Following the Footnotes
The front cover illustration is a visualization of citation patterns among 724 Journals in the *Arts & Humanities Citation Index* from the year 2008. The author wishes to thank Alkim Almila Alkdag Salah and Loet Leydesdorff for permission to use this image.
Following the Footnotes

A Bibliometric Analysis of Citation Patterns in Literary Studies

Björn Hammarfelt
Dissertation presented at Uppsala University to be publicly examined in Universitetshuset, sal IX, Biskopsgatan 3, Uppsala, Saturday, May 12, 2012 at 10:15 for the degree of Doctor of Philosophy. The examination will be conducted in English.

Abstract

This thesis provides an in-depth study of the possibilities of applying bibliometric methods to the research field of literary studies. The four articles that constitute the backbone of this thesis focus on different aspects of references and citations in literary studies: from the use of references in the text to citation patterns among 34 literature journals. The analysis covers both an Anglo-Saxon context as well as research in Swedish literary studies, and the materials used include Web of Science data, references in the Swedish literature journal TFL (Tidskrift för Litteraturvetenskap) and applications to the Swedish Research Council (Vetenskapsrådet). A study is also made of the influence of one single publication—Walter Benjamin’s Illuminations—and its impact in literary studies and in wider academia.

The results from the four articles are elaborated upon using a theoretical framework that focuses on differences in the social and intellectual organization of research fields. According to these theories literary studies can be described as a fragmented, heterogenic, interdisciplinary and ‘rural’ field with a diverse audience. The fragmented and rural organization of the field is reflected in low citation frequencies as well as in the difficulties in discerning research specialities in co-citation mappings, while the analysis of the intellectual base (highly cited authors) is an example of the heterogenic and interdisciplinary character of the field, as it includes authors from many fields across the humanities and the social sciences.

The thesis emphasizes that bibliometric studies of research fields in the humanities need to incorporate non-English and non-journal publications in order to produce valid and fair results. Moreover, bibliometric methods must be modified in accordance with the organization of research in a particular field, and differences in referencing practices and citation patterns ought to be considered. Consequently, it is advised that bibliometric measures for evaluating research in these fields should, if used at all, be applied with great caution.

Keywords: Bibliometrics, citation analysis, scholarly communication, research practices, literary studies, the humanities, visualization

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Contents

Acknowledgments........................................................................................................ ix

Abbreviations .............................................................................................................. xi

1. Introduction .............................................................................................................. 13
   Structure of the Thesis ......................................................................................... 16
   Bibliometrics as a Research Area ........................................................................ 17
   The Humanities and Literary Studies: Definition, Delineation, and Operationalization ................................................................................................................ 20

2. Scholarly Communication, Research Practices, and Citation Patterns
   in the Humanities ..................................................................................................... 26
   Searching and Writing ....................................................................................... 27
   Submitting and Publishing ............................................................................... 28
   Linking or Citing ............................................................................................. 30
   Collaboration and the Growth of Knowledge .................................................... 37
   Reviewing and Evaluating .............................................................................. 39
   Scholarship in Literary Studies: Research Practices in Transition? ............... 44

3. Theoretical Framework ........................................................................................... 47
   The Social and Intellectual Organization of Research Fields ......................... 48
   Academic Tribes .............................................................................................. 52
   New Modes of Knowledge Production .......................................................... 54
   Interdisciplinarity ............................................................................................ 56
   A Theoretical Toolbox for the Study of Citation Patterns ................................ 58
   Visualizations, Mapping Techniques, and Topographical Metaphors ....... 60

4. Referencing in the Humanities and its Implications for Citation
   Analysis ................................................................................................................. 64
   Introduction ........................................................................................................ 64
   A Brief History of Annotation .......................................................................... 66
   References as Rhetorical Devices ..................................................................... 68
   Referencing and the Intellectual Organization of the Humanities ............... 71
   Discussion ......................................................................................................... 76
   References ........................................................................................................ 79

5. Interdisciplinarity and the Intellectual Base of Literature Studies:
   Citation Analysis of Highly Cited Monographs ............................................ 83
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>83</td>
</tr>
<tr>
<td>Methods and Materials</td>
<td>87</td>
</tr>
<tr>
<td>The Intellectual Base of Literature Studies</td>
<td>89</td>
</tr>
<tr>
<td>The Two Levels of Literature Studies</td>
<td>94</td>
</tr>
<tr>
<td>Interdisciplinarity and Intellectual structure</td>
<td>95</td>
</tr>
<tr>
<td>Citation Patterns and Intellectual Organization</td>
<td>100</td>
</tr>
<tr>
<td>Discussion</td>
<td>101</td>
</tr>
<tr>
<td>References</td>
<td>106</td>
</tr>
<tr>
<td>6. Citation Analysis on the Micro Level: The Example of Walter</td>
<td>109</td>
</tr>
<tr>
<td>Benjamin’s <em>Illuminations</em></td>
<td></td>
</tr>
<tr>
<td>Introduction</td>
<td>109</td>
</tr>
<tr>
<td>Background</td>
<td>110</td>
</tr>
<tr>
<td>Methods and Material</td>
<td>113</td>
</tr>
<tr>
<td>Results</td>
<td>114</td>
</tr>
<tr>
<td>Discussion</td>
<td>127</td>
</tr>
<tr>
<td>References</td>
<td>132</td>
</tr>
<tr>
<td>7. Harvesting Footnotes in a Rural Field: Citation Patterns in Swedish Literary Studies</td>
<td>135</td>
</tr>
<tr>
<td>Introduction</td>
<td>136</td>
</tr>
<tr>
<td>Background</td>
<td>137</td>
</tr>
<tr>
<td>Material and Methods</td>
<td>139</td>
</tr>
<tr>
<td>Citation Characteristics of Swedish Literary Studies</td>
<td>143</td>
</tr>
<tr>
<td>Intellectual Patterns in Swedish Literary Studies</td>
<td>150</td>
</tr>
<tr>
<td>Discussion</td>
<td>155</td>
</tr>
<tr>
<td>Literature</td>
<td>160</td>
</tr>
<tr>
<td>8. Summary and Discussion</td>
<td>164</td>
</tr>
<tr>
<td>Citation Patterns in Literary Studies</td>
<td>164</td>
</tr>
<tr>
<td>Material and Methodology Revisited</td>
<td>168</td>
</tr>
<tr>
<td>The Politics of Bibliometrics: Measures of Research Quality in the Humanities</td>
<td>171</td>
</tr>
<tr>
<td>9. Sammanfattning</td>
<td>174</td>
</tr>
<tr>
<td>Inledning</td>
<td>174</td>
</tr>
<tr>
<td>Delstudier</td>
<td>176</td>
</tr>
<tr>
<td>Avslutande Reflektioner</td>
<td>179</td>
</tr>
<tr>
<td>References</td>
<td>181</td>
</tr>
</tbody>
</table>
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Abbreviations

ACA – Author Co-citation Analysis
A&HCI – Arts and Humanities Citation Index
DDC – Dewey Decimal Classification System
ERIH – European Reference Index for the Humanities
ISI – Institute for Scientific Information
LIS – Library and Information Science
PCA – Page Citation Analysis
RES – Research Evaluation System
SCI – Science Citation Index
SSCI – Social Sciences Citation Index
SSH – Social Sciences and Humanities
STS – Science and Technology Studies
TFL – Tidskrift för Litteraturvetenskap
WoS – Thomson Reuter Web of Science
1. Introduction

“Academic texts are usually more interesting for their footnotes than their main argument—that is, for what they consume rather than what they produce.” (Steve Fuller 2005, The Intellectual, p. 131)

Referencing is a highly organized, ritualized, and important practice in academic scholarship. The reference is one of the most familiar symbols of research, and a text without references is hardly seen as scientific or scholarly. The examination of footnotes and references might appear to be a rather esoteric exercise, but for those interested in the flow and exchange of ideas, the coming and going of trends and the impact and dissemination of research the reference is a unit of particular interest. If references are regarded as ‘the life blood of academia,’ this thesis is interested in one particular part of the ‘blood flow’ of scholarly literature: the humanities.

The emerging focus on the giving of references in contemporary scholarship coincides with the development of a new culture in science: the citation culture (Wouters, 1999a). This culture is not yet as strong within the social sciences and the humanities, but increasingly these fields are interested not only in giving references but also in receiving citations. Bibliometric studies in general and citation analysis of scholarly fields in particular are increasingly used to study, map, and evaluate academic research. Previous studies have mainly been preoccupied with the natural sciences, but growing interest is directed at the social sciences and the humanities. Citation counts are not yet widely used to evaluate fields in the humanities, foremost due to the limitations of existing databases, but several bibliometric approaches for evaluating the humanities have been proposed (Moed, Luwel & Nederhof, 2002, Torres-Salinas & Moed, 2009; Linmans, 2010). Obviously, the evaluation of research using bibliometric methods is a controversial issue that cannot be resolved within a study of this kind. Instead, this thesis aims to contribute to a critically informed and balanced debate.

This project is fueled by an interest in research practices, communication patterns, and the visualization of information structures. Several attempts have been made to map disciplines and the macrostructure of science—see Börner (2010) for an illustrative overview—and the aim of these maps is

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1 The distinction between a reference (given in a document) and a citation (received by a document) is used in this study when it serves the argument to make a difference between the two.
often to capture the ‘landscape’ of research and its development. However, few mappings cover the humanities or research fields in the humanities; this often due to a belief that neither the material used nor the bibliometric methods applied could accurately depict these fields. This project tests this assumption in four studies that in an explorative way investigate how bibliometric methods can be applied to a research field—in this case literary studies—in the humanities.

This dissertation is driven by an effort not only to perform bibliometric analysis on the humanities, but also to use, and to critically study, bibliometric methods from the perspective of the humanities. In this effort it tries to develop an approach where theories and methods are adapted to the structure and epistemology of the humanities. This is important, as most bibliometric methods have been developed for the analysis of disciplines and fields that differ from the humanities in both intellectual organization and publication patterns. Thus, the limits of existing approaches warrant the development of a bibliometrics for the humanities, and approaches and methods have been modified and further developed in order to make them applicable to the arts and humanities.

The choice of bibliometrics for studying knowledge structures in the field of literary studies is motivated by an assumption that quantitative studies on an aggregated level can produce knowledge that would not be attainable using other methods. Interviews, surveys and ethnographical methods are important approaches for studying communication patterns and structures but “[t]he bibliometric analysis may, on the other hand, reveal regularities and patterns in scientific communication which are not consciously available to the actors involved—and therefore should not be asked of them—yet structure their behavior.” (Leydesdorff, 2001, p. 20). Hence, bibliometrics is used to study the actions and artifacts—references and publications—of communication rather than accounts about these actions made by the actors involved. The results of the analysis can then be contextualized using qualitative accounts and theoretical tools, with the aim of giving a more accurate view of communication structures within a discipline or a field.

The title of the thesis—“Following the footnotes: A bibliometric analysis of citation patterns in literary studies”—has several connotations. First, and most important, it means ‘to follow’ the footnotes in the sense of mapping references on their journey through the disciplinary landscape. Second, it points to the question of ‘what will follow’ after the footnote. The footnote in its traditional sense has been described as an endangered species (Zerby, 2003), and there is no doubt that referencing practices in the humanities will change in the meeting with the citation culture of science and the digital culture in which a growing share of knowledge is disseminated. This dissertation deals with the referencing practices and citation patterns of today, but the intention is also to give some insights to that which might ‘follow.’ Finally, the title alludes to the heightened awareness and importance of the
reference and its transaction into citations, which through the use of bibliometric methods for research evaluation is ‘followed’ by rewards such as academic positions or research grants.

Rationale and Aim of the Thesis
Although the social sciences and the humanities have attracted the interest of bibliometricians in recent years, communication structures, intellectual networks, and citation patterns within these fields are still largely unexplored. Sociologists of science have preferred to study the writing of texts and the use of references in the natural sciences, whereas writing and citing in the humanities has received less attention. This could be due to scholars in the humanities and social scientists focusing on the more prestigious scientific text, but as MacDonald (1994, p. 10) states: “[…] humanist and social scientists stand to gain from monitoring their own practices.” Thus, knowledge about publication and referencing practices, intellectual networks, and distribution of citations is valuable not only for researchers interested in scholarly communication, the sociology of science, and bibliometrics, but also for scholars in the humanities who are interested in structures and developments in their own fields.

This thesis depicts the possibilities and complexities of studying a research field such as literary studies using bibliometric methods. Literary studies was chosen because of its long history as one of the major research fields in the humanities. A further reason for studying citation structures in literary studies is that research and publication practices in this field differ to a large degree from those in fields closer to the social and natural sciences.

The study focuses on how the social and intellectual organization of a research field influences the practice of referencing as well as citation patterns and structures. In this it builds on the notion that: “[…] citations are a way of ritualistically affirming group goals and norms, of demonstrating group membership and identity (Whitley, 2000, p. 28). Thus, it is assumed that the organization of research fields influences how references are given and distributed.

The project has a twofold aim: first, to study how the social and intellectual organization influences citation patterns and structures in the research field of literary studies, and second, to investigate what the use—as well as the outcome—of bibliometric analysis says about the limits of these methods. An additional purpose of the thesis is to provide a comprehensive account and a critical overview of bibliometric research on the humanities, something that so far has been lacking.

The overarching research questions constitute a background from which the more specific studies were formulated and designed. These questions are formulated below:
I. How can citation patterns and referencing practices in literary studies be explained by the social and intellectual organization of the field?
II. How can bibliometric methods be modified in order to be applicable to the research field of literary studies?
III. What conclusions regarding the evaluation of research in the humanities using bibliometric methods can be drawn on the basis of referencing practices and citation patterns in literary studies?

These questions should be seen as guidelines for the project as such, and more detailed aims and questions are found in each of the four articles. The open aim and the deliberately wide and general questions emphasize the explorative thrust of the thesis. In the concluding discussion, the three main research questions will be evaluated, and implications for further research on the humanities using bibliometric methods will be outlined.

Structure of the Thesis

This dissertation is organized in eight chapters, four of which are journal articles that have been published or are about to be published. The first chapter provides an introduction to bibliometrics as a field of research and its position within library and information science (LIS) as well as a discussion regarding definitions of the humanities and literary studies. An overview of previous research on scholarly communication and bibliometric in the humanities is given in the second chapter, while the third chapter presents the theoretical framework together with an introduction to visualization of research fields and the techniques of bibliometric mapping. Then follow four analyses that are conducted on different levels of aggregation, using a range of materials and applying various perspectives on the results gained. However, they are also intertwined with and build on each other, both implicitly and explicitly.

The first study (chapter four) focuses on how references are given and motivated in the text. It discusses the implications that referencing practices within the humanities have for the use of bibliometric methods, and the principal unit of analysis is the reference/citation. The first study is an attempt to theoretically understand referencing practices in the humanities and how these affect citation patterns and structures. The second study (chapter five) is broad: both in time and in the inclusion of journals, taking a bird’s eye view on literary research in the English language. It analyzes the formation of an intellectual base (‘canon’) and the interdisciplinary import of ideas to literary studies using a selection of literature journals. The third article (chapter six) is directly derived from previous findings as it focuses on one particular publication that was highly cited in the analysis of the intellectual base. This study illustrates the impact of one single publication—Walter
Benjamin’s *Illuminations*—and its dissemination within literary studies as well as in wider academia. Hence, it can be understood as an attempt to understand why a certain publication becomes widely cited. The last analysis (chapter seven) focuses on Swedish language material in the form of the Swedish literary journal *Tidskrift för Litteraturvetenskap* (TFL) as well as grant applications to the Swedish Research Council (Vetenskapsrådet). This study highlights the importance of going beyond English-language materials, and it compares citation characteristics and patterns in Swedish literary studies with findings from the previous articles.

These studies cover different layers of scholarly communication—from a single reference to a large selection of journals, and in doing so they provide a multitude of perspectives on literary studies as a research field. The findings from the four studies are analyzed using a joint theoretical framework that combines theories on the ‘social and intellectual organization of research fields’ (Whitley, 2000) and ‘academic tribes’ (Becher & Trowler, 2001) with concepts such as ‘mode 2’ (Gibbons et al., 1994) and ‘interdisciplinarity’ (Klein, 1996). The fundamental unit of analysis in all studies—although the four articles focus on different materials and uses various methods—is the reference. Each of the four chapters provides a unique perspective on referencing practices and citation patterns in literary studies, with the intention that these studies together will answer or at least provide further insights into the main questions addressed in this thesis.²

How the findings of the four articles can be summarized and integrated is shown in a final chapter, where the main research questions are discussed and implications for the future are outlined. A few reflections on the attempts of evaluating the humanities with bibliometric methods are also given. Last, the reader will find a summary of the thesis in Swedish.

### Bibliometrics as an Research Area

Since the 1960s, scholars have introduced several terms and concepts for the study of communication patterns using statistical methods. All these ‘metrics’ have in common that they analyze information structures on an aggregated level in order to describe distributions and identify patterns. Alan Pritchard coined the term ‘bibliometrics’ in 1969 as a replacement of the previously used ‘statistical bibliography’ thereby defining bibliometrics as: “[…] the application of mathematical and statistical methods to books and other media of communication.” (Pritchard, 1969, p. 349).³ In the same year

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² The four articles that constitute the backbone of this thesis have been formatted in accordance with the design of the thesis as a whole, and they are reproduced as chapters and not as attached articles. This design was adopted in order to enhance coherence and readability.

³ The term was used by Paul Otlet as early as 1934 in the chapter “Le Livre et la mesure – Bibliometrie” in *Traité de documentation* but then in another context (de Bellis, 2009, p. 9).
the term ‘scientometrics’ was introduced by Nalimov and Mulchenko and defined as: “[…] the application of those quantitative methods which are dealing with the analysis of science viewed as an information process.” (Nalimov & Mulchenko, 1969: cited from Glänzel, 2003). As already implied by these definitions, the two concepts overlap: scientometric research can deal with units other than publications, and bibliometrics can be applied to non-scholarly publications (Broadus 1987a).

It is difficult to establish when the first bibliometric study was conducted; however, the development of a more advanced bibliometrics can be situated in time to the 1920s and 1930s when three important bibliometric laws were introduced: Lotka’s law (1926), the Bradford distribution (1934) and Zipf’s law (1936) (de Bellis, 2009, p. 75). The formulation of these laws is an important part of the history of modern bibliometrics, as the use of these measures allowed scientists to discover patterns within scholarly communication that simple counting could not reveal.

Another crucial event in the history of bibliometrics is the establishment of the Science Citation Index (SCI), first published by the Institute of Scientific Information (ISI) in 1960. The Science Citation Index was later followed by the Social Sciences Citation Index (1970) and the Arts & Humanities Citation Index (1975) and these databases are today challenged by Sciverse Scopus (2004) and the web-based Google Scholar (2004). The creator of SCI, Eugene Garfield, imagined that the index would profoundly change the way research was done, but the result was not what he initially envisioned. At first the index was seen as a tool for information retrieval, but quite soon its potential for science studies and science evaluation was recognized. The creation of the index was associated with problems that were both technical and economic in nature, but it became a success, and over time it would help to establish bibliometrics as a research field (Wouters 1999b).

The history of bibliometrics is often described as a gradual development of methods and available materials, but bibliometrics also shares a common history with qualitative and critical studies of science. The birth of science studies can be placed at different occasions, authors and contexts. The writings of Ludwig Fleck (1992 [1935]) and Thomas Kuhn (1996) [1962] as well as the contributions made by Robert K. Merton (1973) can be considered as central for the establishment of the sociology of science. However, from the perspective of bibliometrics, a passage from Derek de Solla Price and his Little Science, Big Science (Price, 1963, vii) seems a suitable point of departure. In the preface to his famous essay he frames the questions: “Why

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4 A broader concept is that of informetrics: “[…] the study of quantitative aspects of information in any form, not just records or bibliographies, and in any social group, not just scientists.” (Tague-Sutcliffe, 1992, p. 1). The wider term informetrics incorporates other ‘metrics’ such as bibliometrics, scientometrics, cybermetrics and webometrics.

5 For a more thorough account of the history of bibliometrics the reader could turn to de Bellis (2009), Godin (2006; 2007) or Broadus (1987b).
should we not turn the tools of science on science itself? Why not measure and generalize, make hypotheses, and derive conclusions?” This has been the credo of science studies, although the tools of ‘the science of science’ in the case of the contemporary science and technology studies (STS) are quite different from those used by Price. Nevertheless, the idea of studying science like any other phenomenon, with the use of the same methods and with the presumption that science in many regards does not differ from other human activities is something that sociologists of science—from quantitative bibliometricians to qualitative STS-scholars—share.

Today, the sociology of science is divided into at least two branches: a qualitative one that tends to have a social perspective on science, and a quantitative one that primarily focuses on statistical methods for depicting the structure and development of science. A similar divide is seen in the discussion about the theoretical foundation of bibliometrics—a debate that is illustrated by the call for a citation theory, where some argue for a theoretically informed model for explaining the role of citations (e.g. Luukkonen, 1997), while others suggest that a theory of citations is of limited use in explaining bibliometric distributions (e.g. Van Raan, 1998).

It has been suggested that science studies has reached maturity at the price of a division between quantitative studies and qualitative theories (Leydesdorff, 1989, p. 334). The significant theoretical and methodological difference between science and technology studies (STS) and bibliometrics is one reason for this, as bibliometrics often takes the organizational unit as a point of departure of the analysis, while STS focuses on the conceptual and cognitive aspects of science (Leydesdorff, 1989, p. 337). This disagreement limits the possible integration of theories, but the different perspectives and the combination of quantitative methods and qualitative theorizing, on the other hand, could open up for innovative studies of research fields and communication structures.6

The debate regarding the theoretical foundations of bibliometrics is fueled by its application in the evaluation of research. Verification, surveillance, governance, and evaluation are all intrinsic features of modern society. In an influential work, Powers (1999) has framed the term ‘the audit society,’ a society that spends more and more time and resources on evaluation and monitoring. Bibliometrics has emerged as a promising method in the efforts to efficiently evaluate universities and research fields. Bibliometrics is inexpensive, it can appear to be more objective than peer review and seems accessible to managers and politicians. Still bibliometric data needs interpretation and knowledge about methods and context in order to be understood and evaluated. Researchers in the specialty of bibliometrics are often fully aware

6 Science studies or the sociology of science are here viewed as larger fields of research that incorporate both STS and bibliometrics. However, this is not the only possible definition, as science studies, STS, and sociology of science often are used interchangeably.
that they do not measure quality and that experts from the field studied must validate the results gained, but this is often ignored when the data are used in decision-making or referred to in political discussions. The notion that bibliometrics is simple and easy to use and that it provides objective data is a major problem for bibliometric research—as Gläser and Laudel (2007, p. 119) put it: “Bibliometrics thus confronts the ghost it called.” The main challenge for bibliometrics is therefore to remain critical towards its own assumptions and theories at a time when bibliometric methods are increasingly used to evaluate research. Theories and critique from science studies at large play an important role in this endeavor.

Scholarly communication, as well as bibliometrics, is an established and recognized research area in library and information science (LIS), and at the same time a strong specialty of its own that stretches beyond LIS departments into other social sciences, statistics, and mathematics. The position of bibliometrics within the field of LIS has, not surprisingly, been analyzed using citation data. The results of these studies vary according to the analytical level, the selection of journals, and the chosen methods, as is illustrated by the different results achieved by White and McCain (1998), Moya-Anegon, Herrero-Solana, Jiménez-Contreras (2006) and Åström (2007; 2010). A common delineation—which is given in the name of the discipline as such—is the one between ‘library science’ and ‘information science,’ and bibliometrics is considered a part of the latter branch.

Bibliometric approaches are also directly associated with library practices such as acquisition and collection development. Bibliometric methods are used to identify and select journals and books for inclusion in research libraries (Edwards 1999; Enger 2009). University libraries are also to an increasing extent becoming a common setting for establishing local bibliometric expertise at university institutions. Thus, bibliometrics is to a growing degree a part of the functions of research libraries (Åström & Hansson, forthcoming). This furthers the importance of bibliometrics not only in information science but also in library science. Thus, bibliometrics is an interdisciplinary research field that is rooted in the practical application of bibliometric methods as well as in a more theoretically oriented sociology of science. It is an important and growing field within LIS, and it seems that knowledge concerning, as well as skills in, bibliometric methods are increasingly important for libraries and librarians.

The Humanities and Literary studies: Definition, Delineation, and Operationalization

The ‘humanities’ and ‘literary studies’ are broad concepts that can be defined in various ways depending on the context in which they are used. Thus,
a description of how these concepts are defined and operationalized in the context of this study is necessary. The term ‘humanities’ is understood here as a group of disciplines rather than as an ideal or an idea. The term ‘humanities’ can be compared to the German Geisteswissenschaften or the French sciences humaines, which are broader concepts in the terms of disciplines included but narrower in the sense that they are limited to the scholarly (scientific) sphere. The origin of the word and its use as a term for a range of disciplines can be traced back to ancient Roman times when “[h]umanistic inquiry became associated with exploring the meaning and purpose of human existence expressed in particular symbolic modes.” (Klein, 2005, p. 15).

Renaissance scholars carried on the tradition of the humanities, and were also the first to be called humanists. The division of knowledge that resulted in a particular set of disciplines being labeled the humanities occurred much later. Especially Wilhelm Dilthey’s separation between Naturwissenschaften (natural sciences) and Geisteswissenschaften (‘spiritual’ or human sciences) was an important step in this direction. The humanities was long defined as the study of Greek and Latin, and it was not until the 20th century that it came to represent a group of disciplines interested in human expressions and artifacts (Klein, 2005, p. 22-23).

The lists of fields that are defined as the humanities differ between contexts and countries. The Organization for Economic Co-operation and Development (OECD) lists history, archaeology, genealogy, literature, languages, philosophy, arts, history of arts, religion, and theology (OECD, 2002, p. 68), while The European Reference Index for the Humanities (ERIH) distinguishes fifteen fields in the humanities (including educational research as well as gender studies and psychology). In the U.S. on the other hand the Humanities Resources Center include eleven fields (Leydesdorff, Hammarfelt & Salah, 2011). Thus, the definition of fields either as social science fields or humanist fields is dependent on the context and purpose of the categorization. An example of a discipline in which researchers disagree on whether they belong to the social sciences or the humanities is history (Katz, 1995). On a local level, the definition of a research field as belonging either to the social sciences or the humanities can be decided by institutional arrangements. Thus, the definition of research fields as either social science or humanities is governed by institutional as well as epistemological considerations, which further depend on the organization of research in countries or regions. Due to the blurry boundaries of the humanities and the ever-changing disciplinary landscape, no definite list of fields in the humanities can be given. However, a core of fields—that are on all ‘lists’—can be dis-

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7 These fields are English language and literature, foreign languages and literature, history, philosophy, religion, ethnic-, gender- and cultural studies, American studies and area studies, archeology, jurisprudence, selected arts, and selected interdisciplinary studies.
tilled: art, philosophy, music, language, literary studies, and religious studies.

Thus, the term ‘humanities’ is used in this thesis to point to a particular set of research fields that differs from the natural sciences and the social sciences in intellectual organization and in publication practices. The conclusions drawn regarding the possibilities of bibliometric methods are therefore more directed towards fields where monographs are an important publication channel and where a national audience plays an important role. Thus, linguistics, archeology, and to some extent philosophy, which to a larger degree publish in international English-language journals, are somewhat exceptional in this regard.

**Literary Studies as a Research Field**

One reason for focusing on literary studies in this thesis is that the field of literature—especially English literature—has been the backbone of the humanities since the start of the 20th century. Literature was recognized as a subject at English-language universities during the late seventeenth and early eighteenth century (Klein, 2005, p. 84). Before then the classics—Latin and Greek—was the fundamental discipline of the humanities (Klein, 2005, p. 25). The role of literary studies within the humanities is also emphasized by its central position in the macrostructure of the arts and humanities as it emerges in analyses of citation and faculty data (Leydesdorff, Hammarfelt & Salah, 2011).

Research fields can be defined by their epistemological foundation, the subject matter, and the goal and purpose of the field. However, defining the purpose of a field soon turns into a disciplinary quarrel, as different scholars and branches have their own views on the identity of the field. In his ethnographical study of ‘English people’—students, teachers, and researchers in English literature—Evans (1993) proposes that knowledge about the core of the discipline (group) is essential for understanding the boundaries of a discipline. However, the existence of a core of literary studies is an issue of constant debate: “The core can be generically various. It can be the material: rocks for the geologist, literature for English people. But it can also be a question of technique: crystallography, close reading or statistical analysis. And it could be theory: Marxist or Structuralist.” (Evans, 1993, p. 161). Many would agree that ‘literary studies’ is a field occupied with the study of literature, but then other questions emerge: What is literature? What is a text? And what is the difference between the two? Klein (1996, p. 172) sees these discussions as central for the field: “[…] in literary studies, differences over canon, object, interpretation, and practice lie at the heart of disputes about the identity of discipline.”

Research fields and scholarly disciplines are inherently fluid entities that, depending on vantage point, perspective, and approach, may be defined in
numerous ways. Boundaries are redrawn, new fields or research specialties emerge while others disappear. Research fields are also renamed either as a result of political reforms, as in Sweden when literary history became comparative literature in the early seventies (Helgesson, 2005, p. 307f), or because of theoretical movements within a field e.g. women studies becoming gender studies (Stromquist, 2001).

Literary studies can partly be regarded as a discipline—with shared publication outlets and associations—and partly as a conglomerate of different disciplines with their own infrastructure and disciplinary culture. The concept of a discipline is less straightforward and well defined than one might think. Disciplines could be viewed as systems that produce statements about the world, but disciplines are limited and restricted while the ‘discursive formation’ in which they are constituted goes far beyond disciplinary boundaries (Foucault, 1971, p. 179). Thus, disciplines are not to be confused with topics, discourses, subjects or interests; rather they should be understood as knowledge institutions or knowledge systems. A discipline is partly defined by institutional structures within departments, but “[…] international currency is an important criterion, as is a general though not sharply defined set of notions of academic credibility.” (Becher & Trowler, 2001, p. 41). Publication outlets, academic conferences, and associations can be regarded as other important features of a discipline. A further defining trait of an academic discipline is the existence of undergraduate and graduate education as well as textbooks and a core of canonical publications. The control over how knowledge is disseminated and acknowledged is an important trait of a discipline. Lenoir (1997, p. 47) points to this function when writing that: “Disciplines are the institutional mechanisms for regulating the market relations between consumers and producers of knowledge.” In regulating the market of knowledge, disciplines also distributes status and rewards. Thus, there is a strong connection between discipline and power, and authors such as Foucault (1971) and Bourdieu (2001[1984]) have asserted this connection.

The important point is that disciplines are social and foremost organizational units rather than epistemological ones. To be defined as a discipline requires that a particular area of research is recognized and acknowledged, not only by researchers themselves but also by outsiders. As Turner (2000, p. 47) suggests: “Disciplinary identity is just that, a name or an understood identity that is realized in degree-granting bodies, such as departments, using the distinguishing mark both to identify its degree holders and at least occa-

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8 The fluidity of literary studies is illustrated by the different terms that are used to define it, here and elsewhere. Literature studies and literary studies are both used in the dissertation, and they should be read as synonyms. The choice of literary studies as the main term used in the title should not be regarded as a statement regarding the purpose of the discipline (e.g. the study of literary texts). Rather it is chosen because it is a commonly used term in the literature on disciplines and research fields (see for example MacDonald 1994; Klein 1996; Whitley 2000).
sionally by employing holders of degrees from other institutions with the same identity.” Hence, an important feature of a discipline is that it awards degrees and provides a job market for those having the degree. This is partly true for literary studies, but language and cultural differences limit the integration of literary studies as a discipline in the sense of a common job market. Or rather: no single discipline incorporates literary studies as a whole; it consists of a range of disciplines and research specialties. Among them we find: comparative literature, literature in specific languages such as English, French, German, and Spanish, or literature in specific regions such as Latin America or Scandinavia. Furthermore, studies of ‘literature’ are conducted in research specializations that are focused on a specific time period: ancient studies, medieval studies, renaissance studies or eighteenth-century studies, to mention a few. Literary studies is also carried out within the context of research areas focusing on a specific topic or perspective such as cultural studies, postcolonial studies, and gender studies.

Here literary studies is understood as a research field that is inhabited by several disciplines that to a great extent share common ground in their practices, concepts, and canonical texts. The joint communication structure of this research field warrants a wide definition when selecting material for analysis. Whitley (2000 p. 7) defines an intellectual field as:

A broader and more general social unit of knowledge production and coordination is the intellectual field. These fields are conceived here as relatively well-bounded and distinct social organizations which control and direct the conduct of research on particular topics in different ways through the ability of their leaders to allocate rewards according to the merits of intellectual contributions.

Although one could question whether literary studies is ‘well-bounded,’ it can be regarded as a specific field of research. The control of communication (literary journals) and the joint allocation of rewards and resources are the main arguments for this. Thus, although researchers may work in different disciplines, they communicate through joint channels and are judged by the same criteria. Another feature of an intellectual field is that scholars within the same field share research interests, as formulated by Åström (2006, p. 12): “Research fields on the other hand, are basically areas of common research interests.” Research fields, or intellectual fields, can be regarded as broader concepts than disciplines, yet they both share a connection to social and organizational structure within academia.

In this thesis literary studies is viewed as an organizational unit, and special focus is placed on the formal communication within this organization. Thus, articles published in literary journals and grant applications submitted to the category of ‘literature’ are included in this study by dint of their role in the formal communication of this organization. The broad inclusion of sources in the thesis—English language journals, citations to Walter Benja-
min in *WoS*, a Swedish language journal, and grant applications—should not be seen as an attempt to cover the field as a whole; rather this study provides examples that can be used to draw conclusions regarding a larger structure.
2. Scholarly Communication, Research Practices, and Citation Patterns in the Humanities

The purpose of this chapter is to provide an overview of studies on scholarly communication, research practices, and citation patterns in the humanities. Logically special emphasis is given to the application of bibliometric methods on literary studies and closely related fields. The research covered here should be seen as a background to the project as such, while more detailed and focused accounts of previous findings are found in each study. For a summary of bibliometric research conducted on the humanities the reader is referred to the bibliography compiled by Hérubel and Buchanan (1994) as well as Nederhof’s (2006) review of bibliometric evaluation of the social sciences and the humanities.

Scholarly communication is a common term for describing the processes in which research is shared and published. Scholars participate in the communication process in different roles, not only as authors or readers. Borgman and Furner (2002) discern four different roles of researchers: (1) as writers, (2) as linkers (e.g. to cite), (3) as submitters (chooser of publication channel), and as (4) as collaborators. In addition one could add the role of (5) gatekeepers or reviewers. These roles and their importance vary across scholarly fields and academic cultures. This chapter follows the outline indicated above, with a special emphasis on the role of ‘the linker,’ as referencing practices and citation patterns is the main topic of the thesis. The roles covered here are often inseparable, as the reader will soon discover, and the practices connected to one role (e.g. linker or citer) can only be understood in connection with another (e.g. writer).

Research on disciplinary practices, such as writing, searching, and citing, has been a growing theme in LIS (Palmer & Cragin, 2008). Practice is a term used in many contexts, and there is no single practice theory, although some general ideas are associated with the concept. Practices are in the view of many practice theorists: “[…] embodied, materially mediated arrays of human activity centrally organized around shared practical understanding” (Schatzki, 2001, p. 2). Furthermore, the practice approach is associated with specific contexts and the use of skills and activities within these settings. The
definition of ‘practice’ as a collective action is important for understanding the perspective of practice theory. Barnes (2001, p. 18) propose that practices should be seen as: “[…] socially recognized forms of activity, done on the basis of what members learn from others, and capable of being done well or badly, correctly or incorrectly.” Thus, the use, searching, and citing of literature can be seen as practices that are learned within a collective such as a scholarly field.

Searching and Writing

The search for literature in scholarly fields is a common topic in LIS research. One of the first studies focusing on the ‘habits’ of scholars in the humanities was Stone (1982). Her study covers many of the characteristics that reappear throughout the literature: humanists tend to work alone, search for literature on their own, and use monographs rather than journals. Stone’s study emphasizes the central role of the library and the use of browsing for locating relevant materials.

That researchers make little use of online searching is a common finding in studies of scholars in the humanities (Watson-Boone 1994; Bates 1996). Instead chaining—following references in books and articles—and getting recommendations from colleagues were the most common techniques for locating sources. Later findings have also indicated that chaining is the preferred technique among literary scholars, while browsing is popular among historians (Talja & Maula, 2003). However, a move towards using keyword searching was detected in a follow up study, a tendency that might be explained by the influence of the digital environment on the research practices of scholars in the humanities (Vakkari & Talja, 2006).

A literature scholar interviewed by Talja and Maula (2003, p. 680) explains why ‘direct searching’ is less frequent in his field: “This field is not based on technical searching. It is not the nature of this field that you have to read each source that has been written on your topic.” In fact it could even be so that literary scholars have to be selective and thus overlook a majority of topically relevant sources in order to have an efficient information strategy (Talja & Maula, 2003, p. 681). Chu’s (1999) study of the work process of literary scholars suggests that researchers rarely use literature searches when formulating new projects. Instead new venues of research originate from former projects or an already established knowledge base. Furthermore, the analysis of sources could rarely be separated from the writing process. Thus, the wide definition of topic as well as the search techniques used demand that scholars in the humanities search for literature themselves, and the searching for sources is an intrinsic part of the research process.

In her study of writing styles in the social sciences and the humanities MacDonald (1994) suggest that writing in literary studies can be character-
ized as epideictic—celebrating the complexity of literature and affirming the shared values of a particular group—rather than epistemic (establishing knowledge claims). She even suggests that writing in these fields has shifted from a focus on the contributions made to the field to the performance of the scholar. Thus, a further emphasis on the rhetoric of the text can be seen as “[…] scholars display prowess, privilege originality, and amplify on paradoxical themes” (MacDonald, 1994, p. 142). Her findings indicate that articles in literary studies are least epistemic and most particularistic among the fields she studied. Scholars in literary studies are less inclined to make generalizable conclusions, and particular arguments made in an article cannot always be evaluated on their own. Rather the reader must evaluate the whole article: “Contributions to interpreting Shakespeare may be more holistic, less able to be broken down into discrete bits of cumulative insight” (MacDonald, 1994, p. 175). Consequently, references are not only used for affirming a specific claim in the text—as is often the case in the rhetoric of scientific articles—but to support and contextualize the article as a whole.

