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Harvesting footnotes in a rural field: citation patterns in Swedish literary studies

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536

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Abstract

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/methodology/approach – 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, Communication, Data analysis, Periodicals

Paper type Research paper

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

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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 analysing 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 and Testa, 2011).

The publication of research, the use of sources, and citation patterns are affected by the organisation of research. This article examines citation patterns in the field of literary studies, a field that can be described as “rural” in its organisation. “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 and Trowler, 2001, pp. 106-108). The characterisation of fields as either urban or rural in their communication patterns provides a metaphor that can be instrumentalised 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 emphasised 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 *et al.* (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 per cent) compared to journals (67 per cent). 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 per cent 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 per cent for the current period, and an increase of citations to monographs could be observed compared to 1970 (43 per cent). Another categorisation 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 per cent, a figure exceeded only by religion, and the most commonly cited foreign language was French (11.7 per cent).

Ardanauy *et al.* (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 (Ardanauy *et al.*,

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 analysed 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 organisation 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 analyse 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 (Hammarfelt, 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 visualisation methods depicted relations by the use of links between nodes and proximity on the map. Rosengren imagined how his approach could be further developed in to 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 neighbouring 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 analysed in a range of studies (e.g. Bornmann *et al.*, 2010; Melin and Danell, 2006), and the relation between received grants and received citations has been mapped (Boyack and Börner, 2003). However, this is the first study that analyses 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 and 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 and 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 analysed. 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[1]. 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 I). 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 favoured over identical time frames.

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 organisation of a particular field (Hellqvist, 2010). The various systems of annotation that could be observed in the studied 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 *et al.*, 2006, 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: be given in a section separate from the main text (e.g. in endnotes or in a reference list)[2] and include author name, year, and title. References without an author name (e.g. encyclopaedias) 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[3]. 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

	<i>TFL</i>	Applications to the Swedish Research Council
Dataset	213 articles from the years 2000-2009	123 grant applications from the years 2006-2009
No. of references	4,032	5,102
No. of unique cited authors	2,859	2,711

Table I.
The two datasets used for analysis

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 analysed, 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 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 I). 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.) [4]. 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 contains chapters/articles from different authors [5]. 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 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 (Figure 1).

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 *et al.*, 1997; Thompson, 2002).

Thompson (2002) studied references in eight monographs and four journals in American literary studies and found that 67 per cent of the references were to books, 14 per cent to articles/chapters in books, and 18 per cent were to journals. These percentages correspond well with the findings reported here, and numerous studies of literary studies report percentages around 75-80 per cent for books (including edited books) and 15-20 per cent for journals (Cullars, 1989, 1990; Knievel and Kellsey, 2005). In a study of the 200 most cited sources in 34 literature journals (1998-2007) 194 were monographs and only six 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 per cent (*TFL*) and 2 per cent (applications) this is considerably higher than previous studies in Catalan literature, 1.5 per cent (Ardanauy *et al.*, 2009), Spanish and Italian literature 0.2 per cent (Cullars,

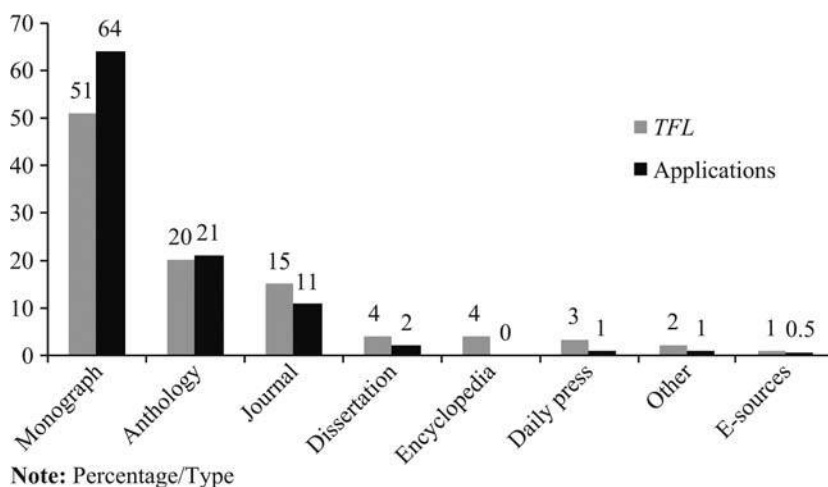


Figure 1.
Types of cited sources in
TFL, 2000-2009 and in
applications 2006-2009

1990) and French literature 1 per cent (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 defence of the dissertation played and plays an essential role (for an historical account see for example Clark, 2007, pp. 68-92). Cullars' (1989) study supports this conclusion as the percentage of citations to dissertations is considerably higher in German literature (3.5 per cent) 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 comprises 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 is 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 encyclopaedias, and this is probably because these sources are tools used in the writing of a scholarly text. Encyclopaedias 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.

