

A BIBLIOMETRIC ANALYSIS OF SCHULZ, KOSCHAKER, PRINGSHEIM, WIEACKER AND COING*

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ABSTRACT

This article uses citation analysis to track the citation patterns of works by Fritz Schulz, Paul Koschaker, Fritz Pringsheim, Franz Wieacker and Helmut Coing – key figures in the field of Roman law – and to see whether databases, such as Google Scholar and Web of Science, provide meaningful data that accurately reflects the popularity and influence of these works. The article also takes into account those limitations regarding the availability of the material, which include the language of the publications, as well as the research field.

Keywords: Bibliometrics; scientometrics; citation analysis; Roman law; legal history; reception of Roman law

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1 Introduction

Bibliometrics – the quantitative study of publications and citations – can be a useful resource to social sciences and humanities research beyond its role in research evaluations and in funding schemes.¹ From the sociology of science perspective, it enables us to understand not only the size and growth of disciplines in terms of the number of publications and researchers, but also changes in the dissemination and citation patterns.² On the other hand, bibliometrics can be used to study the intellectual base, development and exchange of ideas within and between disciplines, and so to enlighten and address also discipline-specific historiographical questions.³

In the field of law, legal citations have traditionally been analysed to trace and determine the impact of juristic opinion on judicial decision-making.⁴ Indexing of legal citations has also inspired the development of citation indexes of academic/scholarly journal literature since the 1960s.⁵ It is well known, however, that the currently available international citation databases, Web of Science and Scopus, offer only a limited coverage of the social sciences and humanities publications, because their data is based on articles from an exclusive set of international journals published mainly in English.⁶ Google Scholar indexes publication and citation data from a wider range of documents available online, but its documentation and structure of data are relatively poor when compared to that of Web of Science and Scopus.⁷ These limitations specifically concern those fields – such as ancient history or Roman law – where national journals, articles in books and monographs, as well as several European languages, still play an important role in the dissemination of research results.

So far, only a limited use has been made of bibliometric methods and resources in fields of ancient history in general, and of Roman law in particular. Walter Scheidel has explored the development of classical scholarship between 1924 and 1992 on the basis of bibliographic information from *L'année Philologique*. He found that “the share of studies in ancient law has dropped from around three per cent before the war to about half that rate in recent years, and the subject must therefore be designated a net loser”.⁸ In a series of working papers, Scheidel has also used Web of Science data to analyse the scholarly impact of Moses Finley’s work,⁹ and to compare citation

1 Moed 2005; Scharnhorst & Garfield 2010: 1-33; Cronin & Sugimoto 2014.

2 De Solla Price 1963; Bourdieu 2004; De Bellis 2009.

3 Hammarfelt 2011a: 819-830; Hammarfelt 2011b: 705-725; Hammarfelt 2012.

4 Wagner-Döbler 1994: 15-26; Duxbury 2001.

5 Shapiro 1992: 337-339.

6 Kulczycki 2018: 463-486.

7 Martín-Martín 2018: 1160-1177.

8 Scheidel 1997: 280.

9 Scheidel 2013.

scores of US based ancient historians.¹⁰ Citation analysis of Roman law literature has relied only on other data sources. For example, an historical-bibliometric study by Thomas Finkenauer and Andreas Herrmann regarding the influence of Nazi policies on citing the works of Jewish authors at the *Savigny-Zeitschrift* is based on the manual counting of citations from papers published in that journal.¹¹ Overall, the coverage of the citation databases and the feasibility of bibliometric methods in the field of Roman law studies have not been properly investigated.

2 Aims and purpose

This article explores data from Web of Science and Google Scholar to track the citation patterns of some key articles and monographs in the field of Roman law. These are Fritz Schulz's *Prinzipien des römischen Rechts* (1934, published in English as *Principles of Roman Law* in 1936); Paul Koschaker's *Europa und das Römische Recht* (1947); Fritz Pringsheim's "The legal policy and reforms of Hadrian" (1934) (and for comparison, his *Greek Law of Sale* (1950)); Franz Wieacker's *Privatrechtsgeschichte der Neuzeit* (originally published in 1952) and *Römische Rechtsgeschichte* (originally published in 1988); and Helmut Coing's *Römisches Recht in Deutschland* (1964) and *Europäisches Privatrecht* (1985–1989).¹²

The five authors of the above-mentioned works – Schulz, Koschaker, Pringsheim, Wieacker and Coing – were the focus of the research project *Reinventing the Foundations of European Legal Culture 1934–1964*, which was hosted by the University of Helsinki from 2013 to 2018. The works of this group of German-speaking legal scholars were selected for this bibliometric study because their works were integral to the birth of the idea of a shared European legal past. All of their professional and private lives were also impacted by Nazi Germany and the Second World War. Fritz Schulz (1879–1957) and Fritz Pringsheim (1882–1967) left Nazi Germany due to persecution and were exiled to Britain, while Paul Koschaker (1878–1951) was ousted from his post in Berlin in 1941.¹³ Both Franz Wieacker (1908–1994), who was Pringsheim's pupil, and Helmut Coing (1912–2000) stayed in Germany during the Nazi regime.