Studies of how academic texts are constructed show that authors from research fields in the humanities are more visible in the text. This is illustrated through the use of hedging and in the amount of self-mentions in the text. In the natural sciences self-mentions are unusual, and a personal stance towards the arguments made is seldom visible. In the humanities, on the other hand, the credibility of the author, as well as explicitly taking a point of view, plays a greater part in “[…] creating a convincing discourse, enabling writers to emphasize their own contribution to the field and to seek agreement for it.” (Hyland, 2006, p. 32). Hence, claims are often inseparable from the author that makes them, and they can only be evaluated in the context in which they are made.

In summary, chaining and browsing are important techniques for locating sources in literary studies, although there are indications that this might be changing due to the rapid development of online databases. Nonetheless, full coverage of a specific topic is not always desirable, and the search for sources is an integrated part of the research process. Furthermore, the rhetoric of the academic text in the humanities aims not only at achieving epistemological goals but stylistic (epideictic) purposes as well, and specific claims can only be evaluated in relation to the overall purpose of the text.

Submitting and Publishing

The preferred publication channel differs across disciplines and fields, and the choice of output is dependent on variables such as the material under study, the methods used, and the intended audience. The publication practices of scholars in the humanities can be discussed from an epistemological point of view where the length of output is due to the type of problems that
is addressed in research. Scholars in the humanities accentuate that the monograph allows for the development of complex ideas, as it gives more room for deep analysis and comparisons (Williams et al., 2009).

The monograph serves a key function in many fields in the humanities, and the publication of a monograph is often a prerequisite for tenure (Donoghue, 2008, p. 41-49). Nonetheless articles in journals and books are publication channels often used by researchers in the humanities. Kyvik (2003) did a survey among scholars in Norway and found that articles—in books or in periodicals—are the most common output. Articles or chapters in books are also frequent in the social science and the humanities, and a small increase of international (English) and co-authored publications was detected. However, the level of co-authorship in the humanities is still small, only 14 percent compared to the natural sciences (72 percent) and the social sciences (43 percent).

A recent analysis of publications in the social sciences and humanities in Flanders (Belgium) shows that journal publishing is increasing in the social sciences, but declining in the humanities. A general increase in the production of publications and especially English language publications could also be detected, but no major shift towards publishing in journals could be discerned (Engels, Ossenblock & Spruyt, forthcoming). A similar study of publication output at the University of Helsinki did not indicate a growth in journal article publications; rather the publication of both articles and monographs was decreasing (Puuska, 2010). Articles in books (e.g. anthologies), on the other hand, were increasing, from 56 percent in 1997-1998 to 72 percent in 2007-2008. At the same time researchers and administrators had the perception that journal publications were more frequent than before. Thus, a change in publication practices towards journals was perceived, but it was not confirmed by empirical findings.

Hicks (2004) connects the various outputs of research in the humanities to the concept of a ‘new mode of producing knowledge’ (mode 2). In this mode, research is transdisciplinary, contextualized, and oriented towards application. Of special interest in the context of new modes of knowledge production is the category of literature that is directed to non-specialists and a general public. The function of non-scholarly publications can be described as follows: “Where national literatures can develop knowledge in the context of application, publishing in non-scholarly journals moves knowledge into application. The literature therefore performs a function similar to patenting for scientist” (Hicks, 2002, p. 489). While patent databases have been used to study the ‘application impact’ in technology and the natural sciences, the public dissemination of research in the social sciences and the humanities is a phenomenon that has not been measured or quantified to any great extent so far.

For a longer and critical discussion regarding mode 2 see p. 54-56.
A study that looked at the percentage of publications directed to a general public was Nederhof et al. (1989). They found that the percentage of publications directed to a non-scholarly audience was large in Dutch literary studies (30-43 percent), and a huge majority of publications were written for a national audience (95 percent) and in Dutch. General (comparative) literature, on the other hand, was more internationally oriented, with almost half of the publications directed to an international audience, and here the percentage of publications directed to non-scholarly readers was also lower (10-21%). Thus, the publication patterns in literary studies are dependent on the focus of research, and the degree to which publications are focused on a national and non-scholarly audience differs considerably.

Research in the humanities is directed to three different groups: scholars on the international ‘research frontier,’ scholars on the national or regional level, and a non-scholarly public (Nederhof, 2006, p. 96). The monograph does reach all three audiences to greater extent than the journal article, and it is especially efficient in targeting non-scholarly readers. English-language journals are foremost used to reach international scholars, while national journals play a role in the dissemination and discussion of research with national or local foci. Thus, publication patterns in the humanities are ascribable to the diverse audience of many research fields, and important contributions can be found in journal articles, book articles as well as in monographs. Publications directed to a popular audience play an important role, and the writing of monographs can be seen as an effort to target both a scholarly and a popular audience.

**Linking or Citing**

A range of studies have looked at the citation characteristics of research fields in the humanities. The type of sources, the language of sources, and the age of sources in different publications and research fields are often analyzed. A majority of studies use references form English-language journals, but there are also analyses of French, German, and Spanish sources. In general it has been claimed that scholars in the humanities often cite books and older sources. However, there are important differences within the humanities in the citing of sources, and the percentage of references to books varies from 88 percent in religion to only 49 percent in linguistics (Fig. 1).
Disciplines like religion, philosophy, and literature can be regarded as book-based disciplines, while journals play an important role in history and linguistics. As a comparison, two fields in the social sciences—sociology and LIS—were included, and books play an important role in these fields as well. A field such as sociology also relies heavily on books, but as always one must be aware that the choice of material influences the result. An analysis of qualitative research published in monographs would show high rates of references to books, while the opposite would be true for quantitative research published in articles. Hence, in the case of sociology, the high percentage of references to books might be partly a result of studying references in ‘outstanding academic books’ rather than journal articles (Lindholm-Romantschuk & Warner, 1996, p. 391).

Differences on the subdisciplinary level also influence how references are used. A detailed study of a few articles in the subfield of “Renaissance New Historicism” found that scholars almost solely cited primary materials and publications from outside their own discipline. The anecdotal style used by the authors is “[...] not explicitly focused on disciplinary knowledge making, and more likely to cite primary sources than sources within the dis-

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10 Data gathered from: religion (Knievel & Kellsey, 2005), philosophy (Cullars, 1998), music (Knievel & Kellsey, 2005), literature (Thompson, 2002), arts (Knievel & Kellsey, 2005), history (Lowe, 2003), sociology (Lindholm-Romantschuk & Warner, 1996), LIS (Chung, 1995) and linguistics (Georgas & Cullars, 2005).

11 The percentage of journal articles varies considerably across specializations in LIS. The study cited here focused on sources cited in the specialty of classification, and the number of cited journal articles would be considerably higher in the subfield of bibliometrics, for example.
ciplinary community” (MacDonald, 1994, p. 140). Thus, there seems to be little communication—at least in the practice of referencing each other—between researchers in this particular subdiscipline. The interdisciplinary use of sources was also observed by Talja et al. (2007), who found that scholars in the humanities were more prone to use literature outside their own field when compared to scholars in the social sciences and the natural sciences.

The referencing practices of literary scholars are also discussed by Crane (1972) in her study of ‘invisible colleges.’ She suggests that literary scholars are “[…] not concerned with creating a common body of knowledge of their subject” (Crane, 1972, p. 95). This would explain the reluctance to cite the work of colleagues. Referencing practices are thus a reflection of a field where there is more room for disagreement and were fewer researchers are engaged on each topic. Consequently, the invisible college of likeminded scholars—if existent at all—would be small compared to fields in the natural sciences.

There is no doubt that the most frequently cited sources in literary studies are books in the form of monographs and anthologies. The referencing practices of scholars in literary studies have been studied in a range of articles, but the results are not always comparable due to variations in the definition of books or monographs and differences in the methods used. The rate of citations to books within literary studies varies between 63 and 87 percent, depending on the material used. The results from these studies, covering a period from 1980-2010, give no indication that referencing patterns are changing over time. Books are the most cited publication form, and although the percentage of citations to journals varies considerably between studies no trend towards increased citing of journals can be discerned.

The extent to which fields in the humanities are adopting referencing practices from the natural sciences has been debated. Larivière et al. (2006) did a comparison between the humanities, the social sciences, engineering and the natural science when it comes to journal publication. They found a general increase in citations to journals between the years 1981-2000, and this applied both to the natural sciences and engineering as well as to the social sciences and the humanities. Though, when looking in detail at fields such as history, law and literary studies a decline in citations to journals during the period could be detected.

**The Language and Age of Cited Sources**

The language of cited sources is rarely an issue in the natural sciences were English is the established language of communication. The situation in the social sciences and especially in the humanities is rather different. Many

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fields in the social sciences and the humanities have a strong regional or national orientation, and this is the case especially in fields such as literary studies, sociology, political science and public administration (Nederhof 2006 citing Luwel et al. 1999). Databases that foremost index English-language sources cannot adequately cover these fields, and this is one of the major issues when using established databases such as WoS or Scopus to study research fields in the humanities.

Studies of the language of cited sources in German literature and French literature shows that the influence of English-language sources is moderate in these fields. Less than 15 percent of the cited sources in German literature and only 9 percent of the cited sources in French literature are in English (Cullars, 1989). The same pattern was discerned in the field of literary studies in Italian (8 percent) and Spanish (9 percent) (Cullars, 1990). Consequently, studies of these fields would need to incorporate sources in the national language rather than English-language ones, and the same applies to many other countries and research fields.

The citing of recent sources has been seen as an indication of the existence of a ‘research front’ in a specific field. A measure of the age of sources in a field is the ‘Price index’ (named after the inventor Derek J. de Solla Price). The Price index, also called ‘the immediacy factor,’ calculates the percentage of recent sources in a field (Price, 1965). A high Price index—the number of cited sources which are five years or younger—suggest that researchers predominately cite recent literature while the age span of sources is broader in a field with low Price index. An analysis of 154 journals in the humanities, the natural sciences and the social sciences showed considerable differences; in physics and chemistry the percentage of recent sources was 60-70 percent, in the social sciences 40-50 percent, and in the humanities only 10 percent (Price, 1970). Price explains the difference in the ‘consumption’ of sources as follows: “With a low index one has a humanistic type of metabolism in which the scholar has to digest all that has gone before, let it mature gently in the cellar of wisdom, and then distill forth new words of wisdom about the same sort of questions” (Price, 1970, p. 15). This characterization disregards the diversity of research in the humanities, although the metaphor of digestion is illustrative. Furthermore, Price overlooked that many sources in the humanities are primary sources, which considerably increases the median age of references. However, even after taking this into account, the Price index for literary studies was only 13-21 percent (Cole, 1983). This corresponds well with more recent analyses of the age of sources in literary studies where a Price index between 10-17 percent was found (Budd, 1986; Cullars, 1990; Thompson, 2002; Nolen, 2010). Thus, many fields in the humanities—including literary studies—use sources covering a wide age span. The age of sources used in research is related to the search for sources. The pressure to keep up with current research is less pronounced in fields such as literary studies, and searches here are focused on a specific
project rather than on following the latest developments in the field (Ileperruma, 2002). This limits the possibilities of discerning a research front, and it warrants long time windows when conducting bibliometric analyses.

Contrary to the results recapitulated above, Nederhof and Noyons (1992, p. 254) found that articles in literary studies and linguistics reached their ‘citation peak’ within three or four years, which is equivalent with results from the natural sciences. However, although the peak of citations seems to occur roughly at same time across research fields, it might be so that the distribution of citations over time looks rather different depending on the discipline and type of publication. Consequently, bibliometric analyses of the humanities must take into account differences between disciplines and fields in the age of sources cited. The importance of tailoring the methods for each field analyzed is emphasized, as major differences exist between such close related fields as linguistics and literary studies.

A phenomenon related to the frequency of citations is self-citation. Snyder and Bonzi (1998) studied the giving of self-citations in six disciplines and found that the practice of self-citation was much more common in natural science fields. The occurrence of self-citations was 15 percent in the natural sciences, 6 percent in the social sciences and 3 percent in the humanities (Snyder & Bonzi, 1998, p. 433). The main explanation for this is, according to Snyder and Bonzi (1998), the ‘non-incremental’ nature of research in the humanities, but also aspects such as the speed and length of publications as well as the number of collaborators influence the level of self-citation. Furthermore, natural scientists publish more frequent and shorter items than many scholars in the humanities, and therefore there are simply fewer sources for scholars in the humanities to self-cite.

Studies of citation characteristics in the humanities show that the type of publication that is most frequently cited is the monograph, the age span of cited sources is broad, the rate of obsolescence is low, languages other than English play an important role, and self-citations are rare. These are the characteristics that could be agreed upon, but there are still a few issues that have not been resolved. One matter is if the publication and referencing practices of scholars in the humanities are adapting to the practices that prevail in the natural sciences. A few studies (Butler, 2003; Kyvik, 2003) suggest that this might be the case, while others emphasize the constancy of cited and published material (Larvieré et. al, 2006; Puuska, 2010). Furthermore, the organization of research in the humanities differs greatly between countries, and results gained in one context are not always applicable in another (Nederhof, 2006).

Citation Structures

Few attempts have been made to study communication structures in particular disciplines, fields, or specialties in the humanities using bibliometric methods. Citation frequencies or networks have seldom been analyzed, and
visualizations of citation patterns in the humanities are rare. However, a few notable examples of attempts using databases, journals, and topics to study structures of research fields in the humanities are covered below.

A forerunner to the well-established bibliometric method of co-citation analysis was employed to analyze the literary climate of Sweden as early as 1968. The literature sociologist Karl Erik Rosengren listed authors that were mentioned together in literary reviews and used these co-occurrences to create maps of the ‘literary field’. These maps, constructed without the aid of computers, are early examples of attempts to visualize knowledge structures in the humanities using informetric methods (fig. 2).

Fig. 2. An example of Rosengren’s co-mention maps. “Structures in the mentions during the period 1954-56” (Rosengren, 1968, p. 135).

These maps build upon the idea that the influence or ‘impact’ of a writer could be measured by the number of times the writer is mentioned in reviews of other authors. Mentions in this sense are used as references in bibliometric studies: “The particular co-mentions are produced by individual reviewers, but their pattern or structure is social by nature. It is a product of the literary system” (Rosengren, 1968, p. 143). This map—portraying how authors have been co-mentioned in literary reviews in 1954-56—shows, among other things, that Swedish working-class writers such as Ivar-Lo Johansson, Wilhelm Moberg, and Eyvind Johnson often are mentioned in the same reviews.
A few authors—such as the French existentialist writers Albert Camus and Jean-Paul Sartre or Finnish modernist poets—are also grouped together on the basis of co-mentions. Ultimately, several maps of this kind covering different time periods could be used to depict changes in the ‘literary climate.’

An approach to combine information retrieval, relevance theory, and bibliometrics was introduced by White (2007). This technique was tested through visualizations of sources related to Moby Dick and August Strindberg (White, 2007; White, 2009). The method uses a seed source—in these cases the classic novel by Herman Melville and the famous Swedish playwright—and visualizes how related sources position themselves in relation to this source. Two axes depict the ease of processing (abstraction level) and the cognitive effects (how closely related the sources are). Ideally these diagrams can be used for distinguishing between sources that serve different purposes. The age of sources also influences their placement on the map as indicated by terms related to Strindberg (Fig. 3).

![Pennant diagram of terms related to August Strindberg (White 2009, p. 73).](image)

Background, theoreticians, and older authors are found in the lower part of the map (e.g. Nietzsche, Derrida, and Shakespeare), contemporaries or related authors such as Ibsen in the middle and commentaries (scholars studying Strindberg) in the upper part of the map. The idea is that users interested in a
specific work or author could benefit from maps like these. However, this approach presupposes that the topic/author in question is well covered in citation databases.

Leydesdorff and Salah (2010) employed mapping techniques on WoS data to map the art journals: Leonardo and Art Journal as well as the topic ‘digital humanities.’ The findings indicate that articles on digital humanities are predominately cited in two different types of journals: journals dealing with computer-aided research in the humanities and library and information science journals. Thus, these mappings can help us to locate journals were a specific topic is discussed, and this could in turn be a tool for researchers in the search for literature. Their conclusion was that topics seem to be a better option than journals for depicting intellectual structure in the humanities. In a follow-up study the journal structure of the A&HCI for the year 2008 was mapped (Leydesdorff, Hammarfelt & Salah, 2011). Twelve subsets of journals were identified, with the largest of these focused on ‘literature,’ and this corresponds well with data on the number of PhD’s in different fields. The analysis shows that journals, on an aggregated level, can be used to discern disciplinary structures in the humanities.\footnote{A visualization of citation networks of journals using the data employed in this article can be found on the front page of this thesis.}

Studies of citation patterns and structures in the humanities are so far limited. The availability of materials and methods for analysis is one reason, and another might be that few scholars in fields such as literary studies or art are interested in bibliometric methods, while many social scientists are familiar with and accustomed to statistical analysis. Thus, few scholars in the humanities have studied their own field using bibliometric methods.\footnote{One of few examples of scholars in the humanities using bibliometric methods to study the intellectual structure of their own discipline is Kreuzman (2001), who mapped the discipline of philosophy using a co-citation of authors.} However, the availability of data and the development of user-friendly software for doing citation analysis might lead to an increase in bibliometric studies directed towards fields and specialties in the humanities.

**Collaboration and the Growth of Knowledge**

The practice of writing and disseminating research in the humanities is closely related to the notion of the independent and single author, and co-authorship is rather uncommon. However, the level of collaboration is dependent on both publication channel and the methods used. Larivière, Gingras and Archambault (2006) studied co-authorship in Canadian publications indexed in WoS. Papers from the humanities, the social sciences and natural sciences were analyzed, and not surprisingly large differences were detected. A majority of papers in the social sciences are co-authored, and the
most ‘collaborative’ discipline is psychology, with 82 percent of papers written by two authors or more. In the humanities, on the other hand, only 10 percent of the studied publications are co-authored, and literary studies is the discipline with the fewest co-authored publications, only 4 percent. A sharp increase in collaboration in the social sciences was detected in the period 1980-2002, although the same pattern could not be found in the humanities. In conclusion, co-authorship seems to be more common in disciplines where journal articles are the main publication channel and in research fields where quantitative methods are common (Larivière, Gingras & Archambault, 2006, p. 531).

Bibliometric studies often use co-authorship as a measure for quantifying and analyzing collaboration between authors, departments, disciplines, or countries. However, there are other means of expressing collaboration and interaction, and one of these that is common in the social sciences and the humanities is the acknowledgment. Cronin, Shaw and La Barre (2003) explored the use of acknowledgments as a measure of collaboration between scholars. They found a sharp increase in the giving of acknowledgments in the discipline of philosophy, a discipline where 98 percent of the papers are single-authored. However, it is unclear if this can be interpreted as an indication of further collaboration or as a sign that scholars “[…] have become more attuned to the etiquette of acknowledgment, in part, at least, as a result of the growing amount of public debate on subjects such as credit, attribution, and plagiarism in contemporary research and scholarship” (Cronin, Shaw & La Barre, 2003, p. 869). Nevertheless, the fact that co-authorship is uncommon does not suggest that there is no co-operation. In fact there are quite a few collaborative practices in the humanities: “Circulation of drafts, presentation of papers at conferences, and sharing of citations and ideas, however, are collaborative enterprises that give a social and collegial dimension to the solitary activity of writing” (Brockman et al., 2001, p. 11).

Since de Solla Price’s (1963) seminal study bibliometric studies have been used as a method for determining the growth of science and research. Usually these studies focus on the natural sciences and the number of journals or articles produced annually. The growth of research in the humanities has not yielded the same amount of interest, and this is not only due to limitations in methods and available materials for analysis. One reason for this is that research in the humanities is often seen as less connected to technological development and economic growth. Another is that the resources invested in the humanities are small compared to the natural sciences, and it has therefore not been seen as important to track its development.

The various publication channels used by scholars in the humanities make it difficult to quantify the growth of research. A possible solution to this problem is to study the number of people active within a specific research field (e.g. the workforce). An option for doing this is to study the growth of PhD’s within a discipline. Wood (1988) adopted this approach and looked at
the growth of dissertations in the natural sciences, the social sciences, and the humanities. A rapid increase could be detected in all fields during 1880-1984 with the exception of a decline—often explained by the oil crisis—in the 1970s. A later study using a similar approach looked at the annual production of dissertations in eight fields for the period 1950–2007, and significant differences in the growth profiles were detected (Andersen & Hammarfelt, 2011). The field of literature showed a sharp increase during the 1960s and the early 1970s with a dip during the late seventies and early eighties. Then the growth seems to flatten out during the 1990s and 2000s. Thus, literature does not show the strong growth observed in fields such as biomedicine and engineering, yet it is evident that differences in growth are not simply determined by the field being in the natural sciences or in the humanities (Andersen & Hammarfelt, 2011, p. 381). The dynamics of research in the social sciences and the humanities is a still an underdeveloped research area, and comparisons using other data sources could contribute to a further understanding of the growth and development of research fields in the humanities.

Reviewing and Evaluating

Little is known about how scholars in the humanities evaluate scholarly texts, as much of the research about the review process is directed towards the natural sciences. An exception in this regard is a study by Guetzkow, Lamont and Mallard (2004) on the notion of originality in the humanities and the social sciences. They found that scholars in the humanities value originality in terms of the approach used, as well as in the choice of data source. Researchers in the social sciences, on the other hand, value originality foremost in the use of method. Both social scientists and humanities scholars often make a connection between originality and the moral character of the applicant. Thus, the author of a research proposal judged as original is characterized as ‘brave’ and ‘authentic,’ while those lacking this quality were seen as ‘lazy’ or ‘trendy’ (Guetzkow, Lamont & Mallard, 2004, p. 203-204). The overarching conclusion of the study is that the view of originality—which strongly influences the view of quality—differs considerably between disciplines.

An in-depth study of the process of judging research proposals was conducted by Lamont (2010). She found that literary scholars have a problem in claiming their territory when competing with other fields (such as history), and this problem is related to the heterogeneous nature of the field: “The disciplinary broadening and diversification of criteria of evaluation may have led to a deprofessionalization that puts literary scholars in a vulnerable position when competing on theoretical or historical grounds with scholars whose disciplines ‘own’ such terrains” (Lamont, 2010, p. 73). Thus, the
broadening of literary studies in terms of subjects and theories might be a disadvantage when competing for grants and resources with more homogeneous fields.

Besides peer-review procedures for journal articles and monographs, a common form of pre-publication reviewing in fields such as literary studies is the selection of chapters in edited monographs, where often a distinguished scholar selects chapters for inclusion. However, also post-publication reviewing is an important method for gatekeeping in the humanities that is commonly expressed through review articles in journals. Book reviewing can also be judged as a merit for the scholar writing the review, and it has been proposed as a measure of scholarly influence (Zuccala & Van Leeuwen, 2011). Furthermore, book reviews in journals have been studied to depict the flow of communication between research fields in the social sciences and the humanities (Lindholm-Romantschuk, 1998). The results showed that there was quite a lot of interaction between disciplines, and the ‘flow’ of knowledge was primarily directed from the social sciences towards the humanities.

The studies recapitulated above discuss the most common type of approach used for evaluating scholarship: peer review. However, the growth of scholarship, questions regarding the ‘objectiveness’ and fairness of peer review (Wennerås & Wold, 1997), and the time consuming nature of peer-review processes have resulted in attempts at finding more effective methods for evaluating research. In this effort bibliometrics has emerged as a promising alternative (Gläser & Laudel, 2007). Bibliometric evaluation is still more commonly used on the natural sciences, but bibliometric frameworks for evaluating the humanities have been implemented. The skepticism towards these measures—as articulated by deans and researchers in Swedish academia (Geschwind, 2010)—seems justified, as several and significant limitations remain.

The insufficient coverage of publications in languages other than English is often seen as one of the major obstacles for evaluating the humanities using bibliometric methods. Archambault et al (2006) investigated the coverage of journals in Thomson Reuters WoS depending on the country of origin (country of the editor), and a 20–25 percent bias towards journals in English-speaking countries was found. Subsequently, journals in languages like French, Spanish, and German are less likely to be included in the database with the consequence that research in English is overvalued while the ‘impact’ of other languages and countries is underestimated. The use of WoS is particularly worrisome in the case of major European languages such as Spanish, French, or German as these are predominately focusing on a national audience. An illustrative example is that German research in the social sciences is ranked last out of seventeen countries when measuring impact using the SSCI (Ingwersen, 2000). Similar results were gained by Godin who found that Canada and Australia produced more papers than Germany in the
social sciences and humanities (Godin 2002: cited by Archambault et al. 2005). These findings can be explained by the WoS bias towards English-language sources, or as Archambault et al. 2005 (p. 154) state: “Intuitively, it seems very improbable that Canada and Australia would produce more papers in SSH (Social Science and Humanities) than a country like Germany with its much larger population and its long traditions of prolific authors such as Kant, Weber, Habermas and so forth.”

The coverage of the WoS for publications in many fields in the humanities is indeed very low. Sivertsen (2009) compared registered publications in Norwegian higher education and matched these with the WoS database. Of all publications in the humanities 9 percent were indexed in WoS (10 percent for literary studies) while 97 percent of all publications in biomedicine could be retrieved. Similar indications of the poor coverage of the humanities were given in a recent evaluation of research at Uppsala University. Here, only 6 percent of the publications within the ‘Arts’ and 1 percent of publications registered by the department of literature were indexed in WoS (Quality and Renewal 2007, p. 485).

An alternative to citation databases, which has limited coverage of the humanities, is search engines such as a Google Book Search. This approach was explored by Kousha and Thelwall (2009), who found that book citations could be an appropriate source for research evaluation in fields where Thomson Reuters WoS or Elsevier Scopus data is less applicable. A subsequent study compared citation scores from Google Books, Google Scholar, and Scopus with peer evaluations from the British Research Evaluation Exercise (RAE) and a weak but significant relationship between the RAE ranking and citations from Google Books was found (Koshua, Thelwall and Rezaie, 2011). Hence, book citations could be a useful indicator for supporting the peer-review process in book-based disciplines. Yet, retaining citations to books on a larger scale remains a problem—only citation data for individual books or list of books can be gained, and manual checking is needed—that has to be solved before the method can be used on a larger scale. The coverage of books in languages other than English is also an issue of concern.

Linmans (2010) suggests a three-level approach using citation data, library holdings, and productivity for overcoming the problems of insufficient coverage. Using these three methods on a sample of 292 researchers he could show that evaluation of the humanities using bibliometric methods is feasible. Especially interesting is the strong correlation between book publishing (in English) and citation rates for articles, which suggests that authors that publish extensively in international monographs also tend to be cited often (Linmans, 2010, p. 351).

The use of library catalogues for the evaluation of research in the humanities and the social sciences has also been proposed by Torras-Salinas and Moed (2009) as well as by White et al. (2009). They suggest that library catalogues could be used in a similar way as citation indexes are used today,
where books equal papers and inclusion in a library catalogue equals a citation. Thus, the book that is indexed in most libraries is considered the most influential. However, they also discern several shortcomings as: national biases, problems with field delimitation, the variety of libraries and how to account for different types of books (Torras-Salinas & Moed, 2009, p. 24-25). Furthermore, one could reflect over the consequences that a wide adoption of ‘library catalogue analysis’ would have for decisions about acquisitions at libraries, and how it would affect the role of the librarian making these decisions.

Finkenstaedt (1990) made a survey of how literature scholars rate different publication forms in terms of reputation and impact. Not surprisingly the scholarly monograph was singled out as the most important publication channel with over 90 percent of the respondents rating it as ‘very important.’ Therefore a weighted system of evaluation—where monographs counts as 50 and an article as 10—was suggested. This proposal has a few similarities with the approach that is used in the Norwegian system for research evaluation. This alternative system for evaluating the humanities uses ‘soft metrics’ that count publications rather than citations of publications in major citation databases as Scopus and WoS. A system of this kind has been used since 2006 for the allocation of research funds in Norway. It has also been adopted locally at universities in Sweden and has been proposed for use in Flanders (Sivertsen, 2010). ‘The Norwegian system’ makes a qualitative difference between publication outlets in order to measure performance, not only production. The importance of having a quality component in the system is illustrated by the implementation of a research evaluation system (RES) in Australia. Here, the consequence of allocating founds on the basis of publication counts was higher productivity but the increased quantity was not accompanied by an increase in quality; rather, a decrease in quality could be detected (Butler, 2004). The Norwegian system tries to avoid this by using a differentiated scale for the allocation of points in the system. The model for allocating points incorporates both monographs and articles (Table 1).

Table 1. Allocation of points in the Norwegian model for research evaluation

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<tr>
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<th>Level 1</th>
<th>Level 2</th>
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<tbody>
<tr>
<td>Scholarly articles in journals</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Scholarly articles in anthologies</td>
<td>0.7</td>
<td>1</td>
</tr>
<tr>
<td>Monographs</td>
<td>5</td>
<td>8</td>
</tr>
</tbody>
</table>

The model is based on a division between level one and level two (the most selective and prestigious channels), and at any given time only 20 percent of the world’s gathered publications can be ranked as level two. This is to make
the division dynamic and responsive to changes in publication practices among scholars. The Norwegian model has an advantage in that it includes different type of publications in the evaluation, and it seems that the unintended effects of the Australian system have been avoided (Schneider, 2009). Another advantage is that the trust in the system by scholars themselves is enhanced by their inclusion in the process of selecting high quality publishers, and a recent study suggest that the transparency, coverage, and legitimacy of the Norwegian system makes it preferable to evaluation systems that use WoS data (Ahlgren, Colliander & Persson, forthcoming). The major drawback is that publication counts are a crude measure of quality as they measure output rather than impact. Furthermore, it could be questioned if a book article in an anthology from an esteemed publisher is only worth one third of a journal article. Little motivation for submitting book articles to prestigious publishers is given in this system, although the overarching goal is to promote publication in high-quality channels. The definition of scholarly publications might be another matter of discussion in some humanities fields. As an example, only 372 publications in the field of literature were indexed in the Norwegian database between 2005–2009, and only four percent of these were books. As a comparison, 526 publications were indexed in the category of linguistics, out of which three percent were books (Sivertsen & Larsen, 2011). The low number of publications for such a large field as literary studies as well as the remarkably low percentage of books suggests that many publications in the field of literature are judged as non-scholarly in this system. In summary, the Norwegian model must be regarded as much more promising and transparent than the approach that was employed in Sweden using ‘normalized’ citation data from WoS (Sandström & Sandström, 2008), although serious questions and challenges remain.

An attempt to establish a ranking list of humanities journals on the European level, similar to the one used in Norway, was initiated by the European Science Foundation. The initial purpose of this list was to provide an additional tool for research evaluation in fields where established bibliometric methods were less applicable. Thus, the European Reference Index for the Humanities (i.e. the ERIH list) was compiled with the help of national panels and scientific committees. These lists, which were published in 2007 and 2008, ranked journals in A*-A-, B- and C-journals. These categories described the ‘quality’ of the journals: A* (one of the best in the field), A (high ranking with very strong reputation), B (standard international journals) and C (important local journals). Scholars and publishers criticized the list heavily, as it failed to acknowledge the political and cognitive nature of all rankings and categorizations (Pontille & Torny, 2010). The critique directed at the project did eventually result in a new ranking of journals, and concepts

15 The current evaluation system used in Swedish higher education is now being revised, and a new model, partly inspired by the Norweigan system, is proposed (Flodström, 2011).
such as ‘ranking’ and ‘impact’ were replaced by ‘visibility’ and ‘recognition.’ In the new ranking a distinction is initially made between national journals and international journals, followed by a further division between international journals with high visibility and international journals with significant visibility.\textsuperscript{16} However, substantial criticism against the project persists.

In summary all models for the evaluation of research fields in the humanities, with few exceptions, points to the importance of incorporating sources that are not indexed in the major citation databases. The coverage of these databases is basically too low to provide accurate and reliable data. The establishment of broader more inclusive databases—Thomson Reuter Book Citation Index is one example, and Google Scholar might be another—could change this but currently the possibilities of using citation data for evaluation are limited. More promising is the method of using weighted publication output, but the categorization of publication channels is a delicate matter, and the definition of ‘scholarly’ might disadvantage the traditional publication practices of scholarship in the humanities.

\textbf{Scholarship in Literary Studies: Research Practices in Transition?}

The findings above show that scholarly practices in fields such as literary studies remain stable. Literary scholars usually write and search for sources alone, they submit their research for publication in many different types of channels (journal, anthologies and monographs), and their collaborations are usually not manifested through co-authorship. Furthermore, literary scholars act as gatekeepers and reviewers but the quality criteria used differs from the social sciences and the natural sciences. Finally, literary scholars foremost link to (cite) monographs, the time span of sources cited is broad, and non-English publications play an important role in the field. The question, however, is if these characteristics of scholarship in literary studies will persist when a majority of research is communicated in digital form, and in a time when open access publishing is encouraged.

The emergence of the web as the major tool for searching for information seems already to have changed the practice of searching, and the possibilities of publishing in the digital domain are now, slowly, being explored by scholars in the humanities (Borgman, 2009). The advantages that digital dissemination provides—faster publication, linking to primary materials or data (e.g. enhanced publications) and possibly a larger audience—are in-

creasingly relevant in a time when the dependence on monograph publishing in disciplines such as literary studies appears to be problematic (Donoghue, 2008, p. 48-49).

The call for open access is another factor that is bound to influence the publication practices of scholars in the humanities. Open access publishing is not yet as common in the humanities as in the life sciences, where large granting bodies (such as the National Institute of Health) demand open dissemination of results. However, the access to research is still a major issue—not the least due to the decrease in monograph purchases by academic libraries (Ferwerda, 2010). Thus, although the importance of books in literary studies and other similar fields in the humanities seems to prevail, there are several challenges that have to be addressed if this is to be true in the future. The crisis in academic publishing, the open access movement, and the acquisition policies of academic libraries are all developments that question the status of the monograph.

The wide application of research evaluation systems (RES) that count publications or citations to publications is another factor that influences how research is conducted and published. The effect of such a system is dependent on its design, and the degree to which it redistributes resources between research fields. Research evaluation systems usually provide incentives for publishing in international journals, and journals indexed in commercial citation databases such as WoS and Scopus are often those that give the highest rewards. The implementation of research evaluation systems is bound to have diverse results depending on the organization of the research field. It has been suggested that the degree of coordination will increase in research fields such as literary studies if a strong RES is employed, and it might also result in changes in the publication and referencing practices of scholars (Whitley, 2007).

These challenges against the traditional model of scholarship in the humanities are bound to influence the practices of researchers. However, previous research suggests that ‘older’ research fields are less prone to adapt new techniques (Sukovic, 2009), and new digital practices are shaped by the disciplinary culture of the field. A telling example from the study by Collins, Bulger and Meyer (2012, p. 81-82) is that of scholars in the humanities who find a quote using an easily searchable digital edition, but they cite the printed version. Researchers appreciate the availability and the searchability of the digital edition, but the higher status of the printed version is evident when a formal reference is given. Hence, a fast transformation of the research practices in fields such as literary studies is not to be expected. Rather, a gradual development driven by the interaction between techniques and disciplinary culture can be anticipated.

This chapter has canvased the practices of scholars in literary studies and related fields, but a theoretical framework is needed in order to understand how these practices are formed and transformed. The next chapter introduces
theories on how research fields are organized, and it establishes a conceptual framework that can be used to explain publication patterns, referencing practices, and the distribution of citations in research fields.
3. Theoretical Framework

The theoretical framework of this thesis is based on the assumptions that science and research can be studied like any other human activity, and that both qualitative and quantitative methods can be used in this effort. The study could therefore be incorporated in the broad and interdisciplinary field of science studies. However, the aim is not to study researchers, institutions, ‘the construction of facts’ or knowledge claims, but rather to study the communication between researchers. This dissertation focuses on how research is communicated, and in doing so it views research mainly as a shared practice, although a practice that is shaped by epistemological beliefs and arguments. It assumes that disciplines, fields, and institutions are socially constructed entities or, as elaborated by Leydesdorff (2001, p. 339): “Indeed, the sciences have been socially constructed. But this is a meta-theoretical insight: it is true by definition.” Thus, this dissertation views research fields as entities that are defined by institutional, organizational, financial, and epistemological characteristics. Therefore it employs theories that highlight differences between scientific fields as well as more general developments in contemporary knowledge production.

The following chapter aims to discuss the theoretical underpinnings of the dissertation in a way not possible in the individual articles. The chapter introduces two frameworks—Whitley (2000) [1984] and Becher and Trowler (2001)—that can be used to compare, describe, and explain disciplinary differences. This is followed by a definition and discussion of two interrelated concepts: ‘mode 2’ knowledge production and interdisciplinarity. Then, an effort is made to integrate the different theoretical concepts and theories into a joint framework, or in other words to combine them in a theoretical toolbox designed for the analysis of referencing practices and citation patterns. The metaphor of a ‘toolbox’ illustrates that different theories and concepts have been emphasized in each study. The choice of using several concepts and theories is motivated by an effort to provide a multilayered view on citation patterns in literary studies. Finally, the role of visualizations and maps is highlighted, methods for creating co-citation maps are explained, and the use of topographical metaphors is discussed.
The Social and Intellectual Organization of Research Fields

A theoretical framework is needed in order to put the results from bibliometric studies of publications in relation to the research practices of specific scholarly fields. Such a framework is introduced by Richard Whitley, formerly in the field of organizational management, in *The intellectual and social organization of the sciences* (2000[1984]). The aim of the book is to contribute to an understanding of research fields “[…] as particular kinds of work organizations which construct knowledges in different ways in different contexts” (Whitley, 2000, p. 6). A key feature of these work organizations is the focus on producing novelty and innovations, a feature that separates them from other organizations. Scientific fields—Whitley uses a continental definition of ‘science’ and incorporates the social sciences and the humanities in the concept of ‘science’—are the context in which researchers develop specific competencies and skills. Thus, intellectual fields are seen as organizations rather than as epistemological entities:

> Intellectual fields are here seen as the major form of intellectual organizations which structure the framework in which day-to-day decisions, actions, and interpretations are carried out by groups of scientists primarily oriented to public intellectual goals. (Whitley, 2000, p. 8-9).

