2378    target="#note_52">52</ref></ref> These catacombs
2379      are located in areas where there are also pagan and Christian tombs, but there is
2380    general
2381      agreement that they were used exclusively by Jews. While it is impossible to
2382    prove, there is no
```

```
2383      strong <pb n="24"/>evidence to the contrary. <ref type="noteSpan"
2384    corresp="#note_53">Some
2385      epitaphs use the pagan formula Dis Manibus in its abbreviated form D.M., but
2386    those found in
2387      context are very few. The same reasoning may apply to some tombs with a
2388    pagan decor. Rooms I
2389      and II of the Villa Randanini catacomb are painted with explicitly pagari motifs,
2390    but they
2391      could originally have belonged to an independent hypogeum.<ref
2392    type="noteLoc"
2393      corresp="#note_53">53</ref></ref> That would mean that at Rome, toward
2394    the end of the second
2395      century when these catacombs began to be used, Jews preferred to be buried
2396    together. </p>
2397      <note xml:id="note_51" place="foot" anchored="true" n="51">
2398      <gi>51. </gi><ab type="citation">
2399      <seg function="contextualization">Beside the pioneering study of </seg>
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2401    xml:lang="EN" type="book"
2402      xml:id="bibl_66">
2403      <author>
2404       <name type="first">Harry J.</name>
2405       <name type="last">Leon</name>
2406      </author>, <title level="m">The Jews of Ancient Rome</title>
2407      <edition>1</edition>st ed., <date>1960</date>, updated by <editor>
2408       <name type="first">Carolyn A.</name>
2409       <name type="last">Osiek</name>
2410      </editor> (<pubPlace>Peabody</pubPlace>:
2411    <publisher>Hendrickson</publisher>,
2412      <date>1995</date>), <pubCountry
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2414      States</pubCountry>
2415      </bibl>
2416      <seg function="contextualization">see</seg>
2417      <bibl sourceRole="secondary" contentType="fact" reason="support"
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2419      corresp="#bibl_34">
2420      <author>
2421       <name type="last">Rutgers</name>
2422      </author>, <title level="m" type="short">The Jews of Late Ancient
2423    Rome</title>. </bibl>
2424      </ab>
2425      <ab type="citation">
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2430      <author>
2431       <name type="first">Tessa</name>
2432       <name type="last">Rajak</name>
2433      </author>, " <title level="a">Inscription and Context: Reading the Jewish
2434    Catacombs of
2435       Rome</title>," in <title level="m">Studies in Early Jewish Epigraphy</title>
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2436   ed. <editor>
2437     <name type="first">Jan Willem</name>
2438     <name type="last">van Henten</name>
2439   </editor>and <editor>
2440     <name type="first">Pieter Willem</name>
2441     <name type="last">van der Horst</name>
2442   </editor>, <series>
2443   <title level="s">Arbeiten zur Geschichte des antiken Judentums und des
2444  Urchristentums</title>
2445     <biblScope type="vol">21</biblScope>
2446   </series> (<pubPlace>Leiden</pubPlace>: <publisher>Brill</publisher>,
2447  <date>1994</date>),
2448     <pubCountry
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2456  catacombs, see </seg>
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2463   </author>, " <title level="a">I cimiteri ebraici di Roma</title>," in <title
2464  level="m">Società
2465    romana e impero tardoantico.</title><biblScope type="vol">2</biblScope>,
2466  <title level="a">Le
2467    merci. Gli insediamenti</title>, <editor>
2468    <name type="first">Andrea</name>
2469    <name type="last">Giardina</name>, </editor>
2470   <date rend="false">1986</date>
2471   <pubCountry xmlns="http://www.example.org/ns/nonTEI">Italy</pubCountry>
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2474   </series>
2475   </bibl>
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2479    <author>
2480    <name type="first">Leonard Victor</name>
2481    <name type="last">Rutgers</name>
2482   </author>, " <title level="a">Überlegungen zu den jüdischen Katakomben
2483  Roms</title>," <title
2484    level="j">Jahrbuch für Antike und Christentum</title>
2485    <pubCountry
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2489    57.</biblScope>
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2498      <author>
2499       <name type="first">Leonard Victor</name>
2500       <name type="last">Rutgers</name>
2501      </author>, " <title level="a">Dating the Jewish Catacombs of Ancient
2502    Rome</title>," in idem,
2503       <title level="m">The Hidden Heritage of Diaspora Judaism</title>
2504       (<pubPlace>Leuven</pubPlace>: <publisher>Peeters</publisher>,
2505    <date>1998</date>), <pubCountry
2506      xmlns="http://www.example.org/ns/nonTEI">Belgium</pubCountry>
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2508      </ab>
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2511    xml:lang="EN"
2512      type="bookSection" corresp="#bibl_67">
2513      <author>
2514       <name type="last">Rajak</name>
2515      </author>, " <title level="a" type="short">Inscription and Context</title>,"
2516    <biblScope
2517      type="pp">228-30</biblScope> , </bibl>" <seg
2518    function="contextualization">insists on the very
2519      limited knowledge we have of these catacombs.</seg>
2520      </ab>
2521      </note>
2522      <note xml:id="note_53" place="foot" anchored="true" n="53">
2523      <gi>53. </gi><ab type="citation">
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2525      <bibl sourceRole="secondary" contentType="fact" reason="neither"
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2527      corresp="#bibl_34">
2528      <author>
2529       <name type="last">Rutgers</name>
2530      </author>, <title level="m" type="short">The Jews of Late Ancient
2531    Rome</title>, <biblScope
2532      type="pp">269-72</biblScope>, <seg function="contextualization">for the
2533    formula Dis
2534      Manibus;</seg>
2535      <biblScope type="pp">77-81</biblScope>, <seg
2536    function="contextualization">for sarcophagi;
2537      </seg>and <biblScope type="pp">53-55</biblScope>, <seg
2538    function="contextualization">for rooms
2539      I and II in Villa Randanini.</seg></bibl>
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2541      <ab type="citation">
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2542        <bibl sourceRole="secondary" contentType="opinion" reason="reject"
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2546      <name type="last">Rajak</name>
2547     </author>, " <title level="a" type="short">Inscription and Context</title>,"
2548   <biblScope
2549      type="pp">239</biblScope> , </bibl>
2550     <seg function="contextualization">decides to leave the question open. </seg>
2551     </ab>
2552     </note>
2553     <p>
2554     <ref type="noteSpan" corresp="#note_54">Harry J. Leon posited that the choice
2555   of a catacomb for
2556     burial was determined by membership in a particular synagogue.<ref
2557   type="noteLoc"
2558     target="#note_54">54</ref></ref>
2559     <ref type="noteSpan" corresp="#note_55">However, Margaret H. Williams has
2560   recently shown that
2561     there was only one case of a synagogue of which all known members were
2562   buried in the same
2563     catacomb, and that the members of at least three synagogues used several
2564   catacombs.<ref
2565     type="noteLoc" target="#note_55">55</ref></ref>
2566     <ref type="noteSpan" corresp="#note_56">Moreover, there are no inscriptions
2567   attributing a role
2568     in the choice or assignment of a tomb to any synagogue. Inscriptions mention a
2569   synagogue only
2570     to indicate that the dedicatee held an office there. It is therefore unlikely that
2571   membership
2572     in a synagogue determined the choice of burial site; it is even more difficult to
2573   imagine a
2574     centralized system.<ref type="noteLoc" target="#note_56">56</ref></ref>
2575     </p>
2576     <note xml:id="note_54" place="foot" anchored="true" n="54">
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2580     corresp="#bibl_66">
2581     <author>
2582      <name type="last">Leon</name>
2583     </author>, <title level="m">The Jews of Ancient Rome</title>, <biblScope
2584   type="pp"
2585     >54</biblScope>, and chap. <biblScope type="chap">7, passim.</biblScope>
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2595        <name type="last">Williams</name>
2596       </author>, " <title level="a" type="short">The Organization of Jewish
2597   Burials</title>,"
2598         <biblScope type="pp">165-70</biblScope> . </bibl>
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2605       type="journalArticle" corresp="#bibl_71"> Ibid., <biblScope type="pp">179-
2606   81</biblScope> .
2607        </bibl>
2608       </ab>
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2611       <bibl sourceRole="secondary" contentType="opinion" reason="support"
2612   furtherReading="true"
2613        xml:lang="EN" type="bookSection" corresp="#bibl_36">
2614        <author>
2615         <name type="last">Noy</name>
2616       </author>, " <title level="a">Where Were the Jews of the Diaspora
2617   Buried?</title>" <biblScope
2618        type="pp">87</biblScope> . </bibl>
2619       </ab>
2620       </note>
2621       <p>
2622      <ref type="noteSpan" corresp="#note_57">Williams offers the hypothesis that
2623   Jews, like their
2624        pagan contemporaries, bought their tombs from funerary merchants who built
2625   these underground
2626        burial grounds at their own expense, then sold them in parcels consisting of
2627   large or small
2628        burial chambers, or of simple tombs.<ref type="noteLoc"
2629   target="#note_57">57</ref></ref>
2630      <ref type="noteSpan" corresp="#note_58">This may in fact be how the
2631   catacombs of Beth She'Arim
2632        in Palestine were organized. The city is set on a plateau; into its slopes were dug
2633   the
2634        catacombs, used mainly in the third and fourth centuries. In general, a hallway
2635   descends to the
2636        heart of the hill, pierced by entryways into halls that consist of one or two
2637   connecting burial
2638        chambers. Numerous inscriptions preserved in situ give us a fairly precise idea
2639   about the
2640        organization of the space. These inscriptions are generally deeds of ownership:
2641   Aidesius, an
2642        official of Antioch, owned-in hall B of catacomb 12-chamber iv that contains, an
2643   inscription
2644        tells us, six places; hall C of catacomb I was entirely owned by one Thymus;
2645   another burial
2646        chamber was jointly owned by four people. No inscription ever mentions the act
2647   of purchase
```

2648   itself. The only indication about the role of a funerary enterprise is an inscription
2649   discovered in the synagogue that was meant to `<pb n="25"/>`mark the benches
2650 of two people who
2651   were responsible for preparing and placing the body.`<ref type="noteLoc"`
2652 `target="#note_58"`
2653   `>58</ref></ref>`
2654   `<ref type="noteSpan" corresp="#note_59">`In Rome, however, no Jewish
2655 inscriptions mention the
2656   sale of a tomb or its title deed in any way that attests to the intervention of a
2657 funerary
2658   trade. In general, very little is known of these funeral consortia.`<ref`
2659 `type="noteLoc"`
2660   `target="#note_59">59</ref></ref>`
2661   `</p>`
2662   `<note xml:id="note_57" place="foot" anchored="true" n="57">`
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2667   `<author>`
2668   `<name type="last">`Williams`</name>`
2669   `</author>`, " `<title level="a" type="short">`The Organization of Jewish
2670 Burials`</title>`,"
2671   `<biblScope type="pp">`181-82`</biblScope>.</bibl>`
2672   `</ab>`
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2674   `<note xml:id="note_58" place="foot" anchored="true" n="58">`
2675   `<gi>`58. `</gi><ab type="citation">`
2676   `<seg function="contextualization">`Important precision is brought in `</seg>`
2677   `<bibl sourceRole="secondary" contentType="fact" reason="support"`
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2680   `<author>`
2681   `<name type="first">`Tessa`</name>`
2682   `<name type="last">`Rajak`</name>`
2683   `</author>`, " `<title level="a">`The Rabbinic Dead and the Diaspora Dead at Beth
2684   She'arim`</title>`," in `<title level="m">`The Talmud Yerushalmi and Graeco-
2685 Roman culture`</title>`,
2686   ed. `<editor>`
2687   `<name type="first">`Peter`</name>`
2688   `<name type="last">`Schafer`</name>`
2689   `</editor>`, `<series>`
2690   `<title level="s">`Texte und Studien zum Antiken Judentum`</title>`
2691   `<biblScope type="vol">`71`</biblScope>`
2692   `</series>` (`<pubPlace>`Tübingen`</pubPlace>`: `<publisher>`Mohr
2693 Siebeck`</publisher>`,
2694   `<date>`1998`</date>`), `<pubCountry`
2695 `xmlns="http://www.example.org/ns/nonTEI">`Germany`</pubCountry>`
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2698   `<ab type="citation">`
2699   `<seg function="contextualization">`For excavations and inscriptions, see`</seg>`
2700   `<bibl sourceRole="secondary" contentType="fact" reason="neither"`

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2706      </editor>, ed., <title>Beth She'arim</title>, vol. <biblScope
2707    type="vol">1</biblScope>, <title
2708       type="sub">Catacombs 1-4 </title>( <publisher>Massada</publisher>,
2709       <pubPlace>Jerusalem</pubPlace>: <pubCountry
2710    xmlns="http://www.example.org/ns/nonTEI"
2711       >Israel</pubCountry>
2712       <date>1973</date>); </bibl>
2713       <bibl sourceRole="secondary" contentType="fact" reason="neither"
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2716       <editor>
2717       <name type="first">Moshe</name>
2718       <name type="last">Schwabe</name>
2719      </editor> and <editor>
2720       <name type="first">Baruch</name>
2721       <name type="last">Lifschitz</name>
2722      </editor>, eds., <title level="m">Beth She'arim</title>, vol. <biblScope
2723    type="vol"
2724       >2</biblScope>, <title type="sub">The Greek
2725       Inscriptions</title>(<pubPlace>Jerusalem</pubPlace>:
2726    <publisher>Massada</publisher>,
2727       <date>1974</date>); <pubCountry
2728    xmlns="http://www.example.org/ns/nonTEI">Israel</pubCountry>
2729       </bibl> and <bibl sourceRole="secondary" contentType="fact" reason="neither"
2730    xml:lang="EN"
2731       type="book" xml:id="bibl_75">
2732       <editor>
2733       <name type="first">Nachman</name>
2734       <name type="last">Avigad</name>
2735      </editor>, ed., <title level="m">Beth She'arim</title>, vol. <biblScope
2736    type="vol"
2737       >3</biblScope>, <title type="sub">The Archaeological Excavations during
2738    1953-1958: The
2739       Catacombs 12-13</title>( <pubPlace>Brunswick, NJ</pubPlace>:
2740    <publisher>Rutgers University
2741       Press</publisher>, <date>1976</date>). <pubCountry
2742    xmlns="http://www.example.org/ns/nonTEI"
2743       >United States</pubCountry>
2744       </bibl>
2745      </ab>
2746      <ab type="citation">
2747       <seg function="contextualization">The inscriptions referred to are </seg>
2748       <bibl sourceRole="primary" contentType="fact" reason="neither"
2749    xml:lang="EN" type="book"
2750       corresp="#bibl_74">
2751       <title>Beth She'arim</title>, vol. <biblScope type="vol">2</biblScope>, nos.