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 per cent 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 (Figure 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

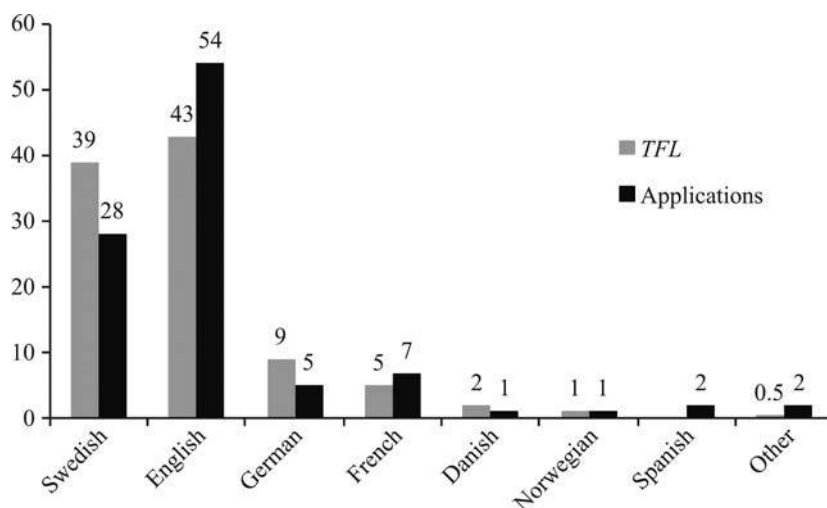


Figure 2.
Language of cited sources
in TFL 2000-2009 and
research applications
2006-2009

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 per cent in German literature to 7.9 per cent 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 predominately 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, 1998). 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 characterised 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 (Figure 3)[6].

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 per cent of the references in *TFL* being from 2001 and younger, while the same percentage for research applications is 31 per cent. In a previous study 37.5 per cent and 40.9 per cent of the references in books and journals, respectively, were to sources ten 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 per cent) of the articles in physics did not receive any citations after 14 years (Glänzel and 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 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

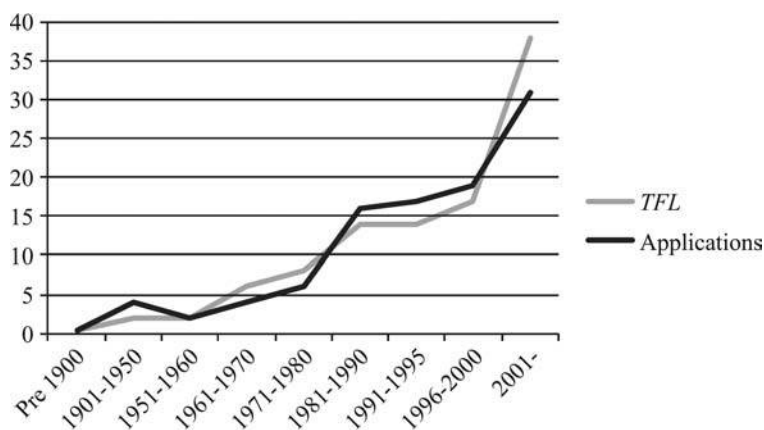


Figure 3.
Age of cited sources in
TFL 2006-2009 and in
research applications
2006-2009

Notes: Percentage/Time period. Please notice the difference in length of time periods as indicated on the x-axis

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 categorise 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 categorised as “not disclosed/both” (Figure 4).