Whitley’s theory is based on two main axes that can be used to describe intellectual fields. These are *mutual dependency* and *task uncertainty*. Mutual dependency is a measure of how much the individual researcher is dependent on colleagues in his research. Whitley identifies two types of dependency: *functional dependency* and *strategic dependency*. Functional dependency measures the degree to which researchers rely on the results and methods of other researchers in order to make valid knowledge claims. Strategic dependency, on the other hand, reflects how important it is for researchers to persuade their colleagues that their research is important for the field (Whitley, 2000, p. 88). Whitley illustrates with historical and contemporary examples how these axes can be combined to characterize research fields. The description of fields that are low on both functional and strategic dependency fits well with the humanities in general. He describes these ‘low-low’ fields as weakly bound with great variation of goals and procedures and with a low degree of division of labor between researchers.

As contextual factors that influence the degree of mutual dependency Whitley points to the plurality and diversity of audiences. He suggests that where the audience is limited and specialized, mutual dependency will be high, whereas when audiences are diverse and where different, equally important target groups exist it will be low. In accordance with the humanities as a field with a diverse audience Whitley (2000, p. 111) comes to the con-
clusion that “[…] the existence of the educated lay public as a legitimate audience in many of the human sciences has restricted their development of separate languages and standardized research procedures.” Terms and concepts used in many research fields in the humanities are close to everyday language, and competing groups hinder the development of standardized usage of concepts.

Research differs from other work activities in that the outcomes are uncertain. The second axis in Whitley’s theory is therefore the degree of task uncertainty. The degree of task uncertainty depends on the intellectual organization of a research field. The ‘Kuhnian view’ would be that “[…] the more paradigm bound a field is, the more predictable, visible, and replicable are research results and the more limited is permissible novelty” (Whitley, 2000, p. 119). This implies that researchers in the humanities have greater freedom in choosing research topics and methods, but, on the other hand, they risk being ignored because their results are not accessible and replicable for other researchers. This is true even though originality can increase the visibility of research, as ‘new approaches’ are a highly valued form of originality in the social sciences and the humanities (Guetzkow, Lamont & Maltrail, 2004, p. 206).

Whitley introduces two kinds of uncertainty: technical and strategic. A high technical task uncertainty suggests that conflicts concerning the interpretation of results are common, and that the choice of method and the success of methods are debated. The degree of strategic task uncertainty depicts the level of consensus on intellectual priorities and the goals of research. It concerns the choice of problem and research topic. The variability of research problems and topics is high in a field with high strategic task uncertainty, and also the ‘value’ of these research topics in the view of the audience is shifting, while the hierarchy of problems and goals of research is clear in a field with low strategic task uncertainty, which in turn leads to stability and uniformity.

As with mutual dependency, these two aspects can be combined. An example of a field that has both high strategic and technical task uncertainty is modern sociology, and the same applies to many fields in the humanities. Economics has high technical task uncertainty but low strategic task uncertainty; the goals of research are clear but not the methods. Modern biology is, on the contrary, characterized by high strategic task uncertainty and low technical task uncertainty, while modern physics has low strategic as well as low technical task uncertainty.

A consequence of high technical task uncertainty is the difficulty of evaluating the performance of the field. This is especially relevant for the humanities as “[r]eputations for particular accomplishments vary across employers and national boundaries as the precise nature of results and their implications are difficult to establish and communicate formally” (Whitley 2000, p. 131–132). Being aware of the particular context where the research
has been conducted thus becomes vital for evaluating the results. International co-ordination, control of results, and reputations are therefore limited in fields with high technical task uncertainty such as philosophy or literary studies. Instead, the control over and co-ordination of research is achieved through personal contacts and knowledge. The ambiguity of results and their value does in turn influence how research is communicated. This is the case because the presentation of findings has to be more elaborate in order to justify a specific interpretation. Hence, articles in fields with high technical task uncertainty are long and books are a common method for communicating research, while a low technical uncertainty “[…] enables research to be effectively communicated in a short space through esoteric and standardized symbol systems.” (Whitley, 2000, p. 134).

A majority of disciplines within the humanities are in Whitley’s characterization defined as fragmented adhocracies. These fields are intellectually varied and heterogenic. Literary studies is an example of a field where research is personal, weakly coordinated, and the degree of specialization is limited. The characterization of fields that have a low degree of functional dependence shows how the different axes can be combined (Table 2).

<table>
<thead>
<tr>
<th>High technical and high strategic task uncertainty</th>
<th>High technical and low strategic task uncertainty</th>
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<tr>
<td>Fragmented adhocracy; diffuse results, discursive knowledge of commonsense objects. e.g. British sociology, political studies and literary studies.</td>
<td>Unstable</td>
</tr>
<tr>
<td>Polycentric oligarchy; diffuse results and locally coordinated knowledge e.g. German philosophy and British social anthropology.</td>
<td>Partitioned bureaucracy; analytical specific knowledge and ambiguous empirical knowledge e.g. Anglo-Saxon economics.</td>
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Literary studies fits in the category of fragmented adhocracies. The dominant attribute of these fields is that they are intellectually varied and fluid; they lack a stable configuration; tasks are not specialized; co-ordination is weak, and when it occurs it is highly personal. Subgroups form around objects of study and distinct methodological approaches. Audiences are varied and so are the research strategies. Individuals and groups disagree on the topics that should be studied as well as on the methods used, and the lack of standards makes it difficult to reach a resolution of disputes. The intensity of conflicts is low and originality is an important variable in judging the quality of research in these fields: “Rather than co-coordinating their research with one
another, or combating the ideas and results of opponents, practitioners in these fields develop highly individual research strategies around distinct topics and problems often with idiosyncratic methods—or at least highly tacit and non-comparable ones—in order to obtain high reputations for originality” (Whitley, 2000, p. 174). Attempts to create a coherent theoretical structure in these fields are often dismissed as attempts for a ‘grand theory.’

The collective reputational control over individuals is low in fragmented adhocracies, which suggests that the condition of employment is more important here than in other fields. The variety of goals of research is high because the individual is not dependent on one particular group of colleagues for rewards. The result is a high degree of intellectual freedom for the individual researcher but, on the other hand, intellectual fragmentation within the field as a whole. Thus, as little consensus exists on the goals of research the terms of employment are instrumental for defining literary studies as a research field.

The strong focus on the organization of work and the practices of researchers is one of the advantages with Whitley’s framework. The significance given to these aspects partly explains its common use in studies of differences in scholarly communication between fields (Talja et al., 2007) as well as of the development and institutionalization of research fields (Åström, 2004). However, it could be argued that disciplines and research fields are more than work organizations, and that Whitley’s theory focuses too strongly on organizational aspects. Thus, Leydesdorff (2001, p. 26) argues that: “Whitley (1984) has mistakenly drawn the methodological conclusion that the intellectual organization of the sciences can be analyzed sufficiently in terms of the fine-structure of their social and historical organization.” The main problem is then the conclusion that ‘the social organization’ and ‘the intellectual organization’ (or cognitive organization) of research fields are dependent upon each other. Consequently, Whitley’s theory can be regarded as a theory of social organization, but the question remains if it can explain ‘intellectual organization.’ However, the social and the intellectual cannot easily be separated; the choice of problem, the way in which knowledge claims are made in the text, and the evaluation of research are practices governed both by epistemological and intellectual considerations as well as social ones. Thus, the view of science as a type of ‘work organization’ might not be sufficient for explaining the distinctiveness of scientific reasoning across disciplines, but it provides an analytical position from which differences in communication structures between research fields can be studied. Nonetheless, research fields can also be described using an anthropological and sociological perspective, as the framework developed by Becher and Trowler (2001) exemplifies. This framework provides an alternative perspective on how research fields can be described, but, as is shown below, it has also much in common with the theory provided by Whitley.
Academic Tribes

An effort to take a broad look at research and higher education is made by Tony Becher and Martin Trowler in *Academic tribes and territories: Intellectual enquiry and the culture of disciplines* (2001). Their analysis includes twelve different disciplines (tribes) that have been explored through interviews with researchers. These interviews are structured using a conceptual framework outlined in Becher (1989). Disciplinary borders, community life, scholarly communication, and academic careers are among the topics covered, and their analysis focus on an epistemological and cognitive level as well as a social and organizational one.

Becher and Trowler build upon differences between research fields that can partly be explained by categorizations such as *soft/hard* and *pure/applied* research. These characteristics were identified in a questionnaire study of 36 research fields conducted by Biglan (1973), who in turn partly based his categorization on the concept of ‘a paradigm’ (Kuhn 1970[1962]).

The second categorization concerns the use of results: are the findings used by other sciences (pure) or in a context outside the academy (applied). Pure science is in general self-regulating, whereas applied science is open for influence from other fields. In this categorization natural sciences as physics and mathematics are regarded as hard-pure, engineering is hard-applied, social professions (teaching, social work, and law) are soft-applied, and the humanities and the social sciences are soft-pure (Table 3).

<table>
<thead>
<tr>
<th>Pure</th>
<th>Applied</th>
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<tbody>
<tr>
<td>Hard</td>
<td>Physics</td>
</tr>
<tr>
<td></td>
<td>Computer science</td>
</tr>
<tr>
<td>Soft</td>
<td>Literary studies</td>
</tr>
<tr>
<td></td>
<td>Library and information science</td>
</tr>
</tbody>
</table>

Becher and Trowler also found differences between *urban* and *rural* sciences and between sciences that are *convergent* as opposed to *divergent*. The distinction between rural and urban reflects how densely inhibited a discipline or a research area is; if many researchers are focused on the same problem, then the research area can be categorized as urban, while the opposite is true for a rural one. A (ongoing) ‘fight’ can be observed between highly competitive researchers about positions and resources in an urban research area (for example biomedicine), whereas there is less competition in rural fields such as literary studies. However, the variations within disciplines can

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17 By paradigms Kuhn means that “[…] some accepted examples of actual scientific practice—examples which include law, theory, application, and instrumentation together—provide models from which spring particular coherent traditions of scientific research.” (Kuhn, 1970, p. 10).
be as large as differences between them, and it can also be so that certain specialties within a discipline are urban and applied while others are pure and rural. These variables must also be seen on a scale from more applied to less applied or from more urban to less urban and so forth. Convergence indicates the degree to which standards and procedures are agreed upon. A convergent discipline is guided by a controlling élite of researchers. Becher and Towler describe fields lacking a controlling élite as divergent and state that the individual author in these fields has a greater freedom in choosing problems and methods (Becher & Trowler, 2001, p. 184-185).

The style and language differs between disciplines and research areas. One important variable is to what degree a controlled and specific language is used. Generally the hard (natural) sciences develop a more specialized language where terms are fixed to one meaning, whereas softer areas to a larger extent use everyday language. Becher and Trowler (2001, p. 117) suggest that disciplines where amateurs have been active and important—such as astronomy, history, and biology—have a more public and accessible style.

The communication practice within different research fields is governed by the overall organization of the field. One explanation for the use of articles in the natural sciences is the need for fast publication of important findings. In the humanities, on the other hand, the effort is rather to be thorough, and style is important and highly valued. Generally, books are a common publication form in fields that are rural and soft, while articles in journals are typical for fields that are urban and hard.

Becher and Trowler (2001) propose an accessible theory in which commonly used metaphors describe the characteristics of research fields. Literary studies is described as soft, pure, rural, and divergent, while a discipline such as physics can be characterized as hard, pure, urban, and convergent. These dichotomies describe differences between sciences fairly well, and many concepts resemble those used by Whitley. However, the concepts used by Becher and Trowler are fetched from different theories and are therefore not part of a unified system, unlike Whitley’s framework. The concepts are independent of each other and thus less usable as a theoretical foundation. The terms used to describe the different categorizations hard/soft, pure/applied and urban/rural are first of all not specialized, and secondly they are value laden. Usually something ‘pure’ is regarded as better than the ‘applied’ and ‘urban’ is connected to the modern while ‘rural’ could be associated with the past. It may be that these concepts convey how we usually perceive differences between research fields and research specialties, but the use of these metaphors may be deceiving and normative rather than enlightening. Thus, the categorization used by Becher and Trowler does not lend itself to building a coherent theoretical framework. Still, some of their concepts—especially the difference between urban and rural fields—provide a
graspable and important characterization that is helpful in analyzing citation patterns and communication structures.

The theories described above form a framework for understanding how research fields are organized, but recent transformations in how academic research is produced could question these categorizations. In the next section some of these proposed changes will be discussed and scrutinized.

New Modes of Knowledge Production

It has been claimed that contemporary research differs to a large degree from previous forms of knowledge production. The changes include a further contextualization of research, an emphasis on application, and a commercialization of outcomes. These are developments most visible and discussed in relation to the natural sciences—especially the life sciences—and several concepts such as, ‘academic capitalism’ (Slaughter & Leslie, 1997), ‘triple helix’ (Etzkowitz & Leydesdorff, 1998) and ‘post-academic science’ (Ziman 2000) have been used to describe this phenomenon. Most influential as well as most debated, however, is the concept of mode 2 knowledge production. This concept was introduced by Gibbons and colleagues (1994) and later extended and elaborated upon by Nowotny, Scott and Gibbons (2001).

In The new production of knowledge: The dynamics of science and research in contemporary societies (1994) Gibbons and colleagues make a distinction between older forms of knowledge creation, mode 1, and the contemporary production of knowledge, mode 2. Typical for mode 2 is that knowledge is produced in the context of application, it is transdisciplinary and heterogenic. Furthermore, contemporary science is described as reflexive, socially accountable, and commercialized. The differences between ‘mode 1’ and ‘mode 2’ are outlined below (Table 4).

<table>
<thead>
<tr>
<th>Mode 1</th>
<th>Mode 2</th>
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<tbody>
<tr>
<td><strong>Organization</strong></td>
<td>Disciplinary and hierarchical</td>
</tr>
<tr>
<td></td>
<td>Transdisciplinary and heterarchical</td>
</tr>
<tr>
<td><strong>Context</strong></td>
<td>Academic; specific community</td>
</tr>
<tr>
<td></td>
<td>Public; application based</td>
</tr>
<tr>
<td><strong>Quality control</strong></td>
<td>Academic</td>
</tr>
<tr>
<td></td>
<td>Social accountability; reflexive</td>
</tr>
<tr>
<td><strong>Setting</strong></td>
<td>The university</td>
</tr>
<tr>
<td></td>
<td>The university and non-university institutions</td>
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</table>

Mode 2 is usually referred to when describing changes in the natural sciences, but the new production of knowledge is also visible in the humanities.
Some of the features of mode 2 are and have always been a part of humanistic research: heterogeneity, reflexivity, and transdisciplinarity, while others—such as instrumentation and rising costs—are less prevalent in these fields (Gibbons et al., 1994, p. 90-110).

The notion of a new mode 2 of science is as influential as it is criticized, and the perceived change has been questioned on several grounds. First of all the very assumption that earlier mode 1 science was disconnected from society can be challenged. It may be true that contemporary science is an integrated part of society—and it could be that this integration is more apparent today than before—but has not science always been an integrated part of society? Historical studies of science—like Fleck (1979/1935) or Shapin (2008) to mention but a few—often show how science is intrinsically bound up in its historical context. Hence, one could ask if there has ever been a mode 1, a de-contextualized science. Another important critique is that mode 2 concerns phenomena on the surface and does not depict the ‘inner workings of science’ (Weingart, 1997). Moreover, several claims—like the change of quality criteria—are not confirmed by empirical findings (Hessels & van Lente, 2008). Furthermore, it can be argued that mode 2 describes phenomena that are representative for few research fields (such as biomedicine) and applies them to fields and contexts where changes in the production of knowledge are less apparent.

Commercialization and commodification are seen as parts of the transfer to mode 2, but these concepts can at the same time be said to legitimize the developments they aim to describe (Radder, 2010, p. 11). Claiming that research is becoming more commercial becomes a self-fulfilling prophecy rather than a tool for analysis and informed action. Hence, mode 2 is a debated concept not least because of its ‘normative’ and legitimizing effects.

Research fields in the humanities share some of the features—transdisciplinarity, heterogeneity, and social accountability—associated with mode 2 knowledge production. At the same time many fields in the humanities are less influenced by other features of mode 2, such as instrumentation and rising costs. Furthermore, it has been suggested that phenomena connected to mode 2 are better studied separately rather as an aggregate of attributes (Hessels & Van Lente, 2008, p. 758). Consequently, two features of the mode 2 framework are focused upon in this study: increased social accountability/reflexivity and increased transdisciplinarity.

The contextualization of knowledge is equally if not more persistent in the humanities. A good example is the debate about the literary canon and the feminist protest against the ‘dead, white, male’ dominance in literary studies (Robinson, 1983). In this regard the humanities and the social sciences are forerunners: “Rather than the humanities being pre-scientific, it is the natural sciences which until very recently have been pre-social.” (Gibbons et al., 1994, p. 99). The turn towards social accountability suggests that the quality of contemporary science is not determined by academic criteria alone.
but by a broader contextualization of knowledge. Reflexivity has always been a characteristic of research in the humanities: history, literary studies, and philosophy are all fields in which self-reflection is a prominent feature.

Interdisciplinary interaction is also common in the humanities. Fields such as literary studies and philosophy are loosely organized microcultures that are marked by conflicting communities. An example is the research concerned with the classical world, which is inhabited by archaeologists, philologists, historians, and specialists in Greek and Latin to mention a few (Gibbons et al., 1994, p. 100). The intellectual borders of fields in the humanities have always been blurred, and the amount of interdisciplinary interaction in these fields is high.

Interdisciplinarity

Boundary crossing is an intrinsic part of contemporary academic research and the boundaries that are crossed are drawn between academic and popular knowledge, science, and non-science, hard and soft knowledge, basic and applied research, explanation and interpretation, qualitative and quantitative methods, and so forth. But mostly when boundary crossing is discussed in the sociology of science, it is disciplinary boundaries that are referred to (Klein, 1996).

The emphasis on interdisciplinarity can be somewhat contradictory in a time of further and further specialization. As Weingart (2000, p. 30) notices “[…] it reveals the seemingly paradoxical mechanism that the more differentiation of knowledge production the more intense will be the call for interdisciplinarity.” Interdisciplinarity could in this sense be seen as an influential concept in the debate about how academic research should be organized.

The concept of interdisciplinarity is operationalized in this study as a measure of the interaction between disciplines and fields. An inherent contradiction in this approach is that in order to study ‘border crossing,’ borders must be drawn. A conventional delineation of fields must first be made before the blurring of categorizations can be studied (Van den Besslar & Heimeriks, 2001). A recent example of a study that uses joint authorship as an indication of interdisciplinarity is Levitt, Thelwall and Oppenheim (2011). They found an increase of interdisciplinarity in the social sciences in the period 1980-2000, but the results vary greatly between disciplines and the categorization of publications may influence the result. Gringas and Larivière (2010) conducted a longitudinal study (1900-2010) of references and found no increase of interdisciplinary citing in the humanities until the beginning of the 21st century, when significant growth occurred.

Interdisciplinary citing was used as a measure in this study as well. Thus, the more a paper cites publications from other research fields, the more interdisciplinary it is (Small, 2010, p. 836). This simplified notion of interdisc-
ciplinarity suits bibliometric methods well. At the same time, however, it fails to identify and differentiate between different ‘degrees’ of interdisciplinarity and the diverse forms it can take. Usually one distinguishes between multi-, inter-, and transdisciplinarity. A definition of these concepts is given by Wagner et al. (2010, p. 16):

*Multidisciplinary* approaches juxtapose disciplinary/professional perspectives adding breadth and available knowledge, information and methods. [...] In short, the multidisciplinary research product is no more and no less than the simple sum of its parts.

*Interdisciplinary* approaches integrate disciplinary data, methods, tools, concepts, and theories in order to create a holistic view or common understanding of a complex issue, question or problem. [...] the integrative synthesis is different from, and greater than, the sum of its parts.

*Transdisciplinary* approaches are comprehensive frameworks that transcend the narrow scope of disciplinary world views through an overarching synthesis, such as general systems, policy sciences, feminisms, sustainability, [...].

The level of integration constitutes the main difference between these three concepts. Methods and theories from different disciplines are used in multidisciplinary research, but there is little integration between them, while interdisciplinary research aims for an integrated approach that goes beyond disciplinary contributions. According to the given definition, transdisciplinary research differs from the other concepts by suggesting a perspective—such as ‘gender’ or the ‘environment’—that supersedes the traditional labeling of knowledge in disciplines. When using these concepts in bibliometric research, it is at times hard to distinguish between the different levels of ‘border crossing.’ Thus, interdisciplinarity is used in this thesis as a general concept for describing the degree of disciplinary border crossing, as an in-depth qualitative study of the actual use of theories and concepts is required in order to understand the nature of these ‘border crossings’ more thoroughly.

Interdisciplinary interaction can be an indication of the status of a discipline—is it an exporter or an importer?—and Klein (1996, p. 47) mentions literary studies, which through the current elevated status of literary theory has gained a high social capital in other fields of research. Theoretical trends and concepts influence the degree of ‘crossing’ going on and the import of ‘critical’ theories from Europe—in particular the influential authors labeled as ‘French theory’—has contributed to interaction between humanistic disciplines and disciplines within the social sciences.

The identity of a discipline is a factor that determines how and if it interacts with other disciplines. Disciplines having a *synoptic* or *synthetic* identity are supposed to have a loose aggregation of interest, which makes them open for influences from other research fields. This is typical for disciplines such
as anthropology, history, philosophy, geography, and literary studies (Klein, 1996, p. 40). The synthetic identity of the humanities and in particular literary studies influences not only the collaboration practice of scholars but also more importantly for this project the referencing practices within these disciplines.

A Theoretical Toolbox for the Study of Citation Patterns

Whitley’s focus on organizational structure and Becher’s and Trowler’s characterization of disciplinary differences are in this study used to understand scholarly communication in general and referencing practices in particular. This does not suggest that epistemological differences are neglected; rather they are, in Whitley’s theory, integrated with organizational differences. An overview of how the two different frameworks as well as the concepts of ‘mode 2’ and interdisciplinarity describe research in the field of literary studies is given below (Table 5):

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<tr>
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<tr>
<td>Intellectually varied and fluid; high task uncertainty and low degree of task specialization; less standardized communication and mixed audience; research seldom coordinated.</td>
<td>Divergent: lacking a central core of theory; rural: covers a broad territory; pure: research not directed towards application.</td>
<td>Transdisciplinary; socially accountable; reflexive.</td>
<td>‘Synoptic’ or ‘synthetic’ identity: less of a core and interested in the knowledge of other fields.</td>
</tr>
</tbody>
</table>

The theories outlined in Whitley (2000) and Becher and Trowler (2001) are employed in the analysis of communication structures and citation patterns in literary studies. The theoretical tools developed by Whitley come foremost from an organizational perspective, while Becher and Trowler have an ethnological and sociological approach. The two theories are well in line with each other, as is indicated by several overlapping concepts. The main difference is that in Whitley’s framework an effort is made to explain how and why these features are interrelated: a low degree of task specialization is related to the ‘mixed audience,’ which in turn influences how research is communicated. The framework used by Becher and Trowler, on the other hand, is empirically derived. In fact, the simplicity of their model is an advantage when explaining differences between fields.

In order to explain changes in scholarly communication concepts as ‘mode 2’ (Gibbons et al., 1994) and ‘interdisciplinarity’ (Klein, 1996) are
utilized. The concepts used by these authors are also incorporated in the theoretical toolbox. The openness to influences from other contexts is one such feature, and the heterogenic nature of many research fields in the humanities is mentioned in all accounts, although the concepts used differ: ‘intellectually varied and fluid,’ ‘divergent,’ ‘transdisciplinary,’ and ‘synoptic’. Thus, the theories outlined above have a lot of common features although the foci—organizational (Whitley), ethnological or sociological (Becher & Trowler), and change (Gibbons)—are rather diverse. All these theories have drawbacks as well as strengths, and no single theory or conceptual framework could cover all the features that characterize a research field. Consequently, the theories and concepts outlined above together form an integrated theoretical setting used to explain, compare, criticize, and synthesize the results of the four studies.

The theoretical toolbox formed in this chapter has been developed in order to explain and discuss the connection between the social and intellectual organization of fields and citation patterns. This study builds upon the assumption that referencing practices and citation patterns can be explained by the characteristics of a research field. These characteristics are related to boundaries and the intellectual integration of research fields: a weakly bounded field lacking a central core would be influenced by other research fields and could therefore be more interdisciplinary in its referencing practices, while a field with clear boundaries and a low task uncertainty would be more inclined to intradisciplinary citing.

Citation patterns are also determined by the number of researchers engaged with a certain topic: in an urban field it is important always to keep up with the ‘research front’ and cite recent sources, while the age of sources plays a minor role in a rural field. This is also connected to the speed of publication, which is much higher in an urban field (biomedicine) than in a rural one (literary studies).

Another variable that influences citation patterns is the audience: in disciplines where a non-academic audience plays an important role, scholars may choose a referencing style—the footnote is a typical example—which serves both an academic and a public audience. The degree of dependence between researchers and the view of originality are further factors that influence how references are given: it is important to cite one’s peers in a field where researchers are dependent on each other for reputation and rewards, but in fields where originality is highly valued, referencing serves other purposes as well.

Important characteristics of research fields and how these affect citation patterns have been discussed in the theoretical overview. A more thorough analysis of referencing practices in the humanities is conducted in the first study (chapter 4), which should be seen as a continuation and development of the theoretical framework of the thesis.
Visualizations, Mapping Techniques, and Topographical Metaphors

This dissertation uses visualizations in order to portray relations and structures in scholarly communication. Visualizations, in this case bibliometric maps based on citation data, are utilized to depict complex structures. The appearance of these structures in maps is dependent on the methods and techniques employed. Thus, a short introduction to the use of maps, knowledge visualization, and methods for constructing co-citation maps is necessary.

The inherent contradiction of all map-making, including bibliometric maps, is that in order to depict a phenomenon we need knowledge about it, but the goal of mapping is to reach new insights. Furthermore, the lack of prior knowledge can hinder the mapping as such: “If we attempt to map the world of a story before we explore it, we are likely either to (a) prematurely limit our exploration, so as to reduce the amount of material we need to consider, or (b) explore at length but, recognizing the impossibility of taking notes of everything, and having no sound basis for choosing what to include, arbitrarily omit entire realms of information” (Turci, 2004, p. 14). The balancing of ‘preconceptions’ and ‘arbitrary decisions’ is a delicate matter, but a partial solution is to be as open and explicit as possible when describing the choice of materials and methods.

Maps and other diagrams serve persuasive functions in scholarly texts, and the ‘objectivity’ of maps, both geographical and conceptual, has been questioned on several grounds. Also, the idea that new techniques and methods create ‘better’ maps must be scrutinized, and as MacEachern (2004, p. 10) puts it: “This perspective suggests that maps are as much a reflection of (or a metaphor for) the culture that produces them as they are a representation of a section of the earth or activities on it.” Depending on the design of a map, it can be placed on a scale of abstraction: from images that are less abstract to diagrams that are generally more abstract (MacEachern, 2004, p. 161). Bibliometrics visualizations usually bear resemblance to diagrams, and are thus in a sense abstract. Consequently, a bibliometric map demands prior knowledge or (at times lengthy) explanations in order to be understood by the viewer.

The use of maps reflects the need to reduce complexities and present them in a two-dimensional space. Maps or other visualizations allow researchers to grasp and capture a phenomenon. In this sense they serve as inscriptions that allow scientists to, in the words of Latour (1999, p. 29), “[…] master the world, but only if the world comes to them in the form of two-dimensional, superposable, combinable inscriptions.” Hence, bibliometric maps are tools for reducing complexities that allow researchers to interpret their data.
Visualization of Knowledge Structures

The first attempts of using visualizations based on citation data for depicting knowledge structures were conducted in the early sixties. Visualization techniques have both been used to map science as whole as well as specific areas of research. The aim of these techniques is to “[…] reveal realms of scientific communication as reflected in the scientific literature and the citation paths woven between researchers” (Börner, Chen & Boyack, 2003, p. 183).

Several methods are used for mapping semantic and citation networks, and among the ones covered by Börner, Chen and Boyack (2003) are eigenvalue, factor analysis, multidimensional scaling, latent semantic analysis, pathfinder network scaling, self-organizing maps, and cluster analysis. These all have benefits and drawbacks depending on the goal of the study and the material used. The type of matrix generation and the inclusion of all authors or only first authors is yet another parameter that influences the results. Schneider, Larsen and Ingwersen (2009) compared the all-author co-citation (ACA) versus first author co-citation and found that the all-author approach results in more distinct groupings of authors while first-ACA is better in depicting specialties. Another reoccurring question in the creation of citation matrices is the use of correlation measures. Ahlgren, Jarneving and Rousseau (2003) scrutinized the use of correlation measures when creating matrices and concluded that Pearson correlation might not be the best choice for co-citation mapping, since co-citation frequencies are measured on an ordinal scale rather than on an absolute scale.

There are a wide variety of methods for doing co-occurrence mapping, and a growing number of software programs for visualization are available, and no particular one can be regarded as the best or leading one (Cobo et al., 2011). Furthermore, there is no consensus on how maps should be created or validated. The approach used in this study is not inventive or elaborated but rather follows a straightforward approach for constructing bibliometric maps. An advantage of this method is that scholars in the humanities who are not specialized in bibliometric methods can easily adopt it.

The procedure used in this thesis can be described in a few steps. Initially, citation data were selected and downloaded from Thomson Reuter Web of Science. The retrieved dataset was then converted to Dialog format using the Bibexcel software. The reference strings were cleaned and duplicate author names were standardized (e.g. Edward Said could be written either as ‘Said, E’ or ‘Said EW’). Then citation frequencies were calculated and the co-occurrence of items was produced. Detailed instructions for this procedure can be found in Persson, Danell and Schneider (2009). Next, the

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18 An account on methods adopted and the software used in the specific studies is found in chapters 6 and 7.

19 The latest version of the software and several tutorials can be found at: [http://www8.umu.se/inforsk/Bibexcel/] accessed: 2011-10-25.
result of the co-occurrence analysis was visualized using two different programs and methods. The third study used the Pajek software (de Nooy, Mrvar & Batagelj, 2005) together with a clustering routine proposed by Persson (1994). In the case of analyzing Swedish literary studies the Mapequation software and a ‘pathfinder’ approach for visualizing relational data were employed (Rosvall, Axelsson & Bergstrom, 2009). The latter approach was chosen because it provides clearer structures in a small dataset, and it has been stated that this approach “[…] provides a more accurate representation of local relationships than techniques such as MDS” (Börner, Chen & Boyack, 2005, p. 201). Finally, it should be noted that several techniques and software programs have been tested on the datasets in this thesis, and although the difference in visual appearance between programs such as Pajek and Mapequation is great, the basic structures remain unaltered.  

Topographical Metaphors

The increasing use of visualizations for depicting the structure and dynamics of scientific fields is linked to “[…] a rapid growth in the use of spatial concepts to explain phenomena that previously had been viewed in aspatial terms” (Skupin, 2009, p. 233). Both the interest in visualization and the use of topographical metaphors can be linked to a broad movement known as ‘the spatial turn’ (Skupin, 2009, p. 233-234). Topographical metaphors are often used to describe scientific disciplines and research specialties. Research directed at a specific topic is described as a ‘field’ with ‘boundaries’ to other neighboring fields. Concepts such as a ‘research front’ are employed for describing the dynamics of science. Scholars are portrayed in the ‘disciplinary landscape’ and disciplines have been described as ‘urban’ or ‘rural’ in their intellectual organization (Becher & Trowler, 2001, 106-108). These metaphors are used in this thesis as well, sometimes extensively, and they can hardly be avoided when trying to describe the social and intellectual organization of research. In fact metaphors in general are fundamental for our understanding, and our conceptual system is built upon metaphorical thinking (Lakoff & Johnson, 2003, p. 3). Metaphors are beneficial for understanding complex phenomena, but they can also be misleading and evoke unintended or problematic associations. An example is the characterization of fields either as ‘urban’ or ‘rural,’ and the common description of novel research being at the ‘research front.’ These concepts are useful for describing the dynamics of research fields, but one must be aware of the connotations that the use of these particular metaphors might evoke. As stated above, ‘rural’ could unintentionally be associated with something old and backward. The concept of a ‘research front,’ on the other hand, relates to images of battle, revolutions, and exploration, activities often perceived as

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20 Among the software tested during the work with this dissertation are Netdraw, The Network Workbench and Gephi.
male domains. The use of metaphors might in this case reinforce and cement stereotypes rather than improve our understanding of science. Thus, metaphors are a necessity for understanding and explaining, but an awareness of how the use of particular metaphors influences and governs our thinking is warranted.
4. Referencing in the Humanities and its Implications for Citation Analysis


This article studies citation practices in the arts and humanities from a theoretical and conceptual viewpoint, drawing on studies from fields like linguistics, history, library & information science, and the sociology of science. The use of references in the humanities is discussed in connection with the growing interest in the possibilities of applying citation analysis to humanistic disciplines. The study shows how the use of references within the humanities is connected to concepts of originality, to intellectual organization, and to searching and writing. Finally, it is acknowledged that the use of references is connected to stylistic, epistemological, and organizational differences, and these differences must be taken into account when applying citation analysis to humanistic disciplines.

Introduction

The aim of this article is to study the meaning and function of referencing within the arts and humanities in order to investigate the possibilities for citation analysis of humanistic disciplines. This study is primarily a theoretical and conceptual one, but it draws on empirical studies from linguistics, history, the sociology of science, and informetrics.

In fields such as linguistics, informetrics, and the sociology of science references have been studied as rhetorical devices, as indicators, and as marks of credibility. Theories and concepts have been proposed to explain the use and function of citations (Merton, 1942/1970; Small, 1978; Gilbert, 1977; Cronin, 1984; Leydesdorff, 1998; Nicolasien, 2003) and its importance has been highlighted by the use of citation indexes (Wouters, 1999).

Regardless of how scholars view the citation, they agree on citation practices being important objects to study in scholarly communication and the sociology of science. This has resulted in studies of citations, especially on a quantitative level, having grown rapidly during the last decades, not least for
evaluative purposes. This, however, largely excludes disciplines in the humanities, where little research concerning publication and citing practices has been done.

When discussing the possibility of using citation analysis to evaluate humanistic disciplines the problems discussed are often of a technical nature; databases such as the Web of Science are too narrow in scope, humanistic scholars publish in their native language and not in English-language journals, and they publish in monographs and anthologies rather than journals. These are obviously serious problems that have to be dealt with when trying to study and evaluate the humanities using citation analysis. However, an epistemological aspect of equal importance is how and why you cite. Citation databases and methods do not sufficiently cover the humanities but neither do citation theories developed to explain the use of citations in science. This article does not propose a ‘citation theory’ for the humanities but it tries to depict important characteristics of referencing in the humanities that affect the application of citation analysis.

Scholars studying the function of citations have pointed out that there is a difference between ‘a citation’ and ‘a reference’—one of them is received, the other given—and this distinction between perspectives is important. ‘Reference studies’ often deal with rhetorical and textual functions whereas ‘citation studies’ often are focused on the content and the conceptual function of references/citations as well as on how distributions of citations on an aggregated level can be explained. This article focuses on how citations are given and used in scholarly texts, but it also claims that how you cite has a strong influence on how you are cited. In the following ‘citation’ will be used when discussing on a more conceptual and theoretical level and ‘reference’ will be used when textual and rhetorical functions are in focus.

This article starts out with a short definition of the humanities as a field and this is followed by a short history of annotation in the humanities with a special focus on the tradition of the footnote. A connection between intellectual structure and citation practices is presented and referencing is discussed in regard to originality and searching. Finally, some conclusions are drawn about the function of citations in the humanities and its consequences for citation analysis.

The Humanities as a Field of Study

The humanities is a poorly defined field and its boundaries are fuzzy. Gibbons et al. (1994) include both the academic fields and the production of culture (e.g., artists, architects, fiction writers) but in this article the scholarly disciplines analyzing the ‘products of culture’ are in focus. The arts and humanities generally encompass religion, philosophy, art, music, literature, linguistics, and archeology, while history is often seen as standing on the border between the social sciences and the humanities.
The humanities is a heterogeneous domain and the differences between the disciplines that occupy it are vast. As with the natural or the social sciences, the humanities consist of different cultures or tribes and these have their own traditions when it comes to publication channels and citation practices (Becher & Trowler, 2001). It is also important to acknowledge that information behavior and the use of technology vary considerably within the arts and humanities (Borgman, 2007), and this article focuses on studies of literature, art, and philosophy, whereas disciplines in the humanities bordering on the social sciences and the natural sciences (e.g., history, linguistics, and archaeology) are beyond its scope.

Studies of references in the humanities have been conducted both on articles and monographs (Hérubel & Buchanan, 1994). Usually, these studies focus on the sources cited in terms of type (monograph or article), language, and primary or secondary material. Examples are Cullars (1989, 1990, 1998), studying references in literary monographs and in the discipline of philosophy, and Frost (1979), who studied references in German literary studies, while Hyland (1999, 2004) takes a multidisciplinary perspective on references. A thorough account of the history of the footnote is given by Grafton (1997) and this subject has also been covered by Zerby (2003).

Studies of information-seeking practices of scholars in the humanities take a broader perspective on referencing, and examples of such studies are Stone (1982), Wiberley and Jones (1989), and Bates (1996). Studies that also take the use and citing of electronic material into consideration are Brockman, Neumann, Palmer, and Tidline (2001), Wiberley and Jones (2000), Ellis and Oldman (2005), and Borgman (2007).

Previous research is mainly focused on the characteristics of sources (type, language, primary or secondary material, and age) used by scholars in the humanities, whereas further analyses of the content of cited material are rarely done.

A Brief History of Annotation

Annotation has a long history, probably as long as the written word itself. The organized use of references can be traced back to the classical world. Modern referencing within the sciences developed during the seventeenth and eighteenth centuries and established itself in the nineteenth century. While emerging during the seventeenth century, the number of references was small; only a third of scientific articles had references at all (Gross, Harmon, & Reidy, 2002).

Referencing began as recognition of debt but soon interlinking between contemporary researchers emerged. At the same time, social networks of researchers, publications with gatekeepers, and a codified literature developed and the modern scientific communication was formed (Bazerman,
1988). The intertextuality of former statements had become an important feature of scientific investigation and writing.

The importance of the reference grew as the status of the scholar changed, and as the gentleman’s stamp of scientific grandeur diminished in the seventeenth century (Shapin, 1994), references became a warrant of scientific credibility. As fewer scholars knew each other personally, the development of codified language and a formal system of authority was needed. However, researchers interested in the social construction of science have shown that the question of ‘who you are’ is still an important one when evaluating ‘what you say.’