2752    <biblScope
2753       type="catNo.">141-43</biblScope>, <biblScope
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2754   type="catNo.">11</biblScope>, <biblScope
2755      type="catNo.">83</biblScope>, and <biblScope
2756   type="catNo.">202</biblScope> respectively .
2757      </bibl>
2758      </ab>
2759      </note>
2760      <note xml:id="note_59" place="foot" anchored="true" n="59">
2761      <gi>59. </gi><ab type="citation">
2762      <bibl sourceRole="secondary" contentType="opinion" reason="neither"
2763   xml:lang="EN" type="book"
2764      xml:id="bibl_76">
2765      <author>
2766      <name type="first">Susan D.</name>
2767      <name type="last">Martin</name>
2768      </author>, <title level="m">The Roman Jurists and the Organization of Private
2769   Building in the
2770      Late Republic and the Early Empire</title>, <series>
2771      <title level="s">Collection Latomus</title>
2772      <biblScope type="vol">204</biblScope>
2773      </series> ( <publisher>Latomus</publisher>,
2774   <pubPlace>Brussels</pubPlace>: <pubCountry
2775      xmlns="http://www.example.org/ns/nonTEI">Belgium</pubCountry>
2776      <date>1989</date>), <biblScope type="pp">48-49</biblScope> , </bibl>
2777      <seg function="contextualization">assumes on the basis of <bibl
2778   sourceRole="primary"
2779      contentType="fact" reason="neither" type="codex" xml:id="bibl_77"
2780   xml:lang="LA"><title
2781      level="a">Digesta</title><editor rend="false"><name
2782   type="first">Alan</name><name
2783       type="last">Watson</name></editor><date
2784   rend="false">1985</date><pubCountry
2785      xmlns="http://www.example.org/ns/nonTEI">United States</pubCountry>
2786      <biblScope type="otherLoc">17.2.52.7</biblScope></bibl> that there were
2787   small businesses
2788      specializing in the development of land for resale as tombs. </seg>
2789      </ab>
2790      <ab type="citation">
2791      <seg function="contextualization">On the sale of tombs and loculi in
2792   columbaria, see </seg>
2793      <bibl sourceRole="secondary" contentType="fact" reason="neither"
2794   furtherReading="true"
2795      xml:lang="DE" type="book" xml:id="bibl_78">
2796      <author>
2797      <name type="first">Stefan</name>
2798      <name type="last">Schrumpf</name>
2799      </author>, <title level="m">Bestattung und Bestattungswesen im Römischen
2800   Reich : Ablauf,
2801       soziale Dimension und ökonomische Bedeutung der Totenfürsorge im
2802   lateinischen Westen</title>
2803      ( <pubPlace>Cottingen</pubPlace>: <publisher>Bonn University
2804   Press</publisher>,
2805      <date>2006</date>), <pubCountry
2806   xmlns="http://www.example.org/ns/nonTEI">Germany</pubCountry>
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2807        <biblScope type="pp">202-10</biblScope>. </bibl>
2808        </ab>
2809        </note>
2810        <p> According to the traditional view, the fact that Jews were buried among Jews
2811    was not even
2812       open to discussion: the synagogue was held to be responsible for the
2813    organization of the burial
2814       of Jews. <ref type="noteSpan" corresp="#note_60">According to <note
2815    xml:id="note_60"
2816        place="in-line"><bibl sourceRole="secondary" contentType="opinion"
2817    reason="neither"
2818         xml:lang="EN" type="journalArticle" corresp="#bibl_71"><author><name
2819    type="last"
2820          >Williams</name></author></bibl></note>'s view, the question has to be
2821    framed differently:
2822       Why did Jews choose to be buried among Jews if they were buying their tombs
2823    from consortia?
2824       Does the answer imply that the consortia themselves were Jewish?</ref>
2825       </p>
2826       <p>
2827       <ref type="noteSpan" corresp="#note_61">At the beginning of the twentieth
2828    century, Jean Juster
2829        held that "religious segregation of the dead" was characteristic of Jews. The only
2830        justification given to support this statement were a few imniptiom whose
2831    wording finds numerous
2832        parallels in both Christian and pagan inscriptions relating to ius sepulchri and not
2833    "religious
2834        segregation."<ref type="noteLoc" target="#note_61">60</ref></ref>
2835       <ref type="noteSpan" corresp="#note_62">In rabbinical teaching, there are no
2836    rules about the
2837        separation of Jews and non-Jews in burial. Semahot, a treatise that seems to
2838    have been
2839        published in the third century and entirely dedicated to burial and mourning,
2840    contains no such
2841        proscription. At most, it prescribes that "<q>for pagans or slaves,no rite shall be
2842    observed,
2843        but [that] there shall be an expression of mouming</q>"<ref type="noteLoc"
2844    target="#note_62"
2845         >61</ref></ref>. <ref type="noteSpan" corresp="#note_63">The issue is
2846    about adopting no ritual
2847        signs of mourning and not about refusing burial to a non-Jew. In addition, the
2848    Tosefta (third
2849        and fourth centuries) and the Jerusalem Talmud (fifth <pb n="26"/>century)
2850    recommend that in
2851        cities where Jews live in the midst of pagans they should take care to bury the
2852    poor whether
2853        Jewish or not, but give no detail about the place of burial.<ref type="noteLoc"
2854        target="#note_63">62</ref></ref>
2855       <ref type="noteSpan" corresp="#note_64">No impurity seems to have been
2856    attached to the tombs of
2857        gentiles, either; their homes, however, could be a source of impurity as aborted
2858    fetuses could
2859        be buried nearby.<ref type="noteLoc" target="#note_64">63</ref></ref>
```

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2860      <ref type="noteSpan" corresp="#note_65">In a discussion about the Sabbath, it
2861  seems that if a
2862      gentile dug a tomb for a Jew on the Sabbath, the Jew could not use it, but if the
2863  tomb were dug
2864      for a gentile, a Jew could use it.<ref type="noteLoc"
2865  target="#note_65">64</ref></ref>
2866      <ref type="noteSpan" corresp="#note_66">Thus a Jew could not require a
2867  gentile to work for him
2868      on the Sabbath, but nothing would stop a Jew from being buried in a tomb
2869  intended for a
2870      gentile. Even though the Mishna and the Tosefta cannot be used as documents
2871  relating directly
2872      to the relations between Jews and non-Jews<ref type="noteLoc"
2873  target="#note_66">65</ref></ref>,
2874      <ref type="noteSpan" corresp="#note_67">there is every indication that
2875  segregation in burial
2876      was not the rule.<ref type="noteLoc" target="#note_67">66</ref></ref>
2877      </p>
2878      <note xml:id="note_61" place="foot" anchored="true" n="60">
2879      <gi>60. </gi><ab type="citation">
2880      <bibl sourceRole="secondary" contentType="opinion" reason="reject"
2881  xml:lang="FR" type="book"
2882      xml:id="bibl_79">
2883      <author>
2884       <name type="first">Jean</name>
2885       <name type="last">Juster</name>
2886      </author> , <title level="m">Les juifs dans l'Empire romain: leur condition
2887  juridique,
2888      économique et sociale</title> , vol.<biblScope type="vol">1</biblScope>
2889      (<pubPlace>Paris</pubPlace>: <publisher>Geuthner</publisher>,
2890  <date>1914</date>), <pubCountry
2891      xmlns="http://www.example.org/ns/nonTEI">France</pubCountry>
2892      <biblScope type="pp">480</biblScope>, and n. <biblScope
2893  type="note">4</biblScope>
2894      <seg function="contextualization"> which cites the three following inscriptions:
2895  </seg>
2896      <relatedItem type="cited">
2897      <bibl sourceRole="primary" contentType="fact" xml:lang="EN" type="corpus"
2898  reason="neither"
2899      corresp="#bibl_44">
2900      <author>
2901       <name type="last">Noy</name>
2902      </author>, <title level="m">Jewish Inscriptions of Western Europe</title>,
2903  vol. <biblScope
2904      type="vol">2</biblScope>, no. <biblScope type="catNo.">378</biblScope>
2905  = <relatedItem
2906      type="alternative">
2907      <bibl sourceRole="primary" contentType="fact" xml:lang="LA" type="corpus"
2908  reason="neither"
2909      corresp="#bibl_46">
2910      <author>
2911       <name type="last">Frey</name>
2912      </author>
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2913        <title level="m" type="short">Corpus inscriptionum iudaicarum</title>, vol.
2914   <biblScope
2915        type="vol">1</biblScope>, no. <biblScope type="catNo.">220</biblScope>
2916        </bibl>
2917       </relatedItem>
2918       <seg function="contextualization"> where a wife chooses a loculus next to her
2919        husband's;</seg>
2920        </bibl>
2921      </relatedItem>
2922      <relatedItem type="cited">
2923       <bibl sourceRole="primary" contentType="fact" xml:lang="LA" type="corpus"
2924   reason="neither"
2925        corresp="#bibl_47">
2926       <title level="m">Tituli Asiae minoris</title>. <biblScope type="vol">2,
2927   2</biblScope>, no.
2928        <biblScope type="catNo.">612</biblScope> = <relatedItem
2929   type="alternative">
2930        <bibl sourceRole="primary" contentType="fact" xml:lang="LA" type="corpus"
2931        corresp="#bibl_46" reason="neither">
2932        <author>
2933         <name type="last">Frey</name>
2934        </author>
2935        <title level="m" type="short">Corpus inscriptionum iudaicarum</title>, vol.
2936   <biblScope
2937        type="vol">2</biblScope>, no. <biblScope type="catNo.">757</biblScope>
2938        </bibl>
2939        </relatedItem>, <seg function="contextualization">where a funerary
2940   monument is given to the
2941        Jews of Tlos;</seg>
2942        </bibl>
2943      </relatedItem>
2944      <relatedItem type="cited">
2945       <bibl sourceRole="primary" contentType="fact" xml:lang="LA" type="corpus"
2946   reason="neither"
2947        corresp="#bibl_25">
2948       <title level="m"><abbr>CIL</abbr><expan>Corpus Inscriptionum
2949   Latinarum</expan></title>
2950        <biblScope type="vol">6</biblScope>. <biblScope
2951   type="catNo.">10412</biblScope>, <seg
2952        function="contextualization">which is no longer identified as Jewish.</seg>
2953        </bibl>
2954      </relatedItem>
2955      </bibl>
2956     </ab>
2957     </note>
2958     <note xml:id="note_62" place="foot" anchored="true" n="61">
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2960      <bibl sourceRole="primary" contentType="fact" reason="neither"
2961   xml:lang="HE" type="other"
2962     xml:id="bibl_133">
2963     <title>Semahot</title>
2964     <biblScope type="otherLoc">1.9.</biblScope>
2965     </bibl>
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2966        <seg function="contextualization">See </seg>
2967        <bibl sourceRole="primary" contentType="fact" reason="support"
2968    xml:lang="EN"
2969      type="scholarlyEdition" xml:id="bibl_134">
2970      <editor>
2971       <name type="first">Dov</name>
2972       <name type="last">Zlotnick</name>
2973      </editor>, <title level="m">The Tractate "Mourning": (Semahot)</title>: (
2974    <title level="m"
2975      type="sub">Regulations Relating to Death, Burial and Mourning</title>),
2976    <series>
2977      <title level="s">Yale Judaica Series</title>
2978      <biblScope type="vol">17</biblScope>
2979      </series> ( <publisher>Yale University Press</publisher>, <pubPlace>New
2980    Haven, CT</pubPlace>:
2981       <pubCountry xmlns="http://www.example.org/ns/nonTEI">United
2982    States</pubCountry>
2983      <date>1996</date>).</bibl>
2984      </ab>
2985      </note>
2986      <note xml:id="note_63" place="foot" anchored="true" n="62">
2987      <gi>62. </gi><ab type="citation">
2988      <bibl sourceRole="primary" contentType="fact" reason="neither"
2989    xml:lang="HE" type="other"
2990      xml:id="bibl_80">
2991      <title level="m">Tosefta</title>. <biblScope type="otherLoc">Gittin
2992    5.5</biblScope>; </bibl>
2993      <bibl sourceRole="primary" contentType="fact" reason="neither"
2994    xml:lang="HE" type="other"
2995      xml:id="bibl_81">
2996      <title level="m">Jerusalem Talmud</title>. <biblScope
2997    type="otherLoc">Demai 1.4</biblScope>;
2998      </bibl> and <bibl sourceRole="primary" contentType="fact" reason="neither"
2999    xml:lang="HE"
3000      type="other" corresp="#bibl_81">
3001      <title level="m">Jerusalem Talmud</title>. <biblScope type="otherLoc">Aboda
3002    zora
3003       1.3</biblScope>. </bibl>
3004      </ab>
3005      <ab type="citation">
3006      <seg function="contextualization">See</seg>
3007      <bibl sourceRole="primary" contentType="fact" reason="support"
3008    xml:lang="HE" type="other"
3009      xml:id="bibl_82">
3010      <title level="m">Babylonian Talmud</title>. <biblScope type="otherLoc">Gittin
3011    61a</biblScope>, </bibl>
3012      <seg function="contextualization">where no burial place is indicated
3013    either</seg></ab>
3014      <ab type="citation">(contra <bibl sourceRole="secondary" contentType="fact"
3015    reason="reject"
3016      xml:lang="EN" type="journalArticle" corresp="#bibl_33">
3017      <author>
3018       <name type="last">Rutgers</name>
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3019        </author>, " <title level="a" type="short">Archaeological Evidence</title>,"
3020    <biblScope
3021        type="pp">114</biblScope>
3022        </bibl>). </ab>
3023        </note>
3024        <note xml:id="note_64" place="foot" anchored="true" n="63">
3025        <gi>63. </gi><ab type="citation">
3026        <bibl sourceRole="primary" contentType="fact" reason="neither"
3027    xml:lang="HE" type="other"
3028        xml:id="bibl_83">
3029        <title level="m">Michna</title>. <biblScope type="otherLoc">Ohalot 18.7-
3030    8</biblScope> . </bibl>
3031        <seg function="contextualization">See</seg>
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3033    xml:lang="EN" type="book"
3034        xml:id="bibl_84">
3035        <editor>
3036        <name type="first">Jacob</name>
3037        <name type="last">Neusner</name>
3038        </editor>, <title level="m">A History of the Mishnaic Law of Purity</title>, vol.