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 per cent) is higher than the percentage of female article authors (43 per cent)[7]. 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 labelled 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

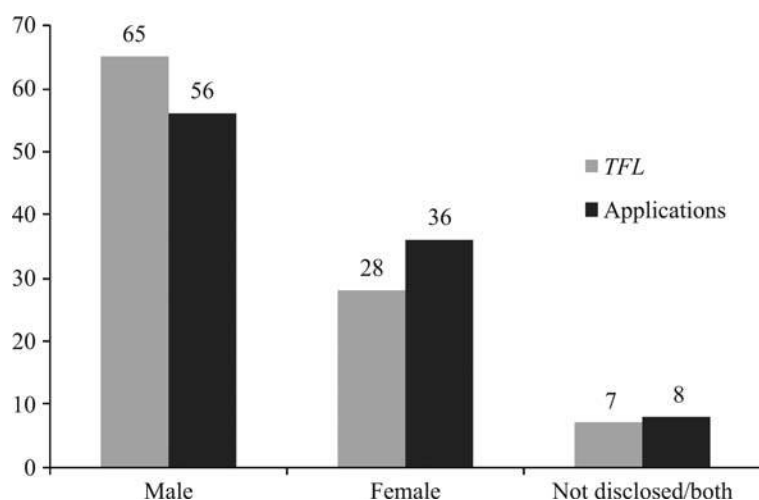


Figure 4.
Gender of authors cited in
TFL 2000-2009 and in
research applications,
2006-2009

four journals in the field of archaeology, 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 per cent of the given citations were to male authors. The few citations given to sources written by women (8.5 per cent) 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 and Salah, 2010). In fact, individual authors often attract more citations than the most cited journals (Hammarfelt and Åström, 2011). 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 an 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 Bakhtin, Roland Barthes, Walter Benjamin, Pierre Bourdieu, Judith Butler, Jacques Derrida, Michel Foucault, and Gérard Genette (Appendix). 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 *et al.*, 2009). The co-citation pairs were then inserted in Mapequation: a software for visualizing relational data (Rosvall *et al.*, 2009). Only authors with the highest “page rank” and the links with the highest weight were visualized using the Kamada Kawai algorithm (Kamada and Kawai, 1989). Thus, only the most connected authors and not necessarily the most-cited ones are depicted in the maps (Figures 5 and 6).

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). This low volume of citations is related to literary studies having communication patterns that can be described as “rural” (Becher and Trowler, 2001, pp. 106-108). Thus, relatively few scholars focus on nineteenth-century Swedish

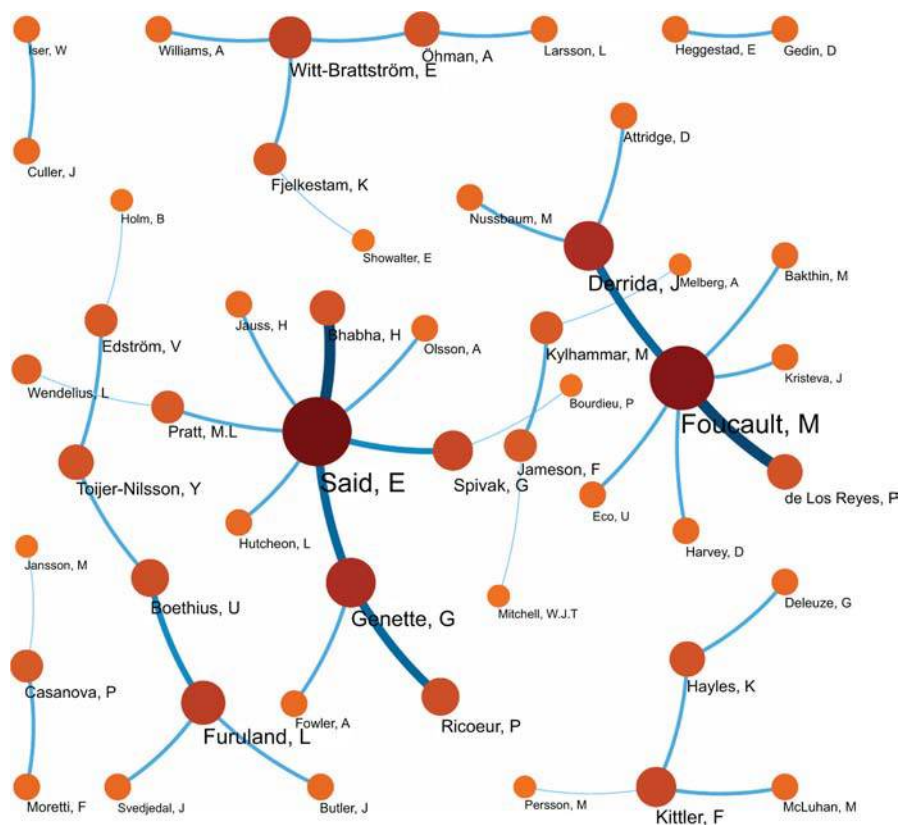


Figure 6.
Co-citation of authors cited
in grant applications
2006-2009, 50 most
connected authors with
five citations or more

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 (Figure 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 eighteenth-century studies) or through theoretical approach (deconstructionism or gender theory) was also recognised in a co-citation analysis of 38 literature journals indexed in WoS (Hammarfelt and Åström, 2011).