The article seeks to examine whether databases, such as Google Scholar and Web of Science, provide meaningful data for the study of the popularity and influence of the selected authors and their works. We examine not only the impact of these works from their publication dates, but also their continued impact in terms of citations up to 2016.

10 Scheidel 2008; Scheidel 2011.

11 Finkenauer & Herrmann 2017: 1-48.

12 A similar approach was utilized by Hammarfelt (2011a). In addition, Hammarfelt used page citation analysis, focusing on which specific pages of the work studied had been cited the most. See, also, Broady & Persson 1989: 54-73; and Hérubel & Goedecken 2000: 51-68.

13 Beggio 2018: 84, 111.

3 Data and methodology

The primary method employed in this article is simple citation analysis, taking into account only the number of citations of each work. We do not utilise page citation analysis¹⁴ or citation analysis that takes into account the context of the citation.¹⁵ The works studied in this paper include one journal article and seven monographs. Reprints and new editions of citing works are omitted so that only the citation from the original publication counts as such. To track the citations, we use Google Scholar (GS) through Publish or Perish (PoP),¹⁶ as well as Web of Science (WoS), including citations to both source and non-source items. For Pringsheim’s article, “The legal policy and reforms of Hadrian”, we also searched citations from Scopus – this option is not available for the monographs. Duplicate citing works from GS, WoS and Scopus were removed.

The citation histories are not only compared between the eight works, but are related also to the estimated number and growth of Roman law publications from the early 1900s to the present. This is based on a separate GS dataset containing 12 300 records of publications from 1725 to 2016 with the words “Roman law”, “diritto romano”, “derecho romano”, “droit romain” or “römische Recht/römischen Recht/römisches Recht/römischen Rechts” appearing in the title.¹⁷

Google Ngram¹⁸ is used in passing when looking at the appearance and development of concepts on a general level.

4 The works and impact of Fritz Schulz (1879–1957)

The idea that there were fundamental principles behind the way legal systems functioned, began to surface in the English corpus in the eighteenth century (with the first mention of “principles of tax law” already around 1600) and in the German

14 Like Hammarfelt 2011a.

15 Cf. Russell 1997.

16 Harzing 2007.

17 The method and data is described in Pölönen & Hammarfelt 2019. The total number of Roman law publications is 1 390 in 1925–1949; 2 319 in 1950–1974; 2 915 in 1975–1999; and 4 070 in 2000–2016. During this period, the annual average number of Roman law publication increased from 56 in 1925–1949 to 93 in 1950–1974; to 116 in 1975–1999; and to 239 in 2000–2016.

18 Google Ngram normalises the data at a relative level (because the number of books published annually fluctuates and increases with time) and the search results show the percentage of published material that the searched-for word or phrase occurs in. Only ngrams that occur in at least forty books are taken into account. Google Ngram shows how a word or phrase (and its different spellings/capitalisations) becomes more common or rare over time, but does not show in which books or in which context it appears. The material skews towards scientific literature. It does not show whether terms searched for together appear together in the same publications, but only the separate graphs for each term. One can look for correlation, but not for co-occurrence of terms.

corpus in the 1810s.¹⁹ In his *Prinzipien des römischen Rechts*, originally presented as a series of lectures in 1933 and published in 1934,²⁰ Schulz sought to isolate these functional principles behind Roman law²¹ – even though such principles were not laid out by any actual Roman lawyers. This is because Roman law is casuistic and codification attempts, such as the Digest of Justinian, are little more than lists of decisions reached in different cases. The citations to all editions of the German original²² and the translations into English (*Principles of Roman Law*, 1936),²³ Spanish (*Principios del derecho romano*, 1980) and Italian (*I principii del diritto romano*, 1946)²⁴ are tracked by year in Figure 1.

The citations of Schulz’s *Prinzipien* remain mostly in the single figures per year. In the citation numbers, there is not a lot of fluctuation, and, as one would expect, after a publication spike in one year, the next year has fewer citations. The steady growth in the number of citations (ten to twenty citations every year, starting from 2010) is in line with the growing average rate of Roman law publications.