3039    <biblScope
3040        type="vol">4</biblScope>, <title level="a">Ohalot: Commentary</title>,
3041    <series>
3042        <title level="s">Studies in Judaism in Late Antiquity</title>
3043        <biblScope type="vol">6 no.4</biblScope>, </series>
3044    (<pubPlace>Leiden</pubPlace>:
3045        <publisher>Brill</publisher>, <date>1974</date>), <pubCountry
3046        xmlns="http://www.example.org/ns/nonTEI">Netherlands</pubCountry>
3047        <biblScope type="pp">340-41</biblScope> ; </bibl>
3048        </ab>
3049        <ab type="citation">
3050        <bibl sourceRole="secondary" contentType="fact" reason="neither"
3051    xml:lang="EN" type="book"
3052        xml:id="bibl_85">
3053        <author>
3054        <name type="first">Gary G.</name>
3055        <name type="last">Porton</name>
3056        </author>, <title level="m">Goyim: Gentiles and Israelites in Mishnah-
3057    Tosefta</title>, <series>
3058        <title level="s">Brown Judaic studies</title>
3059        <biblScope type="vol">155</biblScope>
3060        </series> (<pubPlace>Atlanta</pubPlace>: <publisher>Scholars
3061    Press</publisher>,
3062        <date>1988</date>), <pubCountry
3063    xmlns="http://www.example.org/ns/nonTEI">United
3064        States</pubCountry>
3065        <biblScope type="pp">16-17</biblScope>, <biblScope
3066    type="pp">274</biblScope>. </bibl>
3067        </ab>
3068        </note>
3069        <note xml:id="note_65" place="foot" anchored="true" n="64">
3070        <gi>64. </gi><ab type="citation">
3071        <bibl sourceRole="primary" contentType="fact" reason="neither"
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3072   xml:lang="HE" type="other"
3073     corresp="#bibl_83">
3074     <title level="m">Michna</title>. <biblScope type="otherLoc">Shabbat
3075   23.4</biblScope></bibl>,
3076     and <bibl sourceRole="primary" contentType="fact" reason="neither"
3077   xml:lang="HE" type="other"
3078     corresp="#bibl_80">
3079     <title level="m">Tosefta</title>. <biblScope type="otherLoc">Shabbat
3080     17.14-15</biblScope>.</bibl>
3081     <seg function="contextualization">See</seg>
3082     <bibl sourceRole="secondary" contentType="opinion" reason="neither"
3083   xml:lang="EN"
3084     type="scholarlyEdition" xml:id="bibl_137">
3085     <author>
3086      <name type="first">Jacob</name>
3087      <name type="last">Neusner</name>
3088     </author>, <title level="m">A History of the Mishnaic Law of Appointed
3089   Times</title>, vol.
3090     <biblScope type="vol">1</biblScope>, <title level="a">Shabbat: Translation
3091   and
3092     Explanation</title>, <series>
3093     <title level="s">Studies in Judaism in Late Antiquity</title>
3094     <biblScope type="vol">34, no. 1</biblScope>
3095     </series> (<pubPlace>Leiden</pubPlace>: <publisher>Brill</publisher>,
3096   <date>1981</date>),
3097     <pubCountry
3098   xmlns="http://www.example.org/ns/nonTEI">Netherlands</pubCountry>
3099     <biblScope type="pp">200-201</biblScope> ; </bibl>
3100     <bibl sourceRole="secondary" contentType="opinion" reason="neither"
3101   xml:lang="EN" type="book"
3102     corresp="#bibl_85">
3103     <author>
3104      <name type="last">Porton</name>
3105     </author>, <title level="m" type="short">Goyim</title>, <biblScope type="pp"
3106     >28-29</biblScope>, <biblScope type="pp">208</biblScope>. </bibl>
3107     </ab>
3108     </note>
3109     <note xml:id="note_66" place="foot" anchored="true" n="65">
3110     <gi>65. </gi><ab type="citation">
3111     <seg function="contextualization">See the important methodological points in
3112   </seg>
3113     <bibl sourceRole="secondary" contentType="opinion" reason="support"
3114   xml:lang="EN" type="book"
3115     corresp="#bibl_85">
3116     <author>
3117      <name type="last">Porton</name>
3118     </author>, <title level="m" type="short">Goyim</title>, <biblScope
3119   type="pp">4-5</biblScope>.
3120     </bibl>
3121     </ab>
3122     </note>
3123     <note xml:id="note_67" place="foot" anchored="true" n="66">
3124     <gi>66. </gi><ab type="citation">
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3125        <bibl sourceRole="secondary" contentType="opinion" reason="reject"
3126    type="review" xml:lang="EN"
3127      xml:id="bibl_86">
3128      <author>
3129       <name type="first">Leonard V.</name>
3130       <name type="last">Rutgers</name>
3131      </author>, in <seg function="indirectCitation"><title level="a"
3132    rend="false">Éric Rebillard,
3133        Religion et sépulture. L'Église, les vivants et les morts dans l'Antiquité
3134    tardive</title>a
3135        review of the French version of this book</seg>, states that"the sources do not
3136    forbid
3137      explicitly the burying together of Jews and non-Jews simply because it was self-
3138    evident from
3139      the beginning that this was not normal procedure" ( <title level="j">Vigiliae
3140      Christianae</title>
3141      <pubCountry
3142    xmlns="http://www.example.org/ns/nonTEI">Netherlands</pubCountry><biblSco
3143    pe
3144      type="vol">59</biblScope>, no.<biblScope type="issue"> 2</biblScope>
3145    [<date>2005</date>]:
3146        <biblScope type="pp">214</biblScope>. </bibl>
3147      </ab>
3148      <ab type="authorIntervention">This is the kind of assumption I am challenging
3149    in this book.</ab>
3150      </note>
3151      <p> Ultimately, the choice of a tomb seems to have been a family matter, as it is
3152    taught in the
3153      Old Testament. <ref type="noteSpan" corresp="#note_68">The purchase of the
3154    Tomb of the
3155       Patriarchs by Abraham at Hebron <note xml:id="note_68" place="in-
3156    line">(<bibl
3157       sourceRole="primary" contentType="fact" reason="support" type="other"
3158    xml:lang="HE"
3159       xml:id="bibl_125"><title level="a"><abbr>Gen.</abbr><expan>Book of
3160       Genesis</expan></title><title level="m" rend="false">Bible</title>
3161       <biblScope type="otherLoc">23</biblScope></bibl>)</note> is an important
3162    model, and the
3163      desirability of possessing a family tomb for the burial of the dead is a recurring
3164    theme in the
3165       Old Testament.</ref>
3166      <ref type="noteSpan" corresp="#note_69">This is Jacob's wish in <note
3167    xml:id="note_69"
3168       place="in-line"><bibl sourceRole="primary" contentType="fact"
3169    reason="support" type="other"
3170       xml:lang="HE" corresp="#bibl_125"><title level="a">Book of
3171    Genesis</title><title level="m"
3172       rend="false">Bible</title>
3173       <biblScope type="otherLoc">49:29-31</biblScope></bibl></note>: that he
3174    be buried with his
3175      fathers, where he himself buried his wife Leah, in the field where Abraham and
3176    Sarah as well as
3177       Isaac and Rebecca lie buried.</ref>
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3178    <ref type="noteSpan" corresp="#note_70">Joseph makes his family promise to
3179  take his body back to
3180    the land of Abraham when they are able to do so <note xml:id="note_70"
3181  place="in-line">(<bibl
3182    sourceRole="primary" contentType="fact" reason="support" type="other"
3183  xml:lang="HE"
3184    corresp="#bibl_125"><title level="a"><abbr>Gen.</abbr><expan
3185  rend="false">Book of
3186    Genesis</expan></title>
3187    <title level="m" rend="false">Bible</title><biblScope type="otherLoc"
3188    >50:25</biblScope></bibl>)</note>.</ref>
3189    <ref type="noteSpan" corresp="#note_71">Gideon and Samson also were
3190  buried in their fathers'
3191    tombs <note xml:id="note_71" place="in-line">(<bibl sourceRole="primary"
3192  contentType="fact"
3193    reason="support" type="other" xml:lang="HE" xml:id="bibl_126"><title
3194  level="a"
3195    ><abbr>Judg.</abbr>
3196    <expan>Book of Judges</expan></title><title level="m"
3197  rend="false">Bible</title>
3198    <biblScope type="otherLoc">8:32</biblScope> and <biblScope
3199  type="otherLoc"
3200    >16:31</biblScope></bibl>)</note>.</ref>
3201    <ref type="noteSpan" corresp="#note_72">David gathers the bones of Saul, of
3202  his son Jonathan,
3203    and of the seven hanged men, in the tomb of Kish, Saul's father <note
3204  xml:id="note_72"
3205    place="in-line">(<bibl sourceRole="primary" contentType="fact"
3206  reason="support" type="other"
3207    xml:lang="HE" xml:id="bibl_127"><title level="a"><abbr>2
3208  Sam</abbr><expan>Second Book of
3209    Samuel</expan></title><title level="m" rend="false">Bible</title>,
3210  <biblScope
3211    type="otherLoc">21:12-14</biblScope></bibl>)</note>.</ref>
3212    </p>
3213    <p> Thus, there was no specific religious ruling about the choice of a tomb; the
3214  model is simply
3215    that of family buriaL Moreover, it should be noted that, for Jews, contrasting
3216  family and
3217    community did not have the same significance <pb n="27"/>as for followers of
3218  the cults of
3219    Mithras or of Isis; burial with family and burial among Jews were one and the
3220  same thing. <ref
3221    type="noteSpan" corresp="#note_73">How then are we to explain the
3222  groupings of family tombs in
3223    the same catacombs at Rome? Was it a desire to distinguish themselves from
3224  non-Jews?<ref
3225    type="noteLoc" target="#note_73">67</ref></ref> That seems to be
3226  contradicted by the absence
3227    of parallels, elsewhere, in Jewish communities of the Diaspora. <ref
3228  type="noteSpan"
3229    corresp="#note_74">But the size of the city might explain different social
3230  practices.<ref
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3231        type="noteLoc" target="#note_74">68</ref></ref>
3232      </p>
3233      <note xml:id="note_73" place="foot" anchored="true" n="67">
3234      <gi>67. </gi><ab type="citation">
3235       <bibl sourceRole="secondary" contentType="opinion" reason="neither"
3236    xml:lang="EN"
3237       type="bookSection" corresp="#bibl_36">
3238        <author>
3239         <name type="last">Noy</name>
3240        </author>, " <title level="a">Where Were the Jews of the Diaspora
3241    Buried?</title>" <biblScope
3242         type="pp">88-89</biblScope> , </bibl>
3243        <seg function="contextualization">mentions such desire without giving specific
3244    examples.</seg>
3245      </ab>
3246      <ab type="citation">
3247       <seg function="contextualization">See also</seg>
3248       <bibl sourceRole="secondary" contentType="opinion" reason="neither"
3249    furtherReading="true"
3250       xml:lang="EN" type="journalArticle" xml:id="bibl_87">
3251        <author>
3252         <name type="first">David</name>
3253         <name type="last">Noy</name>
3254        </author>, " <title level="a">Writing in Tongues: The Use of Greek, Latin and
3255    Hebrew in Jewish
3256         Inscriptions from Roman Italy</title>," <title level="j">Journal of Jewish
3257         Studies</title><pubCountry
3258    xmlns="http://www.example.org/ns/nonTEI">United
3259         Kingdom</pubCountry>
3260       <biblScope type="vol">48</biblScope> (<date>1997</date>): <biblScope
3261    type="pp"
3262        >300-311</biblScope> , </bibl>
3263       <seg function="contextualization">which suggests that using Greek for the
3264    epitaph (in about 74
3265        percent of the cases) coincided with choosing a specific formula, a Jewish one
3266    therefore, by
3267        opposition to Latin epitaphs whose formula was more in accordance with
3268    contemporary pagan
3269        inscriptions.</seg>
3270      </ab>
3271      </note>
3272      <note xml:id="note_74" place="foot" anchored="true" n="68">
3273      <gi>68. </gi><ab type="citation">
3274       <seg function="contextualization">About the implications of the status of
3275    megapolis, see </seg>
3276       <bibl sourceRole="secondary" contentType="opinion" reason="neither"
3277    xml:lang="FR"
3278       type="conferenceProceedings" xml:id="bibl_135">
3279        <editor>
3280         <name type="first">Claude</name>
3281         <name type="last">Nicolet</name>
3282        </editor>, <editor>
3283         <name type="first">Robert</name>
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3284        <name type="last">Ilbert</name>
3285       </editor>, and <editor>
3286        <name type="first">Jean-Claude</name>
3287        <name type="last">Depaule</name>
3288       </editor>, eds., <title level="m">Mégapoles méditerranéennes: géographie
3289   urbaine
3290        rétrospective: actes du colloque organise par l'Ecole française de Rome et la
3291   Maison
3292        méditerranéenne des sciences de l'homme (Rome, 8-11 mai 1996)</title>
3293       <series>
3294        <title level="s">L'atelier méditerranéen</title>, </series>
3295       <series>
3296        <title level="s">Collection de l'Ecole française de Rome</title>
3297        <biblScope type="vol">261</biblScope>
3298       </series> ( <pubPlace>Paris</pubPlace>: <publisher>Maisonneuve et
3299   Larose</publisher> /
3300        <pubCountry
3301   xmlns="http://www.example.org/ns/nonTEI">France</pubCountry>
3302        <pubPlace>Rome</pubPlace>: <publisher>Ecole française de
3303   Rome</publisher>, <pubCountry
3304        xmlns="http://www.example.org/ns/nonTEI">Italy</pubCountry>
3305        <date>2000</date>) </bibl>
3306        <seg function="contextualization">A study of social practices in those large
3307   cities has not yet
3308        been undertaken.</seg>
3309       </ab>
3310       </note>
3311      </div>
3312      <div type="chapterSection">
3313       <head type="chapterSection">Christians</head>