The Footnote

Referencing in the humanities has its roots in both the modern ‘scientific’ reference and the historical use of the footnote. The footnote was introduced during the Renaissance; and in the eighteenth century it was custom to attach footnotes when writing history. Zerby (2003) identifies a sixteenth century printer by the name Richard Jugge as the first person to come up with the idea of the footnote. However, it was Leopold von Ranke who firmly established the footnote, together with the criticism of sources, in the discipline of history, and the allocation of footnotes turned history into a scientific discipline (Grafton, 1997). Ranke was a disciplined annotator and his footnotes usually contained only authors, titles, and pages. The footnote was and is both a pointer to the source and an opportunity to comment on primary sources. The footnote had two purposes, as a reference and as a comment, and it still serves both these purposes.

The type of referencing used in the humanities differs but footnotes and endnotes are frequently used, especially in monographs. The choice and use of an annotation system is not only a decision made on intellectual, aesthetic, social, or personal grounds, moreover it is also a technical and economical decision made by the publisher. The type of notes (footnote or endnote) and the number of notes is often a question of debate between the author and the publisher. In fact, the history of annotations is intricately bound up with the advances in printing techniques, and it was a trend in printing that moved references from the margins to the bottom of the page in the eighteenth century (McFarland, 1991).

Referencing in the humanities can be seen as a mix of the tradition of the footnote and modern referencing in science. The footnote (being outside and mainly commenting on primary sources) is intertwined with referencing practices from the natural sciences, residing inside the text and usually linking to previous research. Grafton (1997) sees the history of the footnote as a decline in style and elegance as the footnote went from being an art to merely being a routine. The one to blame for this, according to Zerby (2003), is von Ranke, who formalized the use of footnotes, but the decline of stylish-
ness could also be related to the influence from the modern reference in science.

The footnote provides a meta-quality (it is a text commenting on the main text) and initially its main function was source criticism. The footnoted text presupposes a hierarchy between texts where the footnotes are subordinate or—in the words of Derrida—“slaves” to the main text. The text is divided into the principal (main) and secondary (annotations) parts and these hierarchical structures correspond to the structure of a community or institution (Derrida, 1991). In allocating footnotes the author can choose, especially in a polemic text, “to play the game of the footnote” and thus transform slaves into the actual masters of a text. Although the footnote can be the primary item it is often of secondary and intertextual nature: it is a response and as such it has meaning only in relationship to other texts. A text can survive without footnotes but a footnote is lost without the text it is commenting on (Derrida, 1991).

One important difference between the footnote and the reference that is given in the written text is the intrusion in the reading of the text. Grafton (1997) describes the footnote as someone knocking on your door during love making and although this may be true, the fact is you can ignore a knock. A reference within the text cannot be ignored, it is part of the text—irrespective of whether the reader shows an interest in it or not. Thus, when reading a footnoted or endnoted text you can choose if you want to read the footnote. The footnote is an option, whereas a reference residing in the text is mandatory; it can be ignored but it is an active decision to ignore, whereas it is an active decision to read the footnote.

When studying citations in the humanities, on a qualitative level as well as on a more quantitative one, it is necessary to acknowledge the different traditions of referencing that exist within the humanities. Furthermore, the comprehension of the tradition of the footnote is important for understanding citation practices within the humanities.

References as Rhetorical Devices

References, as we generally perceive them, serve as rhetorical devices in the written text. However, the way in which these references are given and formulated in the text depends to a great extent on disciplinary differences. Citing practices, as well as the choice of referencing systems—references in parentheses or the footnote—vary within the humanities. Generally, fields closer to the social sciences, using quantitative methods, are more prone to use references residing within the text, while in history and literary studies, where the source material is often cited, footnotes are used to a greater extent. Obviously, differences in reference systems exist between departments, traditions, and journals within the same scientific discipline, but generally
the footnote is more common in the humanities and references in parentheses is the usual choice in the social sciences.

Swales (1990) differentiates between references that are integral and non-integral. An integral reference contains the author’s name in the main text, e.g. (as Swales states above). The nonintegral form gives the reference in parentheses, e.g. (‘Swales, 1990’) or as in physics, where a numerical endnote form is being used; the reference will appear in the text as a number in parentheses, e.g. (‘1’). The integral reference is more personal and it associates strongly with the author (person), and studies have shown that the inclusion of both the first and second name is more common in integral references (Harwood, 2008). The inclusion of the first name makes the reference more personal, whereas the nonintegral focuses on the cited text (message) and serves rather as a symbol for content than for person. Finally, the nonintegral reference with numbers (not names) in parentheses, often used in physics, simply gives a link to the reference list, thus giving an anonymous reference which cannot be evaluated by the identity of its sender. When removing the agent, the statement being claimed is dissociated from human intervention, which is one step on the way for the claim to become a ‘fact.’ The traditional footnote is truly nonintegrated, but on the other hand, it accompanies the text (at the bottom of the page) and it is more often a comment that can enhance, contextualize, or even undermine the main text. Also, the footnote is often accompanied by an integral reference in the first place. Therefore, its rhetorical function is quite different from the “endnote” system that is used in some scientific disciplines.

If one compares this to Latour’s (1987) theories about fact making, one can see how scientific credibility increases as the message becomes depersonalized. When the agent (author) is removed, the message stands on its own. Compare:

Latour (1987) states that references are a part of the process of creating credibility.

References are a part of the process of creating credibility (Latour, 1987).

References are a part of the process of creating credibility (1.)

Finally in Latour’s theory the agent is removed completely. This way the statement becomes a fact. As a fact, the statement now stands on its own and the person making the claim no longer seems to be of interest. As Hyland (1999) shows, the use of integral references is much more common in the humanities than in other academic disciplines. Hyland’s (1999) study of eight disciplines, where philosophy represented the humanities, showed that
the dominant reference in all disciplines except philosophy was nonintegral, whereas in philosophy almost 65 percent of the references were integral (Hyland, 1999). The use of hedgings also differs between the sciences and the humanities; in philosophy hedgings such as ‘say,’ ‘suggest,’ ‘argue,’ and ‘claim’ are used whereas in science ‘fact-making’ verbs such as ‘report,’ ‘describe,’ and ‘show’ are more common (Hyland, 1999). Direct quotations were not used at all in the natural sciences but in applied linguistics and philosophy they were not uncommon.

The kind of referencing usually used in the humanities has two consequences: first, the author is given a great deal of autonomy in evaluating the statement of others; second, the statement is strongly connected to a person. This freedom is expressed through the options available to the author as he can modify the statement through the use of hedgings such as ‘says,’ ‘claims,’ ‘states,’ and also, a more indirect referencing can be used as in ‘the Latourian view.’ The strong connection between the author and the message puts the spotlight on the author and diminishes the fact-like status of the claim. The humanities do not use the whole arsenal of fact-making devices that is used in the natural sciences. The individual saying something is often visible in the actual text, creating a strong connection between sender and message.

Negative references are common in the humanities when compared to the natural sciences, where negative references are rarely used (Meadows, 1974; Brooks, 1985; Cano, 1989). In fact, the use of references within the humanities is in some instances like a conversation in a community of likeminded scholars, and this is especially common in philosophy (Hyland, 1999). The conclusion is that scholars in the humanities not only comment on the primary material but on the secondary material as well, and studies made by Kautto and Talja (2007) suggest that when using texts, scholars in the humanities do not distinguish between scholarly and fictitious texts. All texts are equal and all texts and relationships between texts can be of interest in the research.

Generally speaking, integral referencing and the use of verbs show that references are more bound up with a person claiming something in the humanities than is the case in the natural sciences. It is also true to say that references in the humanities are often part of a discussion and that their use is to evoke a debate or a conversation between lines of thinking. Swales (1990) found that contractive references—references that dispute the conclusions drawn in the sentence itself—are very uncommon in science but they do form a tradition of writing for some academics in the humanities. This would indicate that the use of criticism and debate in the writing of scholarly texts is important within the humanities. The argumental and debatable is given more space in the humanities and this is reflected in how and whom you cite.
The freedom to use hedging and to construct the meaning of citations—‘symbol-making’ (Small, 1978)—is greater in the humanities, especially when using integral references. On the other hand, references in the humanities are not as convincing as those in the natural sciences—meaning that they are less fact-making: the symbols are more ambiguous. Using the terminology introduced by Cozzens (1982), one can say that references in the humanities have a split citation identity or maybe even a multiple citation identity that gives the author freedom in choosing the ‘identity’ of the cited text to fit the purpose of the citing text. Citations are used as rhetorical devices to signify the context of a statement, or to act as a symbol for a theory or method, but to a lesser extent as a tool for turning statements into facts. References in the humanities have rhetorical functions; they are even more explicitly rhetorical than their equivalents in science. This is illustrated by the use of footnotes, which gives an opportunity to comment on the sources, and also by the use of negative and contrastive referencing. If one compares the citation practices between disciplines, we find that references in fields such as philosophy and literature are often integrated in the text and reflected upon, hedging is frequently used to modify statements, and references often assume a conversational manner, as a way of negotiating scholarly results.

Referencing and the Intellectual Organization of the Humanities

References are a social and institutional phenomenon as well as an epistemological one, and the number of given references is often higher in the humanities and the social sciences than in the sciences (Hyland, 2004). The greater frequency of citing within the humanities could be explained by “...firmly situating research within disciplinary frameworks and supporting claims with intertextual warrants” (Hyland, 1999, p. 353). A scholar in the study of Becher and Trowler (2001) describes the function of the footnotes as giving the reader a sense of the relationship between primary and secondary sources. In some aspects, the reference in the humanities serves the purpose of the methods section in the natural sciences. It is a standardized code used to contextualize the research, and in this respect the idea of the citation as a symbol for the content of an article seems appropriate (Small, 1978). Consequently, if a shared context among readers exists, few references would be needed, but if a shared context is lacking there would be a need for more references (Hyland, 1999). This is reflected in the difference between multiparadigmatic (guided by several competing paradigms) and single paradigmatic fields (Talja & Maula, 2003), and the conclusion would be that disciplines guided by a single paradigm with a clearly defined core of texts
would need fewer references, whereas in multiparadigmatic fields the number of given references would be higher.

To understand citing and the importance of references within the humanities, an inclusion of the whole research process is essential. Using references to give acknowledgment to previous scholarship is, according to Frost (1979), rather uncommon in literary research, and in humanistic disciplines as literature research and philosophy references are instead used to create the context in which the research should be placed. It depicts the theoretical and methodological stance from which the research is done; creating a context less fixed than that of predecessors and followers.

**Mutual Dependency and Citation Practices**

In *The Intellectual and Social Organization of the Sciences* (1984), Whitley introduces the concept of ‘mutual dependency,’ a concept that can be used to describe intellectual fields. Mutual dependency is a measure of how much the individual researcher is dependent on colleagues in his research. Whitley identifies two types of dependency: *functional dependency* and *strategic dependency*. Functional dependency is the degree to which researchers have to use the ideas and procedures that are established in their field in order to make claims that are regarded as valid contributions. Strategic dependency, on the other hand, is the degree to which researchers have to persuade their peers that their research is important in order to obtain a high reputation in the field. Whitley shows with current and historical examples that these axes can be combined in different ways. The description of fields that are low on both functional and strategic dependency fits well with the humanities in general. He describes these ‘low-low’ fields as: weakly bound with great variation of goals and procedures and with low extent of division of labor between researchers.

However, academic fields that are disintegrated and weakly bound in a traditional academic sense might be well integrated in other aspects: to the society or to a profession (Åström, 2004). A scholar of literature might review books in the local paper, participate in readings and seminars for an interested public, and in such a way be integrated with the ‘literature field’ outside the academy. The humanities might in some cases be heterogeneous and diversified in themselves but they are often an integrated part of a society stretching outside the boundaries of academia.

As contextual factors that influence the degree of mutual dependency, Whitley (1984) discusses the plurality and diversity of audiences. He suggests that where the audience is limited and specialized, mutual dependency will be high. But when audiences are diverse and where different, but equally important target groups exist, then mutual dependency will be low. Regarding the humanities as a field with a diverse audience, Whitley (1984) comes to the conclusion that the mixed audience in the humanities may have hindered the development of a codified language and standardized research.
procedures. This could be extended to include citation practices. The use of the footnote also indicates the mixed audience of fields, like art or literature, as the footnote to a nonprofessional audience is a sign of scholarliness but without insisting that it be read. To peers the footnote provides insight into source material and theoretical foundations, but for a nonprofessional the footnote is less of an intrusion in the text compared to references in parentheses. The footnote within the humanities serves two audiences, both a public audience and a community of peers.

In fields with a low degree of mutual dependency the researcher has a greater degree of individual freedom when choosing references—the need for citing authorities in the field is low. This circumstance is reflected in citation practices. Whitley describes the humanities as *fragmented adhocracies* and these are typified as fields where control over standards and concepts is limited and shared between scholars and nonprofessional groups. The need and ability to coordinate and compare research efforts within the field is low and, as a consequence, the field becomes disconnected and fragmented (Whitley, 1984). This can be seen as a weakness of research in the humanities but it also gives the scholar an intellectual freedom rarely seen in the natural sciences, and this might be an explanation for citation practices within the humanities, called “promiscuous” by White (2007).

The very nature of research in fields as literature or philosophy is personal and individualistic. Scholars search for literature, work, and publish alone (Stone, 1982). Some findings do indicate that this is changing, and as an example Cronin, Shaw, and Le Barre (2003) found that acknowledgments among philosophy scholars have grown substantially during the last two decades. However, whether this is a sign of greater collaboration or simply a change in attitudes toward giving acknowledgments remains an unresolved issue.

**The Independent Author**

The individual author as the independent creator is the norm in many humanistic disciplines, multiple authorships occur, but the phenomenon of hyperauthorship occurring in the natural sciences and described by Cronin (2001) is, to put it mildly, not a problem. The concept of the author as an independent self emerged, according to Barthes (1984), during the Renaissance and the Reformation and established itself in the modern period. This occurred during the same time as the footnote became customary. It was also at this time that the custom of indexing text by authors was introduced, a process implying that the author, unlike before, was now not seen solely as an instrument or a mediator used by God (McInnis & Symes, 1988).

Barthes (1984) describes modern authorship as a performative act rather than as a recording or representing one. In the humanities the act of writing is seldom separated from research itself; it is truly a preformative rather than a reporting act. This is also illustrated by the fact that the border between
data (the studied) and publications (the study) is fuzzy in the humanities and that scholars are rarely rewarded for sharing data with other scholars (Borgman, 2007). The data, the results, and the actual text resulting from the research are inseparable. Modern authorship, as a creative and preformative act, is the norm in the humanities, while in the natural sciences the author as an independent reporter of ‘facts’ still is an important concept. In fact, it has been claimed by critics that, like in the ‘old’ notion of the concept, the ‘author’ in the natural sciences is understood as a messenger relying not on truth from God but from nature (Gilbert, 1976). Furthermore the ‘product’ of research in the humanities is primarily texts, whereas in science the outcome can be data of various kinds. Therefore, research in fields a literature, art, or philosophy is dependent on an author, whereas research in the natural sciences does not to the same extent demand a modern ‘author’ that can be recognized by his style, elegance, or wit.

Hyland (2004) suggests that references are used to construct a context for the reader and the inclusion of references from different fields makes it accessible for a broad audience, and the interdisciplinary and mixed audience of research in the humanities is reflected in citing practices. Humanities scholars cite in order to broaden the audience, not to narrow it. According to Whitley (1984), the relatively large number of references in the humanities can be explained by low mutual dependency, the permeability of field boundaries, and the diversity of research methods. It could be claimed that the more disintegrated a field is, the more references are needed and it might be so that the frequent use of annotations is hiding an ‘intellectual fragmentation,’ but one could also argue that in a highly fragmented field references would be very few. Literature scholar Thomas McFarland suggests that: “...the greater the actual disintegration of culture, the more in fashion do footnotes become” (McFarland, 1991, p. 177). The less we feel actual integration in a culture the more we formally need to show this affiliation.

As suggested before, to cite is to some extent the overall method for the humanities, and the interpretation of text is to a large extent the research procedure. This is illustrated by the first thing that students learn, and this is emphasized, namely, that you cite in a correct manner. This is perhaps due to citing being one of the few fact-making devices that exist in the humanities, as numbers, diagrams, and illustrations are not that common. To cite is to create your own identity as a writer, but the citing also marks the status of being a professional, taking part in an academic collective (Stevens & Williams, 2006).

The use of references is also an important part of constructing academic disciplines. The choice of reference system is not only a stylistic decision but also a part of the disciplinary self-identity. This is illustrated by disciplines trying to establish themselves as ‘scientific’ and therefore adopting a more ‘scientific way’ of publishing and citing. Cullars (1998) describes how a discipline like philosophy is trying to adopt a more scientific citing practice.
His conclusion, however, is that, although philosophers perceive themselves as more ‘scientific’ than other disciplines in the humanities, they still cite in a manner typical to humanities such as art, literature studies, or religion.

Originality, Citing, and Searching
Throughout the history of science originality has been seen as a key aspect of scientific discovery. However, being original is not the same in the humanities as in the natural sciences. The notion of originality differs between disciplines, and the aspects emphasized when evaluating are quite different, depending on the discipline (Guetzkow, Lamont, & Mallard, 2004). Generally, the production of new (empirical) findings is the main criterion of originality in the natural sciences, but in the humanities and the social sciences other criteria such as new approaches, new methods, and new theories are common (Guetzkow et al., 2004). This notion of originality influences the use of material and shapes how the material/literature is cited. The citing of sources from a wide range of disciplines is consistent with the use of theories and materials from a broad range of scholarly fields. Hence, one form of originality is to use a new theory or a new method to analyze a well-known piece of material, or the opposite way around. Adapting ‘new’ theories on old material as well as adapting old theories on new material is an act of originality that gives the scholar a broad range of options when choosing theory, method, and material for a research project. The concept of originality in the humanities is connected with an interdisciplinary view on methods, theories, and materials that is also reflected in citation patterns. Citing theory or method is as important as citing previous research on a specific material. This might be due to the nature of the process of research in the humanities as an effort to introduce new perspectives and reflections rather than discovering new facts. A more tentative conclusion would be that citing theory, at least in a discipline like literature studies, became more important after the ‘cultural/linguistic’ turn where approach (e.g., feminist, critical, or postcolonial) became a more important distinguisher between scholars than their material of study (e.g., genre, period, or region).

Koestler (1964) introduced a concept he called ‘bisociation,’ suggesting that a creative act always operates on two levels/areas and that the connection between the two is what creates originality. The act of bisociation, connecting two seemingly separate phenomena, is an important feature in research in the humanities. This could in fact explain the ‘promiscuous’ citation practice of humanities scholars. A researcher interested in studying Shakespeare would have a problem finding material that has not been studied before—25,000 articles and books about Shakespeare have been completed since the eighteenth century (Gibbons et al., 1994, p. 94)—but through the implementation of a new theory or method a study can obtain the status of originality. The search is, as discussed by Talja (2002), not always focused on the specific subject that the scholar is studying but instead
sources are used to give a new perspective or a new approach to the subject. Accordingly, the connection of two seemingly separate phenomena or sources is an act of originality often employed by humanities scholars.

Originality, citing practices, and intellectual structure are also connected to the organization of knowledge and the search for information. As suggested by Bates (2002) and elaborated by Fry and Talja (2004), the search for relevant literature differs between disciplines. It has been claimed that browsing (indirect searching, e.g., surfing the Internet or looking through library shelves) and chaining (following citation links) are the most common methods when searching for relevant sources in the humanities (Stone, 1982; Brockmann et al., 2001). A field (such as literature or philosophy) with low mutual dependency and high task uncertainty would not only cite across disciplines and extensively but the literature search would also be broad and primarily done by chaining and browsing. Directed searches using keywords or title are not that effective in the humanities, to some extent due to the lack of codified language, and this partly explains why scholars rarely delegate searching to librarians. The reason why directed searching is less effective in heterogenic fields such as literature or philosophy might be due to scholars needing a broader perspective, comprising sources that are not, at first glance, strongly connected to the research topic. The most relevant sources might not be those having “topical relevance” but those with ‘epistemological’ or ‘paradigmatic relevance’ (Hjörland & Sejer Christiansen, 2002; Talja & Maula, 2003). Offering theories, frameworks, concepts, and approaches to a subject might in many cases be much more important than getting the ‘facts.’ The research process might in some cases benefit from a broad perspective rather than a narrow and exact one, and consequently the use of exact and directed searching would not be optimal. Instead, the search for literature is much more an integrated part of the research process than it is in the natural sciences (Wiberely & Jones, 2000). The search process requires both expertise and a personal examination of the material and this cannot, except for really trivial searching, be delegated to another person. If scholars manifest their own professional identity when they cite, then obviously the search for literature cannot be delegated.

Finally, if there are connections between searching and citing patterns—it is obvious that such connections exist as they are two sides of the same process—then citation studies, on a quantitative as well as a qualitative level, could provide valuable insights in fields like information behavior and knowledge organization.

Discussion

This article has shown that the problem when using citation analysis on humanistic disciplines is not only a technical one associated with differences in
publication practices, but also has to do with differences in how and why you cite. References in fields like philosophy, art, or literature are often integrated in the text; frequently, whole names and less fact like hedging are used. They serve the purpose of building the context in which the research and the researcher exist, as well as the ‘traditional’ task of acknowledging previous research. Accordingly, references in the humanities are more integrated in the text and therefore more ambiguous when separated from their context.

The use of contrastive, argumental, and negative references is a sign of the author’s freedom to adjust the message. The extensive use of hedging and integral references as well as the common use of negative and contractive references suggests that references are more context-bound in humanistic disciplines. One could say that the transition from given (reference) to received (citation) is longer and that a lot of meaning is lost on the way. A reference in the humanities is often context-dependent and therefore ambiguous when it is separated from the text it accompanies. This ambiguous meaning of a citation has major implications for citation analysis, not least when it comes to negative or contrastive references. It has been claimed that negative citations in the natural sciences are so few that they do not distort the results in any major way (Meadows, 1974; Brooks, 1985; Cano, 1989), but one can question if this argument is still valid if there are substantially more negative citations in the humanities. Furthermore, if references are used to create a context, a context that goes beyond the reciprocal relationship of predecessor and follower, then their function as an indicator of influence or impact can be questioned.

Citation practices in the humanities differ from those in science, due to differences in intellectual and social organization, and one essential aspect is the individualistic nature of research in the humanities. The purpose of referencing is not only to affiliate oneself with other scholars but also to create one’s own unique intellectual identity and the mix of sources (‘bisociation’) is an important part of creating originality. Therefore, scholars often search for literature themselves, as searching is an integrated part of the research process. The search for literature in the humanities is often done through browsing or chaining and direct search, based on title or keywords, is more uncommon. This has implications for citation analysis, since browsing and chaining is optimal when the search is focused on ‘paradigmatic relevance’ rather than ‘topical relevance.’ Citation analysis as it is used today often presupposes a strong topical relevance between citing and cited material, but in order to gain an understanding of citation patterns in many humanistic disciplines paradigmatic relevance has to be taken into consideration.

Citation practices within fields such as literature, philosophy, or art is also connected to the permeability of field boundaries and interdisciplinary citing. A core of texts defining the discipline or the specialty is often lacking and the inclusion of sources from other fields and disciplines are common. It
is also true that in quite a few humanistic disciplines a nonscholarly audience is important for the reputation of a scholar, a circumstance that is reflected in the use of footnotes which is often employed, due to less intrusion in the text, in publications for a nonacademic audience. If we agree with Whitley (1984) that the humanities serve two audiences, which are both important for recognition and reputation, then we cannot study them by using only one of them (scholarly), but we must also find methods for measuring public impact. Hence, citation studies of disciplines in the humanities must cover a wide range of sources, both inside and outside of academia.

In conclusion, three important reservations can be made regarding the use of citation analysis for research evaluation of humanistic fields: First, a fair analysis must incorporate sources and citations from a wide range of disciplines and from non academic sources. Second, the notion of the reference as acknowledgment to previous research can be questioned in the humanities (Frost, 1979); and third, the meaning of a citation is highly context-bound and therefore generalizations about impact or influence are at best tentative. These reservations are based on the social and intellectual organization of scholarly fields (interdisciplinarity and low mutual dependency) as well as on characteristics of an epistemological nature (view of author and originality).

Further studies into the role of referencing in the humanities are needed to shed light on problems and possibilities in both informetric research and in knowledge organization. Studies of citing patterns in specific disciplines as well as more broad studies of scholarly communication within the humanities are needed, and quantitative methods (e.g., bibliometric) as well as qualitative methods can be used in this effort. Furthermore, a historical and theoretical understanding of disciplinary culture is crucial to explain and interpret empirical data, and in this effort a theoretical framework explaining the citation in the humanities on a more general level is necessary.

The current emphasis on technical and material issues hides the fact that epistemological and organizational characteristics—as concepts of originality, view of the author as an independent creator, or the mixed audience—are equally important when trying to study the humanities using citation analysis. The development of techniques and the building of databases will allow more and more disciplines in the humanities to be studied by the use of citation analysis; however, as long as a theoretical foundation and an understanding of citation practices in the humanities are lacking such results should be interpreted with great care.

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References


5. Interdisciplinarity and the Intellectual Base of Literature Studies: Citation Analysis of Highly Cited Monographs


This article studies interdisciplinarity and the intellectual base of 34 literature journals using citation data from Web of Science. Data from two time periods, 1978–1987 and 1998–2007 were compared to reveal changes in the interdisciplinary citing of monographs. The study extends the analysis to non-source publications; using the classification of monographs to show changes in the intellectual base. There is support for increased interdisciplinary citing of sources, especially to the social sciences, and changes in the intellectual base reflect this. The results are explained using theories on the intellectual and social organization of scientific fields and the use of bibliometric methods on the humanities is discussed. The article demonstrates how citation analysis can provide insights into the communication patterns and intellectual structure of scholarly fields in the arts and humanities.

**Keywords** Citation analysis; Humanities; Interdisciplinarity; Intellectual structure; Literature studies

**Introduction**

The humanities have long been neglected when it comes to the study of knowledge production and intellectual structure (Lamont 2000). One problem has been to “...measure the content of the texts—the knowledge—which collectively comprises the field” (Evans 2005, p. 112). Citation analysis is one of several methods that can be used to gain an understanding of the ‘collective’ knowledge production within a field. It has been claimed that citation analysis has the potential to be useful in the humanities but it is rarely employed (Hérubel and Buchanan 1994). This article strives to use citation analysis on a discipline in the humanities and it focuses on the most frequently cited sources; monographs. The study uses citation data from 34 literature journals indexed in Web of Science (*WoS*) in order to depict the intellectual base—the highly cited sources—and interdisciplinary citing in...
literature studies. Two time frames, 1978–1987 and 1998–2007 were studied, and changes in the intellectual base are related to changes in knowledge production, interdisciplinarity and citation practices. The results are discussed and explained in relation to earlier studies on the humanities and with the use of a theoretical framework from the sociology of science (Becher and Trowler 2001; Gibbons et al. 1994; Whitley 1984). Furthermore, the use of bibliometric methods on the arts and humanities is discussed in relation to the methods used, to theoretical considerations and the results gained.

This article tests how the classification of monographs can be used to study interdisciplinary citing in the humanities and the combination of citation data from WoS with Dewey classifications (DDC) is a novel approach. Generally bibliometric studies use the citing of journals as an indicator of interdisciplinarity. However, these approaches are less applicable in this context as only a small part of what is published in literature studies is indexed in citation databases such as the WoS while the main publication channels are monographs and chapters in monographs (Larivière et al. 2006). Monographs are, as will be seen in this study, visible in the WoS; not as documents indexed in the databases, but as documents cited by the WoS-indexed journal articles. This has major consequences when trying to evaluate research using bibliometric methods; as evaluative studies focus on how specific institutions and scholars are cited. However, when analyzing highly cited texts this may be less of a problem. As suggested by Finkstaedt (1990) the leading ‘theorists’ in the humanities can be studied with bibliometric methods using citation databases, but it would be difficult to analyze research fronts (e.g. citing articles), smaller institutions or departments. Hence, it is possible to investigate general patterns in citing but harder to depict the impact of specific scholars or institutions. Furthermore one must, as practised in this study, expand the target to non-source publications—publications that are not indexed in the database used (Bulter and Visser 2006)—in order to have good coverage and representativity; a conclusion also drawn by Linmans (2010).

The article starts out with a definition of the studied field, followed by a presentation of key concepts and theories. This is followed by an introduction to the used methods and the studied material. Then, the intellectual base of literature studies is presented and the interdisciplinarity of the field is studied using classifications of highly cited monographs. Subsequently, the results of the study are discussed using theories from the sociology of science, conclusions regarding the methods used are drawn and implications for further research are considered.

**Literature Studies**

There are difficulties in defining fields, disciplines and specializations; not the least when analyzing the discipline(s) concerned with the study of literary works. Literary texts (prose, poetry and drama) are studied in a wide
variety of disciplines and fields; comparative literature, English literature, classics and literature in specific languages such as French, German and Swedish. In the British and American tradition ‘general’ and wide-ranging literature research is done in what is called comparative literature; the name illustrating that literature from different languages and cultures is studied and compared. Cultural studies, emerging as English literature turned towards sociology (Milner 1996, pp. 11–18) or in epistemological terms the meeting between British Marxism and French theory in the context of American popular culture (Cusset 2008, p. 133), is also to be considered part of literature studies even though it is concerned with cultural expressions in a variety of forms and genres.

The boundaries defining literature studies are national, geographical and historical, but there are also important differences between the canonical tradition and subversive readings and the demarcation between high and low culture (Klein 1996, p. 171). Furthermore, only a part of literature studies is carried out within the boundaries of academia since the analysis and criticism of fictional texts is a phenomenon that also can be found in newspapers, reading groups in schools and libraries, and it is practised by journalists, critics, teachers, librarians and by a reading public. It is a field where non-professionals are an important audience, and a field in which the control of knowledge production is shared between academics and an interested public audience. In this study the concept of literature studies is used in its broadest sense and literature studies is defined by the empirical setting of the chosen journals. Thus, ‘literature studies’ here are a product of the deliberate choices made for this study, and the results should be valued and interpreted with this in mind.

**Interdisciplinarity, Transdisciplinarity and ‘Mode 2’ Knowledge Production**

Interdisciplinarity is a key concept in describing contemporary research although the concept has been questioned and partly replaced by the notion of ‘transdisciplinarity’ (Klein 1996). Interdisciplinarity in its simplest form can be defined as ‘boundary crossing’ thus, the more a discipline influences and is influenced by other disciplines the more interdisciplinary it is. Interdisciplinarity, in a bibliometric sense, can be defined both in terms of manpower (co-authors from different disciplines) and in citation patterns (citation from and to other fields). The citing of sources—both monographs and articles—is an indicator of interdisciplinarity, as it measures to which degree a discipline or a field borrows terminology, methods and theory from other disciplines. In a narrower sense it can be stated that “…the reference list of a scientific paper can be interdisciplinary if it cites literature in different disciplines” (Small 2010, p. 836). Accordingly, the more an article or a journal cites literature from ‘other’ disciplines the more interdisciplinary it is.
Interdisciplinarity is related to the concept of transdisciplinarity; defined by Gibbons et al. (1994) as knowledge production that is applicable, situated and disseminated outside disciplinary borders. Transdisciplinary fields are often problem-focused and contextualized; examples are environmental research and gender research both of which supersede traditional disciplinary borders to investigate a specific problem (the effect that humans have on nature or gender inequality). Furthermore, transdisciplinary fields often have a high degree of social accountability and they are organized around perspectives and theories rather than around a topic or a time period.

‘Mode 2’ knowledge production is a concept that was introduced by Gibbons et al. (1994) and it describes a situation where the borders between research and society as well as between academia and society are blurred. Accordingly, a key feature in modern knowledge production is interdisciplinarity/transdisciplinarity but ‘mode 2’ is also associated with greater social accountability, instrumentation, application, reflexivity and a general contextualization of research, as well as with late modernity and post modernity (Gibbons et al. 1994).

The notion of ‘Mode 2’ has been criticized for not distinguishing between organizational changes and epistemological ones; is there a new production of science or a new organization of scientific production? (Weingart 1997). Questions have also been raised regarding the novelty of ‘mode 2’ knowledge production and the notion of a distinct change from ‘mode 1’ has been criticised. Gibbons et al. (1994) claim that the change is less distinct in the humanities as research in the humanities to some extent has always been of the ‘mode 2’ kind. Reflexivity and contextualization are inherent in the epistemology of the humanities; research is less codified, more value laden, more personal and humanistic research has greater permeability than the natural sciences (Klein 1996, p. 39).

The concept of ‘mode 2’ is used in this article to elaborate on changes in the intellectual base—the highly cited texts—in literature studies. ‘Mode 2’ combines aspects as social accountability, reflexivity and interdisciplinarity which all are important for understanding changes in the intellectual organization of literature studies. Thus, the concept of ‘mode 2’ in this article is used rather as a description of changes on the ‘surface’ of research—publication and citation patterns—than as an explanation of epistemological change.

Interdisciplinarity in the humanities has been studied by Dowell (1999) who found an increase in interdisciplinary citing in the art journals Art Bulletin and Burlington Magazine, Hérubel and Goedeken (2001) identifying interdisciplinary historians and Leydesdorff and Salah (2010) who studied how two art journals—Leonardo and Art Journal—are widely cited outside their own discipline. The few existing bibliometric studies on interdisciplinarity in the humanities have focused on one or a couple of journals, using subject categories and journals as ‘indicators’ of interdisciplinarity, and both
Dowell (1999) and Leydesdorff and Salah (2010) detected an increase in the interdisciplinary citing of sources. This article differs from these earlier studies in the use of a large selection of journals, its focus on monographs and the use of a bibliographic classification system for disciplinary definitions.

Methods and Materials

The gathering of data is based on a selection of journals from which the articles for analysis were collected, a common method for material selection when analyzing research fields; which has also been utilized in bibliometric studies of the humanities (Dowell 1999; Leydesdorff and Salah 2010). The task of identifying core journals within literature studies is complex: there is no Journal Citation Report for the Arts & Humanities Citation Index. Instead the journals were selected by using Journal Info. Of the journals indexed as Literature: General in Journal Info, the ones indexed in the A&HCI (WoS) databases, as well as those characterized as being of ‘high scientific standard’ in the Norwegian publication database FRIDA were chosen for download and analysis.

The criterion of ‘high scientific standard’, a label given to the journals by researchers themselves, does not exclude journals that have an audience outside the academy but rather the criterion provides a basis for more ‘advanced’ selection. An example of an acclaimed non-scholarly journal in the ‘literary field’ is the Times Literary Supplement, and usually literature journals have a wide-ranging audience consisting both of scholars and an interested lay public. This is consistent with a field that is inhabited both by academics and the general public. Furthermore, literature journals also deal with culture and cultural production in a more general sense, which is reflected in titles such as Boundary 2: an International Journal of Literature and Culture and Journal of Popular Culture.

There were 183 literature journals identified as ‘Literature: general’ in Journal Info, of which 34 were indexed in the WoS and labelled as having a high scientific standard in FRIDA (Table 3 in Appendix). A majority of the chosen journals were also indexed in ERIH—European Reference Index for the Humanities, of which 22 were ranked as ‘A’ journals, i.e. ‘high-ranking international publications with a very strong reputation among researchers of the field in different countries, regularly cited all over the world. Thus, the majority of the journals are considered major and central

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journals in the field, which is emphasized by quite a few of the selected journals being relatively highly cited (Tables 4, 5 in Appendix).

Two datasets were downloaded from the A&HCI one covering articles published in the period 1978–1987; and one ranging from 1998 to 2007 (Table 1). The choice of two periods of time is motivated by an effort to detect changes in the structure of the literature field; i.e. to gain a historical understanding of current trends. The two time windows can be seen as long when compared to bibliometric studies of science, but generally it takes longer for citations to accumulate in humanistic disciplines than in the natural sciences (Al et al. 2006; Linmms 2010). Another issue is the low representation of non-English language journals that are indexed in the A&HCI—there is an overrepresentation of English language journals of about 20–25% when compared to those listed in Ulrich Periodicals Directory (Archambault et al. 2006)—and this disadvantages research done outside the English speaking countries. This is obviously an issue that has to be taken into account, especially as literature scholars largely publish in their native languages. The current study can therefore only be seen as representative for research in English speaking countries, and especially for an American context, as a majority of the journals are published in the United States and a majority of the contributing authors are American. The exceptions are Neophilologus (Netherlands), Poetics (Netherlands) and Orbis Litterarum (Denmark) but the main language in these journals is still English.

The analyses are limited to references from research articles since book reviews, letters, notes as well as fiction in the form of short stories or poetry, make up a major part of the sum of documents in the journals; and since they typically lack references, they cannot be subjected to citation analysis. There are more articles, and more references per article in the later time frame, and this is important to remember when comparing citation numbers between the two periods. The material was converted to Dialog-format and imported to the software package Bibexcel (Persson et al. 2009) for further study.

Problems with non-standardized data in citation indexes, as well as the potential distortions in the results thereof, have been discussed in bibliometric research (Sweetland 1989); and for example problems with different name forms were quite common in the downloaded data; especially Russian names such as Bakhtin existed in several forms. To deal with such problems the dataset was imported to Excel and individually searched for alternative spellings.

Highly cited sources were identified and the two hundred most cited monographs were manually indexed using the Dewey Decimal Classification (DDC) in the Library of Congress catalogue. When several editions were indexed in the catalogue (different year or language) the most frequently cited edition was used (e.g. In the case of Derrida’s Grammatology the classification was based upon the first English language edition instead of the French original published 1967).
Table 1 The two datasets used for analysis

<table>
<thead>
<tr>
<th>Period</th>
<th>Nr of Articles</th>
<th>Nr of References</th>
<th>Reference / Article</th>
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<tr>
<td>1978-1987</td>
<td>7274</td>
<td>157048</td>
<td>21.6</td>
</tr>
<tr>
<td>1998-2007</td>
<td>9344</td>
<td>245514</td>
<td>26.2</td>
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Manual indexing of the monographs was the best available option for this study. However, the ‘indexer effect’ has to be seen as a factor that could possibly influence the results. This as classification is based on the judgement of an indexer and not on representations suggested by researchers themselves (Rafols and Leydesdorff 2009).