5 The works and impact of Paul Koschaker (1879–1951)

Paul Koschaker published his *magnum opus*, *Europa und das römische Recht*, in 1947.²⁵ The citations of this work are broken down by year, regardless of language and edition (Figure 1).²⁶ The conclusions we can draw are similar to those with regard to the citation history of Schulz’s *Prinzipien*: they remain mostly in the single digits per year, and indicates growth in the 2010s, keeping in line with the generally growing publishing rates.

It may be useful to look closer at how the citations are divided by language. As of June 2017, *Europa und das römische Recht* has been cited 921 times, according to GS. After the publication language was manually detected, the data shows that the

19 Data gathered through Google Ngram in April 2017.

20 This lecture series eventually led to Schulz’s dismissal from his position at the University of Berlin in Apr 1933 (see Ernst 2004: 123-124). Friedrich Mann (1907–1991) noted that “[Schulz’s] last achievement in Germany had been a course of lectures on Principles of Roman law, which in truth and substance was nothing but a veiled attack on Nazi despotism and lawlessness” (quote cited from Ernst *supra*: 123).

21 Giltaij 2016: 3-4. On Schulz, see also Giltaij 2019: 73-92.

22 Data gathered through GS and WoS (all databases) in August 2017. Duplicates were removed and two results were omitted.

23 The data was gathered through GS and WoS (all databases) in Aug 2017. Duplicates were removed and three results were omitted.

24 The data was gathered through GS and WoS (all databases) in Aug 2017. Duplicates were removed.

25 On Koschaker, see Beggio 2018: 291-326; Beggio 2019: 159-180.

26 Data gathered from GS and WoS (all databases) in August 2017. Duplicates removed and four results omitted, because the year could not be verified.

work is cited 766 times in German, English, Spanish, Italian and French scholarly literature indexed by GS. Of these citations, 51 per cent are in German language publications, while 31 per cent are in English, 6 per cent in Spanish, 6 per cent in Italian and 5 per cent in French publications.²⁷

6 The works and impact of Fritz Pringsheim (1882–1967)

Fritz Pringsheim’s article, “The legal policy and reforms of Hadrian”, was published in *Journal of Roman Studies* in 1934.²⁸ The citation history of the article is broken down by year (Figure 1).²⁹ For most of the years during this period there are no citations to this article at all. When the data from WoS and GS are combined, it turns up a total of twenty citations. These are divided by language: eleven in English, three in German, one each in French, Italian, Russian and Ukrainian, and two in Spanish.

A search in Scopus for citations of Pringsheim’s “Hadrian” article turns up five additional citations: one in 1995, one in 2007 and three in 2012.³⁰ None of these are the same as those in WoS and GS. It is quite interesting to note that here, the coverage of Scopus does not overlap with that of WoS and GS at all.

While Pringsheim’s book, *Greek Law of Sale* (1950), does not deal with Roman law, we include it in this analysis to act as a comparison to his “Hadrian” article. Since in terms of citation counts, Pringsheim’s “Hadrian” article does not seem to have enjoyed great popularity, it may be relevant to ask whether Pringsheim is simply a relatively unknown author, or whether “Hadrian” is a relatively sparsely cited article. Citation analysis shows that *Greek Law of Sale* has a total of 244 citations and a much more consistent citation history (Figure 1).³¹

27 Data gathered from GS in Jun 2017.

28 Pringsheim 1934: 141-153. On the importance of this article, see Tuori 2017: 470-486 (note that while Tuori’s article obviously cites Pringsheim’s “Hadrian”, it is excluded from the analysis as the article was published in 2017 and our analysis only extends to 2016). The next year, Pringsheim was dismissed from his position at the Albert-Ludwigs University at Freiburg im Breisgau (see Honoré 2004: 218).

29 Data gathered from GS and WoS (all databases) in Jul and Aug 2017. Duplicates were removed.

30 As of 5 Dec 2017.

31 Data gathered from GS and WoS (all databases) in Jul and Aug 2017. Duplicates were removed and four results omitted, because GS dated them earlier than 1950 and the publication year could not be confirmed.

7 The works and impact of Franz Wieacker (1908–1994)

Franz Wieacker's impact³² is studied through references to his *Privatrechtsgeschichte der Neuzeit*³³ (originally published in 1952)³⁴ and his *Römische Rechtsgeschichte*³⁵ (originally published in 1988) (both in Figure 1). Wieacker's *Privatrechtsgeschichte* has, overall, more citations than the works of Schulz or Koschaker, and there is more fluctuation per year. Noticeable peaks are 1968, 1983, 1990, 2000, 2010 and 2014. His *Römische Rechtsgeschichte* is cited less, with such citations mainly in the single digits per year. The rise in the number of citations of both works after 2010 is again in line with the growing rate of Roman law publications in general.