3314        <p> The precedent of Jewish communities has often been used as an argument
3315   supporting the thesis
3316        of burial segregation among Christians. Particularly in Rome, the development of
3317   Jewish and
3318        Christian catacombs has been attributed to the same religious necessities in the
3319   two
3320        communities. Yet the case of Jewish catacombs shows that there was no
3321   community organization
3322        responsible for the burial together of Jews, that this was largely the result of
3323   family choice . </p>
3324        <label>The Teaching of the Church</label>
3325        <p> There is no known Jewish teaching that can be cited to support a ban on
3326   mixing Jewish and
3327        non-Jewish graves. Does Christian teaching contain any new elements? <ref
3328   type="noteSpan"
3329        corresp="#note_75">This is assuredly not the case in the New Testament,
3330   where even a familial
3331        obligation to provide burial for relatives is contested.<ref type="noteLoc"
3332   target="#note_75"
3333        >69</ref></ref>
3334        <ref type="noteSpan" corresp="#note_76">Christian texts have been closely
3335   examined, however, in
3336        order to find any trace of a rule against mixing the graves of Christians and non-
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3337    Christians in
3338      one place.<ref type="noteLoc" target="#note_76">70</ref></ref>
3339      </p>
3340      <pb n="28"/>
3341      <note xml:id="note_75" place="foot" anchored="true" n="69">
3342      <gi>69. </gi><ab type="citation">
3343       <seg function="contextualization">See</seg>
3344       <bibl sourceRole="primary" contentType="fact" reason="neither"
3345    xml:lang="EN" type="other"
3346       xml:id="bibl_129"><title level="a"><abbr>Matt.</abbr><expan
3347    rend="false">Gospel after
3348       Matthew</expan></title><title level="m">Bible</title>
3349       <biblScope type="otherLoc">8:25</biblScope>
3350       </bibl> "<quote>Let the dead bury the dead</quote>," <seg
3351    function="contextualization">which
3352      is, surprisingly, rarely commented on by the Fathers of the Church, unless
3353      allegorically;</seg>
3354      </ab>
3355      <ab type="citation">
3356       <seg function="contextualization">see</seg><bibl sourceRole="primary"
3357    contentType="opinion"
3358       reason="neither" type="commentary" xml:id="bibl_92"
3359    xml:lang="LA"><author>
3360        <name type="first">Hilary</name>
3361        <name type="last">of Poitiers</name>
3362       </author><editor rend="false">
3363        <name type="first">Jean</name>
3364        <name type="last">Doignon</name>
3365       </editor><title level="m" rend="false">In Matthaeum </title><series
3366    rend="false">
3367        <title level="s">Sources chrétiennes</title>
3368        <biblScope type="vol">254</biblScope>
3369       </series> (<pubPlace rend="false">Paris</pubPlace><publisher
3370    rend="false">Editions du
3371       Cerf</publisher><date rend="false">1978</date><pubCountry rend="false"
3372       xmlns="http://www.example.org/ns/nonTEI">France</pubCountry><biblScope
3373    type="otherLoc"
3374       corresp="#note_81">below, note 73.</biblScope></bibl>
3375      </ab>
3376      </note>
3377      <note xml:id="note_76" place="foot" anchored="true" n="70">
3378      <gi>70. </gi><ab type="selfCitation">
3379       <seg function="contextualization">See</seg>
3380       <bibl sourceRole="secondary" contentType="opinion" reason="neither"
3381    xml:lang="FR"
3382       type="journalArticle" xml:id="bibl_88">
3383       <author>
3384        <name type="first">Éric</name>
3385        <name type="last">Rebillard</name>
3386       </author>, " <title level="a">Eglise et sépulture dans l'Antiquité tardive
3387    (Occident latin,
3388       3e-6e siècles)</title>" <title level="j">Annales: histoire, sciences
3389    sociales</title>
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3390      <pubCountry
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3392   type="vol"
3393      >54</biblScope>, no. <biblScope type="issue">5</biblScope>
3394   (<date>1999</date>): <biblScope
3395      type="pp">1029-32</biblScope>. </bibl>
3396     </ab>
3397     <ab type="citation">
3398      <seg function="contextualization">See</seg>
3399      <bibl sourceRole="secondary" contentType="opinion" reason="neither"
3400   furtherReading="true"
3401      xml:lang="EN" type="journalArticle" xml:id="bibl_89">
3402      <author>
3403       <name type="first">Mark J.</name>
3404       <name type="last">Johnson</name>
3405      </author>, " <title level="a">Pagan-Christian Burial Practices of the Fourth
3406   Century: Shared
3407       Tombs?</title>" <title level="j">Journal of Early Christian Studies</title>
3408       <pubCountry xmlns="http://www.example.org/ns/nonTEI">United
3409   States</pubCountry><biblScope
3410       type="vol">5</biblScope>, no. <biblScope type="issue">1</biblScope> (
3411   <date>1997</date>):
3412        <biblScope type="pp">37-59</biblScope> , </bibl>
3413       <seg function="contextualization">for a list of similar testimonies and a critique
3414   of the way
3415       they have been used.</seg>
3416     </ab>
3417     </note>
3418     <p>
3419     <ref type="noteSpan" corresp="#note_77">As a result, a phrase from Tertullian
3420   (c. 160-225) has
3421       been taken out of context: "<q>We may live with the heathens, die with them
3422   we may not</q>"
3423       <note xml:id="note_77" place="in-line">(<bibl sourceRole="primary"
3424   contentType="opinion"
3425       reason="neither" type="other" xml:lang="LA" xml:id="bibl_128"><author
3426   rend="false"><name
3427        type="last">Tertullian</name></author><editor rend="false"><name
3428   type="last"
3429        >Waszink</name><name type="first">Jan</name>
3430       <name type="middle">Hendrik</name></editor><editor rend="false"><name
3431   type="last">Van
3432        Winden</name><name type="first">J. C. M.</name></editor><title
3433   level="a">De
3434       idololatria</title><date rend="false">1987</date><pubPlace rend="false"
3435       >Leiden</pubPlace><pubCountry rend="false"
3436   xmlns="http://www.example.org/ns/nonTEI"
3437       >Netherlands</pubCountry>
3438       <biblScope type="otherLoc">14.5</biblScope></bibl>)</note>. Tertullian
3439   comments upon the
3440       verses of 1 Corinthians in which Paul explains that idolatry must be shunned, but
3441   not so as to
3442       offend the pagans; thus, one is allowed to accept an invitation to dinner from a
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pagan and to
   eat what is served without question, but if meat is offered as a meat of sacrifice,
it must be
   refused. Tertullian concludes, "<q>While it is inevitable that we live and mingle
with sinners,
   we may also sin with them. Where there is social intercourse, which is permitted
by the
   apostle, there is also sinning, which is permitted by no one. We may live with the
heathens,
   die with them we may not.</q>" Death in that sense means sin, so the second
phrase repeats the
   first and cannot be understood as an interdiction for Christians to be
buriedamong pagan tombs.
   </ref></p>
   <p>
   <ref type="noteSpan" corresp="#note_78">A letter from Cyprian of Carthage (d.
258) has also
   often been interpreted in this sense. The letter is a response by Cyprian and his
African
   colleagues to the Spanish communities of Legio, Astorica, and Emerita on the
subject of the
   bishops Basilides and Martialis. They had obtained false certificates of sacrifice
that
   testified that they had conformed with Decius's edict (250) but they did not
themselves
   actually sacrifice. Nevertheless, their churches deemed their conduct unworthy of
bishops and
   deposed them. The Spaniards appealed to their African colleagues, for Basilides
requested and
   received support from Stephen, bishop of Rome. The offense of the two bishops
was not simply
   their obtaining of certificates of sacrifice. Martialis's case, in particular, was
aggravated
   by his membership in a collegium. Not only did he participate in the banquets of
the collegium,
   but also had buried his sons in the collegium burial place. Cyprian's indignation is
clear in
   the words he used: "<q>his own sons he had buried in the manner of pagans as
members of that
   same sodality, interred in the company of strangers among heathen
graves.</q>"<ref
   type="noteLoc" target="#note_78">71</ref></ref> We must take note of his
insistence on
   describing pagan rites as foreign to Christians, but the key to understanding his
indignation is
   found in the role played by the collegium. <ref type="noteSpan"
corresp="#note_79">Martialis, in
   effect, not only turned to the collegium for the burial of his sons but obtained for
them tombs
   in the locus scpulturae of the collegium-in other words, in the monument or the
ground owned by
   the collegium, where its members could be buried.<ref type="noteLoc"
target="#note_79"

3496   >72</ref></ref> The choice of such a place had religious implications, for
3497 members <pb n="29"
3498   />of a collegium commemorated their dead together and on those occasions
3499 offered libations and
3500   sacrifices that were forbidden to Christians. Cyprian's letter therefore contains no
3501 general
3502   condemnation of the mixing of pagan and Christian tombs, but condemns
3503 specifically the recourse
3504   to a pagan association for funerals and burials of Christians. </p>
3505   <note xml:id="note_78" place="foot" anchored="true" n="71">
3506   <gi>71. </gi><ab type="citation">
3507   <bibl sourceRole="primary" contentType="fact" reason="neither" xml:lang="LA"
3508   type="scholarlyEdition" corresp="#bibl_90">
3509   <author>
3510   <name type="last">Cyprian</name>
3511   </author>, <title level="m">Letters</title>
3512   <biblScope type="otherLoc">67.6</biblScope>
3513   </bibl>
3514   <seg function="contextualization">See</seg>
3515   <bibl sourceRole="secondary" contentType="fact" reason="neither"
3516 furtherReading="true"
3517   xml:lang="EN" type="scholarlyEdition" xml:id="bibl_90">
3518   <author rend="false"><name type="last">Cyprian</name></author><editor>
3519   <name type="first">Graeme W</name>
3520   <name type="last">Clarke</name>
3521   </editor>
3522   <title level="m">The Letters of Cyprian</title>, vol. <biblScope
3523 type="vol">4</biblScope>, <series>
3524   <title level="s">Ancient Christian Writers</title>
3525   <biblScope type="vol">47</biblScope>
3526   </series> (<pubPlace>New York:</pubPlace>
3527   <publisher>Newman Press</publisher>, <date>1989</date>), <pubCountry
3528   xmlns="http://www.example.org/ns/nonTEI">United States</pubCountry>
3529   <biblScope type="pp">139-42</biblScope> , </bibl>
3530   <seg function="contextualization">for the circumstances and the
3531 bibliography.</seg>
3532   </ab>
3533   </note>
3534   <note xml:id="note_79" place="foot" anchored="true" n="72">
3535   <gi>72. </gi><ab type="citation">
3536   <seg function="contextualization">See</seg>
3537   <bibl sourceRole="secondary" contentType="fact" reason="neither"
3538 furtherReading="true"
3539   xml:lang="IT" type="journalArticle" xml:id="bibl_91">
3540   <author>
3541   <name type="first">Anna</name>
3542   <name type="last">Cafissi</name>
3543   </author>, " <title level="a">Contributo alla storia dei collegi romani: i collegia
3544   funeraticia</title>," <title level="j">Studi e ricerche dell'Istituto di Storia,
3545 Facoltà di
3546   Lettere e Filosofia, Università di Firenze</title>
3547   <pubCountry
3548 xmlns="http://www.example.org/ns/nonTEI">Italy</pubCountry><biblScope

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3549   type="vol"
3550     >2</biblScope> ( <date>1983</date>): <biblScope type="pp">89-
3551   111</biblScope> ; </bibl> and
3552     <bibl sourceRole="secondary" contentType="fact" reason="neither"
3553   furtherReading="true"
3554    xml:lang="FR" type="book" corresp="#bibl_27">
3555    <author>
3556     <name type="last">Waltzing</name>
3557    </author>, <title level="m" type="short">Étude historique sur les
3558   corporations</title>,
3559     <biblScope type="vol">4</biblScope>:<biblScope type="pp">487-
3560   95</biblScope>
3561    </bibl>, <seg function="contextualization">for an inventory of locus sepulturae
3562   known through
3563    epigraphy. </seg>
3564    </ab>
3565    <ab type="selfCitation">See <bibl sourceRole="secondary" contentType="fact"
3566   reason="neither"
3567    furtherReading="true" type="bookSection" xml:lang="EN" xml:id="bibl_136">
3568    <title level="m" rend="false">The Care of the Dead in Late Antiquity</title>
3569    <author rend="false">
3570     <name type="first">Éric</name>
3571     <name type="last">Rebillard</name>
3572    </author><publisher rend="false">Cornell University Press</publisher>
3573    <pubPlace rend="false">Ithaca</pubPlace>
3574    <pubCountry rend="false" xmlns="http://www.example.org/ns/nonTEI">United
3575   States</pubCountry>
3576    <pubPlace rend="false">London</pubPlace>
3577    <pubCountry rend="false" xmlns="http://www.example.org/ns/nonTEI">United
3578   Kingdom</pubCountry>
3579    <date rend="false">2009</date>
3580    <biblScope type="chap">chapter 3 of the present volume</biblScope></bibl>
3581   for the funerary
3582    activities of the collegia.</ab>
3583    </note>
3584    <p>
3585    <ref type="noteSpan" corresp="#note_81">A passage from Hilary of Poitiers (d.