The used method makes it possible to study the disciplinary origin of monographs that are not indexed in the database. This is important, as monographs are the ‘golden standard’ for publishing in the humanities. In the material analyzed here, only 16 (10 in the 1978–1987 dataset and 6 from 1998–2007) out of the 200 most cited references were journal articles. The rest, over 95% of the most cited publications, were monographs and this is in accordance with earlier studies of the literature field which has shown that monographs stand for a major part of the references; percentages between 64 and 83% are given in a recent overview (Ardanuy et al. 2009). Publication practices in literature seem to be stable and an adoption to any ‘typical scientific’ publication mode is not apparent. It appears that the dominance of monographs continues to prevail—especially among the highly cited texts—which is why citation analysis in this context must be extended to nonsource items such as monographs.

The Intellectual Base of Literature Studies

In bibliometric research, cited articles can be seen as the intellectual base of a research field, while the citing articles are typically considered as constituting the research front (Persson 1994). The intellectual base can include all types of documents, regardless of form and age; and it does not necessarily matter if they are among the citing documents (source items) or if they are only indexed as cited documents (non-source publications) in the database used (Åström 2007). The intellectual base is constituted by the core documents of a field; the documents that you should have read or cited, or the ‘classics’ which you at least should be familiar with in order to be recognized as a member of the research community.

The intellectual base in the natural sciences and in some social sciences consists of journals or articles in journals. However, the citing of journals does not provide the function of intellectual organization or provide a knowledge base in the humanities as the monograph remains the main and
most prestigious publication channel. Consequently this analysis is focused on the highly cited sources, namely monographs but journals provide additional data (Tables 4, 5 in Appendix) that depicts changes in intellectual structure.

The establishment of an intellectual base or a canon is always connected to power relations and status. What are considered to be central texts—the core texts of a discipline—often depends upon who you ask and the context. A selection of major literature journals, with thousands of references, does to some extent overcome this problem, but literature studies is a vast and heterogeneous field and this is a small and specific sample. Therefore, the results should be interpreted and understood in the specific context of ‘literature journals indexed in the WoS’ even though it could be indicative of trends and movements in a more wide-ranging context.

**Highly Cited Publications in Literature Studies**

A detailed view of the highly cited sources in literature studies is gained by analyzing individual documents. These are the twenty most frequently cited texts in the two periods; the intellectual base as it emerges from the two datasets (Table 2).

<table>
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<tr>
<th>Rank</th>
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<th>Year</th>
<th>Cit.</th>
<th>Author and Title</th>
<th>Year</th>
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The number of citations for these ‘canonical texts’ is small when compared to citation counts for highly cited papers in the natural sciences and when compared to their influence in a wider academic and cultural sphere. These small numbers do confirm that the A&HCI coverage of the humanities and specifically literature studies is quite limited, but nonetheless distinct patterns and changes in the intellectual base can be detected.

The intellectual base has changed substantially and only four publications are among the twenty most cited sources in both periods; Derrida’s *Grammatology*, Joyce’s *Ulysses*, Jameson’s *Political unconscious: narrative as a socially symbolic act* and Lacan’s *Ecrits*. A majority of the highly cited documents are theoretical texts and only five are literary works; three in the early period and two in the later. The two lists are dominated by highly in-

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fluential literature and cultural theorists such as Derrida, Jameson and Barthes, but also classics like Ovid and Aristotle as well as works by authors such as Lacan and Wittgenstein from other ‘disciplines’ are noticeable.

*Grammatology*—the most cited text combining both periods—was translated in 1976 by Gayatri Spivak and it is still a widely read and cited text with over 200 citations. Lamont (1987) has studied the emergence of Derrida as a ‘dominant French philosopher’ and comes to the conclusion that quite a few processes were important in establishing him in an American context: Derrida’s theories were adaptable over cultural boundaries, they were directed to a specific domain (the literature field more than to the philosophical) and he benefited from the already established import of French theorists such as Barthes, Kristeva, Foucault and Lacan.

The other giant of French theory is Foucault and his impact is spread over several publications, his works are used in a variety of disciplines and his long-term impact on the intellectual life in America is unrivalled (Cusset 2008, p. 279). Together with *The order of things* (1970), *Archaeology of knowledge* (1974) and *The history of sexuality* (1977); anthologies with Foucault’s texts such as *Language, counter-memory, practice* (1977) and *Power/Knowledge* (1980) can be found among the 200 most cited texts in both periods.

What become known as ‘French theory’ entered the United States and the humanities through the literature departments in the 1970s; and quotations from these highly cited monographs were important in the establishment of ‘French theory’ as a concept: ‘‘Quotation provides, in the end, the primary material of this intellectual composite called French theory, which is itself contained entirely in a handful of these quotations’’ (Cusset 2008, pp. 91–92). These references, that through the ‘radical chic’ discourse of French theory are turned into ‘common nouns’ (Cusset 2008, p. 92), could be one explanation for the high citation frequencies of authors such as Barthez, Foucault, Derrida, Kristeva and Bourdieu. ‘Theory’ was also used to make ‘‘…legitimate the transition of ‘soft’ disciplines from being descriptive enterprises to more theoretical ones’’ (Lamont 1987, p. 614). The import of theory affected the interdisciplinarity of literature studies since it stimulated interaction in terms of theory as well as in relation to perspectives and focus, between disciplines in the humanities and the social sciences (Klein 1996, p. 47). The high citation frequencies— which can be interpreted as a canonization—of a work are due to several factors; first and foremost the quality and adaptability of the work but there is also a need for translators, introducers and forebearers. Furthermore a favourable intellectual and social climate is needed, and finally, the text has like any other ‘product’—to fill a need for the consumer/ reader.

The list of highly cited publications (Table 2) can be compared to the results of Garfield (1980) who listed the hundred most cited authors in the whole *A&HCI* during 1977–1978, and several of the names on his list are
also featured in this study. Aristotle, Barthes, Benjamin, Bloom, Derrida, Foucault, Frye, Genette, Lacan, Ovid, Joyce and Wittgenstein are all on Garfield’s list of the hundred most cited. Political thinkers are less prominent in this study compared to Garfield’s in which Marx and Lenin among others were highly cited.\footnote{The high number of citations to Lenin—nearly as many as to Shakespeare—can be explained by the inclusion of some Soviet journals where references to Lenin were almost mandatory.}

The overlap between Garfield’s study and this one implies that there is an interdisciplinary canon in the arts and humanities that is quite stable over the years, and this is emphasized by authors in the lists who are situated in other disciplines such as sociology (Bourdieu), psychology (Lacan) and philosophy (Wittgenstein). However, as we acknowledge the influence of other research fields on the literature field, we should not underestimate the influence that scholars in literature have outside their discipline, especially when it comes to the influence of literature theory which in recent years has rendered literature studies a high ‘social capital’ in other research fields; not at least in the social sciences (Klein 1996, p. 44).

One noticeable feature of the intellectual base is the impact of older publications, foremost illustrated by Aristotle’s *Poetics* which is highly cited in both of the studied periods. Weintraub (1980) and McCain (1987) among others have studied the age of used material and found that in the humanities the connection between age of material and obsolescence is weak. The relevance and influence of publications in literature studies can be almost independent of their age, but on the other hand a majority of the frequently cited publications are of recent date. Since a publication—especially in the humanities—must have some time to gather citations it is notable that quite contemporary publications like Guillory’s *The cultural capital*, and *The black Atlantic*, as well as Butler’s *Bodies that matter*, all three published as recently as 1993, are among the twenty most cited publications in the second period.

*Illuminations*—a collection of translated essays published in 1968—by German literature critic Walter Benjamin is the most frequently cited publication in the later period. What is notable about this collection of texts is that between 1978 and 1987 it received 34 citations but in the period 1998–2007 it was cited 173 times. Apparently the publication was a ‘late bloomer’ or what in bibliometrics is called a ‘sleeping beauty’. The concept of sleeping beauties was introduced by Van Raan (2004) and it describes a publication that suddenly awakens and draws attention. The increased citing of Benjamin indicates that the impact of publications in the humanities is not related to the age of the publication.

Only one of the 20 most frequently cited publications in the period 1978–1987, is written by women; *The madwoman in the attic* by Sandra Gilbert and Susan Gubar. In the period from 1998 to 2007 there are two books by
Judith Butler; *Bodies that matter* and *Gender trouble* and one by Nancy Armstrong *Desire and domestic fiction* that are among the most frequently cited publications (Table 2). The pattern is the same when looking at the 200 most cited publications in both periods; between 1978 and 1987 10 (5%) are written by women whereas there are nearly twice as many, 18 (9%) in the recent period. The representation is low when compared to the gender structure of literature studies in general where, at least in English literature studies, half of all post-graduates and one-third of the faculty are women (Evans 1993, p. 116). Nonetheless, this study shows that the degree of highly cited publications by female authors is increasing albeit slowly; but still, references in literature journals are mainly to male 20th century authors (Table 2).

The Two Levels of Literature Studies

Literature studies differ from other scholarly disciplines in as far as there are two levels: the epistemic and the vocational (Mignolo 1991), and these levels are evident in the list of the 20 most frequently cited publications. When teaching literature you teach both the ‘discipline’—the culture, methods and theories of literature studies (epistemic) but you also teach the ‘vocational’ level—literary works (Mignolo 1991). When studying the citing of sources in the literature field the intersection of the two levels is evident, as scholarly/theoretical sources (epistemic) and literary/fictional sources (vocational) are mixed. References to Shakespeare accompany those to Butler; citations to the Bible are indexed in the same way as those to Derrida. In this study 59 (1978–1987) and 40 (1998–2007) of the 200 hundred most cited sources are to literary works, and in both periods the most frequently cited literary work is James Joyce’s *Ulysses*. Both the epistemological and the vocational level of literature studies are represented in the highly cited sources and this could be explained by literature scholars using literary works not only as their empirical material, but also for analysis and interpretation. Literary texts form intertextual links between each other that are used to interpret and contextualize. The division between scholarly and literary texts is blurred; the epistemic and vocational levels intersect, as texts are both analytical tools as well as objects of analysis. The distance between the studied phenomenon (literary texts) and contextualization (analysis of literature) is short or non-existent (Gibbons et al. 1994, p. 108).
Interdisciplinarity and Intellectual structure

The Interdisciplinary Citing of Monographs

In bibliometric research, interdisciplinarity can be studied by looking at the citing of journals and the co-occurrences of subject categories, but as few citations are given to journals in the humanities, monographs must be included in the studied material. In order to get an overview of what scholars in comparative literature cite, the 200 most cited monographs in both time frames were analyzed. Each monograph was categorized using the Library of Congress catalogue and the Dewey Decimal Classification. The DDC was chosen because it is the most widely used classification system; and its ten major categories serve the purpose of this study well. The use of DDC as indicator of interdisciplinarity is not without problems and two main shortcomings can be identified. First, it is not structured according to disciplinary borders between research areas; and secondly it was constructed with an early 20th century conception of knowledge. Although these weaknesses were identified, DDC remained the best option available for this analysis, not least since the simplicity and familiarity of the structure of the system is an advantage in comparison with other options such as the Library of Congress Subject Headings.

Generally the 10 main categories have been utilized, but in some cases it has been valuable to look at subgroups. Examples of how the monographs were indexed are Jacques Derrida’s Grammatology indexed as 401 (Language: philosophy & theory), William Shakespeare’s King Lear as 822 (English Literature: English drama) while Thomas Laqueur’s Making sex was indexed as 305 (Social sciences: social groups). Each work was assigned to one of the ten main classes in the DDC and the two periods were compared to each other (Fig. 1).

Fig. 1 Classification of the 200 most highly cited monographs
In the later period monographs in categories as Social sciences, Arts and Recreation and History, Geography and Bibliography are more frequently cited, which is in accordance with a general tendency towards interdisciplinarity. In the period 1998–2007, references to monographs indexed in classes other than literature constituted almost half of the citations which is an increase of 30% compared to the early period (1978–1987). The literature field, at least as reflected in the most frequently cited monographs, has become more interdisciplinary over recent decades, or maybe the disciplinary borders have changed/moved so that the concept of discipline in itself can be questioned; and the concept of interdisciplinarity should be replaced with transdisciplinarity. The most apparent change is the decline in citing sources indexed as Literature and the growth of citations to the classes of Social sciences, Arts and History. A key to understanding these changes is a more detailed look at the different categories.

More than half of the highly cited monographs are found in the category of Literature (800); and a little less than half of these texts are to literary works (prose, poetry and drama). In the early period, 59 out of the 200 most cited publications were literary/fictional, a number that decreased to 40 in the later period. The Literature category includes, apart from the literary works, also texts defined as literature studies and literature criticism. Publications by authors such as Bakthin, Barthes, Bloom, Culler, De Man, Derrida, Jakobson and Kristeva are found in the category of Literature & rhetoric which is the most common classification for highly cited publications in the early period.

Apart from a significant decrease in the category of Literature & rhetoric there are few changes among the highly cited monographs in the class of Literature. Almost all highly cited literary works are found in the category of English & old English literature. Authors like Chaucer, Shakespeare, Austen and Joyce are well represented in both periods—44 monographs can be found in this category in both time frames—and a greater openness for literature outside the English language is not apparent among the top cited sources (Fig. 2).
French literature represented, for example, by Proust, Flaubert and Baudelaire, is quite highly cited in the early sample; with even more publications than in the American literature category. However, the citing of contemporary American literature has increased; and the focus on ‘social groups’ is emphasized both by the literary works—Morrison’s Beloved and Ellison’s Invisible man—as well as critical studies: Playing in the dark (Morrison) and Epistemology of the closet (Sedgwick). Thus, a correspondence between the ‘vocational’ and ‘epistemological’ level of literature studies—sometimes even in the ‘Oeuvre’ of a single author—is at hand. Although the citing of contemporary American literature has increased, the impact of ‘comparative literature’ is not distinguishable in this material, and the canon of literary works has changed quite little between the two time frames. This might seem surprising as the debate about a ‘canon’ and the revision of it has been a highly debated issue, not the least in an American context (Guillory 1997).

Publications categorized as Philosophy & psychology (100) are frequently cited in both periods, and here classics by Plato (Phaedrus) and Aristotle (Nichomachean Ethics) can be found as well as works by Freud (Interpretation of dreams; Uncanny) and Lacan (Ecrits). This is probably due to a continuing tradition of literature scholars with a psychoanalytical or philosophical perspective and iterative citing of classics such as Kant (Critique of judgment) and Plato (The symposion and The republic). The difference in the number of citations to monographs indexed as Modern western philosophy can be entirely explained by the frequent citing of Nietzsche; represented by five publications in the early period but none in the latter: apparently the ‘Nietzschean’ impact on literature studies has diminished in recent years (Fig. 3). The citing of philosophical classics also points to the tension be-
tween the epistemic and vocational level of literature studies as they can be read both as epistemological texts (texts about literature) and as vocational texts (as *literary* texts).

Thus, a distinction between primary material (the studied object) and secondary material (previous research, theory and so forth) cannot be made in this case. It is also so that several of these authors are indexed in a variety of fields such as Aristotle (*Philosophy & psychology* and *Literature*) and Plato (*Philosophy & psychology* and *Social sciences*).

The most significant changes are detected in the category of *Social Sciences*, where there is an increase from 9 texts in the early period to 35 in the later period (Fig. 4). Authors as Agamben, Althusser, Anderson, Benjamin, Butler, Certeau, Clifford, Fanon, Foucault, Geertz, Gilroy, Hardt, Laclau, Marx, Spivak and Williams are among those found here, however, several of these authors have works indexed in other classes also.

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**Fig. 3 Classification of highly cited monographs in the category of Philosophy and Psychology**

The most significant changes are detected in the category of *Social Sciences*, where there is an increase from 9 texts in the early period to 35 in the later period (Fig. 4). Authors as Agamben, Althusser, Anderson, Benjamin, Butler, Certeau, Clifford, Fanon, Foucault, Geertz, Gilroy, Hardt, Laclau, Marx, Spivak and Williams are among those found here, however, several of these authors have works indexed in other classes also.
A closer look at the material reveals that one of the main reasons for the increased citing is the subcategory of Social groups (305)—indexed under Social sciences in which no texts were indexed in 1978–1987 but where 9 texts were indexed in the later period. This category gathers publications that deal with gender, postcolonial or class perspectives, e.g. Butler’s *Gender Trouble* (1990), Gilroy’s *The black Atlantic* (1993) and Habermas’ *The Structural transformation of the public sphere* (1993/1962). In the later period, there is also an increase in references to publications indexed as ‘political sciences’, where both contemporary work such as Agamben, *Homo*, Anderson *Imagined communities*, and Hardt and Negri’s *Empire*, as well as classical texts by Plato and Hobbes are represented. Although all works indexed in the category of Social sciences cannot be described as sociological, this confirms to some extent the notion of sociology as a ‘first cousin’ of literature studies (Klein 1996, p. 139). The increasing influence from sociology is also evident in the list of cited journals (Table 5 in Appendix) were three sociological journals are among the thirty most cited in the later time frame.

The study of ‘literature’ as a social phenomenon rather than an aesthetic one emphasizes the role of theory that goes beyond literary and rhetorical aspects of the text. It also emphasizes a focus on the generic rather than the specific; and it shifts from ‘“…an exclusive focus on the canon of high literary texts to, in effect, an inclusive focus on all cultural texts”’ (Milner 1996, p. 16). This would imply that the importance of a canon of literary texts is diminishing at the same time as the importance of the ‘theoretical/epistemological’ canon is elevated. The ‘vocational level’ of literature studies is becoming decreasingly important for prestige in the field. This conclusion is also drawn by Guillory (1997), who states that the questioning of the literary canon is connected to a devaluation of literature itself, whereas...
the development of a ‘theoretical canon’ is important both for the status of the individual scholar as well as for the discipline as a whole.

If there is an increase in citing texts on social issues, there is an opposite trend in the category of Language (400). In the earlier period, this was the third most common category, with 14 publications, but in 1998–2007, only 6 texts in this category were cited (Fig. 1). This could be interpreted, as a change in focus from the ‘text’ in itself—grammatology, semiotics, deconstruction and close reading—to a broader look at texts and their relation to society and political, historical and social issues. However, further studies which extend the analysis beyond the 200 most cited monographs would be needed to substantiate this conclusion.

Citation patterns in the studied literature journals have changed, at least when it comes to the highly cited sources. The inward focus on the text itself, as well as linguistic and semiotic aspects has given way to an increasingly outward focus, dealing for example with social implications and identity. This change can be related to theoretical and epistemological considerations but also, which is less discussed, to increasing demands on social responsibility in terms of addressing urgent research problems in, and a societal contextualization of, research; issues that are closely related to ‘mode 2’ knowledge. Furthermore, as argued by Guillory (1997), the devaluation of literature itself and the lack of an educated reading public can also be seen as a factor in the change of the intellectual base of the literature field, at least in an Anglo-American context.

Citation Patterns and Intellectual Organization

Interdisciplinarity has always been one of the characteristics of the literature field, and this study supports the notion that the literature field is becoming more interdisciplinary or even transdisciplinary to its nature. Literature scholars have always been open to influences from other disciplines and fields, such as psychology, philosophy and anthropology; a noted difference in comparison with their colleagues studying literature in the modern languages departments, who tend to stay within their own area of expertise (Becher and Trowler 2001, pp. 59–60). The citation practices of scholars in the humanities, where contextualization is of equal importance as the citing of previous research and where citing is an inherent part of the research process itself (Hellqvist 2010), is also an explanation to the interdisciplinarity of given references.

The forming of an intellectual base of highly cited texts and journals can be discussed in connection with theories about the structure of scholarly fields. In Whitley’s (1984) typology, literature studies is an example of a ‘fragmented adhocracy’, i.e. a field were research is personal, is interested in particulars and with a low level of coordination in terms of epistemological
orientation as well as prioritizing research problems. However, there is a tendency—illustrated by the increasing citing of theory and the forming of research clusters around topics as ‘gender’ or ‘post colonialism’—towards increasingly assuming the characteristics of ‘polycentric oligarchies’. Polycentric oligarchies are characterized by adherence to the views and ideas of a few intellectual leaders; and by theoretical competencies having higher status for gaining a good reputation in the field than competencies on empirical matters. While literature studies might not be centred on a strong core of intellectual leaders, there is, however, an increasing tendency towards coordination of theoretical perspectives on for example gender and postcolonial issues, as reflected in this study; whereas the empirical aspects in terms of literary texts are becoming less visible in the references.

The findings indicate that the cited sources of literature research are more interdisciplinary in the later period, and this concurs well with a situation where the ‘borders’ to other disciplines are less well-defined and not as easily defended, since the members of the community ‘…lack a clear sense of mutual cohesion and identity’ (Becher and Trowler 2001, p. 59). The interdisciplinarity of research is also manifested in eclectic clusters of research like ‘women’s studies’ or ‘urban studies’ (Gibbons et al. 1994). The growing interest in the social aspects of literature is expressed in the material by the citing of postcolonial studies (Gilroy, Andersson and Bhabha), the impact of gender studies (Butler and Armstrong) and the increased citing of sociological journals (Tables 4, 5 in Appendix). This development could be related to the demands for an ‘enhanced social accountability’ in modern knowledge production, the ‘sociological turn’ of literature studies and the emergence of cultural studies (Milner 1996, pp. 11–18). The popularity of perspectives as ‘postcolonialism’ and ‘gender’ could be seen as a response to important social issues such as racism and inequality between the sexes. Furthermore, the focus on emergent social issues as well as an increased interdisciplinarity can be discussed in the context of funding structures and a general ‘marketisation’ of research; a trend that also affects the humanities.

Discussion

The main conclusions from this study are that literature studies have become more interdisciplinary over the last 20 years. There is a shift from citing texts primarily from the Literature category to citing texts from the social sciences and other humanities fields such as ‘art’ and ‘history’. Literature studies as a field is dynamic and interdisciplinary and it shows a growing interest in ‘social responsibility’ but this is not reflected in the ‘canon’ of literary works that is stable and focused on English literary classics. The increased interdisciplinarity could be explained by the emergence of cultural studies and gender studies and a general increasing importance of theoretical
perspectives, as well as an increasing adherence to demands on research related to ‘mode 2’ knowledge production. However, one could also claim that literature studies has always been interdisciplinary and contextualized; and that changes in the intellectual base rather should be interpreted as a change of focus from linguistic and language (rhetorical turn) to society and ‘culture’ (social and cultural turn). Although the disciplinary origin of the cited material has changed, a corresponding transformation in the form of publications cited has not occurred. Monographs are still the prevailing publication form, and to an increasing degree also the form of publication that attracts the most citations. Finally, this study of 34 literature journals shows that literature studies has undergone changes in its intellectual structure during the last decades; interdisciplinary citing has increased and especially sources from art, history and social sciences are cited more frequently, but the ‘literary canon’ and the preferred publication form remains the same. Thus, literature studies can be seen as a field characterized by contextualization, reflexivity and interdisciplinarity, and a research area where demands for social accountability and ‘problem based research’ are gaining ground.

Citation analysis and bibliometrics are types of research that are underdeveloped in the study of humanistic disciplines and fields. Nonetheless, the analysis of citations in literature studies yields results that are encouraging for further research. It seems that a combination of more qualitative analyses—such as looking at types of cited material—and more quantitative bibliometric ones might be useful. There are difficulties with analyzing such a vast and heterogeneous field as literature studies. Still, informetric analyses of humanistic fields can be used to provide further insights into the intellectual organization of research fields, patterns of communication and the history of disciplines.

This study demonstrates how citation analysis using established databases combined with the use of classification in library catalogues can provide quantitative data to empirically validate theoretical discussions about trends, intellectual base and developments in a field like literature studies. The importance of extending the analysis to nonsource items is emphasized as the highly cited publications are monographs, and qualitative methods and theoretical tools are needed to interpret the data. Future studies could develop and refine these methods using other databases and catalogues—Library of congress headings could be one possible alternative—to provide data on interdisciplinarity and intellectual structure within humanistic fields.

The benefits of using citation analysis combined with the classification of monographs in library catalogues are several: they provide a multi-layered (statistical) point of view of the intellectual base as opposed to ‘overviews’ written by individual scholars, citation data that can support theoretical discussions—as those about modern knowledge production and interdisciplinarity, and citation analysis offers empirical data that can be used to follow the development within a discipline and the emergence of ‘turns’ or ‘shifts’
of focus. Furthermore, citation analysis can be accused of ‘cementing structures’ but it can also be used as an argument and a illustration of current structures by those trying to change the ‘canon’ of literature studies; a canon that now is dominated by white males. Finally, citation analysis combined with classifications from library catalogues can be used to empirically investigate and operationalize concepts such as ‘intellectual base’, ‘canon’, and ‘turns’ in fields where traditional bibliometric methods such as co-citation analysis of journals and documents has been rendered less applicable.

However, there are clearly problems with using citation analysis for studying a field like literature studies: first, the collection of data is incomplete—the tip of the iceberg as Leydesdorff and Salah (2010) put it—as a majority of research is published outside journals indexed in citation databases. Second, there are major problems when defining fields and disciplines within the humanities, not only because borders between disciplines are blurred, but also there is a less than clear distinction between academia and a wider cultural sphere. Third, the organization of research in general, and citation practices in particular, affect the units used by citation analysis; using fields, departments or journals as objects of study may not be the optimal choice. Fourth, the citing of both scholarly and literary publications, or if we use the terminology used by Mignolo; the mix of the epistemological level (theoretical and scholarly works) and vocational (the literary canon used in the curriculum) has consequences for citation analysis as the borders between previous research, theoretical texts and the research object are blurred. Fifth, if we acknowledge a ‘mode 2’ organization of knowledge—where borders between disciplines and the borders between academia and society are blurred—then the study of disciplines and disciplinary journals would be something of a contradiction; especially in humanistic fields. Thus, we would be studying ‘mode 2’ science with the concepts and methods of ‘mode 1’. An alternative would be to use ‘topic’, ‘theory used’, ‘method’, ‘author’ or a specific publication as the starting point for the study of intellectual structure within literature studies, and to extend the analysis to ‘non-academic sources’ such as newspapers and popular journals.

The study of intellectual structure within the humanities using citation analysis is as yet an underdeveloped area, but with a growing demand for research evaluation using bibliometric methods, the emergence of new tools and databases that provide opportunities to study a wider range of materials and the ambition of researchers to look for new approaches and methods this will not be the case for long. Citation analysis can be used for studying scholarly communication and intellectual structure in the humanities but the methods must be adjusted and complemented in order to yield valuable results; the use of monographs combined with indexing in a catalogue could—as shown in this article—be one of the available options.
Acknowledgments The author wishes to thank Kerstin Rydbeck and Fredrik Åström as well as the anonymous reviewers for valuable comments and suggestions.

Appendix

See Tables 3, 4, and 5

Table 3 Studied journals

<table>
<thead>
<tr>
<th>Journal Name</th>
<th>ERH Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boundary 2-An International Journal of Literature and Culture</td>
<td>(A)</td>
</tr>
<tr>
<td>Children's Literature in Education</td>
<td>(x)</td>
</tr>
<tr>
<td>Comparative Literature Studies</td>
<td>(A)</td>
</tr>
<tr>
<td>Contemporary Literature</td>
<td>(A)</td>
</tr>
<tr>
<td>Criticism-A Quarterly for Literature and the Arts</td>
<td>(B)</td>
</tr>
<tr>
<td>Diacritics-A Review of Contemporary Criticism</td>
<td>(A)</td>
</tr>
<tr>
<td>Eighteenth-Century Studies</td>
<td>(A)</td>
</tr>
<tr>
<td>Journal of Medieval and Early Modern Studies</td>
<td>(B)</td>
</tr>
<tr>
<td>Journal of Popular Culture</td>
<td>(x)</td>
</tr>
<tr>
<td>Modern Fiction Studies</td>
<td>(A)</td>
</tr>
<tr>
<td>MLN-Modern Language Notes</td>
<td>(A)</td>
</tr>
<tr>
<td>Modern Language Review</td>
<td>(A)</td>
</tr>
<tr>
<td>Modern Language Quarterly</td>
<td>(x)</td>
</tr>
<tr>
<td>Modernism-Modernity</td>
<td>(x)</td>
</tr>
<tr>
<td>Modern Philology</td>
<td>(A)</td>
</tr>
<tr>
<td>Narrative</td>
<td>(C)</td>
</tr>
<tr>
<td>Neophilologus</td>
<td>(x)</td>
</tr>
<tr>
<td>New Literary History</td>
<td>(A)</td>
</tr>
<tr>
<td>Orbis Litterarum</td>
<td>(A)</td>
</tr>
<tr>
<td>Philosophy and Literature</td>
<td>(A)</td>
</tr>
<tr>
<td>PMLA-Publications of the Modern Language Association of America</td>
<td>(A)</td>
</tr>
<tr>
<td>Poetics</td>
<td>(A)</td>
</tr>
<tr>
<td>Poetics Today</td>
<td>(A)</td>
</tr>
<tr>
<td>Studies in the Novel</td>
<td>(x)</td>
</tr>
<tr>
<td>Style</td>
<td>(x)</td>
</tr>
<tr>
<td>TDR-The Drama Review-A Journal of Performance Studies</td>
<td>(x)</td>
</tr>
<tr>
<td>Textual Practice</td>
<td>(A)</td>
</tr>
<tr>
<td>TLS-The Times Literary Supplement</td>
<td>(x)</td>
</tr>
<tr>
<td>World Literature Today</td>
<td>(A)</td>
</tr>
<tr>
<td>Yale Journal of Criticism</td>
<td>(A)</td>
</tr>
<tr>
<td>Studies in the Literary Imagination</td>
<td>(A)</td>
</tr>
<tr>
<td>Tulsa Studies in Women’s Literature</td>
<td>(A)</td>
</tr>
<tr>
<td>Novel-A Forum on Fiction</td>
<td>(A)</td>
</tr>
<tr>
<td>Speculum-A Journal of Medieval Studies</td>
<td>(A)</td>
</tr>
</tbody>
</table>

ERIH classes: A high-ranking international publications with a very strong reputation among researchers of the field in different countries, regularly cited all over the world; B standard international publications with a good reputation among researchers of the field in different countries; C research journals with an important local/regional significance in Europe, occasionally cited outside the publishing country though their main target group is the domestic academic community.
### Table 4: 30 most frequently cited journals 1978–1987

<table>
<thead>
<tr>
<th>Rank</th>
<th>Citations</th>
<th>Journal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>575</td>
<td>Publications of the Modern Language Association of America</td>
</tr>
<tr>
<td>2</td>
<td>362</td>
<td>New Literary History</td>
</tr>
<tr>
<td>3</td>
<td>317</td>
<td>Critical Inquiry</td>
</tr>
<tr>
<td>4</td>
<td>293</td>
<td>Modern Language Note</td>
</tr>
<tr>
<td>5</td>
<td>223</td>
<td>English Literary History</td>
</tr>
<tr>
<td>6</td>
<td>185</td>
<td>Speculum</td>
</tr>
<tr>
<td>7</td>
<td>158</td>
<td>Journal of English and German Philology</td>
</tr>
<tr>
<td>8</td>
<td>152</td>
<td>Poetics</td>
</tr>
<tr>
<td>9</td>
<td>143</td>
<td>Diacritics</td>
</tr>
<tr>
<td>10</td>
<td>140</td>
<td>Modern Language Review</td>
</tr>
<tr>
<td>11</td>
<td>130</td>
<td>Poetique</td>
</tr>
<tr>
<td>12</td>
<td>116</td>
<td>Yale French Studies</td>
</tr>
<tr>
<td>13</td>
<td>111</td>
<td>19th Century Fiction</td>
</tr>
<tr>
<td>14</td>
<td>105</td>
<td>Poetics Today</td>
</tr>
<tr>
<td>15</td>
<td>99</td>
<td>Comparative Literature</td>
</tr>
<tr>
<td>16</td>
<td>95</td>
<td>Modern Philology</td>
</tr>
<tr>
<td>17</td>
<td>92</td>
<td>Neophilologus</td>
</tr>
<tr>
<td>18</td>
<td>90</td>
<td>Journal of Aesthetics and Art Criticism</td>
</tr>
<tr>
<td>19</td>
<td>90</td>
<td>Boundary</td>
</tr>
<tr>
<td>20</td>
<td>82</td>
<td>Signs: Journal of Women in Culture and Society</td>
</tr>
<tr>
<td>21</td>
<td>81</td>
<td>Journal of Popular Culture</td>
</tr>
<tr>
<td>22</td>
<td>78</td>
<td>Novel</td>
</tr>
<tr>
<td>23</td>
<td>77</td>
<td>Essays in Criticism</td>
</tr>
<tr>
<td>24</td>
<td>76</td>
<td>The Georgia Review (poetry, fiction)</td>
</tr>
<tr>
<td>25</td>
<td>74</td>
<td>Modern Fiction Studies</td>
</tr>
<tr>
<td>26</td>
<td>74</td>
<td>Philological Quarterly</td>
</tr>
<tr>
<td>27</td>
<td>74</td>
<td>Critique</td>
</tr>
<tr>
<td>28</td>
<td>73</td>
<td>Genre</td>
</tr>
<tr>
<td>29</td>
<td>71</td>
<td>American Literature</td>
</tr>
<tr>
<td>30</td>
<td>70</td>
<td>College English</td>
</tr>
</tbody>
</table>

### Table 5: 30 most frequently cited journals 1998–2007

<table>
<thead>
<tr>
<th>Rank</th>
<th>(Rank early period) Citations</th>
<th>Journal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(1)</td>
<td>Publications of the Modern Language Association of America</td>
</tr>
<tr>
<td>2</td>
<td>(3)</td>
<td>Critical Inquiry</td>
</tr>
<tr>
<td>3</td>
<td>(5)</td>
<td>English Literary History</td>
</tr>
<tr>
<td>4</td>
<td>(2)</td>
<td>New Literary History</td>
</tr>
<tr>
<td>5</td>
<td>(new)</td>
<td>Poetics Today</td>
</tr>
<tr>
<td>6</td>
<td>(8)</td>
<td>Poetics</td>
</tr>
<tr>
<td>7</td>
<td>(4)</td>
<td>Modern Language Note</td>
</tr>
<tr>
<td>8</td>
<td>(9)</td>
<td>Diacritics</td>
</tr>
<tr>
<td>9</td>
<td>(6)</td>
<td>Speculum</td>
</tr>
<tr>
<td>10</td>
<td>(new)</td>
<td>Modern Fiction Studies (new)</td>
</tr>
<tr>
<td>11</td>
<td>(new)</td>
<td>Representations (new)</td>
</tr>
<tr>
<td>12</td>
<td>(29)</td>
<td>American Literature</td>
</tr>
</tbody>
</table>
References


Garfield, E. (1980). Is information retrieval in the arts and humanities inherently different from that in science? The effect that ISI’s citation index for the arts and humanities is expected to have on future scholarship. *Library Quarterly*, 50(1), 40–57.


Leydesdorff, L., & Salah, A. A. A. (2010). Maps on the basis of the Arts & Humanities Citation Index: The journals Leonardo and Art Journal, and "Digital Hu-


6. Citation Analysis on the Micro Level: The Example of Walter Benjamin’s *Illuminations*


One can go even further and remember that interruption is one of the fundamental devices of all structuring. It goes far beyond the sphere of art. To give only one example, it is the basis of quotation. To quote a text involves the interruption of its context.\(^{26}\)


This article employs citation analysis on a micro level—the level of the cited document; in this case, Walter Benjamin’s *Illuminations* (1968/2007). The study shows how this frequently cited publication—more than 4,000 citations in Web of Science—has been received. The growth of citations and interdisciplinary citing is studied, and a novel approach—page citation analysis—is applied to study how different parts of *Illuminations* have been cited. The article demonstrates how bibliometric methods can be used together with qualitative accounts to map the impact and dissemination of a particular publication. Furthermore, it shows how bibliometric methods can be utilized to study intellectual structures in the humanities, and highlights the influence of the humanities on the social sciences and sciences.

**Introduction**

The purpose of this article is to show how bibliometric methods can be used to study the impact and the dissemination of a highly cited publication within the humanities; in this case, Walter Benjamin’s *Illuminations* (1968/2007). The use of bibliometric methods on the humanities has often focused on publication forms (e.g., Knievel & Kellsey, 2005; Larivière, Archambault, Gringas, & Vignola-Gagne, 2006), citation characteristics (e.g., Cullars, 1998; Wolfe Thompson, 2002), or interdisciplinarity (e.g., Dowell, 1999; Leydesdorff & Salah, 2010), but impact has, due to the limitations of existing databases, rarely been studied. However, it has been claimed that the impact of leading interdisciplinary authors can be depicted

using established databases such as the *Web of Science* (WoS) (Finkstaedt, 1990; Hammarfelt, 2011). Thus, this article uses the example of *Illuminations* to test the assumption that the impact and the interdisciplinary use of one particular highly cited publication can be studied by means of citation databases and bibliometric methods.

Bibliometric studies are often focused on an institution, a discipline, a country, or a journal. This article is different since it follows the citation record of one specific document. In this way, it explores if and how bibliometric methods can be applied to study the intellectual history and influence of a single publication. Furthermore, the article introduces a new approach—“page citation analysis” (PCA)—which uses a “cited reference search” to depict the citing of a specific part of a document. Hopefully, this approach will further our understanding of citation patterns and referencing, especially in the humanities where the giving of references is an integrated part of the research process and where the meaning of a reference is ambiguous when separated from the text in which it was given (Hellqvist, 2010).

### Background

A selection of Walter Benjamin’s essays was translated into English in 1968 by Hannah Arendt, who also wrote an introduction. The collection, comprising 10 essays, was named *Illuminations*. This bibliometric study will investigate the impact of this publication. In a study of highly cited monographs in literature studies—using citations from 34 literature journals indexed in the WoS—it was observed that the impact of *Illuminations* has risen substantially over the years from 34 citations from 1978 to 1987 to 173 citations in 1998 to 2007 (Hammarfelt, 2011). Thus, the in-depth study of *Illuminations* is motivated not only by its status as a highly cited publication but also by the remarkable growth of its citations and its general influence on research in various fields.