The visibility of Swedish scholars is greater in the case of applications (Figure 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 specialisations. 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 specialisation 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 per cent) and anthologies (20-21 per cent) – 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 emphasised by the different citation characteristics of journals compared to other sources, e.g. monographs 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 a group of international and interdisciplinary “giants” and 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[8]. 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 analysed 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 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 per cent 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 endeavour. 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.

Notes

1. There is no English equivalent to the discipline of “Litteraturvetenskap” (literary studies), which encompasses both comparative literature and Swedish literature.

2. 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.
3. See: <http://paracite.eprints.org/developers/> (accessed: 2011-10-07)
4. 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.
5. 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)
6. Please notice the difference in length of time periods as indicated on the x-axis.
7. In all there were 215 different authors, 122 male, 92 female, and one co-authored by a woman and a man.
8. All Swedish authors among the top 20 (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 five citations in total in the WoS. (www.webofknowledge.com, 2011-10-04)

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(The Appendix follows overleaf.)

	TFL 2000-2009	Research applications 2006-2009	34 literature journals, 1998-2007. WoS-data (Hammarfelt, 2011b)
1	Jacques Derrida (20 cit.) ^b	Michel Foucault (17 cit.) ^b	Jacques Derrida (658 cit.) ^b
2	Judith Butler (20) ^b	Gerard Genette (16) ^b	Michel Foucault (622 cit.) ^b
3	Roland Barthes (16)	Jacques Derrida (13)	Walter Benjamin (483 cit.) ^b
4	Gerard Genette (14) ^b	Homi Bhabha (12)	Roland Barthes (442 cit.) ^b
5	Arne Melberg (13) ^a	Edward Said (12)	Fredric Jameson (407 cit.)
6	Horace Engdahl (12) ^a	Katherine Hayles (10)	Mikhail Bakhtin (337) ^b
7	Paul De Man (12)	Paul Ricoeur (10)	Judith Butler (325 cit.) ^b
8	Walter Benjamin (12) ^b	Paulina De Los Reyes (9) ^a	Edward Said (318 cit.)
9	Michel Foucault (11) ^b	Mikhail Bakhtin (9) ^b	Pierre Bourdieu (300 cit.) ^b
10	Friedrich Kittler (11)	Judith Butler (9) ^b	Gilles Deleuze (282 cit.)
11	Lisbeth Larsson (11) ^a	Lisbeth Larsson (9) ^a	Theodor Adorno (271)
12	Jacques Rancière (11)	Pierre Bourdieu (7) ^b	Homi Bhabha (264)
13	Theodor Adorno (10)	Lars Furuland (7) ^a	Raymond Williams (220 cit.)
14	Jonathan Culler (10)	Fredric Jameson (7)	Gerrard Genette (208 cit.) ^b
15	Johan Svedjedal (10) ^a	Hans R. Jauss (7)	Julia Kristeva (205)
16	Mikhail Bakhtin (9) ^b	Benedict Anderson (6)	Paul de Man (205)
17	Stefan Bergsten (9) ^a	Roland Barthes(6) ^b	Slavoj Zizek (202)
18	Pierre Bourdieu (9) ^b	Walter Benjamin (6) ^b	Gayatri C. Spivak (192)
19	Peter Brooks (9)	Pascal Casanova (6)	Terry Eagleton (191)
20	Seymour Chatman (9) ^c	Jonathan Culler (6) ^d	Jean-Francois Lyotard (176)

Table AI.

A total of 20 of most highly cited authors in the two datasets with a comparison to WoS data

Notes: ^aSwedish authors; ^bOverlapping authors; ^cOther authors with nine citations were Gilles Deleuze, Olof Lagercrantz, and Martha Nussbaum; ^dOther authors with six citations were Vivi Edström, Alastair Fowler, Friedrich Kittler, Julia Kristeva, W.J. T Mitchell, Anna Williams, Ebba Witt-Brattström, and Anders Öhman

About the author

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