3586   367) has also been
3587    misunderstood. It is a commentary on <ref type="noteSpan"
3588   corresp="#note_80"><note
3589    xml:id="note_80" place="in-line">(<bibl sourceRole="primary"
3590   contentType="fact"
3591    reason="neither" type="other" xml:lang="LA" corresp="#bibl_129"><title
3592   level="a"
3593     >Matthew</title><title level="m" rend="false">Bible</title>
3594    <biblScope type="otherLoc">18:22</biblScope></bibl></note>: "<q>He did
3595   not therefore forbid
3596    to honor a father with a decent burial, but by adding, 'let the dead bury the
3597   dead,' he urged
3598    him not to associate with the memory of the saints (memoriis sanctorum) dead
3599   nonbelievers,
3600    and also to consider as dead those who live without God.</q>"</ref> The
3601   memoriae sanctorum
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3602    have sometimes been understood as the tombs of the saints, but the last part of
3603   the sentence
3604    shows that death there is used metaphorically, which caused the last editor of
3605   the text to
3606    conclude that "<q>the wording does not reflect a liturgical usage relative to
3607   burials, but is
3608    relevant to the rule on excommunication.</q>"<ref type="noteLoc"
3609   target="#note_81"
3610    >73</ref></ref>
3611    </p>
3612    <note xml:id="note_81" place="foot" anchored="true" n="73">
3613    <gi>73. </gi><ab type="citation">
3614    <bibl sourceRole="primary" contentType="opinion" reason="neither"
3615   xml:lang="LA"
3616    type="commentary" corresp="#bibl_92">
3617    <author>
3618     <name type="last">Hilary</name>
3619    </author>
3620    <title level="m">In Matthaeum </title><biblScope
3621   type="otherLoc">7.11</biblScope>
3622    </bibl>
3623    <seg function="contextualization">, with commentary by</seg>
3624    <bibl sourceRole="secondary" contentType="opinion" reason="neither"
3625   xml:lang="FR"
3626    type="scholarlyEdition" corresp="#bibl_92">
3627    <editor>
3628     <name type="first">Jean</name>
3629     <name type="last">Doignon</name>
3630    </editor>, <title level="m">In Matthaeum</title>
3631    <series>
3632     <title level="s">Sources chrétiennes</title>
3633     <biblScope type="vol">254</biblScope>
3634    </series> (<pubPlace>Paris</pubPlace>: <publisher>Editions du
3635   Cerf</publisher>,
3636    <date>1978</date>), <pubCountry
3637   xmlns="http://www.example.org/ns/nonTEI">France</pubCountry>
3638    <biblScope type="pp">192-93</biblScope>, and n. <biblScope
3639   type="note">15</biblScope> .
3640    </bibl>
3641    </ab>
3642    <ab type="citation">
3643    <bibl sourceRole="secondary" contentType="opinion" reason="support"
3644   xml:lang="EN"
3645    type="journalArticle" corresp="#bibl_89">
3646    <author>
3647     <name type="last">Johnson</name>
3648    </author>, " <title level="a" type="short">Pagan-Christian Burial
3649   Practices</title>,"
3650    <biblScope type="pp">44</biblScope> , </bibl>
3651    <seg function="contextualization">understands that it is forbidden to bury
3652   nonbelievers in the
3653    tomb of a martyr, but that the statement does not concern private
3654   burials</seg>
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3655      </ab>
3656      </note>
3657      <p>
3658      <ref type="noteSpan" corresp="#note_82">Finally, sometimes cited is a text in
3659   which Theodoret of
3660      Cyrus (d. 458/466) refers to pagan concerns that Christian burials were a source
3661   of pollution
3662      <note xml:id="note_82" place="in-line">(<bibl sourceRole="primary"
3663   contentType="opinion"
3664      reason="neither" type="other" xml:lang="EN" xml:id="bibl_130"><title
3665   level="a">The Cure of
3666      Greek Maladies</title><author rend="false"><name type="last">Theodoret of
3667      Cyrus</name></author>
3668      <biblScope type="otherLoc">8:29</biblScope></bibl>)</note>. The object of
3669   the criticism was
3670      actually the veneration of the martyrs. Theodoret dealt with the objection easily
3671   by alluding
3672      to the cult of the tombs of ancient heroes; their tombs, like those of the martyrs,
3673   were
3674      intermingled among the living. There was never an issue of the mixing of pagan
3675   and Christian
3676      tombs.</ref>
3677      </p>
3678      <p>
3679      <ref type="noteSpan" corresp="#note_83">The first proscription against the
3680   mixing of pagan and
3681      Christian tombs seems to have been made by Charlemagne in 782 in the
3682   Capitulatio de Partibus
3683      Saxoniae, a collection of measures taken against the Saxons, who had just been
3684   defeated: "We
3685      order, he said, that the bodies of Christian Saxons be buried in the church
3686   cemeteries and not
3687      in the pagan tumuli," Charlemagne's law was not meant to enforce Christian
3688   practice, but to
3689      undermine the Saxon aristocracy by banning its traditional burial customs.<ref
3690   type="noteLoc"
3691      target="#note_83">74</ref></ref>
3692      </p>
3693      <note xml:id="note_83" place="foot" anchored="true" n="74">
3694      <gi>74. </gi><ab type="citation">
3695      <bibl sourceRole="primary" contentType="fact" reason="neither" xml:lang="LA"
3696   type="codex"
3697      xml:id="bibl_93">
3698      <title level="m">Capitulatio de partibus Saxoniae</title>
3699      <author rend="false"><name
3700   type="last">Charlemagne</name></author><date rend="false"
3701      >782</date>
3702      <pubCountry
3703   xmlns="http://www.example.org/ns/nonTEI">France</pubCountry>, <biblScope
3704      type="otherLoc">22</biblScope>; </bibl>
3705      <seg function="contextualization">see also the analysis of</seg>
3706      <bibl sourceRole="secondary" contentType="opinion" reason="neither"
3707   xml:lang="EN"
```

```
3708      type="journalArticle" xml:id="bibl_94">
3709       <author>
3710        <name type="first">Bonnie</name>
3711        <name type="last">Effros</name>
3712       </author>, " <title level="a">De partibus Saxoniae and the Regulation of
3713   Mortuary Custom: A
3714       Carolingian Campaign of Christianization or the Suppression of Saxon
3715   Identity?</title>"
3716       <title level="j">Revue belge de philologie et d'histoire</title>
3717       <pubCountry
3718   xmlns="http://www.example.org/ns/nonTEI">Belgium</pubCountry><biblScope
3719   type="vol"
3720       >75</biblScope>, no. <biblScope type="issue">2</biblScope>
3721   (<date>1997</date>): <biblScope
3722       type="pp">267-86</biblScope>. </bibl>
3723     </ab>
3724     </note>
3725     <p> In any case, it is impossible to affirm that the exclusive character of
3726   Christian burial
3727     places was a very ancient regulation. The church clearly wanted to leave the
3728   question of burial
3729     to the discretion of the family and not interfere in this sphere. <pb
3730   n="30"/></p>
3731     <label> The Behaviour of Christians </label>
3732     <p> In Christian epitaphs, the place of the nuclear family and even the "conjugal
3733   family" is even
3734     greater than in pagan inscriptions, even though Christians tended not to note the
3735   relationship
3736     between the deceased and the commemorators. <ref type="noteSpan"
3737   corresp="#note_84">This change
3738      in epigraphic formulae, however, was due to other factors than those that
3739   concern us here: it
3740      was the vertical relationship of the deceased to God that received the attention,
3741   not the
3742      horizontal relationships of kinship.<ref type="noteLoc"
3743   target="#note_84">75</ref></ref>
3744     Christians did not introduce religious restrictions on the right to burial in their
3745   family or
3746     hereditary tombs. There are, however, two apparent exceptions that warrant our
3747   attention. <ref
3748      type="noteSpan" corresp="#note_85">The first is an inscription, published by
3749   Giovanni Battista
3750      De Rossi in 1865, which opened the tomb to freedmen and their descendants on
3751   condition that
3752      they belonged to the same religion (at religionem pertinentes meam) as their
3753   patron, Valerius
3754      Mercurius. On paleographical grounds the inscription is dated from the end of the
3755   second
3756      century. As it was found among other pagan inscriptions or fragments of
3757   inscriptions in the
3758      Villa Patrizi, on the Via Nomentana, and out of any specific archaeological
3759   context, its
3760      Christian character is difficult to determine. For De Rossi the use of religio mea
```

3761 was
3762   sufficient evidence. But, as we have seen, followers of Cybele, and also those of
3763 Isis, use the
3764   word religio to speak of their cult and called themselves religiosi.`<ref`
3765 `type="noteLoc"`
3766   `target="#note_85">`76`</ref></ref>` Be that as it may, membership in the same
3767 religion was
3768   subordinate to membership in the first category, that of the freedmen of Valerius
3769 Mercurius and
3770   his wife and their descendants. So this monument was a simple family tomb. `<ref`
3771 `type="noteSpan"`
3772   `corresp="#note_86">`The same is true of the tomb that Marcus Antonius
3773 Restitutus says was
3774   constructed for "himself and his household faithful in the Lord." This epitaph
3775 comes from the
3776   catacomb of Domitilla in Rome, but we do not know the exact context in which it
3777 was found; it
3778   may have been simply a cubiculum or part of a larger group. It is difficult to say
3779 whether the
3780   expression "faithful in the Lord" had a restrictive meaning, signifying "on
3781 condition that they
3782   be faithful in the Lord," or if it was a declaration of faith.`<ref type="noteLoc"`
3783   `target="#note_86">`77`</ref></ref>`
3784   `<pb n="31"/></p>`
3785   `<note xml:id="note_84" place="foot" anchored="true" n="75">`
3786   `<gi>`75. `</gi><ab type="citation">`
3787   `<bibl sourceRole="secondary" contentType="opinion" reason="neither"`
3788 `xml:lang="EN"`
3789   `type="journalArticle" xml:id="bibl_95">`
3790   `<author>`
3791   `<name type="last">`Show`</name>`
3792   `</author>`, " `<title level="a" type="short">`Latin Funerary Epigraphy and Family
3793   Life`<expan>`Latin Funerary Epigraphy and Family Life in the Later Roman
3794   Empire`</expan></title>`,"`<title level="j" rend="false">`Historia`</title><date`
3795 `rend="false"`
3796   `>`1984`</date><pubCountry xmlns="http://www.example.org/ns/nonTEI"`
3797   `>`Germany`</pubCountry><biblScope type="pp">`481-83`</biblScope>`. `</bibl>`
3798   `</ab>`
3799   `</note>`
3800   `<note xml:id="note_85" place="foot" anchored="true" n="76">`
3801   `<gi>`76. `</gi><ab type="citation">`
3802   `<seg function="contextualization">`See`</seg>`
3803   `<bibl sourceRole="secondary" contentType="opinion" reason="reject"`
3804 `xml:lang="IT"`
3805   `type="journalArticle" xml:id="bibl_96">`
3806   `<author>`
3807   `<name type="first">`Giovanni Battista`</name>`
3808   `<name type="last">`De Rossi`</name>`
3809   `</author>`, " `<title level="a">`Le iscrizioni trovate nei sepolcri all'aperto cielo
3810 nella villa
3811   Patrizi`</title>`," `<title level="j">`Bullettino di archeologia cristiana`</title>` (
3812   `<date>`1865`</date>`): `<biblScope type="pp">`53-54`</biblScope><pubCountry`
3813   `xmlns="http://www.example.org/ns/nonTEI">`Italy`</pubCountry>`(=

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3817        corresp="#bibl_25">
3818        <title level="m"><abbr>CIL</abbr><expan>Corpus Inscriptionum
3819    Latinarum</expan></title>
3820        <biblScope type="vol">6</biblScope>.<biblScope
3821    type="catNo.">10412</biblScope></bibl>
3822      </relatedItem>
3823      <relatedItem type="alternative">