### Walter Benjamin and Illuminations

Walter Benjamin was born in Berlin in 1892 and brought up in a middle-class, Jewish family—a childhood described in his biographical writings. He became a literary critic and a cultural theorist inspired by Marxism (especially the Frankfurt School and Theodor Adorno) and Jewish traditions of thought. Benjamin’s tragic death on the border between France and Spain in 1940 when trying to escape the Nazis added to the “aura” surrounding his works. His early death and the circumstances surrounding it as well as his iconic status contribute to the image of him as being “the last intellectual” by Sontag (1981, p. 133) or “the last European” by Arendt (as cited in Benjamin, 1968/2007, p. 18).
The fame and impact of Benjamin’s work as a critic has only grown since his death, and his influence in American literature studies and cultural studies is mainly associated with *Illuminations* (1968). The book is a collection of essays; some of the more notable are “The Task of the Translator,” “Franz Kafka,” “The Work of Art in the Age of Mechanical Reproduction,” and “Theses on the Philosophy of History.” The essays in the collection were chosen by Arendt with the intention of establishing Benjamin as a literary critic in the United States (Ferris, 2008, p. 138). The original texts were published between 1923 and 1950 but today, many decades after they were written, they still have considerable impact both inside and outside academia. Later, a second volume of essays by Benjamin, *Reflections* (1978), was published. This second volume also gathered interest, but in comparison to *Illuminations*, the citation rate for *Reflections* is low: 193 citations compared to 4,070 for *Illuminations*. In fact, none of his subsequent publications reached the level of popularity that *Illuminations* enjoys, and this anthology of Benjamin’s work remains his most widely read in the English language (Ferris, 2008, p. 137).

*Illuminations* is indexed as one “publication” in the *Arts & Humanities Citation Index*, but it consists of 10 essays originally published during a time span of more than 25 years. The study of *Illuminations* as one particular document can—due to the importance of the collection for the impact of Benjamin and because of the wide array of essays included—be seen as a more general study of Benjamin’s reception in an English-language context. The impact and dissemination of *Illuminations* is, of course, dependent upon the fact that it is a collection of essays comprising a wide array of subjects which appeal to different disciplines and specialties. The publication is both a document in its own right as well as a collection of documents which have been gathered for a specific purpose, and this motivates not only a study of the publication as a whole but also a study of the specific essays.

**Bibliometrics, the Humanities, and Citation Analysis of Specific Documents**

Citation analysis is often focused on fields, institutions, or journals, but examples of studies that have focused on a specific author or authors do exist, as do studies of specific publications. Garfield’s (1977) project *Citation Classics*, in which highly cited articles in science were presented, is one example, although these cannot be regarded as in-depth analyses of impact or influence. A more recent and comprehensive study is that of Scharnhorst and Garfield (2011), which follows the impact of Robert K. Merton’s influ-

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27 “Theses on the Philosophy of History” was written in 1940, but it was first published in 1950 in *Neue Rundschau*

28 Search for “Reflections” and “Benjamin W” in *Cited Reference Search, ISI’s Web of Science* (November 3, 2009).
ential article from 1968 about the “Matthew Effect.” This study shows how citations to Merton’s article have grown over time, and it follows the citing of the article in different scholarly fields.

A few studies have been conducted on scholars and intellectuals within the humanities and the social sciences. An example is Broady and Persson (1989), who studied the reception of the sociologist Pierre Bourdieu in the United States by looking at citations in the Social Sciences Citation Index (SSCI). Their conclusion is that the influence of Bourdieu differs according to context and the availability of translated texts. They also concluded that different research traditions constitute a factor that affects the impact of Bourdieu’s work.

Hérubel and Godeken (2000) followed the impact of the French author André Malraux using the Arts and Humanities Citation Index (A&HCI). They searched for articles that cited Malraux, and a sample of 518 articles was analyzed further. The results showed that Malraux was cited in a variety of fields and journals, with literature and art being the main fields, and Espirit and Nineteenth Century French Studies being the most cited journals. The conclusion was that Malraux’ work “…has insinuated itself into interdisciplinary articles treating subjects both on the margins of disciplinary activity, as well as those situated within disciplinary contexts” (Hérubel & Godeken, 2000, p. 64).

Russell (1997) did an in-depth analysis of citations to the work of the philosopher Ludwig Wittgenstein, where he looked at context and use in two journals: Philosophy of Science and Social Studies of Science. He found significant differences in the use and citing of Wittgenstein in the two journals; apparently Wittgenstein was more frequently referred to in constructive accounts of science than in realist ones. Howard White demonstrated how a particular work such as Herman Melville’s Moby Dick (White, 2007) and an author like August Strindberg (White, 2009) can be studied using pennant diagrams that depict their citation context as well as “ease of processing” and “cognitive effects.” Previous research has used databases such as the WoS to study particular authors and works within the humanities; however, this analysis focuses not only on the impact and the interdisciplinary citing of a particular publication, but also on the chapters or essays within this publication.

This article begins with a study of the overall citing of Illuminations during a period of 40 years. It then looks at the citing in different fields using co-occurrence of “subject categories” and journals. This is followed by an examination of specific essays in Illuminations, and the interdisciplinary citing of them. Hence, the article goes from the macro perspective of thousands of citations to the references made to a specific page. The purpose is not only to give an overview of the impact of Illuminations but also to depict the interdisciplinary use of the publication. Finally, the results are summa-
rized, implications and questions for further research are formulated, and the methods used are evaluated.

Methods and Material

The article uses data from ISI’s WoS; Science Citation Index (SCI), SSCI, and A&HCI. The WoS does not analyze citations by monographs—the major publication channel within the humanities—but only citations by a selection of English-language journals. The limited coverage of research in the humanities has been dealt with by several authors (e.g., Archambault, Vignola-Gagne, Côté, Lavrivère, & Gringras, 2006; Nederhof, 2006), but it also has been suggested that nonsource items such as highly cited monographs can be studied using the database (Hammarfelt, 2011). The data can give clues to the impact and use outside the database, but these results should be interpreted with care, and the limited coverage of the WoS should be kept in mind. Additionally, this is a study of how articles cite Illuminations, and these results cannot be generalized because little is known about the citation patterns of monographs. Furthermore, Illuminations was essential for Benjamin’s reception in English-speaking countries and especially the United States, but to study the influence of his ideas in other contexts, one must incorporate a wider range of sources.

Citations to Illuminations were gathered using the WoS’s “Cited reference search;” a search for “Benjamin, W” and “Illuminations” resulted in 4,070 items. In comparison, a bibliography on Benjamin’s scholarship from 1983 to 1992 gathered 2,000 items (Markner & Weber, 1993, as cited in Isenberg 2001a), and a search in Google book search resulted in 897 books citing Illuminations. Articles citing specific pages as well as articles citing the “whole” publication were included in the dataset. As variations in the spelling of author names and titles often is a problem, one could assume that this is a low figure that could be higher if misspellings and different name forms had been included (Sweetland, 1989). All items except for articles—reviews, proceedings, editorial material, notes, and prose—were omitted from the analysis, resulting in 3,454 articles in the final sample. The results were downloaded, converted to Dialog-format, and imported to the Bibexcel software for further analysis (Persson, Danell, & Schneider, 2009), and the data were subjected to co-occurrences analysis on the level of subject categories.

To identify the impact of the specific essays, page citation analysis (PCA) was used. First, the results from the “cited reference search” were sorted on the basis of reference to specific pages (e.g., Illuminations, p. 69). Then, data

29 Retrieved October 2, 2009 from ISI’s Web of Science.
for the most cited pages were downloaded, subjected to analyses of co-occurrence, and visualized. This method allows for detailed studies of specific parts, chapters, essays, passages, or even sentences (quotations) in a text. PCA is limited to publications—usually highly cited monographs—in which numerous citations to specific pages are available. Whenever multiple editions exist, these must be cross-checked for inconsistencies regarding page numbers; but when applicable, PCA can be used for fine-grained studies of intellectual influence.

Finally, the results were visualized as maps which depict the “citation environment” of Illuminations. The mapping of research areas, journals, and disciplines using bibliometric methods in general and co-citation analysis in particular, is a well-established research specialty. The use of maps is connected to a widespread use of geographical metaphors in science studies; area, border, territories, and field are concepts used to describe structures and developments. The use of maps is motivated by their ability to convey a lot of information in a small space. Visualizations provide an alternative to written descriptions and accounts. However, the information in a bibliometric map is compressed; it has been reduced to the most basic structures and therefore should not be used for specific directions but rather as a clue to an overall structure. The maps depicting the impact of Illuminations should be seen as visualizations serving as the starting point for a discussion; an illustration which is complementary to other accounts.

Results

Citing Over the Years

Citations to Illuminations were sorted on the basis of publication year, and the distribution over time was illustrated (Figure 1). The low citation rates for the early 1970s are partly due to the fact that the A&HCI was not introduced until 1986, and although citations to Illuminations have been registered in the database from 1969 onward, the coverage for the first years is incomplete.
The popularity of *Illuminations* has grown constantly since the book was first published in 1968, and it has had an almost ever-increasing and stable growth of citations. The linear increase of references to *Illuminations* over a period of more than 30 years is remarkable and can be explained not only by increased citation from cultural and literature journals but also by its use in other disciplines both inside and outside the humanities. Although the number of citings has flattened in the 21st century, there is no clear indication that the citation rates are falling. In an overview of Benjamin’s influence in the late 20th century, Isenberg (2001a) argued that the “Benjamin boom” gained momentum around the 50th anniversary of his death in 1990, but although the citations were steadily rising during this time, no “leap” in citation rate can be detected. However, it might be so that Benjamin’s influence was increasing, but that authors were referring to publications other than *Illuminations*, such as *Selected Writings* (1996, 1999a) and *The Arcades Project* (1999b), which were published in the 1990s.

David Ferris (2008) described the impact of Benjamin in four phases: (a) when his writings were published in Germany in the 1950s, (b) when focus is on his association with Marxism and the Frankfurt School, (c) when theory and especially literary theory is in focus, and (d) when his influence spreads across disciplines outside the humanities and the social sciences (p. 136). This study depicts the two latter phases, when Benjamin becomes a theoretical and cultural giant in American scholarship and criticism.

Compared to the citation distribution over time for the average publication in science, *Illuminations* shows a different pattern. Generally, articles in the natural sciences have short life cycles—a fast growth in citations followed by a swift decline—whereas *Illuminations* has had a relatively slow,
but ever-increasing impact, although saturation seemed to occur at the beginning of the 21st century. Cano and Lind (1991) studied the life cycles of highly cited papers in journals and found two types of curves: A and B. The A-curve shows a fast accumulation of citations in the early life of a paper (4–7 years) followed by a gradual decline. The B-curve begins with a moderate increase in citation continuing with a steady growth. The B-curve was typical for highly cited methodological papers, and it shows a striking resemblance to the curve illustrating the citations rates to *Illuminations* (Figure 1). Something that both *Illuminations* and highly cited methodological papers in science have in common is that they remain relevant over a long period of time, although the initial impact might be lower than for highly cited experimental papers.

It could be assumed that the citing of *Illuminations* not only indicates an increasing interest in the ideas of Benjamin but that it also reflects a growth in scholarly literature that is related to his works. The growth of citations can partly be explained by the growth of scholarly literature—new journals and new research fields—but the growth of citations to *Illuminations* is evident even when limited to a specific set of journals (Hammarfelt, 2011). This suggests that the citing also is related to increased popularity that is not dependent on overall growth but which can be explained only by the popularity of Benjamin’s thinking.

The sociologist Randall Collins (1998) suggested that it takes a generation (about thirty years) to see if the contribution of a specific philosopher has had a structural impact (p. 61). Thus, measuring the impact over 5 or even 20 years is not enough because this might be due to “minor fluctuation;” rather, a long-term perspective is needed to establish an author or a work as a classic. This study—stretching over 40 years and complemented by other accounts of the influence of *Illuminations*—undoubtedly confirms it as a “modern” classic which is continually cited by scholars.

Explanations for the increasing impact of *Illuminations* can be found on a more detailed level in different disciplines and research areas, but some more general circumstances contributing to its impact are outlined next. *Illuminations* was published in 1968, and the years that follow can be called the “age of theory” in the humanities. Structuralism and deconstructionism as well as discourse analysis represented by names such as Barthes, Derrida, and Foucault emerged as interdisciplinary giants under the umbrella of “French Theory” (Cusset, 2008). This growing interest in theory also provided fertile ground for Benjamin. The emergence of new media as well as studies devoted to them such as “communication” and “cultural studies” coincided (not coincidentally) with the reception of Benjamin’s work (Ferris, 2008, p. 143). Thus, Benjamin’s thinking fit well with humanistic fields that were increasingly interested in theory and in which growing attention was being given to new media forms. The quotability of Benjamin’s essays is another plausible explanation for the impact of *Illuminations*. This quality in
Benjamin’s writings has led to “. . . a tendency to extract those sentences and phrases that lend themselves to citation as authoritative insights” (Ferris, 2008, p. 145). In some cases, this has resulted in a loss of context in regard to his other works, his contemporaries, and the philosophical and religious thinking that inspired him, but on the other hand, this use of him is a prerequisite for his status as an interdisciplinary giant. The loss of context and depth—the “liberation” of quotations from their context—can in this case be the price for his immense and widespread impact. Benjamin himself stated that he wanted his works to be quoted, to be decontextualized, and spread to different disciplines and communities (Bolz & Reijen, 1996, p. 1). Without hesitation, it can be stated that this wish has been fulfilled as will be shown in the next section, which follows the impact of Illuminations in different disciplines.

Citing in Different Fields
Interdisciplinarity—research conducted over disciplinary borders—is often seen as emblematic for modern research (Klein Thompson, 1996). There are several terms that are used to describe various types of boundary crossing between disciplines. The most common ones are multidisciplinarity, interdisciplinarity, and transdisciplinarity. Multidisciplinarity suggests that the object under study is approached from different disciplinary perspectives that are not integrated with each other. An interdisciplinary approach integrates perspectives from different disciplines and thus creates an own synthesis whereas transdisciplinarity implies a common theoretical framework which “transcends” disciplinary borders (e.g., feminism or Marxism) (Van den Besselaar & Heimeriks, 2001). In this study, the term interdisciplinarity is used to represent multidisciplinary as well as interdisciplinary work, as it is hard to differentiate between the two on the basis of citation data.

In bibliometric research, interdisciplinarity can be studied by looking at how citations to or from a specific journal or discipline are distributed over disciplinary borders or journals. Hence, a journal receiving citations from a wide variety of journals in different disciplines is interdisciplinary in a bibliometric context. This analysis looks at the citing of Illuminations in different subject categories as a measure of the publication’s popularity in different disciplines.

“Subject categories” are used by the WoS to describe which research area, or research areas, journals belong to. As journals are indexed by the use of categories, some journals have several categories assigned to them while others have only one. An example is that the journal Studies in the Novel is indexed as “Literature” only whereas the European Journal of Cultural Studies is indexed under the subject categories “Humanities, multidisciplinary” and “Social sciences, interdisciplinary.” Thus, one should be aware that not all journals are included in the maps constructed on the basis of
cooccurrences between “subject categories.” The categories do not always correspond to a specific discipline, and one should be aware that these are categories used and developed—basically by looking at citation patterns and titles of journals (Pudovkin & Garfield, 2002)—for indexing purposes in the WoS. Although the match between “subject categories” and actual disciplines, research areas, and specialties can be questioned, these “subject categories” are the best available option to gain an overview of the citing of *Illuminations* in different disciplines and fields—an overall structure that cannot be provided by analyzing individual journals or other items.

The reception of *Illuminations* in different fields and disciplines was mapped using co-occurrence between “subject categories.” Data were clustered with the use of Persson’s (1994) clustering routine, which links items that have units in common (e.g., A-B and B-C form a cluster, but A-B and C-D do not), and the Bibexcel software (Persson et al., 2009). Then, the results were visualized using Pajek (de Nooy, Mrvar & Batagelj, 2005) and the Kamada–Kawai algorithm (Kamada & Kawai, 1989).

The size of the nodes—the more citations, the larger the node—indicates how often a publication indexed under a specific “subject category” has cited *Illuminations*. The distance between “categories” illustrates how closely they are related to each other in terms of how often an article from a specific subject category is indexed with another “category” in the material. For example, the article “Television and the transformation of sport” cites *Illuminations*, which makes it a part of the data, and the article is published in a journal that is indexed under two subject categories: “Political Sciences” and “Social Sciences, Interdisciplinary.” This results in a cooccurrence between these two categories. The relation is then reflected by proximity of nodes and lines between nodes on the map. The more often two categories are used to index a journal, the closer they will appear and the thicker the lines between them will become.

On the map (Figure 2), four clusters are identifiable: a green one (focused on literature and language), a yellow one (art, history, and religion, but also anthropology, sociology, and communication), a red one (geography and urban studies), and a blue one (psychology, management, and business). There is some overlapping between the clusters, which is not surprising as interdisciplinary research is a common theme. The lower left-hand side of the map is mainly focused on literature and language, with some notable exceptions such as “Architecture,” “Construction & Building Technology,” and “Geosciences, Multidisciplinary.” The yellow cluster—particularly toward the right—is focused on the social sciences: “Anthropology,” “Sociology,” and “Political Science” whereas the left-hand side is more intermingled with art, theater, and literature. The red cluster consists of environmental studies and geography, with ecology and geology near them. The blue cluster, found below the green one, gathers research areas interested in psychological and organizational issues. In summary, the map conveys to us that
*Illuminations* is used in a variety of disciplines, mainly in the humanities and the social sciences, but that it also is cited in disciplines on the border to or in the natural sciences.

![Co-occurrence of subject categories with three articles or more citing Illuminations (1969–2008).](image) (for figure in colour see appendix).

*Illuminations* is highly cited in fields related to literature studies and literary critique, and it is from those fields that a majority of the citations come (Table 1). However, there also are quite a few citations from other fields and domains such as sociology, history, communication studies, art, and philosophy. The citing in certain disciplines might come as a surprise; however, this can partly be explained by specializations within these disciplines.

**TABLE 1.** The 20 most frequent subject categories indexing journals citing *Illuminations* (1969–2008).

<table>
<thead>
<tr>
<th>Citations</th>
<th>Subject Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>852</td>
<td>Literature</td>
</tr>
<tr>
<td>445</td>
<td>Humanities, Multidisciplinary</td>
</tr>
<tr>
<td>214</td>
<td>Literary Theory</td>
</tr>
<tr>
<td>177</td>
<td>Art</td>
</tr>
<tr>
<td>176</td>
<td>Literary Reviews</td>
</tr>
<tr>
<td>175</td>
<td>Sociology</td>
</tr>
<tr>
<td>173</td>
<td>Literature, Romance</td>
</tr>
</tbody>
</table>
For example, the citing of articles indexed as “Geography” can be related to a development within geography, from having been a “physical science” to becoming a discipline with a wide range of interests. The subdiscipline of human geography is one of the research areas that take the “interactions of societies” into account (Klein Thompson, 1996, p. 41). An example of this is the journal *Environment and Planning D: Society and Space*, which is among the journals that have frequently cited *Illuminations* (Table 2). The same applies for disciplines such as “Law” and “Political Studies,” where the citing of Benjamin can be related to specialties in which text, image, and language have emerged as important aspects (Ferris, 2008, p. 143). Thus, in certain fields such as geography or law, the citing of *Illuminations* often can be connected to theoretical specializations. The wide variety of fields in the humanities, the social sciences, and the natural sciences that cites *Illuminations* confirms its status as an interdisciplinary classic. The establishment of the collection as a classic is, according to Ferris (2008), related to the fourth phase, where Benjamin’s writings are found in a wide array of disciplines. The fourth phase and the suggestion that a “Benjamin-boom” occurred in the 1990s motivates a study of the period pre-1990. Hence, a study limited to the period 1969 to 1990 was conducted to find out if the interdisciplinary citing of the publication amplified after 1990 (Figure 3).
The interdisciplinary citing of *Illuminations* seems to be rather limited before 1990. In addition, a majority of the citing articles are from literary studies and related fields, although there is some citing from the social sciences such as sociology, anthropology, and communication. Literature and other research fields in the humanities are dominant, and the widespread use depicted in the map over the whole period (Figure 1) is not apparent here, and neither could distinct clusters of research be identified. Obviously, the result is affected by differences in the total number of citations—3,454 for the period 1969 to 2008 and 389 from 1969 to 1990—but it seems that the growth in citations is related to a spread into new fields and disciplines. One could even speculate that for a publication to continue to gain impact (in the form of increasing citation counts), a spread to new fields and contexts is necessary. Therefore, the adaptability to different disciplines and specializations is an important characteristic of highly cited publications, and in some cases, the impact is associated with the emergence of new research fields.

Ferris (2008, p. 144) associated the reception of *Illuminations* with the “re-invention” of art history and the emergence of cultural studies. The importance of Benjamin in cultural studies is illustrated by several “cultural studies” journals (e.g., *Boundary 2, Theory*, *Culture & Society*, *Cultural Studies*, and *Media Culture & Society*) that have frequently cited *Illuminations* (Table 2).

**Journals Citing Illuminations**

*Illuminations* is cited by 848 journals, and almost half of these ($n$=387) have cited *Illuminations* only once. The relatively small group of journals that have cited Benjamin more than 15 times over a period of almost forty years...
implies that Benjamin-related research lacks a distinct group of core journals. This is hardly surprising, as research in the humanities is rarely organized around a set of journals. The small citation numbers for a wide array of journals also emphasize that *Illuminations* has been disseminated into a wide array of disciplines and research specialties.

**TABLE 2. Journals citing *Illuminations* 15 times or more (1969–2008).**

<table>
<thead>
<tr>
<th>Citations</th>
<th>Journals</th>
</tr>
</thead>
<tbody>
<tr>
<td>73</td>
<td><em>New German Critique</em></td>
</tr>
<tr>
<td>45</td>
<td><em>Modern Language Notes</em></td>
</tr>
<tr>
<td>45</td>
<td><em>October</em></td>
</tr>
<tr>
<td>42</td>
<td><em>Boundary 2–An International Journal of Literature and Culture</em></td>
</tr>
<tr>
<td>39</td>
<td><em>Publications of the Modern Language Association of America</em></td>
</tr>
<tr>
<td>39</td>
<td><em>Theory Culture &amp; Society</em></td>
</tr>
<tr>
<td>37</td>
<td><em>New Literary History</em></td>
</tr>
<tr>
<td>34</td>
<td><em>Cultural Critique</em></td>
</tr>
<tr>
<td>33</td>
<td><em>Screen</em></td>
</tr>
<tr>
<td>31</td>
<td><em>Critical Inquiry</em></td>
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<tr>
<td>30</td>
<td><em>South Atlantic Quarterly</em></td>
</tr>
<tr>
<td>30</td>
<td><em>Mosaic–A Journal for the Interdisciplinary Study of Literature</em></td>
</tr>
<tr>
<td>30</td>
<td><em>Contemporary Literature</em></td>
</tr>
<tr>
<td>30</td>
<td><em>Novel–A Forum on Fiction</em></td>
</tr>
<tr>
<td>29</td>
<td><em>Modern Fiction Studies</em></td>
</tr>
<tr>
<td>26</td>
<td><em>English Literary History</em></td>
</tr>
<tr>
<td>25</td>
<td><em>Diacritics–A Review of Contemporary Criticism</em></td>
</tr>
<tr>
<td>25</td>
<td><em>Representations</em></td>
</tr>
<tr>
<td>24</td>
<td><em>Sub-Stance</em></td>
</tr>
<tr>
<td>24</td>
<td><em>Art History</em></td>
</tr>
<tr>
<td>23</td>
<td><em>Modernism–Modernity</em></td>
</tr>
<tr>
<td>23</td>
<td><em>Comparative Literature</em></td>
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<td>22</td>
<td><em>Camera Obscura</em></td>
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<tr>
<td>22</td>
<td><em>Poetics Today</em></td>
</tr>
<tr>
<td>22</td>
<td><em>Modern Language Quarterly</em></td>
</tr>
<tr>
<td>21</td>
<td><em>Textual Practice</em></td>
</tr>
<tr>
<td>20</td>
<td><em>Theatre Journal</em></td>
</tr>
<tr>
<td>20</td>
<td><em>Clio: A Journal of Literature History and the Philosophy of History</em></td>
</tr>
<tr>
<td>19</td>
<td><em>Revista Iberoamericana</em></td>
</tr>
<tr>
<td>19</td>
<td><em>Criticism–A Quarterly for Literature and the Arts</em></td>
</tr>
<tr>
<td>19</td>
<td><em>Journal of Aesthetics and Art Criticism</em></td>
</tr>
<tr>
<td>18</td>
<td><em>Journal of Narrative Theory</em></td>
</tr>
</tbody>
</table>
Journals (Table 2) that have cited *Illuminations* 15 times or more are predominantly from literary studies, but there also are journals from sociology, art, history, and geography in the list. The journal that most frequently has cited *Illuminations* during 1996 to 2007 is *New German Critique* (74 citations), a journal focusing on German literature and culture in the 20th century. *New German Critique* was, according to Isenberg (2001b), an important forum for discussing Benjamin and his works in an American context. The literature journal *Modern Language Notes* (45 citations) and cultural studies journals such as *October* (45 citations), *Boundary 2* (42 citations), and *Theory, Culture and Society* (39 citations) also are among those who most frequently have cited *Illuminations*. These highly cited journals share a broad focus on culture in general and cultural theory in particular, and many of them boast an interdisciplinary perspective. Thus, the lack of a disciplinary focus of the highly cited journals substantiates the notion that Benjamin has been used in a widespread array of research areas. This is further emphasized by the interdisciplinary nature of many journals that frequently have cited *Illuminations*.

The use of *Illuminations* is truly interdisciplinary: The essays are cited in scholarly fields in the humanities and in the social and natural sciences. The expansive character of Benjamin’s writings is a reason for his work having had such an influence in a variety of contexts both inside and outside of academia (Isenberg, 2001a). The extent and variety are not only expressed in the various fields in which the publication is cited (Figure 2) but also in the wide array of journals that have cited the monograph (Table 2). The heterogeneity of the collection seems to offer one explanation for its success, and the fact that it is a collection of texts motivates a closer analysis of citations to the specific essays.

Citing of Specific Pages/Sections
Benjamin (1968/2007) saw himself as a gatherer of quotations (p. 47), but the question is which parts of *Illuminations* are cited and quoted by others. The data were analyzed using “cited reference search,” and the four most frequently cited pages/sections were singled out for further study (Table 3).

<table>
<thead>
<tr>
<th>Page</th>
<th>Essay</th>
<th>Citations</th>
</tr>
</thead>
<tbody>
<tr>
<td>217</td>
<td>“The Work of Art in the Age of Mechanical Production”</td>
<td>327</td>
</tr>
<tr>
<td>83</td>
<td>“The Storyteller”</td>
<td>142</td>
</tr>
<tr>
<td>253</td>
<td>“Theses on the Philosophy of History”</td>
<td>136</td>
</tr>
<tr>
<td>69</td>
<td>“The Task of the Translator”</td>
<td>82</td>
</tr>
</tbody>
</table>

a The most common editions have been checked for inconsistencies, but there may be minor differences in page numbers; however, those discrepancies would be so few that they would not distort the results in any significant way.

It is evident that a majority of the citations refer to a few specific essays in the collection “The Work of Art in the Age of Mechanical Reproduction,” “The Storyteller,” and “Theses on the Philosophy of History.” The single most cited page, with 327 citations, is page 217, which is the first page of “The Work of Art in the Age of Mechanical Reproduction.” The citing of this page is almost certainly not an indication of the quoting of a specific passage on this page but a reference to the essay as such, and this study confirms that this essay has been cited more than any other of Benjamin’s works—an observation also made by Ferris (2008, p. 145). The same applies to the other essays studied in this article: The most frequently cited page is the first page of the essay. Therefore, it is assumed that the highly cited pages selected for the analysis point to the essay as such rather than to a passage or a quote on that particular page.

To learn about the disciplinary origin of citations to the specific essays, a new approach—PCA—was adopted. Instead of using citations to a monograph or an article, this approach uses citations to specific pages within a document. Rather than using “cited reference search” to download the data of all articles citing *Illuminations*, all references to a specific page in *Illuminations* were downloaded and analyzed. This was done with the three most frequently cited pages/essays in the collection. The results are presented next in the form of co-occurrence of subject categories.


This work discusses the change of art forms in capitalist society, especially in relation to the “new” medium of film. An analysis of citations to “The Work of Art in the Age of Mechanical Production” was made, and the citing articles were grouped according to co-occurrence of subject categories (Figure 4).

The subject categories defining articles citing the “Work of Art in the Age of Mechanical Reproduction” are gathered in two main groups: The first group focuses primarily on literature (at the left-hand side of the map), and
the second group focuses on interdisciplinary research and the social sciences and has strong nodes in disciplines such as communication, anthropology, and sociology. The map suggests that the essay has had substantial impact in two different contexts: (a) in literary research and (b) on communication and social relations. The map also shows that the article is cited by fields focused on different art forms such as “Theater,” “Art,” and “Film, Radio & Television.” Furthermore, the inclusion of subject categories such as “Geography” and “Environmental Studies” as well as “Education & Educational Research,” “Information Science & Library Science,” and “Computer Science, Information Systems” shows that the essay is cited in a wide variety of research fields.


2. “The Storyteller”

The storyteller with the subtitle “Reflections on the Works of Nikolai Leskov” is an essay about narration and the relation between traditional storytelling and the birth of the novel. In this essay, Benjamin discusses how the novel is connected to the solitary individual whereas storytelling is a social act.

The “Storyteller” map (Figure 5) is, not surprisingly, dominated by subject categories focused on literature and language. Although sociology, communication, and anthropology are represented, the number of articles...
indexed in those categories is low when compared to literature (40 articles in literature and 12 in sociology). The total number of citations influence the result, but it seems that this essay has a more limited reach than does the “Work of Art in the Age of Mechanical Reproduction.”

![Co-occurrence of subject categories with three or more citations to page 83: “The storyteller” in Illuminations, (1969–2008).](image)

**FIG. 5.** Co-occurrence of subject categories with three or more citations to page 83: “The storyteller” in Illuminations, (1969–2008).

### 3. “Theses on the Philosophy of History”

In his “Theses,” Benjamin reflects upon history and historicism in 18 theses. This influential and much quoted essay can hardly be summarized in a few lines. The famous statement that “There is no document of civilization which is not at the same time a document of barbarism” (Benjamin, 1968/2007, p. 256) and the passage about an “Angel of history” is found in this text, and the essay has been seen as a response to the rise of fascism.

The categories (Figure 6) of “Literature” and “Sociology” also are common for articles citing the essay “Theses on the philosophy of history.” Overall, it seems that this essay is cited in a more scattered array of research areas—disentangled from each other—and no distinct clusters can be identified. One possible explanation for this could be that the text itself is less focused, divided as it is with its subject matter garnered from 18 theses which are both imaginative and challenging.

The study of citing to specific pages shows, not surprisingly, that there are differences in how the essays are cited both in the number of citations and in the spread and heterogeneity of citing articles. “The Work of Art in the Age of Mechanical Reproduction” is cited above all by literary studies and research areas focused on communication and social interaction. “The Storyteller,” on the other hand, is less interdisciplinary because the bulk of citations come from literature studies. “Theses on the Philosophy of History” also is highly cited by articles indexed under the category of “literature,” but political studies, history, and geography also contribute to its impact, and it is cited in a wider selection of research areas, although the overall citation count is lower than that for “The Storyteller.” Thus, one could assume that the interdisciplinary citing of *Illuminations* is due to some of the essays, notably “Theses on the Philosophy of History” and “The Work of Art in the Age of Mechanical Reproduction” while others (e.g., “The Storyteller”) are more frequently cited in literature studies and the humanities.

**Discussion**

This study shows how citation analysis can be used to structure and map the impact and diffusion of a cultural classic such as *Illuminations*, providing an empirical backbone from which qualitative insights into scholarly communication, intellectual history, and the sociology of knowledge can be gained. Bibliometric studies are often focused on journals, disciplines, or institutions, studying impact or intellectual structures over a short period of time. This study focuses on one single document during almost forty years, an approach that allows for an in-depth analysis of impact and reach of the pub-
lication. The results confirm that citation analysis on the micro level, the tracking of a specific book or even of specific parts in a book, is a fruitful method for studying impact both over time and across disciplinary borders.

The number of articles in the WoS that have cited *Illuminations* has grown constantly since it was first published in 1968. Interestingly, a resemblance could be detected to citation curves for some highly cited papers in science. Whether this “B-curve” is a recurring pattern that transcends disciplinary borders is yet to be seen, but the results do suggest that this might be the case. The continuing growth of citations over a 40-year period can be explained partly by a general increase in scholarly articles and journals and partly by the quality of the essays in the collection, especially their adaptability and quotability. Furthermore, a favorable context—the age of theory and the emergence of new medias and scholarly fields—has been important for the popularity of Benjamin’s work.

The mapping of interdisciplinary citing shows that *Illuminations* is cited in a variety of disciplines and research fields. The humanities and especially literature studies account for a major part of the citations, but there also is significant citing from the social sciences. Notable is the citing from environmental studies and geography. Overall, the heterogeneity of research fields that cite *Illuminations* is remarkable, from “Literary Reviews” to “Health Care Sciences,” from “Religion” to “Construction & Building Technology,” and so forth. The ability of publications to be usable in different contexts is an important feature of highly cited documents. This seems to be the case with Benjamin’s work, where reception is dependent on translations and introductions. It is not surprising that a work such as Benjamin’s is disentangled from its European origin; the same was noted in Brody and Persson’s (1989) study of Bourdieu’s reception in the United States. The citing from a range of different fields seems to be related to the “fourth phase,” and this study endorses the notion of four phases in Benjamin’s impact. This conclusion is substantiated by a comparison over time where the citing of *Illuminations* pre-1990 is more limited and less heterogeneous. Consequently, it seems that the growth of citations is related to, but not dependent on, the increasing spread of *Illuminations* to new disciplines both inside and outside the humanities. Hence, we can only speculate if a “fifth phase” may involve a further interdisciplinary citing of the publication or if the spread of *Illuminations* has reached its peak.

The dissemination of *Illuminations* can be seen as an indication of the influence of humanistic research, as one can assume that it is the use of Benjamin by contemporary scholars in literature, history, and sociology that has made him known to a wide array of researchers in different fields. The impact of Benjamin thus may be seen as an indirect influence from humanistic research on other research areas. A common belief is “... that the direction of the flow of knowledge is from the hard to the soft disciplines or from the top down (assuming that there is a hierarchy of disciplines)” (Lindholm-
Romantschuk, 1998, p. 14). This view is somewhat contradicted by the results of this study, where there is an inflow from the humanities to the social sciences and the natural sciences.

The fact that *Illuminations* is a collection of essays on different subjects is one of the main reasons for its interdisciplinary reach, and PCA provides an opportunity to depict the citing of specific essays. References to specific pages give clues about what is actually cited and used in a publication. In this case—where quite a few of the essays receive a majority of the citations to specific pages—a detailed study is essential to understand the impact of *Illuminations*. The results show that the specific essays are cited in somewhat different areas; the interdisciplinary citing of Benjamin is foremost linked to two of the essays: “The Work of Art in the Age of Mechanical Reproduction” and “Theses on the Philosophy of History.” In contrast, another highly cited essay, “The Storyteller,” is primarily cited within the humanities.

Citation analysis on the micro level is useful not only in informetrics and scholarly communication but also in fields such as sociology of science and history of science. Using “cited reference search” to trace citations to a specific work allows us to follow in its footsteps. It allows us to map the journeys of a specific work, and ultimately to depict trends and “turns” in the intellectual history of disciplines, publications, and ideas. Using this approach, it is possible to carry out a detailed time-sliced study, looking at the co-occurrence of subject categories and journals to study the reception of a publication in different research areas. The study of citations to specific pages (i.e., PCA), on the other hand, opens up for analyses of specific parts of a document, such as essays, forewords, articles, quotations, and concepts. Furthermore, the use of established databases such as the WoS can be complemented by the use of databases such as Google Scholar and Google Book Search. These databases provide opportunities for studying the citing of monographs; however, problems remain with studying the citing from monographs (Kousha & Thelwall, 2009). Nonetheless, the use of databases that index monographs seems to be a fruitful line of research for scholars interested in scholarly communication and the intellectual organization of the humanities.

The quotation that stands as a motto for this article is a good example of the quotability and adaptability of Benjamin’s (1968/2007) writings:

One can go even further and remember that interruption is one of the fundamental devices of all structuring. It goes far beyond the sphere of art. To give only one example, it is the basis of quotation. To quote a text involves the interruption of its context. (p. 151)
Following Benjamin’s line of reasoning, one could argue that the interruption of context is what citation analysis is all about: ignoring what a cited document claims and the motivations for citing it. Rather, citation analysis focuses on one single aspect: Has the document been cited? Thus, bibliometrics is the structuring of documents through the interruption of their contexts, but truly interesting is when this structure is re-contextualized and analyzed.

Acknowledgments
I thank Kerstin Rydbeck and Fredrik Åström for their constructive comments and helpful suggestions throughout the work with this article.
Appendix

Fig. 2 Co-occurrence of subject categories with three articles or more citing Illuminations (1969–2008).
References


Purpose: The aim of this article is to study a locally oriented and book-based research field using two Swedish-language sources. Knowledge about citation patterns outside journal based, English-language databases is scarce; thus a substantial part of research in the humanities and the social sciences is neglected in bibliometric studies.

Design: Citation characteristics (publication type, language, gender and age) in the journal Tidskrift för Litteraturvetenskap (2000-2009) and in grant applications (2006-2009) are studied. The datasets are analyzed further, adopting an author-co-citation approach for depicting and comparing the ‘intellectual base’ of the field.

Findings: It is shown that monographs and anthologies are the main publication channel in Swedish literary research. English, followed by Swedish, is the major language, and the gender of authors seems to influence citation practices. Furthermore, a common intellectual base of literary studies that is independent of publication type and language could be identified.

Practical implications: Bibliometric analysis of fields within the humanities needs to go beyond established databases and materials. The extensive use of recent English-language monographs in Swedish literary studies informs the acquisition policy of university libraries serving literature scholars.

Originality/value: Citation analysis of non-English sources offers further knowledge about scholarly fields with a local and ‘rural’ profile. The approach of using references in grant applications provides a novel and promising venue for bibliometric research.

Keywords: Citation analysis; bibliometrics, grant applications; humanities; literary studies; scholarly communication; Sweden.

Paper type: Research paper
Acknowledgments: The author wishes to acknowledge the valuable comments on earlier drafts of the paper made by Linda Karlsson Hammarfelt, Kerstin Rydbeck and Fredrik Åström as well as the helpful suggestions given by the reviewers.