3824        <bibl sourceRole="primary" contentType="fact" reason="neither"
3825    xml:lang="LA" type="corpus"
3826        xml:id="bibl_97">
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3828         Romae</expan></title><pubPlace
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3830         xmlns="http://www.example.org/ns/nonTEI">Italy</pubCountry><date
3831    rend="false">1983</date>
3832        <biblScope type="vol">8</biblScope>.<biblScope
3833    type="catNo.">20737</biblScope>
3834        </bibl>
3835      </relatedItem>
3836      </bibl>
3837      </ab>
3838      <ab type="citation">
3839      <seg function="contextualization">See</seg>
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3841    xml:lang="FR" type="book"
3842       xml:id="bibl_98">
3843       <author>
3844        <name type="first">Gaston</name>
3845        <name type="last">Boissier</name>
3846       </author>, <title level="m">La religion romaine d'Auguste aux Antonins</title>
3847        (<pubPlace>Paris</pubPlace>: <publisher>Hachette</publisher>,
3848    <date>1878</date>), <pubCountry
3849        xmlns="http://www.example.org/ns/nonTEI">France</pubCountry>
3850        <biblScope type="otherLoc"> 1:383 </biblScope>, n.<biblScope
3851    type="note">5</biblScope> , </bibl>
3852        <seg function="contextualization">for the use of religiosi.</seg>
3853        </ab>
3854      <seg function="contextualization">Inscriptions of religiosi are now compiled
3855    in</seg>
3856      <bibl sourceRole="secondary" contentType="fact" reason="neither"
3857    furtherReading="true"
3858       type="PhD disertation" xml:lang="FR" xml:id="bibl_99">
3859       <author>
3860       <name type="first">M.</name>
3861       <name type="last">de Souza</name>
3862       </author>, <title level="u">Religiosus ou les métamorphoses du "religieux"
3863    dans le monde
3864       romain, de la fin de la République à l'Empire chrétien (IIe siècle av. ]-C-debut du
3865    Ve siècle
3866       apr. i-C)</title> (PhD diss., <publisher>Université François
```

3867 Rabelais</publisher>,
3868   <pubPlace>Tours</pubPlace>, <date>2001</date>
3869   <pubCountry
3870 xmlns="http://www.example.org/ns/nonTEI">France</pubCountry>), <biblScope
3871 type="pp"
3872   >471-85</biblScope>. </bibl>
3873   </note>
3874   <note xml:id="note_86" place="foot" anchored="true" n="77">
3875   <gi>77. </gi><ab type="citation"><seg
3876 function="contextualization">See</seg>
3877   <bibl sourceRole="secondary" contentType="fact" reason="neither"
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3879   xml:lang="IT" xml:id="bibl_100">
3880   <author>
3881   <name type="first">Giovanno Battista</name>
3882   <name type="last">De Rossi</name>
3883   </author>, " <title level="a">Le varie e successive condizioni di legalità dei
3884 cemeteri, il
3885   vario grado di liberta dell'arte cristiana, e la legalità della medesima religione
3886 nel primo
3887   secolo verificate dalle recenti scoperte nel cemetero di Domitilla</title>," <title
3888 level="j"
3889   >Bullettino di archeologia cristiana</title> (<date>1865</date>): <biblScope
3890 type="pp"
3891   >89-99</biblScope><pubCountry
3892 xmlns="http://www.example.org/ns/nonTEI">Italy</pubCountry> (=
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3895 type="corpus" xml:lang="LA"
3896   corresp="#bibl_97">
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3898   Romae</expan></title>
3899   <biblScope type="vol">3</biblScope>.<biblScope
3900 type="catNo.">6555</biblScope>).</bibl>
3901   </relatedItem>
3902   </bibl>
3903   </ab>
3904   <ab type="citation"><seg function="contextualization">See, more recently,
3905 </seg>
3906   <bibl sourceRole="secondary" contentType="opinion" reason="neither"
3907 furtherReading="true"
3908   type="PhD disertation" xml:lang="FR" xml:id="bibl_101">
3909   <author>
3910   <name type="first">Philippe</name>
3911   <name type="last">Pergola</name>
3912   </author>, <title level="u">Les cimetières chrétiens de Rome depuis leurs
3913 origines jusqu'au
3914   neuvième siècle: le cas du "praedium Domititlae" et de la catacombe homonyme
3915 sur la "Via
3916   Ardeatina"</title> (PhD diss., <publisher>Université d'Aix-
3917 Marseille</publisher>,
3918   <pubPlace>Aix-en-Provence</pubPlace>, <date>1992</date>), <pubCountry
3919   xmlns="http://www.example.org/ns/nonTEI">France</pubCountry>

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3920        <biblScope type="pp">305-6</biblScope>. </bibl>
3921        </ab>
3922        <ab type="citation">
3923        <bibl sourceRole="secondary" contentType="opinion" reason="neither"
3924    type="corpus" xml:lang="LA"
3925         corresp="#bibl_97">
3926         <author><name type="first">Antonio</name>
3927          <name type="last">Ferrua</name></author> ( <title level="m"
3928         ><abbr>ICVR</abbr><expan>Inscriptiones Christianae Urbis
3929    Romae</expan></title>
3930         <biblScope type="vol">3</biblScope>.<biblScope
3931    type="catNo.">6555</biblScope>) <seg
3932         function="contextualization">compares the formula to</seg>
3933         <relatedItem type="cited">
3934         <bibl sourceRole="primary" contentType="fact" reason="neither" type="other"
3935    xml:lang="LA"
3936         xml:id="bibl_102">
3937         <title level="a"><abbr>2 Cor.</abbr><expan>Second Epistle to the
3938    Corinthians</expan></title>
3939         <biblScope type="otherLoc">1:9</biblScope>: <seg
3940    function="directCitation"><quote>non simus
3941          fidentes in nobis sed in deo qui suscitat mortuos</quote>.</seg>
3942         </bibl>
3943        </relatedItem>
3944        </bibl>
3945        </ab>
3946        </note>
3947     <p> Burial foundations intended for adherents of Christianity were not very
3948    numerous. <ref
3949         type="noteSpan" corresp="#note_87">There was the case of Faltonia Hilaritas,
3950    "<q>who built at
3951         her own expense this tomb (coemeterium) and gave it to her religion (huhic [sic]
3952         religioni).</q>" The inscription was discovered on a tomb, in reuse, near a small
3953    funerary
3954         basilica at Solluna, on the territory of the ancient Velitrae, not far from Rome, on
3955    the Via
3956         Appia.<ref type="noteLoc" target="#note_87">78</ref> The discoverer seems
3957    to think that the
3958         inscription, whose marble plaque bears the marks of hooks, was originally hung
3959    at the entrance
3960         to the small burial basilica, which Faltonia was supposed to have given to her
3961         coreligionists.</ref> While it has some appeal, this hypothesis is a fragile one;
3962    the context
3963      of the inscription cannot be taken as confirmed. Even if it were the case, Faltonia
3964    would simply
3965      have opened to her coreligionists a funerary basilica built at her expense for her
3966    own burial
3967      rather than establish a place of communal burial. </p>
3968         <note xml:id="note_87" place="foot" anchored="true" n="78">
3969         <gi>78. </gi><ab type="citation"><seg
3970    function="contextualization">See</seg>
3971         <bibl sourceRole="secondary" contentType="fact" reason="reject"
3972    type="journalArticle"
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3973      xml:lang="IT" xml:id="bibl_103">
3974      <author>
3975       <name type="first">Gioacchino</name>
3976       <name type="last">Mancini</name>
3977      </author>, " <title level="a">Scoperta di un antico sepolcreto cristiano nel
3978  territorio
3979      veliterno, in località Solluna</title>," <title level="j">Notizie degli scavi di
3980      antichità</title> (<date>1924</date>): <biblScope type="pp">341-
3981  53</biblScope>, esp.
3982      3<biblScope type="pp">45-46</biblScope><pubCountry
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3984      >Italy</pubCountry> (= <relatedItem type="alternative">
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3989      veteres</expan></title><editor rend="false"><name
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3991      type="last">Diehl</name></editor><pubPlace
3992  rend="false">Berlin</pubPlace><pubCountry
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3994  rend="false">1961</date>
3995      <biblScope type="catNo.">3681</biblScope></bibl>
3996      </relatedItem>).</bibl></ab>
3997    <ab type="citation">
3998     <seg function="contextualization">See</seg>
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4002      <title level="s">Supplementa Italica</title>, vol. <biblScope
4003  type="vol">2</biblScope>
4004      (<pubPlace>Roma</pubPlace>: <publisher>Ed. di storia e
4005  letteratura</publisher>,
4006      <date>1983</date>), <pubCountry
4007  xmlns="http://www.example.org/ns/nonTEI">Italy</pubCountry>
4008      no. <biblScope type="catNo.">66</biblScope>. </bibl>
4009    </ab>
4010    </note>
4011    <p>
4012    <ref type="noteSpan" corresp="#note_88">A famous inscription from Caesarea
4013  (today Cherchel, in
4014      Algeria) mentions a gift to the church of a funerary enclosure by a pious
4015  benefactor, the
4016      clarissimus Severianus.<ref type="noteLoc"
4017  target="#note_88">79</ref></ref> What has been
4018    preserved is not the original inscription, but that engraved by the Church of
4019  Caesarea
4020    celebrating the gift. Paleographically, the inscription is from the fourth century,
4021  but the gift
4022    of Severianus might be earlier. <ref type="noteSpan" corresp="#note_89">The
4023  archaeological
4024      context of the inscription is unknown;<ref type="noteLoc"
4025  target="#note_89">80</ref></ref> the
```

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4026      description of the enclosure comes entirely from the inscription. Severianus,
4027   poetically
4028      described by the term cultor uerbi, bought some land to be used for burial and
4029   built there at
4030      his expense a cella. The whole is then designated by the word memoria-in other
4031   words, a
4032      (monumental) tomb. The term cella is imprecise. We can rule out the idea of a
4033   chapel devoted to
4034      the <pb n="32"/>martyrs, for these would be mentioned in the commemorative
4035   inscription. Cella
4036      designates either a tomb or the edifice to house it and intended also for the
4037   holding of
4038      funerary rites. </p>
4039      <note xml:id="note_88" place="foot" anchored="true" n="79">
4040      <gi>79. </gi><ab type="citation">
4041      <bibl sourceRole="primary" contentType="fact" reason="neither" xml:lang="LA"
4042   type="corpus"
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4045   Latinarum</expan></title>
4046      <biblScope type="vol">8</biblScope>.<biblScope
4047   type="catNo.">9585</biblScope>, <seg
4048      function="contextualization">with commentary in</seg>
4049      <relatedItem type="citing">
4050      <bibl sourceRole="secondary" contentType="opinion" reason="neither"
4051   type="book" xml:lang="FR"
4052      xml:id="bibl_105">
4053      <author>
4054      <name type="first">Yvette</name>
4055      <name type="last">Duval</name>
4056      </author>, <title level="m">Loca Sanctorum Africae: le culte des martyrs en
4057   Afrique du IVe
4058      au VIIe siècle</title>, <series>
4059      <title level="s">Collection de l'Ecole française de Rome</title>
4060      <biblScope type="vol">58</biblScope>
4061      </series> ( <pubPlace>Rome</pubPlace>: <publisher>Ecole française de
4062   Rome</publisher>,
4063      <pubCountry
4064   xmlns="http://www.example.org/ns/nonTEI">Italy</pubCountry>
4065      <date>1982</date>), <biblScope type="vol">1</biblScope>:<biblScope
4066   type="pp"
4067      >380-83</biblScope>, no. <biblScope type="catNo.">179</biblScope>.