Introduction

The use of bibliometric methods on the humanities—and especially the use of citation analysis—is constrained because of the limited coverage of databases such as Thomson Reuters Web of Science (WoS) and Elsevier Scopus. These limitations are foremost due to the fact that journals play a minor role in many research fields in the humanities. It is also so that fields like literature or history usually publish in their local language, in this case Swedish. Knowledge about citation patterns in publications outside citation databases is scant mainly due to the time-consuming nature of semi-automated or manual indexing of references. These limitations have led to a tendency within bibliometric research to almost solely explore citation patterns and structures within commercially available databases. Thus, the exploration of knowledge structures through the use of bibliometric data is limited to a small selection of scholarly literature. This is especially worrisome in the case of the humanities, where an overwhelming proportion of research is published in monographs and in ‘non-ISI journals.’ The leading citation databases almost exclusively index publications in the English language, which further restrains the possibilities of analyzing fields in the humanities where the local language often is used. The launch of Thomson Reuters’ Book Citation Index will not solve this problem although it might improve the coverage in English-speaking countries (Adams & Testa, 2011).

The publication of research, the use of sources, and citation patterns are affected by the organization of research. This article examines citation patterns in the field of literary studies, a field that can be described as ‘rural’ in its organization. ‘Rural’ in the sense that few researchers are involved on each particular topic. This entails that the competition for resources is low, the rewards for success are small, and the freedom of the individual scholar is high (Becher & Trowler 2001, p. 106-108). The characterization of fields as either urban or rural in their communication patterns provides a metaphor that can be instrumentalized to elucidate both publication and citation practices. The concepts used by Becher and Trowler (2001, p. 106) frame “…an analogy between urban and rural ways of life, we may liken specialisms which have a high people-to-problem ratio to urban areas, and those with a low one to rural areas.” Rural scholars cover larger ‘intellectual territories’ and research problems are less defined and rigid. Urban research on the other hand is focused on a few topics rather than an array of themes and specialties. The pace of research—again comparing the hectic life of an urban area with the slower pace in rural surroundings—is also a distinctive feature. A
rural researcher can invest in long-term projects while the competition in urban areas demands rapid publication of results. Literary studies can be described as a rural field where the ratio of researchers per problem is low, which provides the individual scholar with freedom in choosing research topics and methods. On the other hand, resources in these fields are scarce, and the reward for successful research—including citations to one’s work—is lower. This study builds upon the assumption that bibliometric analysis of rural fields must take these characteristics into account, and that it is especially important to acknowledge the distinctiveness of rural areas when comparing research fields.

The study investigates citation characteristics of material outside established citation databases. Furthermore, it maps the intellectual structure of literary studies in Sweden as it emerges from two different datasets: The Swedish literary journal *Tidskrift för litteraturvetenskap* (TFL) and applications to the Swedish Research Council (*Vetenskapsrådet*) in the category of literary studies. A comparison between these datasets is performed in order to investigate questions such as: Are there differences in the language and age of cited sources? Does the gender of the citing author influence the ‘gender’ of cited sources? Is there a common intellectual base independent of variables such as language and context? What do co-citation mappings of these two sources reveal about the intellectual structure of literary studies? It has been suggested that the type of cited sources differs between journals and monographs: can the same differences be identified in a comparison between journals and research applications?

First, a short background is given in which previous studies of citation characteristics and citation patterns in literary studies are discussed. The material of the study and the novel approach of using references from grant applications are then introduced. Next, the findings of the study are presented and compared in the form of diagrams and co-citation maps. Finally, the results gained and the methods used are evaluated, implications for citation analysis, library acquisitions and bibliometric evaluation are discussed, and some venues for further research are suggested.

**Background**

The importance of examining other types of sources than English-language journals is emphasized by studies suggesting that there are major differences in citation practices between different types of publications. It has been claimed that journals tend to cite other journals whereas monographs to a larger degree cite monographs. In the case of sociology Cronin, Snyder & Atkins (1997) found two highly cited populations of authors: one in monographs and one in journals. Thompson (2002) on the other hand looked at references given in eight monographs and four journals within the field of
literary studies. A majority of the references among the monographs and in the journals referred to books, although references to books were more numerous in monographs (85 percent) compared to journals (67 percent). The different citation patterns for journals and monographs suggest that studies using only journal data may not reflect citation characteristics of the field as a whole. The citation characteristics of literary studies monographs have been covered in a range of articles by Cullars (1985; 1988; 1989; 1990). Studies which all showed similar results: the largest number of references were to monographs, and a smaller majority were to primary material (e.g. literary works or historical sources).

The percentage of citations to books or monographs is dependent on the definition of ‘books’ as well as on the methodology. Nolen (2010) used an approach—similar to the one applied by Cullars (1989)—where all references (including duplicates) were counted. This explains why his study of references in Spanish and Latin American literary studies showed that almost 75 percent of the references were to literary works. A study of a specific literary work would obviously cite and quote this particular text extensively throughout the article, and maybe this is of greater importance for scholars interested in the construction and rhetoric of an article than for those concerned with scholarly communication and citation patterns within scholarly fields. When reducing the study to secondary sources alone (e.g. scholarly publications) the proportion of citations to monographs were 65 percent for the current period, and an increase of citations to monographs could be observed compared to 1970 (43 percent). Another categorization was applied by Knievel and Kellsey (2005) as they included book chapters and dissertations in their definition of ‘books,’ but not what they call source documentation (e.g. primary material). They compared citation characteristics of eight fields in the humanities based on journal data. The proportion of citations to books in the case of literature was 83.6 percent, a figure exceeded only by religion, and the most commonly cited foreign language was French (11.7 percent).

Ardunay, Urbano & Quintana (2009) went beyond available citation indexes in their exploration of citation characteristics and patterns in Catalan literature. They harvested footnotes and reference lists in order to build a database of Catalan literature, and their final sample consisted of 6,109 bibliographic references from key journals (Ardanuy, Urbano & Quintana, 2009, p. 348). The results of this study are in line with previous conclusions regarding literature in the humanities: obsolescence (low), co-authorship (low) and interdisciplinarity (high). They were also able to discern differences between research specialties using co-citation analysis on the level of authors.

Previous research regarding citation characteristics in literary studies concludes that monographs are the main publication channel, and there is no indication that this is changing, rather the opposite. However, a majority of
earlier research is based on English-language material, though a few focus on other major languages (French, German, Spanish and Italian). Not many have analyzed the language of cited sources in small countries and languages such as Swedish, where one could expect foreign sources to be more common than in French or German literary studies. The importance of citation analysis that goes beyond English-language journals is especially important in the humanities, especially since findings in one language or country not always are applicable in other contexts, as regional topics and a local public may influence the organization and publication of research (Nederhof, 2006).

Citation analysis has frequently been used for studying and mapping intellectual structures within and between research fields. However, few attempts have been made to analyze the intellectual structure of literary studies due to limitations in available materials and methods. A previous study used citation data and Dewey Decimal Classification of monographs to depict the intellectual base of literary studies. The results showed a growth of interdisciplinary citing in the last 20 years, a finding that could primarily be explained by an increasing interest in sources from the social sciences (Hamarfelt, 2011b). A precedent-setting approach to author co-citation was introduced as early as 1968 by the Swedish sociologist of literature Karl Erik Rosengren (Rosengren, 1968). His method, called co-mentions, counted mentions of authors in literary reviews in order to portray the ‘literary climate’ in Sweden. The results were illustrated in maps that in the same way as multidimensional scaling or other visualization methods depicted relations by the use of links between nodes and proximity on the map. Rosengren imagined how his approach could be further developed into a ‘quantitative atlas’ and envisioned comparisons with foreign ‘literary systems’ and other fields as one possible option: “Such an atlas might form a basis for further studies, comparing conditions in literature with those in neighboring fields of culture, such as art, music, the humanities and science.” (Rosengren, 1968, p. 147). The coverage of the current study is much more modest than an atlas of literary studies, but hopefully it will provide some orientation and a few directions for those interested in the intellectual structure of the field.

Material and Methods

The relation between citation scores and granted applications has been analyzed in a range of studies (e.g. Bornmann, Leydesdorff & Van den Besselaar 2010; Melin & Danell, 2006), and the relation between received grants and received citations has been mapped (Boyack & Börner, 2003). However, this is the first study that analyzes citations in grant applications, which is surprising given that writing and evaluating grant applications is an increasingly important part of being a researcher. It is not only so that applications
to research councils or research foundations constitute one of the few options for researchers—especially in the social sciences and the humanities—to get substantial time and money for research. Receiving grants is also an important merit for the individual researcher. Therefore, references in applications can be regarded as an important source of information for scholars interested in analyzing developments in particular research fields.

Grant proposals represent a form of persuasive writing that has much in common with other persuasive documents such as sales letters and job applications (Connor & Mauranen, 1999). References play an important role within the ‘genre’: “Citation of resources is a strategy used to strike the difficult balance between group identification and self-assertion. The researcher needs to place himself/herself as one of the group, at the same time revealing a gap in previous research” (Connor & Mauranen, 1999, p. 49). Thus, the persuasive function of references—discussed by Gilbert (1977) and Latour (1987) to mention a few—should be even more pronounced in the case of grant applications. Especially since references can play an important role in convincing the reviewer of the importance of the project as well as the competence of the applicant(s). A further advantage of using research applications—as opposed to monographs—is the relative ease in selecting and finding the material of study. Furthermore, applications are limited to a specific form and length, which is beneficial for doing citation analysis. Monographs on the other hand vary in length and they often target a mixed audience of both scholars and a public audience.

The use of references in research applications also warrants a discussion of how these references should be viewed. References from applications were treated in this study as references in publications although one could claim that these are ‘imagined’ or planned references that qualitatively differ from references given in a published text. If the application is not granted then the references made might never be formally cited or even read. Thus, a major drawback of using references in research applications is that they lack the formality of references made in published material. What the researcher imagines as important work before the project has started might actually change substantially when the project is finished and published.

The Swedish Research Council is a governmental agency, and all documents and records of the Swedish government and legislation are available to the public by law. Therefore, submitted grant applications are available for other researchers and interested citizens. In this case research applications in the category of litteraturvetenskap (literary studies) from the years 2006-2009 were selected for analysis. In all, the dataset included 320 applications (only 21 of which were funded) that were further analyzed. In order to avoid duplicates—several applicants submitted roughly the same text each year—only the first grant application by each unique applicant was included. Furthermore, all applications that lacked a reference list were excluded leaving 123 applications for the final sample.
The second dataset consisted of articles from the Swedish literature journal *Tidskrift för litteraturvetenskap* (TFL), ‘Journal of literary studies’. TFL was founded in 1971. It is a peer-reviewed journal jointly published by literature departments at Swedish universities. The main purpose is to create a communication channel among scholars, but the journal also approaches a public audience. It is open for authors from other disciplines, and a few contributions from neighboring fields—mainly history of ideas—are among the articles studied. Nevertheless, a vast majority of the authors are from Swedish/comparative literary studies, with a few articles written by literary scholars in English studies, French studies and German studies.\(^{31}\) Ten years (2000-2009) of the journal were selected for analysis. The long time window was chosen deliberately in order to gather a substantial and comparable dataset. Citation analysis of many humanities fields warrants a longer citation window, not only because citations peak late but also due to the smaller volumes of citations in these fields (Nederhof, 2006). Only articles with footnotes or reference list were selected for analysis and the final sample amounted to 213 articles. From these the author names of all references were manually extracted and an *MS Excel* file was constructed with article identifiers and cited authors. In all 4,032 references were registered, and 2,859 unique authors were identified (Table 1). The periods studied here were selected in an effort to depict current research in literary studies, and a four-year period was initially selected for analysis (2006-2009). However, the number of references for this period in TFL was not enough for comparing the two sources, and therefore the time frame for this datasets was extended to a ten-year period. As the overarching aim of this article is the comparison of citation patterns and characteristics of sources—rather than a study of a specific time period—comparable volumes of citations were favored over identical time frames.

<table>
<thead>
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<th>Dataset</th>
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<tr>
<td>No. of unique cited authors</td>
<td>2,859</td>
</tr>
<tr>
<td>TFL articles from years 2000-2009</td>
<td>123 grant applications from the years 2006-2009</td>
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<tr>
<td>123 grant applications</td>
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The variety of citation practices in the humanities complicates the use of bibliometric methods, and the use of a referencing system is connected to the social and intellectual organization of a particular field (Hellqvist, 2010). The various systems of annotation that could be observed in the studied ma-

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\(^{31}\) There is no English equivalent to the discipline of ‘Litteraturvetenskap’ (literary studies), which encompasses both comparative literature and Swedish literature.
material made it necessary to define the concept of a reference. A reference could be defined as a “...portion of a sentence in a citing document which references another document or a set of documents collectively.” (Di Marco, Kroon & Mercer, 2005 p. 250). However, this definition would be difficult to apply, as it does not discriminate between implicit and explicit referencing. If also embedded references—mentions of authors or works that are not footnoted or enclosed in the reference list—are counted, then indexing becomes even more complicated and context-dependent. Therefore a formal definition of a reference was utilized in this article. In order to count as a reference it had to: (1) be given in a section separate from the main text (e.g. in endnotes or in a reference list) and (2) include author name, year, and title. References without an author name (e.g. encyclopedias) were counted in the study of citation characteristics but—for obvious reasons—not in the study and mapping of highly cited authors. Automatic indexing devices such as ‘Paracite’ were tested, but automatic harvesting of references was not possible, since the citation practices within the journal varied to a considerable degree. Not surprisingly journal references in general were of a better ‘quality’ than references in grant applications. References in applications were often incomplete, and the lack of a uniform system made the extraction of citations both more demanding and more time-consuming than in the case of journal articles.

Only the first author was counted when indexing references with two or more authors. This method could be questioned, especially since influential authors might be overlooked, as shown by Persson (2001). However manual indexing of references limited the possibility of indexing all authors, and first-author counting did remain the best alternative for this analysis, as rather few publications are co-authored in the field of literature. Only in very few cases like Felix Guattari (co-authoring with Gilles Deleuze) and Susan Gubar (co-authoring with Sandra Gilbert) did the counting of only first authors affect the results. The author of the chapter/book article was registered in the case of chapters in anthologies, but when no specific chapter was referenced, then the first editor was selected as ‘author.’ References where no author name was given, such as dictionaries, were not included in the co-citation study.

Cullars (1990) distinguishes between reference study and citation analysis, a distinction that is valid here as well. A reference study examines all internal references both in the text and in footnotes, and implicit referencing can also be analyzed, whereas citation analysis only counts references the first time a particular source is given. Hence, an article citing Judith Butler five times and Jacques Derrida twice renders one citation for each author in

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32 In research applications there were a few applications that used footnotes. These were not included in the study due to the labor involved in indexing them.

the final dataset. One could argue that this approach does not account for the actual influence an author has; an author cited five times in an article probably has a higher ‘impact’ on the content. On the other hand one can just as well argue that counting all references would distort the result, as a few articles citing a specific author extensively—not to mention self-citations—could inflate the citation numbers.

The lower number of unique authors in grant applications can be partly explained by the extensive self-citation—and citation of co-applicants—which was not surprisingly found in grant applications (Table 1). Authors of research applications are eager to position and promote themselves and therefore more prone to cite their own work, a practice that was uncommon in TFL. The median number of references in research grants (41 refs.) was more than double the number of references given in journal articles (19 refs.). The reason for the extensive citing in research applications is not only self-citation but also authors using references in applications to show their knowledge of a particular field of research.

Citation Characteristics of Swedish Literary Studies

The Prevalence of the Book

The extensive use of books and more specifically monographs is perhaps the most distinctive feature of scholarship in the humanities. ‘Monographs’ refers here to books on a single subject, while anthologies contain chapters/articles from different authors. Hence, having an editor mentioned in the reference distinguishes anthologies from monographs. Works of literature (e.g. source materials) were not counted in this study as it focuses on the scholarly communication of the field and not a ‘literary canon.’ The category of ‘journals’ is not limited to peer-reviewed scholarly journals, since cultural journals, monthly magazines, and other periodicals also play an important role in literary studies (Hammarfelt, 2011b). It was not uncommon that references in research applications referenced a whole issue of a journal—often a thematic one—and not a single article in the journal. Dissertations were included as a category of their own since they can be regarded as an important publication form for scholars in the humanities. However, insufficient referencing did sometimes limit the possibilities of distinguishing dissertations from other monographs. Newspapers and e-sources were included

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34 It should be noted that articles/applications without references were not included in the study, and if these were counted the median number would be smaller for both datasets.

35 The following definition of a monograph is given by Reitz, in The Online Dictionary for Library and Information Science: “…any nonserial publication, complete in one volume or intended to be completed in a finite number of parts issued at regular or irregular intervals, containing a single work or collection of works.” [accessed: 2011/11/06]
in order to study interaction with a popular audience and the emergence of new media. Sources such as movies, television programs, radio programs or music recordings that did not fit any of categories above were indexed as ‘other.’ Hereafter, the cited sources in TFL and research application were compared (Fig 1.).

![Fig. 1. Types of cited sources in TFL, 2000-2009 and in applications 2006-2009. Percentage /Type.](image)

The distribution of cited sources in TFL and grant applications shows many similarities, although a few differences are of particular interest. Monographs are more often cited in research applications, which could be due to the type of arguments that are made in applications, where less detailed accounts are given compared to finished studies. Or, it could be that articles in journals to a larger extent cite other articles, a tendency shown in previous studies (Cronin, Snyder & Atkins, 1997; Thompson, 2002).

Thompson (2002) studied references in eight monographs and four journals in American literary studies and found that 67 percent of the references were to books, 14 percent to articles/chapters in books, and 18 percent were to journals. These percentages correspond well with the findings reported here, and numerous studies of literary studies report percentages around 75-80 percent for books (including edited books) and 15-20 percent for journals (Cullars, 1989; 1990 and Knievel & Kellsey, 2005). In a study of the 200 most cited sources in 34 literature journals (1998-2007) 194 were monographs and only 6 were journal articles (Hammarfelt, 2011b). The higher degree of cited monographs in applications could therefore be explained by the greater prestige of the monograph in the field of literature. Thus, one could assume that authors would prefer this more prestigious and perhaps ‘persuasive’ reference in order to enhance the chances of their applications being granted.
Chapters in anthologies are an important source for scholars in the humanities, yet few studies have dealt with this form of publication. Little is known about how these chapters are selected and reviewed, and the idea that edited books could be used to study informal scholarly networks is indeed an intriguing one (Thompson, 2002, p. 133). Analyses of authors in anthologies might be an alternative for mapping intellectual structures in fields where co-authorship is uncommon. An analysis of ‘co-edited’ authors might reveal both social and intellectual ties and networks.

The percentage of dissertations varies between 4 percent (TFL) and 2 percent (applications) this is considerably higher than previous studies in Catalan literature, 1.5 percent (Ardanuy, Urbano & Quintana, 2009), Spanish and Italian literature 0.2 percent (Cullars, 1990) and French literature 1 percent (Cullars, 1989). The importance of dissertations and consequently the citing of them are probably connected to the academic traditions of different countries. Swedish higher education builds—not the least in the humanities—upon the German tradition where the dissertation and the defense of the dissertation played and plays an essential role (for an historical account see for example Clark, 2007, p. 68-92). Cullars’ (1989) study supports this conclusion as the percentage of citations to dissertations is considerably higher in German literature (3.5 percent) than in Catalan, Spanish, French, or Italian.

Articles in daily newspapers were not an uncommon source. Newspaper articles are often used to reflect upon how a particular author and phenomenon is or has been perceived in society at large. The boundary between scholarly and non-scholarly work is elastic in the humanities, and scholars often write in popular journals and newspapers as critics. The use of these sources reflects the heterogeneous audience of literary studies, which compromises fellow scholars as well as an interested public audience. Not surprisingly, newspapers were more commonly cited in TFL—a journal that also targets a public audience—compared to applications that are read and evaluated by other scholars.

E-sources (e.g. homepages and blogs) are rarely used by literature scholars. When they are it are almost exclusively in articles/applications dealing with the subject of the web and ‘new media’. Sukovic (2009) studied the attitudes of scholars towards e-sources and found that they were more accepted in relatively new fields of research, and this could perhaps explain the infrequent use of these sources in literary research. A type of literature that is not at all cited in applications is encyclopedias, and this is probably because these sources are tools used in the writing of a scholarly text. Encyclopedias and dictionaries are used for specific tasks and purposes and not for providing background or showing familiarity with a topic.

The Importance of the English Language
The language of sources in the natural sciences is rarely an issue, as English is the ‘lingua franca’ of communication. The prominence of English in the
social sciences and the humanities is also strong, but here other major international languages such as German, French and Spanish play an important role, as well as smaller local languages such as Swedish. The similarity between the Scandinavian languages as well as the strong connection between Swedish, Norwegian and Danish literature justified the inclusion of these categories. Noteworthy in the group of other languages are Finnish, Icelandic (mainly due to the Icelandic sagas), Italian, Portuguese, and Russian.

Fig. 2 Language of cited sources in TFL 2000-2009 and research applications 2006-2009.

The major difference between the two datasets is the number of cited sources in Swedish, which is much higher in TFL. This is not surprising as none of the studied articles in TFL is in English, while 35 percent of the applications are written in English. In addition, authors in TFL are from the field of ‘Swedish Literature/literature general’ while applications to the research council come from literature departments in many different languages such as English, German, French, and Spanish, to mention a few. Overall, a majority of sources are either in English or Swedish, while German and French are the two other languages often read and cited by literature scholars (fig. 2). However, quite a few of the cited sources were translations to Swedish or English, and this must be taken into account in this comparison. The citing of sources from other Scandinavian languages is rather uncommon, which is somewhat surprising given the close relations between these countries. It is also the case that a majority of citations to Scandinavian sources are given by Norwegian and Danish scholars who publish articles in TFL. These results could be compared to studies of cited sources in Italian, Spanish, German, and French literature where English sources are scarce. The percentage of cited sources in English stretches from 15 percent in German literature to 7.9 percent in Italian literature (Cullars 1989;1990). Thus, the size of the
research field and the size of the language play an important role for the use of foreign and English-language sources.

The extensive citing of sources in English warrants a discussion, as many disciplines in the humanities stress the importance of local languages, in this case Swedish. However, if the use of English-language sources increase even more a strange situation may occur where literary scholars predominantly cite English-language sources but publish in Swedish. A possible development is that Swedish literary scholars to a larger degree start to publish in English, and make their research internationally available, and one sign—however small—is the decision of TFL to include English abstracts for all articles from 2009 and onwards.

**Aging and the ‘Hierarchy’ of Disciplines**

The wide age span of cited sources is an often-mentioned characteristic of publications in many research fields in the humanities. The age of sources used—in other words their immediacy in time—has been seen as one of the major differences between the natural sciences, the social sciences and the humanities. Differences in the age of used sources have also been identified within smaller research specialties such as research on the Dead Sea Scrolls (Heisey 1988). Often, it has been assumed that fields using recent sources have a fast-moving research front that can be identified. In a highly influential and contested study by Cole (1983) a ‘hierarchy’ of sciences on the basis of the age of used sources was established. Literary studies were characterized as an ‘un-scientific’ field with low codification; unable to accumulate knowledge in the manner of the natural sciences. Although a ‘research frontier’ in the definition used by Cole (1983) does not exist in the field of literature, previous studies have shown that literary scholars do cite recent material to a large extent, and the bulk of references is to recently published sources (Cullars 1989; Nolen 2010).

In order to compare the age structure of references in the two datasets, the same time-period was used for both TFL and research applications. The study of TFL was therefore restricted to articles from the years 2006-2009 (Fig 3).
There are no large differences in the age structure of sources between TFL and research applications. A great part of the references are quite recent, with 38 percent of the references in TFL being from 2001 and younger, while the same percentage for research applications is 31 percent. In a previous study 37.5 percent and 40.9 percent of the references in books and journals, respectively, were to sources 10 years old or younger (Thompson, 2002, p. 128). The results of this study also show that journal articles cite more recent sources than those given in applications. The results can be seen as somewhat surprising, as one might expect that authors of research application would want to include recent sources in order to show the timeliness of their proposed project. On the other hand several studies have shown that journal articles in general cite newer sources than books (Nolen, 2010; Thompson, 2002). These findings are in line with results from previous studies: a majority of cited sources are reasonably recent (within 10-15 years) but the dependence on older materials is much greater than in the natural sciences. Thus, publications in the humanities do get cited later, and there is a considerable difference in the rate of obsolescence in the humanities. Publications in literary studies may remain relevant and cited for a long time, while a majority (46%-75%) of the articles in physics did not receive any citations after 14 years (Glänzel & Schoepflin, 1994, cited by Nederhof, 2006, p. 87). The aging of references is indeed an important issue when conducting citation analysis, and “[o]ne needs to compensate for the smaller volumes of citations in the social sciences and humanities, for instance by monitoring a longer period of time, or by using longer citation windows.” (Nederhof, 2006, p. 93). In fact, many of the highly cited sources in literary

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36 Please notice the difference in length of time periods as indicated on the x-axis.
studies are quite old. For an example, the number of citations to Walter Benjamin’s *Illuminations* has grown for almost every year since it was published in 1968 (Hammarfelt, 2011a). Lacking the pace, research front, and codification of urban fields, scholars in the humanities can reassure themselves with the possibility of being read (and hopefully cited) not only ten years but even thirty, fifty or a hundred years from now. The reliance on both older materials as well as new publications accentuates the need for large library collections that both preserve older sources and provide access to recent publications.

‘Gendered’ Citation Practices

Citation analysis, especially when using established citation databases, rarely studies issues related to gender. This is partly due to the fact that the referencing standards of journals and the indexing procedures of Thomson Reuters *WoS* make it difficult to study the gender of cited sources. *Elsevier Scopus*, on the other hand, provides the full name of authors, which makes it possible to distinguish between male authors and female authors, but the laborious and sometimes complicated procedure of attributing gender to names still remains. These limitations have entailed that bibliometric studies that address the issue of gender in a systematic manner often are based on a small dataset.

In this article all references were checked and indexed either as male or female on the basis of first names. In some cases it was impossible to categorize the source—often because authors did not give the full name in the reference; in other cases publications were co-authored by a female author and a male author. In both instances these references were categorized as ‘Not disclosed/both’ (fig 4).

![Graph](image)

The results show that women are considerably more cited in research applications than in journal articles. One simple explanation for this could be that the percentage of female research applicants (57 percent) is higher than the percentage of female article authors (43 percent). Thus, it seems that more female article authors/applicants results in more references to sources written by women. Similar conclusions were drawn by Håkansson (2005) who, in a study of three library journals, found that male authors might have a bias towards citing other men. This could be labeled a ‘gendered Matthew effect.’ Hutson (2002), who also studied gendered citation practices, tested the hypothesis that male authors tend to cite men more than female authors do. He studied four journals in the field of archeology, and only in one could he detect a pattern where male authors had a bias towards citing other men. On the other hand the rate of citations to women was below the rate of publications by women, and this regardless of the gender of the citing author (Hutson, 2002, p. 340).

In a study of the citation characteristics of monographs in philosophy Cullars (1998) found that over 90 percent of the given citations were to male authors. The few citations given to sources written by women (8.5 percent) often came from monographs written by female authors dealing with women studies/gender studies. This pattern—although less prominent—is evident in the material studied here as well. Articles or applications adopting a gender perspective cite sources written by women to a higher degree. Female authors are also more often cited in studies dealing with popular culture and children’s literature, while ‘traditional’ and well-established topics and approaches are more male oriented. Davenport and Snyder (1995) formulated a few plausible reasons for female authors being less cited than male authors. One possible explanation is that men choose to cite male authors deliberately, or it could be so that male researchers are perceived as more prestigious and that they therefore attract more citations. Another reason might be that female and male researchers focus on different topics, and that this in turn influences how references are given. All these are possible explanations for a phenomenon that warrants studies going beyond the mere distribution of citations.

Intellectual Patterns in Swedish Literary Studies

Co-citation analysis of journals is often employed in order to map research fields; however the use of journals for mapping intellectual structure in the humanities can be questioned (Leydesdorff & Salah, 2010). In fact, individual authors often attract more citations than the most cited journals (Ham-

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37 In all there were 215 different authors, 122 male, 92 female, and one co-authored by a women and a man.
Consequently, co-citation analysis of authors was chosen as the best possible option for depicting the intellectual base of Swedish literary research. A possible alternative to the use of author co-citation would be to map specific documents, but this method seems less suitable considering the limited dataset and the low volumes of citations. A further complication of using a document approach on ‘book-based’ disciplines is the handling of different editions and translations. Thus, one could count all editions and translations of a specific work as one—a laborious and questionable strategy—or one could count citations to every edition, which would result in low citation counts that do not indicate actual influence. Instead, first authors in the two datasets were ranked on the basis of citations, and those above the threshold of five citations were selected for further analysis. As the effort is to depict the structure of literary studies as a research field, only authors that could broadly be defined as ‘scholarly’ were included in the map. Hence, authors such as William Shakespeare, Virginia Woolf, or August Strindberg were not included. The separation between scholars and literary authors might seem apparent, but the delineation cannot always be made. The examples of Umberto Eco both writing scholarly works and fiction, Toni Morrison, Nobel laureate in literature as well as an author of influential scholarly monographs in literary studies, and in the Swedish context Lars Gustafsson, both a poet and novelist as well as a philosopher and critic, illustrate the blurriness of this boundary.

The intellectual base of a discipline can be defined as the core documents of that discipline, publications that scholars within a specific field should have read or cited. Since the scope of this study does not lend itself to an analysis on the document level, authors have been mapped instead. The top-cited authors in the two datasets used here have been compared to an earlier dataset consisting of 34 literature journals indexed in WoS (Hammarfelt, 2011b). Eight authors are among the top twenty in all three datasets: Mikhail Bakthin, Roland Barthes, Walter Benjamin, Pierre Bourdieu, Judith Butler, Jacques Derrida, Michel Foucault, and Gérard Genette (Appendix 1). Hence, a common intellectual base of authors and texts that are highly cited in a Swedish literature journal, in applications to the Swedish Research Council, and in a large collection of literature journals indexed in WoS can be identified. The intellectual base consists of well-known scholars and intellectuals with an impact well beyond the field of literary studies. All authors, with the exception of Butler, are ‘dead white males’ of European origin associated with critical theories about language, literature, and society, and quite a few can be described as ‘French theorists’ (Cusset, 2008). These eight can be regarded as interdisciplinary giants who have an immense impact in many fields in the humanities and social sciences. The impact of these major figures, which in some respects form research areas and journals of their own, stretches well beyond disciplinary, linguistic, and geopolitical borders. The
impact and dissemination of Walter Benjamin’s *Illuminations* can serve as an example (Hammarfelt, 2011a).

Co-citation maps were used in order to depict and compare the structure of literary studies as it emerges from the two different sources. Co-citation measures the frequency of two items being cited together (e.g. occurring in the reference list of the citing document) in a dataset (Marshakova, 1973; Small, 1973). Data from the studied applications and *TFL* were manually inserted in *Microsoft Excel* and the co-citation frequencies were calculated using *Bibexcel* (Persson, Danell & Schneider, 2008). The co-citation pairs were then inserted in *Mapequation*: a software for visualizing relational data (Rosvall, Axelsson & Bergstrom, 2009). Only authors with the highest ‘page rank’ and the links with the highest weight were visualized using the Kamada Kawai algorithm (Kamada Kawai, 1989). Thus, only the most connected authors and not necessarily the most cited ones are depicted in the maps (Fig. 5 and Fig. 6).

Figure 5. Co-citation analysis of *TFL* 2000-2009, 50 most connected authors with 5 citations or more
These maps are based on the strongest links, and the mapping technique focuses on the relative degree of connectivity between nodes. Thus, large nodes have a lot of connections and not necessarily the most citations, although these two often converge. The largest structure in the map of TFL is the one formed around Derrida, Bourdieu, Barthes and Paul de Man. Here we also find the most connected pair in the dataset; de Man and Derrida (seven co-citations). The relationships between the two theorists appear relatively strong, and the connection is established through their central position in the theoretical branch of deconstructionism. Two thematically oriented clusters, one with Butler as a central node (focusing on gender theory), and one consisting of Marshall McLuhan, Friedrich Kittler, Katherine Hayles, and Jay David Bolter (which focuses on media theory), are present in the map. In general, authors are arranged in star or pair structures, which is due to the low density of citations as well as the mapping technique used.

The small volume of citations in the humanities is reflected in these maps: although a long time frame (ten years) was used, the most cited author, Derrida, only received 20 citations (Appendix 1). This low volume of citations is related to literary studies having communication patterns that can be described as ‘rural.’ (Becher & Trowler 2001, p. 106-108). Thus, relatively few scholars focus on 19th-century Swedish literature in comparison to, for example, medical science specializations. Therefore, the potential audience is smaller and consequently potential citers much fewer. The number of potential readers (and citers) of a publication decreases even more if one considers that research in Swedish literature is often limited by language or topics that are foremost of national interest.

The most noticeable difference between this map and the previous one is the central position of Edward Said and more generally the prominence of authors associated with postcolonial theory. The postcolonial perspective is emphasized in research applications, while the psychoanalytical is almost invisible in this dataset; Sigmund Freud receives only two citations among the applications but eight in TFL, while Said received five citations in TFL but twelve in the research applications. This could be a result of the different time periods covered by the two sources. This suggests that postcolonial research is a more recent, more fashionable area, of research than the psychoanalytical approach. Another explanation is that authors of research applications come from a wider range of departments and disciplines (e.g. English, French, German, Spanish), and it might be that authors such as Said, Homi Bhabha, and Gayatri Spivak have had a greater influence here than in Swedish/comparative literary studies. The impact of these authors is also evident in WoS-indexed journals, and if research applications are a valid prediction of research to be done, then one could speculate that the postcolonial approach might become more visible in TFL in the future. Noteworthy as well is the greater connectedness and central position of Foucault in the map depicting citation structures in sources from grant applications (fig. 6).
A recurring connection in both maps is the structure including McLuhan, Kittler, and Hayles. These three scholars can be regarded as media theorists rather than literature scholars—they are often cited in articles dealing with ‘new media’ and their consequences for literature. A connection between authors interested in children’s literature and the sociology of literature is visible through citations in grant applications. This group mainly consists of Swedish scholars—Johan Svedjedahl, Lars Furuland, Ulf Boethius, Ying Toijer-Nilsson, Vivi Edström, and Birgitta Holm—and it shows that scholars are associated not only through theory but also through their research focus. The pattern that authors are associated through topics (children’s literature or 18th-century studies) or through theoretical approach (deconstructionism or gender theory) was also recognized in a co-citation analysis of 38 literature journals indexed in WoS (Hammarfelt & Åström, 2011).

The visibility of Swedish scholars is greater in the case of applications (fig. 6), for which the aforementioned tendency of self-citation might be one
explanation, but the difference can only partly be explained this way as Swedish authors are highly cited in TFL as well (appendix). Rather it is the connections between Swedish authors that are more pronounced in references given in research applications. A telling example is Ulf Boethius—a literary scholar specialized in children’s literature—who is cited only five times and in four of these occasions he is cited together with Lars Furuland. Thus, although not especially highly cited he is strongly connected with another author.

In all we find both contemporary scholars and ‘classical’ authors included in the intellectual base of literary studies. Several of the authors are literary scholars, but, as noted in previous studies, many of the highly cited authors and sources come from outside the discipline (Hammarfelt, 2011b). A comparison between the datasets used here and citation data from journals in WoS indicates that there is a common intellectual base for the field. The intellectual base of Swedish literary studies as it emerges from these two sources consists of a mix of internationally renowned intellectuals as well as contemporary Swedish literature scholars. These two groups are intermingled as Swedish scholars introduce or associate themselves with theoretical specializations. An example of this is the pairing of Butler with Tiina Rosenberg, who is among those introducing Butler in a Swedish context. Hence, Swedish literary studies share a ‘transnational’ base of authors that are used also in English and American literary studies, with the addition of a ‘local’ base consisting of Swedish literary scholars. The small volumes of citations and thus the low co-citation frequencies limit the possibilities of depicting larger structures in the field. Groups of authors that are more often cited together can be distinguished, but sub-disciplines and specialties are hard to discern. The low degree of specialization of research in the field could be one reason for this, and therefore larger datasets might not reveal more in this matter. What could be identified were some research specialties (e.g. children’s literature and sociology of literature) as well as a few theoretical approaches (post-colonialism and gender studies).

Discussion

This study supports the notion that current citation databases such as Thomson Reuters WoS or Elsevier Scopus cannot be used for evaluating researchers in fields such as literary studies. The main reason is the poor coverage of the field in these databases as the most cited sources—monographs (51-64 percent) and anthologies (20-21 percent)—are absent. Including monographs, anthologies, and journals published both internationally and nationally would be necessary in order to cover the field. The importance of using other source materials than journal articles is emphasized by the different citation characteristics of journals compared to other sources e.g. mono-
graphs or grant applications. Thus, references made in journals cannot be regarded as typical for the field as a whole.

Two groups of highly cited authors were found in the two datasets (1) a group of international and interdisciplinary ‘giants’ and (2) a group of leading scholars in the local and specialized context of Swedish literary studies. Thus, one could speculate that the same pattern would recur in literary studies in other small countries and languages, while the pattern may be different in Spanish, German, or French literature. Swedish scholars who are visible in this study and relatively highly cited in national sources are invisible or almost invisible in WoS. The recently initiated inclusion of a book citation index in WoS will provide scholars interested in the humanities with valuable data, not least in comparing the citation characteristics and patterns of books and journals. Language, however, remains as a crucial factor, and studies of citations in non-English sources is needed for a fair and comprehensive coverage of the humanities.

The extensive citing of English-language sources in Swedish literary studies points to differences in the communication system compared to many other disciplines. The main language of the analyzed articles and applications is in Swedish, while the most common language of cited sources is English. The disproportion is partly a consequence of a being a small country and a small language. The differences between the consumption (cited sources) and the production (citing sources) limit the possibilities of Swedish literary scholars being cited by Swedish and international colleagues, which might eventually lead to a further emphasis on publishing in English language.

Literary studies in Sweden foremost cite monographs, and anthologies are also an important source in the field. International sources—especially English-language ones—are frequently used. This has consequences for research libraries, as foreign monographs are often the first category in which cuts in funds are made when the cost of journals rises (Nolen 2010). Thus, the acquiring of foreign monographs—also in German and French—should be a priority for libraries serving literary scholars. Anthologies, both of local and international origin also play an important role in the field. The results show that literary scholars are highly dependent on up-to-date publications and that extensive collections of older materials are therefore not enough for a resourceful university library.

The study seems to support the assumption that the gender of the author affects the gender of cited references. Female authors tend to cite women

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38 All Swedish authors among the top twenty (Appendix 3) were searched for in WoS. A total of 34 publications were found, but of these 26 items were from the now discontinued journal BLM. These items, many of which were reviews, did receive a total of 18 citations, but 13 of those were to an article written by Paulina de los Reyes in the field of labor relations. Thus, the top-cited Swedish literary scholars received 5 citations in total in the WoS. [www.webofknowledge.com, 2011-10-04]
more often, or it might, as suggested by previous studies, be that male authors have a bias towards citing other men. The issue of how gender influences referencing practices of scholars is still an underdeveloped area of research, and only tentative explanations for these findings have been given so far. If male authors have a bias towards citing other men, this would give them an advantage over female researchers in the competition for positions and resources. Thus, larger studies comparing a range of fields and factors would be beneficial for a better understanding of how gender affects referencing practices and influences bibliometric evaluations.

Writing and reviewing grant applications is a growing part of the daily work for researchers regardless of field and positions. It is estimated that researchers spend 30-40 percent of their time writing or evaluating research proposals (Shapin 2008, p. 245). Consequently, research applications are an increasingly important part of academic life, and the applications as such should be regarded as an important document of study for scholars interested in the sociology of academic life and the structure and dynamics of research fields. Applications emerged as a suitable data source for this study, as they are produced annually and follow a given format. Reviewers judge all research applications, and a few of them are deemed worthy of funding. Studies have been made of how researchers judge applicants and applications, showing that the preferences and strategies when assessing quality differ considerably across disciplines (Lamont, 2009). However, little is known about how one of the more persuasive elements of scholarly texts—the reference—influences the judgments of reviewers. Therefore, it would be of interest to study if citation characteristics and patterns differ between successful and unsuccessful applications. The small proportion of successful applications (21 out of 320) in this study did not lend itself to such comparisons, but hopefully such analyses will be possible in the future.

Manual indexing of references is both a laborious and sometimes complicated endeavor. The actual harvesting and indexing reveal some of the messiness of doing citation analysis—an aspect that is often concealed in the major citation databases. The various citation practices in a field such as literary studies present complications regarding how to define and index references. A further matter is whether references and authors should be counted only the first time they appear in a footnote or in a reference list. There are no given answers for these questions, and scholars approach these difficulties differently depending on the material used and the purpose of the study. Choices and deliberations are also made by commercial citation indexes although scholars seldom reflect on the processes of defining, selecting, and counting references when using this ready-made data, processes which in the case of the humanities are not as evident as one might think.

Citation practices are shaped not only by disciplinary differences, language, or gender but also by academic traditions. An example of this is the dissertation, which is more important, and therefore more often cited, in the
German (and Swedish) tradition than in the Anglo-Saxon one. Thus, citation characteristics are governed by several factors such as: disciplinary and epistemic cultures, the publication channel used, gender of the author, academic tradition and the language of the citing publication. These factors are interrelated, and disciplinary culture is connected to the publishing channel, which in turn is shaped by the academic tradition in a specific country or region. These factors concern rural fields such as literary studies to a larger degree, since these fields are much more prone to develop a local tradition and culture. The natural sciences on the other hand—although large epistemic differences exist also here (Knorr-Cetina, 1999)—form a more coherent culture when it comes to language (English) and publication channel (journals). Thus, bibliometric studies of fields in the humanities must take these factors into account when choosing methods, selecting material, and interpreting the result of the analysis.

The notion of fields being either urban or rural is, although simplified, a useful description for understanding the differences in publication patterns and citation practices of disciplines and fields. The low concentration of researchers in rural fields has consequences for bibliometric studies. First, citations are more scattered, as an effect of research being less concentrated on a few topics, and second, citations are given in a wide array of publication forms (e.g. monographs, anthologies, and journal articles). The fact that the volume of citations differs between fields is well known, and usually bibliometric studies try to weigh these differences when comparing fields with each other. However, adjusting the scale might be enough when studying ‘urban’ and ‘suburban’ fields, but the ‘rural’ scenario could—as implied by the present study—be so different that the measuring system as such can be questioned.
Appendix

Twenty most highly cited authors in the two datasets with a comparison to WoS data. Swedish authors in Italics. Overlapping authors in bold.

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<td>2 Judith Butler (20)</td>
<td>Gerard Genette (16)</td>
<td>Michel Foucault (622 cit.)</td>
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<td>3 Roland Barthes (16)</td>
<td>Jacques Derrida (13)</td>
<td>Walter Benjamin (483 cit.)</td>
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<td>4 Gerard Genette (14)</td>
<td>Homi Bhabha (12)</td>
<td>Roland Barthes (442 cit.)</td>
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<td>5 Arne Melberg (13)</td>
<td>Edward Said (12)</td>
<td>Fredric Jameson (407 cit.)</td>
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<td>6 Horace Engdahl (12)</td>
<td>Katherine Hayles (10)</td>
<td>Mikhail Bakthin (337)</td>
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<td>7 Paul De Man (12)</td>
<td>Paul Ricoeur (10)</td>
<td>Judith Butler (325 cit.)</td>
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<td>8 Walter Benjamin (12)</td>
<td>Paulina De Los Reyes (9)</td>
<td>Edward Said (318 cit.)</td>
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<td>9 Michel Foucault (11)</td>
<td>Mikhail Bakthin (9)</td>
<td>Pierre Bourdieu (300 cit)</td>
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<td>10 Friedrich Kittler (11)</td>
<td>Judith Butler (9)</td>
<td>Gilles Deleuze (282 cit.)</td>
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<td>12 Jacques Rancière (11)</td>
<td>Pierre Bourdieu (7)</td>
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<td>13 Theodore Adorno (10)</td>
<td>Lars Furuland (7)</td>
<td>Raymond Williams (220)</td>
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<td>14 Jonathan Culler (10)</td>
<td>Fredric Jameson (7)</td>
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<td>Julia Kristeva (205)</td>
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<td>16 Mikhail Bakthin (9)</td>
<td>Benedict Anderson (6)</td>
<td>Paul de Man (205)</td>
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<td>17 Stefan Bergsten (9)</td>
<td>Roland Barthes (6)</td>
<td>Slavoj Zizek (202)</td>
</tr>
<tr>
<td>18 Pierre Bourdieu (9)</td>
<td>Walter Benjamin (6)</td>
<td>Gayatri C. Spivak (192)</td>
</tr>
<tr>
<td>19 Peter Brooks (9)</td>
<td>Pascal Casanova (6)</td>
<td>Terry Eagleton (191)</td>
</tr>
<tr>
<td>20 Seymour Chatman (9)</td>
<td>Jonathan Culler (6)</td>
<td>Jean-François Lyotard (176)</td>
</tr>
</tbody>
</table>

39 Other authors with 9 citations were Gilles Deleuze, Olof Lagercrantz, and Martha Nussbaum.
40 Other authors with 6 citations were Vivi Edström, Alastair Fowler, Friedrich Kittler, Julia Kristeva, W.J. T Mitchell, Anna Williams, Ebba Witt-Brattström, and Anders Öhman.
Literature


Cullars, J. M. (1990), Citation characteristics of Italian and Spanish literary monographs, *The Library Quarterly*, Vol. 60 No. 4, pp. 337-356.


8. Summary and Discussion

This thesis has followed the scholarly reference through its use in the text, across disciplinary borders, and into the machinery of bibliometric analysis. The current chapter summarizes some of the insights gained, highlights a few conclusions, and reflects on the methods and materials used. It outlines the potential of bibliometric studies on the humanities and discusses the problems associated with the use of bibliometric measures in research evaluation. The findings from the four studies are summarized in the first part of the chapter, followed by reflections on the methodology used, and the chapter ends with a discussion regarding the evaluation of research in the humanities using bibliometric methods.

Citation Patterns in Literary Studies

Sociologists of science and information scientists have foremost focused on how science is communicated, and humanist scholars have been successful in analyzing the ‘practices’ and ‘cultures’ of the natural sciences while analyses of their own fields have been rare. However, such studies are beneficial not only for reflecting on the assumptions regarding the characteristics of scholarship in the humanities but also in order to assess the originality and value of research in these fields.

References are used in all academic fields in order to acknowledge previous research, to develop the arguments made, and to frame the context in which research is situated. However, referencing practices and citation patterns differ depending on the social and intellectual organization of the research field. Literary studies can be described as a fragmented, divergent, interdisciplinary, and rural field, and, as I show below, are these characteristics important for understanding referencing practices and citation patterns.

The first article (chapter four) outlines the implications that referencing practices in the humanities have for the use of bibliometric methods. In this study I show how the search for and the use of sources in the humanities influences referencing practices and citation patterns.

The search for sources is intrinsically bound up with the topics and problems addressed in research. Previous studies have found that literature scholars often browse through library shelves and that chaining (following references) is a common method for locating literature. This is partly due to
searches being focused not only on ‘topical relevance’ (e.g. sources on a specific period, author or context) but also towards ‘paradigmatic relevance’ (e.g. offering a perspective on a topic). The variety and the combination of sources used by literature scholars can be further explained by the concept of ‘bisociation.’ Bisociation, a concept introduced by Koestler, describes how novelty in research can be gained through the mix of two sources that at first can be seen as unrelated. The skillful ‘remixing’ of sources—connecting seemingly disparate texts and creating new insights from these—is valued as an act of creativity and originality by many scholars. The methods for searching, the focus on both topical as well as paradigmatic relevance and the remixing of sources suggest that a variety of sources from different fields and contexts are used in research.

The choice of annotation system may appear to be a mere technical issue, but the use of footnotes, endnotes, or references in brackets also have epistemological consequences. An example is the choice of using integral references where the author’s name is given in the main text or a non-integral one (where author’s name is given in a parentheses or a footnote/endnote). A system using integral references that includes both the first and family name in the text entails that claims and references are tied more closely to the person making a specific claim. The use of integral references is common in the humanities and, as previous research has shown, they are often accompanied by hedging, evoking a discussion such as ‘say,’ ‘suggest,’ and ‘argue.’ Also, negative or contrastive references (references that go against the conclusions drawn in the text) are common in the humanities. Furthermore, analyses of hedgings that are used in scholarly texts show that researchers in the humanities are given a great deal of autonomy when evaluating the statements of other scholars. Thus, references are often used for evoking a discussion or for setting the context in which research is placed. Obviously, references are given to support ‘knowledge claims’ and to acknowledge previous research, but the mix of sources is also used to create one’s own unique intellectual identity. The author is given considerable freedom in evaluating sources in the humanities, and the meaning of a reference is ambiguous when separated from the text in which it is given.

Citation analysis as it is commonly used today presupposes a strong topicoal coherence between citing and cited sources. Also, the popular method of co-citation analysis implies that sources cited by a document are somewhat focused on the same area of research. However, the degree of topical coherence among sources cited can be low in research fields such as literary studies. Thus, I suggest that citation patterns and structures in literary studies can only be understood in relation to referencing practices in the field.

In the second article (chapter five) I use a large selection of English-language journals to analyze the intellectual base (highly cited texts) and the interdisciplinarity of literary studies. In order to gain an historical understanding of developments in the field two time periods (1978–1987) and
(1998–2007) were selected for analysis. The intellectual base of literary studies could be identified through an analysis of citations in 34 literature journals. A majority of the 200 most cited publications was single-authored monographs, and a stable canon was identified, including authors such as: Aristotle, Barthes, Benjamin, Derrida, Foucault, Frye, Genette, Lacan, Ovid, Joyce, and Wittgenstein. A few recent authors—such as Fredric Jameson, Homi Bhabha, and Judith Butler—were included among the highly cited sources, but the dominance of ‘dead white males’ is still evident. The findings show that the ‘vocational’ level (literary works) will intermingle with the ‘epistemological level’ (scholarly works) when doing citation analysis on literary studies. The citation analyst can make a decision to exclude non-scholarly sources, although this can be difficult and time consuming, or one can, as I have practiced in this study, make a point of including all cited sources. In fact, the interplay between the material studied (vocational) and scholarly works (epistemological) in fields such as literary studies or history is an interesting venue of research in itself.

In order to study the interdisciplinarity of the field I compared the classification of the 200 most often cited monographs in the two periods. An increase in the interdisciplinarity of the field during the last 20 years—at least when looking at monographs that are highly cited in literature journals—was found. Publications indexed in the category of ‘literature’ are less frequently cited, and influences from other disciplines (such as sociology, art history and history) have increased. The citing of literary works (novels, poetry, drama) is also decreasing, which could be a sign of a broadening and diversification of the field to other materials besides the literary text.

The relatively high share of interdisciplinary citations found in both periods can be explained by literary studies being a weakly bound, divergent field that lacks a central core. The degree to which colleagues are dependent on their peers for recognition is another important factor for understanding citation patterns; the more dependent the individual researcher is on a distinct group of scholars for recognition, the more concentrated to a core group of researchers will citations be. Literary studies is a field characterized by low mutual dependency between researchers, and accordingly the citation frequencies—even for highly cited authors—is low.

However, the organization of the research field does not explain the increase in interdisciplinary citing, and the tendency of citing sources from the social sciences. The findings of this study supports the notion of a ‘social turn’ in contemporary literary studies, and the results can be interpreted as a move from the ‘rhetorical’ to the ‘social.’ This development can be explained by a general focus on the social across research fields in the humanities, and the emergence of fields such as cultural, postcolonial, and gender studies. A further focus on emergent social issues connected to gender issues and postcolonial perspectives can also be interpreted as an adherence to calls for more reflexive and ‘useable’ research. The turn towards the social can
thus be viewed against the background of ‘a new production of knowledge’ where the social context and the usability of research is in focus. Rather than pointing to one of these explanations in general, I propose that these trends together are plausible explanations for the increased citing of sources from the social sciences. A general emphasis on interdisciplinary research in academia must also be considered.

The interdisciplinarity of many fields in the humanities is illustrated by publications that are highly cited across several research fields. Such an interdisciplinary giant is the German writer and literary critic Walter Benjamin. As I show in chapter six, the anthology of his essays titled *Illuminations* has been cited over four thousand times across the humanities and the social sciences. The number of citations to the publication has grown almost every year since it was published in 1968. The growth of citations to *Illuminations* is partly due to the growth of citing items (e.g. journals and journal articles); however, significant growth can be discerned even when limited to a fixed set of journals.

The growth of citations to *Illuminations* is connected to its interdisciplinary reach. The many ‘subject categories’ in which journals citing *Illuminations* are indexed is an indication of this, and the sheer number of different journals in which *Illuminations* is cited is another. Obviously Benjamin’s essays are being cited in subject categories such as ‘literature’ or ‘literary theory’ but categories such as ‘sociology,’ ‘anthropology,’ and ‘communication’ are also common. More surprising is that *Illuminations* is quite often cited by journals categorized as being on the border to the natural sciences (e.g. ‘geography’). There are even some citations coming from fields such as ‘computer science’ and ‘physics.’

The extensive citing of Benjamin is not only an indication of the applicability of his works but also an example of how theories in the social sciences and the humanities are adopted in various contexts. The growth of citations can also be viewed in relation to the ‘age of theory’ and a growing interest in new media forms. However, one must keep in mind that concepts and theories are adjusted when exported to new fields. Thus, a potential for translation, adaptation, and transformation is needed in order to become an interdisciplinary classic.

In the fourth study, references in the Swedish literary journal *Tidskrift för Litteraturvetenskap*, as well as references in applications for research grants to the Swedish research council, are analyzed. The findings show that monographs followed by anthologies and journal articles are the most frequently cited publications, the most common language of cited publications is English and Swedish, and the time span of publications is broad.

The low citation frequencies of individual authors and the difficulty of discerning research specialties in the co-citation maps of highly cited authors in Swedish literary studies can be explained by the research field being characterized as a ‘rural.’ Rural suggests that the concentration of researchers
and publications on each topic or research specialty is low. The low dependency on other researchers is also a key aspect when describing a field as rural in its organization. The rural character of literary studies has consequences for the communication of research. As there is little competition between researchers and few scholars are engaged in research on the same topic, the need for fast publication is low. The slow pace—the absence of a research front—make scholars less prone to cite recent research, and their colleagues. Thus, the local and national focus of much research in literary studies is a further factor that limits the possibilities of being cited.

A further issue—which might be of concern for literary studies in Sweden—is the language discrepancy between citing and cited material. Thus, although almost all articles in TFL are in Swedish, a majority of the material that these articles cite are in English. This is partly an effect of being a small country, and the same pattern is not evident in studies of German literature or French literature. However, the findings are still worrisome for the field as the frequent citing of foreign sources while publishing in Swedish limits the possibility of an effective communication between researchers. Further studies—with a historical view—could possibly show if referencing practices and publication patterns of Swedish literary scholars slowly are becoming more internationally oriented or if a local focus persists.

Three main characteristics that influence referencing practice and citation patterns can be discerned from the studies recapitulated above: the low dependence on colleagues, the rural organization, and the diverse audience of the field. The heterogeneous audience, the rural organization, and the low dependence on colleagues are interrelated. The diverse audience makes it possible for individual researchers to find readers outside their own specialty, with the consequence that researchers are less dependent on colleagues for recognition. The high task uncertainty of literary studies and the low dependence on colleagues gives the individual scholar great freedom in developing a unique research profile, which results in researchers being dispersed across many different topics with little communication between them. Thus, scholars in the humanities enjoy many possibilities when choosing topic, publication channel, and whom to cite, but this in turn limits the potential of getting ‘rewards’ in the form of citations.

Material and Methodology Revisited
The use of references and citation patterns in literary studies requires that bibliometric methods be modified in order to be applicable. The type of sources cited in different disciplines has been dealt with in several studies, and this study adds to the conclusions reached there. However, few have discussed the implications that differences in referencing practices between fields have for bibliometric analyses. The research questions addressed and
the goals of research differ considerably across fields, and the level varies to which scholars have to relate to previous research. Long time frames for selecting materials is also often mentioned as important when analyzing fields in the humanities. The necessity of adapting for type and age of materials is discussed here as well, but there are other issues that also have to be dealt with, such as the definition of fields and the transaction of references into citations.

The definition of fields or disciplines is a major issue when conducting bibliometric research. The most common method is to choose a selection of journals to represent a discipline or a field. However, this approach—although convenient—has several drawbacks: first, it presupposes that journals are based on research fields, which is not always the case; rather a journal could be representative of a specialty within a discipline, or it could be a multidisciplinary journal. Furthermore, the actual selection of journals can be made in several steps or ways—it could be based on interviews with researchers, on ‘categories’ in a database (e.g. WoS subject categories), or on independent lists of journals compiled by researchers or librarians. In the study of the intellectual base (chapter five) the selection was based on a service for researchers at Lund University designed to be an aid in the choice of journal for publication. Together with the ‘Norwegian list’ of highly rated journals, this allowed for a selection based on the judgments of scholars and librarians. This resulted in a broad and inclusive collection of journals that was motivated by the wide definition of literary studies used in the study. However, due to the interdisciplinarity and heterogeneity of many fields in the humanities, it could even be questioned if research fields or journals are proper units for citation analysis. Topics, authors, or publications—as in the case of Illuminations—are alternatives that are well worth exploring.

The problem of defining fields and research areas also applies to the theories used in this thesis. Whitley’s characterization of research fields and the concepts used by Becher and Trowler presuppose that fields and research areas can be clearly demarcated and separated. This becomes evident in a research field such as literary studies that is loosely organized and challenged by ‘new’ interdisciplinary fields such as cultural studies and gender studies. The influential and criticized concept of mode 2 is more sensitive towards these changes, but, on the other hand, it connects developments in contemporary research that are not necessarily interrelated. Thus, the changing and fluent disciplinary landscape cannot be fully understood using either of these models. Combining them—as practiced in this thesis—is one step toward a better understanding of how research is organized, but it seems that the technical and methodological development in this area needs to be accompanied by theoretical refinement as well.

Given the importance of the monograph in literary studies, it can be suggested that books would be the obvious choice of material for citation analysis. Yet, monographs are problematic as material for bibliometric studies, as
they target a diverse audience, they vary in length, and they are published inconsistently. An alternative option—utilized in the study of Swedish literary studies—is to use the field delineation employed by granting bodies such as the Swedish Research Council. The categories used by the research council are based on the traditional demarcation between disciplines, but the benefit of using such an approach is that the applications to the research council are judged by the same epistemological merits (they are seen as equal and comparable competitors). Research applications follow a given and limited format and they are produced annually, and this makes them exploitable for bibliometric analysis. Furthermore, the writing and reviewing of research grant applications is an important scholarly practice that so far has received little attention in studies of science.

The application of bibliometric methods on the humanities also warrants methodological modifications. The combination of using citation databases and library classification of books is an option for incorporating citations to books that I utilized in the analysis of the intellectual base of literary studies (chapter five). Another approach explored in the study of Illuminations is to focus on a specific publication, and specific pages in this publication, using ‘cited reference search.’ This method makes it possible to study the ‘impact’ of specific parts of a publication, which could be valuable in the case of anthologies. The manual indexing of citations is time consuming but also necessary in fields where database coverage is low. Such studies are important in order to depict structures outside the ‘WoS/Scopus universe,’ a universe that only covers a small part of all published research.

The referencing practices of literature scholars are diverse—footnotes, endnotes, and references in brackets are all used—and in my analysis of journal articles and research applications in Swedish literary studies several documents did not include formal references at all. Thus, the definition of what formally should count as a citation is not as straightforward as one might think. This is especially the case in fields that are directed to a diverse audience. Both direct and indirect referencing can be counted, and a formal definition of a reference is needed; especially when different types of referencing systems are used. The need for a formal definition of a reference indicates that the transformation of references to citations—explicit as well as implicit—is sometimes a complicated procedure. Citations are not given: they are constructed by the hands of the indexer.

The conclusions regarding bibliometric methods concern three different issues that have to be addressed when using bibliometric analyses on the humanities: the first issue—and the one discussed in many previous studies—is the problem of data coverage. Citation databases cover only a small part of research in the humanities, as non-journal and non-English-language material is excluded. The second issue—which is pronounced throughout my study—is that referencing practices affect the distribution and structures of citations. It has been claimed that individual differences in referencing be-
behavior between researchers are irrelevant on the aggregated level of citation analysis; however, when discussing referencing practices in a field or area, these differences cannot be ignored. The third issue—which especially the fourth study emphasizes—is that the citation frequencies for researchers in rural fields like literary studies might be so low that citation analysis in its current form is inapplicable.

The methodology used in this thesis has been adopted in order to study citation patterns in literary studies, with the expectation that similar approaches could be fruitful in studying comparable research fields in the humanities and the social sciences. The methods applied in this study should be seen as an example of how bibliometric methods can be customized to be applicable to a field in the humanities; however, much research is still required in order to develop a ‘bibliometrics for the humanities.’

The Politics of Bibliometrics: Measures of Research Quality in the Humanities

The current emphasis on assessment is not limited to the academic sphere; rather it is ubiquitous in modern society. Large resources are invested by state and private enterprises into research every year. Taxpayers, politicians, stockowners and investors want to know how these resources are used and if they are used wisely. Thus, with a further focus on assessment throughout society, scholars cannot avoid the annoyance of being evaluated. What researchers can do is to be a part of the process of establishing standards of how they want to be judged. Scholars in the humanities have been rather absent from the discussion regarding how their research should be valued and evaluated. One reason for this could be that it is hard to reach a consensus regarding research quality within divergent fields with high technical task uncertainty such as literary studies. In this matter bibliometric studies of research fields might serve an important function in making quality standards visible. Hence, bibliometrics makes implicit value systems explicit, and in doing so it stimulates a debate about research goals and research quality in a specific field.

Although bibliometric approaches for evaluating research have been properly criticized for cementing structures, their potential for questioning these structures must be emphasized as well. Bibliometric studies have put the focus on gender bias, problems with peer review, and the undervaluation of interdisciplinary research. The further development of a critical bibliometrics that investigates issues that go beyond rankings and evaluations appears to be increasingly important—not least for the future of bibliometrics as a research field.
The bibliometric community has rightly discouraged the use of traditional citation analysis of journals indexed in citation databases to evaluate the humanities. This conclusion is firmly based on numerous studies showing that the coverage of the humanities in databases such as *Web of Science* or *Scopus* is meager and not representative for the field as a whole. Research evaluation systems, such as the Norwegian one, amend this by incorporating all scholarly publications. The publications included are then awarded points depending on publication channel (monograph, anthology, or journal) and the ‘quality’ of the journal or the publisher. However, the definition of what should count as a ‘scholarly publication’ still remains problematic. There is no consensus on what an important research output is in the humanities; a peer-reviewed journal article, a book chapter in an anthology edited by a renowned scholar, or a monograph at a prestigious non-academic publisher could all be seen as important outputs, and publications directed to a popular audience are in some instances highly rated. The coverage of the Norwegian system suggest that there is a discrepancy between what is considered as a scholarly publication by literary researchers and what is considered a scholarly item by the evaluation system.

The humanities have always played a role both in academia and in culture and society at large, and prominent scholars have often been public figures (e.g. intellectuals) that take part in the cultural and political debate. Furthermore, the boundary between scholarly and popular publications is elusive, as cultural journals or monthly magazines might be considered possible outlets of research. Literary studies is diverse and heterogenic in its organization, but, on the other hand, it can be seen as well integrated in society as a whole. However, publications directed to a public audience are seldom counted in research assessment exercises, although the communication of research to all parts of society is deemed as important. Consequently, the choice of publications that should be counted in evaluating a research field like literary studies is dependent on our view of the humanities, its purpose in academia and in society at large.

A recurrent problem of evaluating the humanities is the long time span needed for measuring the impact of research. The lifetime, as well as the distribution of citations to a publication over time, is something that has to be considered. The example of *Illuminations*—although exceptional in many respects—is telling. Research by humanities scholars may be relevant in twenty, fifty or even a hundred years, but obviously this aspect cannot be measured today. Hence, some research in the humanities—such as the preservation and translation of cultural heritage—might be of great value for future generations, but it is invisible in the short perspective of research evaluation.

This study, like many others, emphasizes that bibliometric studies of fields such as literary studies need to incorporate non-English and non-journal publications in order to produce valid and fair results. It is also im-
important to distinguish between scholarly and non-scholarly publications, and it is obvious that a simple adaptation of definitions from the natural sciences would not solve this matter in a satisfactory manner. Instead, evaluations of the humanities must incorporate a wide range of sources, and make these comparable. Ultimately, the choice of an evaluation system is a political one, but bibliometricians and the researchers involved should articulate the implications and consequences that the adoption of a specific system might have.

The appeal of a research evaluation system encompassing all research fields might be strong, but it is my firm belief that a diversity of evaluation methods is the best possible option. Three reasons can be given for this: first, a range of evaluation methods would be in accordance with the diverse organization of research across scholarly fields; second, it is likely that an all encompassing system such as the Norwegian one will have an initial positive effect on the production of research, but as scholars adopt this effect will wear off; and third, it is much more difficult for researchers to ‘play the system’ if a range of evaluation methods are used.

That the advent of research evaluation systems using publication and citation counts will influence the practice of writing and publishing research is evident. It can be assumed that the wide applications of such measures will change publication and referencing practices of scholars in all fields, but how and to what extent is still largely unexplored. The consequences of evaluation schemes are also bound to have diverse effects depending on how research fields are organized. A rural field might adapt in another manner than an urban field, where researchers are highly dependent on each other. It has been suggested that implementation of research evaluation systems might have negative effects—especially in weakly bound fields such as literary studies. It is noteworthy that evaluation systems are implemented with very little research on how they will influence the practices of scholars and the quality of research. Thus, both large quantitative studies and detailed qualitative studies of the implementation of such systems are needed.

Knowledge about referencing practices and citation patterns in different disciplines becomes increasingly important when citations are used as indicators of impact and research quality. This study has shown that the ‘consumption’ of references is a matter of intellectual deliberation, disciplinary tradition, and a practice involved in the writing of academic texts. The study of how researchers cite conveys a great deal about the everyday practices of scholars, while citation patterns and structures reveal much about research focus, theoretical trends, and interdisciplinary interactions. Thus, citations can provide valuable knowledge regarding the organization of scholarly fields and the communication of research, even in fields where the terrain is uneven, the paths less traveled, and where maps are scarce.
9. Sammanfattning

Inledning


Resultaten från dessa analyser diskuteras med hjälp av ett teoretiskt ramverk från vetenskapssociologin. Richard Whitleys (1984) teori om vetenskapens sociala och intellektuella organisation har använts för att förstå cit-

41 Citering är här en översättning av engelskans (citation) och betyder inte ”citering” i betydelsen att ordagrant återge ett specifikt textstycke.
eringspraktiker och citeringsmönster inom litteraturvetenskapen. Whitleys teori tar sin utgångspunkt i skillnader i den grad av frihet som den individuella forskaren har i att välja sitt forskningsämne och de metoder som används. Litteraturvetenskapen karakteriseras enligt denna teori som ”fragmenterad” då de enskilda forskarna har stor frihet att själva bestämma forskningens inriktning och mål samt de metoder som används för att nå dessa mål. Även den tilltänta publiken – som i litteraturvetenskapen består av både forskare och en intresserad allmänhet – påverkar hur forskare publicerar och refererar.

Förutom Whitleys teori har även skillnader mellan vetenskaperna som framhålls av Becher och Trowler (2001) använts. De skiljer mellan hård och mjuka vetenskaper, grundforskning och tillämpad forskning samt mellan discipliner som är ”urbana” (många forskare som fokuserar på samma ämne) eller ”rurala” (få forskare som fokuserar på samma ämnesområde) i sin organisation. Vidare har teorier om förändringar i hur vetenskapen organiseras (”mode 2”) samt teorier om interdisciplinariet inkluderats i det teoretiska ramverket. Mode 2 är ett begrepp som används för att beskriva samtida förändringar i hur forskningen bedrivs. Ökad interdisciplinariet, fokus på användbar forskning, kontextualisering, ökade kostnader och instrumentalisering är några av de fenomen som ingår i begreppet ‘mode 2’. Denna beskrivning av nutida forskning har dock blivit ifrågasatt, och frågan är om dessa förändringar verkligen är relaterade till varandra. Därför fokuserar avhandlingen främst på två aspekter av ‘mode 2’: kontextualisering och interdisciplinariet.


Huruvida publiceringsmönster och citeringspraktiker inom humaniora är under förändring är en omdebatterad fråga. En del forskning pekar emot att så är fallet, men i stort verkar det som att forskningspraktiker inom humaniora är oförändrade. Troligtvis kan flera tendenser inom samtida forskning: digitalisering, open access och användandet av bibliometriska mått för fördelning av resurser påverka hur humanister publicerar och citerar. Dock är många discipliner inom humaniora traditionstyngda vilket innebär att snabba omvålvande förändringar knappast är troliga.
Delstudier

Refereringspraktiker inom humaniora och deras konsekvenser för bibliometritiska analyser

Den första delstudien studerar vilka konsekvenser citeringspraktiker inom humaniora har för användandet av bibliometritiska metoder. Studien är främst teoretisk men bygger också på tidigare forskning inom sociologin, biblioteks- och informationsvetenskapen och lingvistiken. Ett särskilt fokus ligger på hur referensen används i texten, den kontext som den ges i, samt den form som referensen har.

Den vetenskapliga referensen som sådan har en lång historia, och det organiserade användandet av referenser började redan i det antika Grekland. Utvecklandet av ett modernt annoteringssystem inom vetenskapen skedde under sextonhundrade- och sjuttonhundratalet, och snart sågs refererandet som en viktig del av den vetenskapliga praktiken. Inom humaniora utvecklades en tradition av att använda fotnoter vilket möjliggjorde för forskaren att både kommentera och referera.

Referenser fungerar som retoriska verktyg i en text och beroende på hur referensen är skriven kan den vara mer eller mindre övertygande. Generellt är referenser inom humaniora mer diskuterande och negerande än övertygande. Forskaren ges därmed stor frihet när det gäller att modifiera innehållet i en referens, och ofta är påståendena som görs starkt kopplade till en person. Det har också visat sig att referenser, som emotserer innehållet i meningen som de ingår i, är vanliga inom humaniora. Sammantaget gör detta att referenser inom humaniora är beroende av den kontext där de är givna, och en stor del av betydelsen försvinner när de skiljs från denna.


blir att bibliometriska studier av humaniora måste ta detta i beaktande vid utformandet av metoder och i val av material.

Interdisciplinaritet och den intellektuella basen: citeringsmönster i engelskspråkiga litteraturtidskrifter


Referenser till publikationer indexerade inom andra discipliner kan ses som en indikation på hur pass interdisciplinärt ett forskningsfält är. I denna delstudie analyserades under vilken ämneskategori de tvåhundra mest citerade monografierna är indexerade, och det är tydligt att referenser till verk inom andra forskningsfält än litteraturvetenskap har ökat mellan perioderna. Främst är det citerandet av samhällsvetenskapliga monografier som ökat under den senare perioden. Flera förklaringar till detta mönster kan urskiljas: ett ökat fokus på teori, framhållandet av kulturvetenskapliga, genuservetenskapliga och postkoloniala perspektiv, samt en generell trend inom vetenskapen där forskningen kopplas till sociala frågor som går utanför en akademisk kontext. Sammanfattningsvis kan konstateras att litteraturvetenskapen blivit alltmer interdisciplinär, mer social engagerad men samtidigt kan inga större förändringar påvisas gällande vilken typ av publikationer som citeras.

Bibliometri på mikronivån: exemplet Walter Benjamin

Den tredje delstudien bygger vidare på resultaten från analysen av högt citerade monografier inom litteraturvetenskapen. Den gör detta genom en detaljerad och djupgående analys av hur Walter Benjamins essäsamling Illuminations har citeras över tid och inom olika fält. En sökning i citeringsdatabasen Web of Science visar att Benjamins antologi citerats i mer än 4000 publikationer under en period på 30 år. Tydligt är hur antalet citeringar ökat konstant under hela perioden, ett resultat som inte enbart kan förklaras av att antalet tidskrifter och artiklar generellt har ökat. Snarare är det så att essäer-


**Citeringsmönster inom svensk litteraturvetenskap: en analys av Tidskrift för Litteraturvetenskap och ansökningar till Vetenskapsrådet.**


Den ”intellektuella basen” eller med andra ord den ”vetenskapliga kanon” inom svensk litteraturvetenskap illustrerades sedan med hjälp av cociteringskartor över högt citerade författare. I dessa kan specialiseringar inriktade på genus, medialitet och postkolonialism urskiljas, och flera av de högt citerade författarna återfinns också i en engelskspråkig kontext. De högt citerade författarna inom svensk litteraturvetenskap bestod av två grupper:

178
internationella, interdisciplinära klassiker samt en inhems kanon av litteraturvetare.

Svensk litteraturvetenskap uppvisar likartade citeringsmönster vad gäller typ av publikation och ålder på de publikationer som påvisats i analyser av anglosaxiskt material. Samtidigt skiljer sig resultaten åt såtillvida att det svenska språket, tillsammans med tyska och franska, fortfarande spelar en viktig roll i svensk litteraturvetenskap. Slutsaten blir att den lokala och rurala karaktären som många vetenskapsfält inom humaniora har måste beaktas vid val av material och metod för bibliometriska analyser.

Avslutande Reflektioner

Denna studie av litteraturvetenskapen visar att citeringspraktiker inom humaniora kan kopplas till hur forskare söker information och till hur originalitet skapas inom olika forskningsfält. Vidare konstateras att litteraturvetenskapen har blivit alltmer interdisciplinär under de senaste 30 åren. Speciellt är det citeringar till samhällsvetenskaperna som har ökat, och här kan en allmän interdisciplinär trend inom vetenskapen liksom ett ökat fokus på samhällstillvänd forskning vara delförklaringar. En generell trend – ibland kallad ”den sociala vändingen” – samt framväxten av interdisciplinära vetenskapsområden som fokuserar på genus och postkoloniala frågor har också bidragit till ett ökat inflytande från samhällsvetenskaperna.

Generellt är citeringsfrekvenserna för enskilda författare låga inom litteraturvetenskapen, och detta beror inte enbart på forskningsfältets ”rurala” karaktär, utan också på att forskare inom litteraturvetenskapen är mindre beroende av sina kolleger för att få erkännande. Den relativa frihet som den enskilda forskaren har i att bestämma forskningens inriktning gör att litteraturvetenskapen är ”fragmenterad”, interdisciplinär och heterogen.

Litteraturvetenskapliga forskare är också mindre specialiserade än sina naturvetenskapliga kollegor, då de mycket väl kan ha bidragit med viktiga forskningsrön inom flera olika områden. Detta, samt generellt låga citeringsfrekvenser, gör det svårt att urskilja forskningsspecialiteter med hjälp av bibliometriska kartor. Sammantaget innebär detta att citeringsfrekvenser och mönster måste förstås utifrån vetenskapssociologiska insikter om hur forskningsfält är organiserade. Bibliometriska studier kan bara förstås i relation till den ”disciplinära kultur” som finns inom ett specifikt forskningsfält.

Bibliometriska metoder måste modifieras och anpassas för att vara användbara på forskningsfält inom humaniora. Ett problem är att humanistiska forskare i mindre utsträckning använder sig av tidskrifter för att spreda sin forskning. Istället spelar monografier och antologier en viktig roll, och detta bör beaktas vid val av material för bibliometriska analyser. En metod som användes i delstudie två och tre är att spåra citeringar till monografier genom att följa referenser i artiklar. Den fjärde artikeln analyserar istället referenser
som inte är indexerade i etablerade citeringsdatabaser. Detta innebär en begränsning av materialets storlek, men i gengäld kan slutsatser kring trender och strukturer i svenskspråkig forskning dras, och det framstår som särskilt viktigt att denna typ av material indexeras för att forskningsfält med en ”lokal” karaktär ska kunna analyseras.


Studiet av citeringar må framstå som en knappologisk verksamhet, men denna studie visar hur citeringar kan ge kunskap om forskningspraktiker, interdisciplinära interaktioner och forskningstrender. Detta gäller även litteraturvetenskapen även om publikationsmönster och citeringsstrukturer här på många sätt skiljer sig från dem som återfinns inom andra, mer utforskade, forskningsfält.
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