4068   </bibl>
4069      </relatedItem>
4070      </bibl>
4071      </ab>
4072      </note>
4073      <note xml:id="note_89" place="foot" anchored="true" n="80">
4074      <gi>80. </gi><ab type="citation">Contrary to <seg
4075   function="indirectCitation">what was
4076      thought</seg></ab>; <ab type="citation">
4077      <seg function="contextualization">see, for instance</seg>, <bibl
4078   sourceRole="secondary"
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4081    xml:id="bibl_106">
4082    <author>
4083     <name type="first">Stephane</name>
4084     <name type="last">Gsell</name>
4085    </author>, <title level="m">Les monuments antiques de l'Algerie</title>
4086    (<pubPlace>Paris</pubPlace>: <publisher>Fontemoing</publisher>,
4087  <date>1901</date>),
4088      <pubCountry
4089  xmlns="http://www.example.org/ns/nonTEI">France</pubCountry>
4090    <biblScope type="vol">2</biblScope>: <biblScope type="pp"/>398-400,
4091  </bibl> and <bibl
4092    sourceRole="secondary" contentType="fact" reason="reject"
4093  furtherReading="true" type="book"
4094    xml:lang="FR" xml:id="bibl_107">
4095    <author>
4096     <name type="first">Paul</name>
4097     <name type="last">Monceaux</name>
4098    </author>, <title level="m">Histoire littéraire de l'Afrique chrétienne: depuis les
4099  origines
4100    jusqu'a l'invasion arabe</title> (<pubPlace>Paris</pubPlace>:<pubCountry
4101    xmlns="http://www.example.org/ns/nonTEI">France</pubCountry>
4102    <publisher>Leroux</publisher>, <date>1901-23</date>), <biblScope
4103  type="vol"
4104    >1</biblScope>:<biblScope type="pp">14</biblScope> and <biblScope
4105  type="vol"
4106    >2</biblScope>:<biblScope type="pp">125-30</biblScope>. </bibl>
4107    </ab>
4108    <ab type="citation"> Actually, <bibl sourceRole="secondary" contentType="fact"
4109  reason="support"
4110    type="excavationReport" xml:lang="FR" xml:id="bibl_108"> Cardinal <name
4111  type="last"
4112    >Lavigerie</name>
4113    <seg function="contextualization">excavated in the area where the inscription
4114  was found, but
4115    the excavation did not fulfill his expectations since he discovered a pagan
4116  enclosure. See
4117    the publication of the excavation in </seg>
4118    <author>
4119     <name type="first">Philippe</name>
4120     <name type="last">Leveau</name>
4121    </author>, " <title level="a">Fouilles anciennes sur les nécropoles antiques de
4122    Cherchel</title>," <title level="j">Antiquités africaines</title><pubCountry
4123    xmlns="http://www.example.org/ns/nonTEI">France</pubCountry>
4124    <biblScope type="vol">12</biblScope> (<date>1978</date>): <biblScope
4125  type="pp"
4126    >93-95</biblScope>.</bibl></ab>
4127    </note>
4128    <p> Gifts, like those of Faltonia or of Severianus, did not come from a desire to
4129  separate
4130    Christians and non-Christians in death, but were benefactions comparable to
4131  those of
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4132    contemporary pagans. <ref type="noteSpan" corresp="#note_90">This is again
4133  the case in a second
4134    inscription from Cherchel, this time that of a priest, Victor, who built an
4135  aaubitorium in
4136    order to house several tombs, including that of his mother Rogata, and who
4137  made it a gift "to
4138    all the brothers";<ref type="noteLoc" target="#note_90">81</ref></ref> and
4139  <ref type="noteSpan"
4140    corresp="#note_91">in a Lydian inscription dated from the fourth century that
4141  relates how
4142    Gennadius bought "with what God gave him" a monument and made it a "tomb
4143  for Christians of the
4144    Catholic Church."<ref type="noteLoc" target="#note_91">82</ref></ref> We
4145  will have to return to
4146    this role of the church as an intermediary, in a way, between the donor and
4147  eventual
4148    beneficiaries. But nothing should lead us to see behind these gifts a Christian
4149  duty to be
4150    buried together and apart from others; no tension with the family is evident. To
4151  open one's
4152    funerary monument to other Christians was not even an expression of a
4153  preference for "Christian"
4154    burial . </p>
4155    <note xml:id="note_90" place="foot" anchored="true" n="81">
4156    <gi>81. </gi><ab type="citation">
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4159     corresp="#bibl_109">
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4161     veteres</expan></title>
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4166      corresp="#bibl_25">
4167      <title level="m"><abbr>CIL</abbr><expan>Corpus Inscriptionum
4168  Latinarum</expan></title>
4169      <biblScope type="vol">8</biblScope>.<biblScope
4170  type="catNo.">9586</biblScope>
4171      </bibl>
4172     </relatedItem>
4173     </bibl>. </ab>
4174    </note>
4175    <note xml:id="note_91" place="foot" anchored="true" n="82">
4176    <gi>82. </gi><ab type="citation">
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4179     xml:id="bibl_110">
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4181     <name type="first">Peter</name>
4182     <name type="last">Herrnann</name>
4183     </author> , <title level="m">Neue Inschriften zur historischen Landeskunde
4184  von Lydien und
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4185        angrenzenden Gebieten</title>, <series>
4186        <title level="s">Denkschriften/Österreichische Akademie der
4187   Wissenschaften</title>, <title
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4189        <biblScope type="vol">77</biblScope>, no. <biblScope
4190   type="issue">1</biblScope>
4191      </series> ( <pubPlace>Vienna</pubPlace>: <pubCountry
4192   xmlns="http://www.example.org/ns/nonTEI"
4193      >Austria</pubCountry><publisher>Rohrer</publisher>,
4194   <date>1959</date>), <biblScope type="pp"
4195      >13</biblScope>,no. <biblScope type="catNo.">10</biblScope> (=
4196   <relatedItem
4197      type="alternative">
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4199   type="corpus" xml:lang="LA"
4200      xml:id="bibl_111">
4201        <title level="m"><abbr>SEG</abbr><expan>Supplementum Epigraphicum
4202   Graecum</expan></title>,
4203        <biblScope type="vol">19</biblScope>, <date>1963</date>,no. <biblScope
4204   type="catNo."
4205      >719</biblScope><pubCountry xmlns="http://www.example.org/ns/nonTEI"
4206      >Netherlands</pubCountry>
4207      </bibl>
4208     </relatedItem>). </bibl>
4209     </ab>
4210     </note>
4211     <label>The Case of the Catacombs</label>
4212     <p> Is such preference supported by archaeological evidence? We must be
4213   cautious; to identify a
4214     burial area-or a tomb within such an area-as Christian on the basis of epigraphic
4215   formulae or
4216     iconographic motif is a delicate business, at least for material dated before the
4217   middle of the
4218     fourth century. In spite of these difficulties, <ref type="noteSpan"
4219   corresp="#note_92">recent
4220      excavations or the reexamination of old ones have led to a number of examples
4221   of the mixing of
4222      Christian and non-Christian tombs.<ref type="noteLoc"
4223   target="#note_92">83</ref></ref> Rather
4224     than attempt to establish an inventory across the provinces of the Roman Empire,
4225   which could
4226     only be incomplete, I prefer to focus on the situation in Rome. There are many
4227   reasons for this
4228     choice, principal among them the historiographic importance of the catacombs to
4229   the studies of
4230     the origins of Christian cemeteries. Because of the antiquity and strength of
4231   Christian
4232     settlement in Rome, and because of the size of the city itself, this example is
4233   appropriate for
4234     illustrating the complexity of the issues at stake. <pb n="33"/></p>
4235     <note xml:id="note_92" place="foot" anchored="true" n="83">
4236     <gi>83. </gi><ab type="citation">
4237      <seg function="contextualization">See</seg>
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4239   type="journalArticle"
4240      xml:lang="EN" corresp="#bibl_89">
4241      <author>
4242       <name type="last">Johnson</name>
4243      </author>, " <title level="a" type="short">Pagan-Christian Burial
4244   Practices</title>:"
4245       <biblScope type="pp">51 ff</biblScope>. </bibl>
4246      </ab>
4247      </note>
4248      <p> While it has long been thought that the origins of the catacombs were
4249   exclusively Christian,
4250       <ref type="noteSpan" corresp="#note_93">today there is a growing awareness,
4251   despite some
4252      obvious ideological obstacles, of the fact that they may have had pagan
4253   origins.<ref
4254       type="noteLoc" target="#note_93">84</ref></ref>
4255      <ref type="noteSpan" corresp="#note_94">The catacomb of Domitilla is one of
4256   the best-known
4257      examples, thanks to the work of Philippe Pergola.<ref type="noteLoc"
4258   target="#note_94">85</ref>
4259      He has shown how difficult it is, in a number of cases, to determine the religious
4260   affiliation
4261      of the owners. The neutrality of the epigraphic formulae may suggest a Christian
4262   identity,
4263      whereas iconography-borrowing its motifs from the traditional repertoire-would
4264   suggest pagan
4265      sponsors, since Christian iconography, unlike epigraphy, was already clearly
4266   defined in the
4267      third century. Of the seven pre-Constantine hypogea, only two belong to
4268   individuals who are
4269      known with certainty to have been Christians: the so-called area of the scalone
4270   of 1897, with
4271      135 meters of galleries and about four hundred tombs, where inscriptions have
4272   been found in
4273      situ with the characteristic formulae, and the hypogeum of "the martyrs," where
4274   Nereus and
4275      Achilles were buried. What is known as the hypogeum of the Flavii, where De
4276   Rossi thought he
4277      had identified the tomb of Christian members of the family of Flavia Domitilla,
4278   niece of the
4279      emperor Domitian, is actually a pagan hypogeum from the end of the second or
4280   beginning of the
4281      third century; it was not used by Christians until the second half of the third
4282   century. The
4283      Ampliatus after whom is named another hypogeum was, far from being the
4284   Ampliatus mentioned in
4285      the Epistle to the Romans, actually a pagan freedman; the iconography in the
4286   two burial
4287      chambers of the primitive area contains no explicitly Christian elements. The
4288   same is true of
4289      the hypogeum of the Good Shepherd, from all evidence a family tomb with a
4290   central gallery
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4291   leading to the burial chamber of the owner and lateral corridors pierced with
4292 loculi for other
4293   members of the familia. Finally, the religious affiliation of the owners of the two
4294 hypogea
4295   known as the Flavii Aurelii cannot be determined: the one with some fifteen
4296 tombs was familial;
4297   the other, which included about 250 burials, may have belonged to a
4298 collegium.\</ref\> What can
4299   be seen through the example of the catacomb of Domitilla is that in the second
4300 and third
4301   centuries in Rome, pagans and Christians were buried together: this pagan
4302 hypogeum became
4303   Christian in the space of one generation; that area was mixed; and so on. The
4304 primitive hypogea
4305   do not have an exclusively familial character (250tombs for the \<pb
4306 n="34"/\>hypogeum of the
4307   Flavii Aurelii A, 400 for that of the sea/one of 1897), but nothing suggests that
4308 the grouping
4309   of tombs followed religious prescriptions in the largest areas. \</p\>
4310   \<note xml:id="note_93" place="foot" anchored="true" n="84"\>
4311   \<gi\>84. \</gi\>\<ab type="citation"\>
4312   \<seg function="contextualization"\>See\</seg\>
4313   \<bibl sourceRole="secondary" contentType="opinion" reason="support"
4314 type="other" xml:lang="IT"
4315   xml:id="bibl_112"\>
4316   \<author\>
4317   \<name type="first"\>Philippe\</name\>
4318   \<name type="last"\>Pergola\</name\>
4319   \</author\>, \<title level="m"\>Le catacombe romane: storia e topografia,
4320 catalogo a Cura di P M.
4321   Barbini\</title\>, \<series\>
4322   \<title level="s"\>Argomenti\</title\>
4323   \<biblScope type="vol"\>8\</biblScope\>
4324   \</series\>(\<pubPlace\>Rome\</pubPlace\>: \<publisher\>Carocci\</publisher\>,
4325 \<date\>1998\</date\>),
4326   \<pubCountry
4327 xmlns="http://www.example.org/ns/nonTEI"\>Italy\</pubCountry\>
4328   \<biblScope type="pp"\>57-71\</biblScope\>. \</bibl\>
4329   \</ab\>
4330   \</note\>
4331   \<note xml:id="note_94" place="foot" anchored="true" n="85"\>
4332   \<gi\>85. \</gi\>\<ab type="citation"\>
4333   \<seg function="contextualization"\>See status quaestionis and bibliography
4334 in\</seg\>
4335   \<bibl sourceRole="secondary" contentType="opinion" reason="support"
4336 type="other" xml:lang="IT"
4337   corresp="#bibl_112"\>
4338   \<author\>
4339   \<name type="last"\>Pergola\</name\>
4340   \</author\>, \<title level="m" type="short"\>Le catacombe romane\</title\>,
4341 \<biblScope type="pp"
4342   \>211-13\</biblScope\>
4343   \</bibl\>, and \<bibl sourceRole="secondary" contentType="opinion"

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4344    reason="support"
4345      type="manuscript" xml:lang="FR" xml:id="bibl_113">
4346       <author rend="false">
4347        <name type="first">Philippe</name>
4348        <name type="last">Pergola</name>
4349       </author>idem, <title level="m">Les cimetières chrétiens de Rome depuis leurs
4350    origines
4351       jusqu'au neuvième siècle</title><pubCountry
4352    xmlns="http://www.example.org/ns/nonTEI"
4353        >France</pubCountry>. </bibl>
4354      </ab>
4355      <ab type="authorIntervention">I would like to thank the author for granting me
4356    access to his
4357       work before publication. </ab>
4358      </note>
4359      <p>
4360      <ref type="noteSpan" corresp="#note_95">Besides the large catacombs, there
4361    are also some
4362       fourth-century hypogea of more modest size whose religious affiliation is hard to
4363    define.<ref
4364       type="noteLoc" target="#note_95">86</ref></ref>
4365      <ref type="noteSpan" corresp="#note_96">They are sometimes referred to as
4366    "private catacombs" as
4367       opposed to "communal catacombs," which would have been managed by the
4368    church. This concept,
4369       which has no legal basis,was used by Antonio Ferrua to explain the presence of
4370    certain
4371       representations, in the famous catacomb of the Via Latina (Dino Compagni)
4372    discovered in
4373       1956,<ref type="noteLoc" target="#note_96">87</ref> that he believed no
4374    ecclesiastical
4375       authority would have tolerated.</ref>
4376      <ref type="noteSpan" corresp="#note_97">This point of view, like the view that
4377    these were the
4378       catacombs of heretics,<ref type="noteLoc" target="#note_97">88</ref> has
4379    slowly been
4380       abandoned;</ref> these hypogea may have escaped ecclesiastical control-
4381    which, for the time
4382      being, remains to be proven for other catacombs-but primarily they are evidence
4383    of pagans and
4384      Christians continuing to use the same burial areas in the fourth century in Rome.
4385      <ref
4386       type="noteSpan" corresp="#note_98">For instance, the catacomb of the Via
4387    Latina, which seems at
4388       first to have been used exclusively by Christians, later received pagan burials in
4389    the second
4390       half of the fourth century, as we know from rooms with pagan iconography
4391    located next to rooms
4392       with Christian iconography.<ref type="noteLoc"
4393    target="#note_98">89</ref></ref>
4394      <ref type="noteSpan" corresp="#note_99">In other hypogea, such as that of
4395    the Aurelii on the Via
4396       Labicana or of the Via Livenza, figured scenes have sometimes been interpreted
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4397   as the result of
4398   philosophical and religious syncretism, since pagan and Christian motifs seem to
4399   have been
4400   juxtaposed in the same spaces.<ref type="noteLoc"
4401   target="#note_99">90</ref></ref> Such a
4402   notion supposes a form of synthesis that is far from being documented and thus
4403   should be
4404   abandoned. <ref type="noteSpan" corresp="#note_100">In any case, the
4405   mixing of pagans and
4406   Christians in Rome up to the second half of the fourth century is clear, and
4407   hardly
4408   exceptional.<ref type="noteLoc" target="#note_100">91</ref></ref> What
4409   about the <pb n="35"
4410   />so-called communal catacombs that are interpreted as places of Christian
4411   burial exclusively,
4412   and that became quite large? <ref type="noteSpan"
4413   corresp="#note_101">Before the beginning of
4414   the fourth century, galleries in the catacomb "Ad duos lauros," for example,
4415   extended two
4416   kilometers and contained some thirty cubicula; Jean Guyon estimates that there
4417   might have been
4418   11,000 burials there, to which must be added 6,000 surface tombs. He
4419   extrapolates from these
4420   numbers a population of some 9,000 souls having used the catacomb in the first
4421   forty years.<ref
4422   type="noteLoc" target="#note_101">92</ref></ref> The number of Christians
4423   living in Rome is
4424   estimated between 30,000 and 50,000 for that period. If we accept the traditional
4425   thesis,
4426   holding that the church managed the catacombs, the question of why Christians
4427   chose to be buried
4428   together is not an issue; it was imposed upon them by their religious affiliation.
4429   But, as I
4430   have shown, there is no evidence of any such obligation during the period under
4431   consideration.
4432   The administration of the catacombs by the church in turn raises a number of
4433   problems, as I have
4434   already shown in emphasizing the fragility of De Rossi's system. <ref
4435   type="noteSpan"
4436   corresp="#note_102">Actually, the only known authority responsible for these
4437   burial areas is
4438   that of the fossores,<ref type="noteLoc" target="#note_102">93</ref> who
4439   were technically
4440   responsible for developing the catacombs: digging the galleries, furnishing the
4441   tombs,
4442   connecting different areas, ensuring their safety.</ref> They sold the spaces
4443   and received
4444   payments. These grave diggers were skilled workers who might have been
4445   previously employed in
4446   the digging of cisterns and sandpits that catacombs often reused. <ref
4447   type="noteSpan"
4448   corresp="#note_103">Charles Pietri has proven that they were not members of
4449   the clergy.<ref

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4450      type="noteLoc" target="#note_103">94</ref></ref>
4451     <ref type="noteSpan" corresp="#note_104">The epigraphical record of the sales
4452   of tombs in
4453      catacombs, studied by Jean Guyon, shows, moreover, that their activity was
4454   autonomous and
4455      independent of the clergy. Of slightly more than one hundred inscriptions, only
4456   three texts
4457      involve a member of the clergy: in one, a priest witnesses a sale, and in two
4458   cases, the
4459      priest's involvement concerns the sale of an especially valuable space. Yet, Pietri
4460   maintained
4461      that the church entrusted these various duties to the fossores.<ref
4462   type="noteLoc"
4463      target="#note_104">95</ref></ref> I will show <pb n="36"/>that, in fact, it
4464   was the emperor
4465     who entrusted the control of the grave diggers to the church. </p>
4466     <note xml:id="note_95" place="foot" anchored="true" n="86">
4467     <gi>86. </gi><ab type="citation">
4468      <seg function="contextualization">See</seg>
4469      <bibl sourceRole="secondary" contentType="opinion" reason="neither"
4470   type="book" xml:lang="IT"
4471      corresp="#bibl_112">
4472      <author>
4473       <name type="last">Pergola</name>
4474      </author>, <title level="m" type="short">Le catacombe romane</title>,
4475   <biblScope type="pp"
4476       >89-93</biblScope> , </bibl>
4477      <seg function="contextualization"> where he insists on the need to clearly
4478   distinguish
4479      fourth-century hypogea from those from the end of the second and beginning of
4480   the third
4481      centuries.</seg>
4482     </ab>
4483     </note>
4484     <note xml:id="note_96" place="foot" anchored="true" n="87">
4485     <gi>87. </gi><ab type="citation">
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4487   xml:lang="IT" type="book"
4488      xml:id="bibl_114">
4489      <author>
4490       <name type="first">Antonio</name>
4491       <name type="last">Ferrua</name>
4492      </author>, <title level="m">Le pitture della nuova catacomba di via
4493   Latina</title>, <series>
4494      <title level="s">Monumenti di antichità Cristiana</title>
4495      <biblScope type="vol">2</biblScope>, no. <biblScope
4496   type="issue">8</biblScope>
4497     </series> (<pubPlace>Vatican City</pubPlace>: <publisher>Pontificio Istituto
4498   di Archeologia
4499      Cristiana</publisher>, <date>1960</date>), <pubCountry
4500      xmlns="http://www.example.org/ns/nonTEI">Vatican</pubCountry>
4501     <biblScope type="pp">89-91</biblScope>. </bibl>
4502     </ab>
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4503      <ab type="citation">
4504       <seg function="contextualization">See</seg>
4505       <bibl sourceRole="secondary" contentType="opinion" reason="reject"
4506   xml:lang="IT" type="book"
4507     xml:id="bibl_115">
4508       <author>
4509        <name type="last">De Rossi</name>
4510        <name type="first" rend="false">Giovanni Battista</name>
4511       </author>, <title level="m">La Roma sotterranea cristiana</title>, <biblScope
4512   type="otherLoc"
4513        >1:84</biblScope>
4514       <pubCountry xmlns="http://www.example.org/ns/nonTEI">Italy</pubCountry>
4515       <date rend="false">1864</date>, </bibl>
4516       <seg function="contextualization">on the distinction between common and
4517   private burial
4518      places;</seg> and <bibl sourceRole="secondary" contentType="opinion"
4519   reason="reject"
4520     xml:lang="IT" type="book" xml:id="bibl_116">
4521       <author>
4522        <name type="first">Pasquale</name>
4523        <name type="last">Testini</name>
4524       </author>, <title level="m">Le catacombe e gli antichi cimiteri cristiani in
4525   Roma</title>, <series>
4526        <title level="s">Roma cristiana</title>
4527        <biblScope type="vol">2</biblScope>
4528       </series> (<pubPlace>Bologna</pubPlace>: <publisher>Cappelli</publisher>,
4529   <date>1966</date>),
4530        <pubCountry
4531   xmlns="http://www.example.org/ns/nonTEI">Italy</pubCountry>
4532      <biblScope type="pp">141-43</biblScope>. </bibl>
4533      </ab>
4534      </note>
4535      <note xml:id="note_97" place="foot" anchored="true" n="88">
4536      <gi>88. </gi><ab type="selfCitation">
4537       <seg function="contextualization">About "cemeteries for heretics" in Rome, see
4538   </seg>
4539      <bibl sourceRole="secondary" contentType="opinion" reason="support"
4540   type="journalArticle"
4541     xml:lang="FR" xml:id="bibl_117">
4542       <author>
4543        <name type="first">Éric</name>
4544        <name type="last">Rebillard</name>
4545       </author>, " <title level="a">L'Eglise de Rome et le développement des
4546   catacombes: a propos de
4547      l'origine des cimetières chrétiens</title>," <title level="j">Mélanges de l'Ecole
4548   française
4549       de Rome. Antiquité</title>
4550      <pubCountry xmlns="http://www.example.org/ns/nonTEI">Italy</pubCountry>
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4554   59</biblScope>.</bibl></ab></note>
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4556      <gi>89. </gi><ab type="citation">
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4562      <author>
4563       <name type="last">Pergola</name>
4564      </author>, <title level="m" type="short">Le catacombe romane</title>,
4565    <biblScope type="pp"
4566       >171-74</biblScope>. </bibl>
4567      </ab>
4568      </note>
4569      <note xml:id="note_99" place="foot" anchored="true" n="90">
4570      <gi>90. </gi><ab type="citation">
4571       <seg function="contextualization">See</seg>
4572      <bibl sourceRole="secondary" contentType="opinion" reason="reject"
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4575      <author>
4576       <name type="first">Fabrizio</name>
4577       <name type="last">Bisconti</name>
4578      </author>, " <title level="a">L'ipogeo degli Aureli in viale Manzoni: un esempio
4579    di sincresi
4580       provata</title>," <title level="j">Augustinianum</title>
4581      <pubCountry
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4584       >25</biblScope> ( <date>1985</date>): <biblScope type="pp">889-
4585    903</biblScope> . </bibl>
4586      </ab>
4587      </note>
4588      <note xml:id="note_100" place="foot" anchored="true" n="91">
4589      <gi>91. </gi><ab type="citation">
4590       <seg function="contextualization">For more Roman and Italian examples, see
4591    </seg>
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4593    furtherReading="true"
4594      xml:lang="EN" type="journalArticle" corresp="#bibl_89">
4595      <author>
4596       <name type="last">Johnson</name>
4597      </author>, " <title level="a" type="short">Pagan-Christian Burial
4598    Practices</title>,"
4599       <biblScope type="pp">53-55</biblScope>. </bibl>
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4606      xml:id="bibl_119">
4607      <author>
4608       <name type="first">Jean</name>
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4609        <name type="last">Guyon</name>
4610      </author>, <title level="m">Le cimetière aux deux lauriers: recherches sur les
4611    catacombes
4612        romaines</title>, <series>
4613        <title level="s">Bibliothèque des Ecoles françaises d'Athènes et de
4614    Rome</title>
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4625      <gi>93. </gi><ab type="citation">
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4628    xml:lang="FR" type="book"
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4630        <author>
4631        <name type="last">Guyon</name>
4632      </author>, <title level="m" type="short">Le cimetière aux deux
4633    lauriers</title>, <biblScope
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4637        type="journalArticle" xml:id="bibl_120">
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4639        <name type="first">Jean</name>
4640        <name type="last">Guyon</name>
4641      </author>, " <title level="a">La vente des tombes à travers l'épigraphie de la
4642    Rome chrétienne
4643        (III - VII Siècles) le rôle des fossores, mansionarii, praepositi et
4644    prêtres</title>," <series>
4645        <title level="j">Mélanges de l'Ecole française de Rome. Antiquité</title>
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4662        <title level="s">Studi di antichità cristiana</title>
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4670   scenes.</seg>
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4680      </author>, <title level="m"><abbr>Roma Christiana</abbr><expan>Roma
4681   Christiana: recherches sur
4682      l'Église de Rome, son organisation, sa politique, son idéologie de Miltiade à Sixte
4683   III
4684      (311-440)</expan></title>, <series rend="false"><title
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4701      </author>, " <title level="a">Appendice prosopographique a la Roma Christiana
4702      (311-440)</title>," <title level="j">Mélange de l'Ecole française de Rome.
4703   Antiquité</title>
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4707      >89</biblScope> (<date>1977</date>): 398-406. </bibl>
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4727        <author>
4728         <name type="last">Guyon</name>
4729        </author>, " <title level="m" type="short">La vente des tombes</title>,"
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4738        <author>
4739         <name type="last">Pietri</name>
4740        </author>, <title><abbr>Roma Christiana</abbr></title>, <biblScope
4741    type="pp">134</biblScope> : </bibl>
4742        <quote>"Very pragmatically, the Church entrusts to the fossores, who are
4743    laymen, the tasks
4744         associated with the care and burial of the dead."</quote>
4745        </ab>
4746        </note>
4747        <p> The choice of a burial was not dictated to Christians by the church, and not
4748    even suggested
4749        as an alternative to family practices. Nor could the grouping of Christians in burial
4750    areas as
4751        vast as the catacombs have been the result of a "Christian community"; what
4752    sort of organization
4753        would it have had, outside the church? Was the service of the fossores available
4754    exclusively to
4755        Christians? We have seen that this was not the case, either in the hypogea later
4756    incorporated in
4757        the largest catacombs or in the small, independent fourth-century hypogea. <ref
4758    type="noteSpan"
4759         corresp="#note_105">Was it, however, the case for the so-called communal
4760    catacombs? The
4761         question has never been asked; it may be that we should reconsider the cases
4762    one by one, now
4763         that we can no longer presume to know the answer in advance.<ref
4764    type="noteLoc"
4765         target="#note_105">96</ref></ref> Let us also point out that, as in the case
4766    of the Jews,
4767        there are no Christian burial areas anywhere in the empire comparable to the
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4768   Roman catacombs; we
4769     should not rule out the possibility that the very exceptional size of the city itself
4770   played a
4771     role in the choice local Christians made to be buried together. </p>
4772     <note xml:id="note_105" place="foot" anchored="true" n="96">
4773     <gi>96. </gi><ab type="citation">
4774      <bibl sourceRole="secondary" contentType="opinion" reason="support"
4775   xml:lang="EN"
4776     type="bookSection" xml:id="bibl_124">
4777     <author>
4778      <name type="first">John</name>
4779      <name type="last">Bodel</name>
4780     </author>, " <title level="a">From Columbaria to Catacombs: Collective Burial
4781   in Pagan and
4782      Christian Rome</title>," in <title level="m">Commemorating the Dead: Texts
4783   and Artifacts in
4784      Context, Studies of Roman, Jewish and Christian Burials</title>, ed. <editor>
4785      <name type="first">Laurie</name>
4786      <name type="last">Brink</name>
4787     </editor> and <editor>
4788      <name type="first">Deborah</name>
4789      <name type="last">Green</name>
4790     </editor> (<pubPlace>Berlin</pubPlace>: <publisher>De Gruyter</publisher>,
4791   <date>2008</date>),
4792      <pubCountry
4793   xmlns="http://www.example.org/ns/nonTEI">Germany</pubCountry>
4794      <biblScope type="pp">183-85</biblScope> , </bibl>
4795      <seg function="contextualization">uses calculations of mortality rate,
4796   estimations of the
4797      number of Christians, and the number of excavated graves to suggest that it is
4798   very unlikely
4799      that the catacombs contain exclusively Christian dead.</seg>
4800     </ab>
4801     </note>
4802     <p> The conclusion is still tentative, but it does seem that Christians, like other
4803   religious
4804     groups, did not have religious reasons for favoring some form of communal burial
4805   over family
4806     burial. Funerary practices and, specifically, the choice of burial place does not
4807   appear to have
4808     been, in the Roman Empire, an important element in the constructing of religious
4809   identity.
4810     Although membership in a cult, synagogue, or church was not a determining
4811   factor in the choice
4812     of burial place, we have often seen that membership in an association, or
4813   collegium, was. It is
4814     this form of social relationship, typical of the Greco-Roman world, that we must
4815   now explore.
4816     </p>
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4821   </TEI>