8 The works and impact of Helmut Coing (1912–2000)

Helmut Coing's main works are *Römisches Recht in Deutschland*³⁶ (1964) and *Europäisches Privatrecht*³⁷ (originally published in 1985). Their impact can be studied through their citation histories, both seen in Figure 1. The citation history of *Römisches Recht in Deutschland* is noticeably sparser than that of *Europäisches Privatrecht*. Whereas citations of *Europäisches Privatrecht* start rising in the 2000s, references to *Römisches Recht in Deutschland* do not – they remain between zero and three citations per year.

9 The development of citations to works of Schulz, Koschaker, Pringsheim, Wieacker and Coing

All the results of this bibliometric analysis are presented in Figure 1, which shows the number of annual citations to these eight works during the period from 1935 to 2016. Overall, it can be observed that the annual number of citations is increasing. Among the eight works studied in this paper, Franz Wieacker's *Privatrechtsgeschichte der Neuzeit* has the strongest citation history recorded in the bibliometric data sources used in this study. Five other works (Schulz's *Prinzipien*, Koschaker's *Europa*, Pringsheim's *Greek Law*, Wieacker's *Römische Rechtsgeschichte*, and Coing's

32 Wieacker has been recently studied in depth by Ville Erkkilä; see Erkkilä 2019a: 201-220; Erkkilä 2019b; Erkkilä 2017.

33 The data was gathered through GS and WoS (all databases) in Aug 2017.

34 The book was subsequently translated into Italian (*Storia del diritto privato moderno con particolare riguardo alla Germania*, 1980), English (*A History of Private Law in Europe*, 1995), Spanish (*Historia del derecho privado de la edad moderna*, 2000), and Portuguese (*História do direito privado moderno*, 2004).

35 The data was gathered through GS and WoS (all databases) in Aug 2017. Duplicates were removed and one result was omitted, because the year could not be verified.

36 The data was gathered through GS and WoS (Core Collection) in Jul 2017.

37 The data was gathered through GS and WoS (Core Collection) in Aug 2017.

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Europäisches Privatrecht) also show a consistent increase in the record of citations. Pringsheim's "Hadrian" and Coing's *Römisches Recht in Deutschland* remain less frequently cited than the other works.

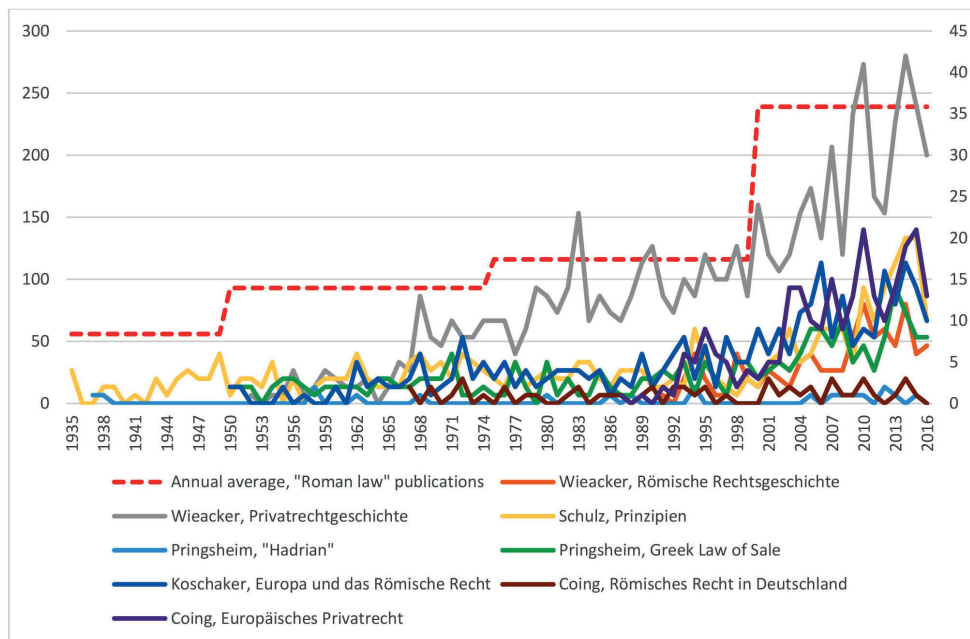


Figure 1: References to Schulz, Koschaker, Pringsheim, Wieacker and Coing 1935–2016 (on the right y axis) with the annual average of “Roman law” publications (on the left y axis) (see n 17).

10 Discussion and conclusions

Two works rise above the others in popularity as measured in the total number of citations: Schulz's *Prinzipien des römischen Rechts* – which shows a strong citation history since its publication in 1934 – and Koschaker's *Europa und das Römische Recht*. The citations of most of the works reviewed in this article fluctuate little, remaining in the single digits per year for most of the time. A noticeable exception is Wieacker's *Privatrechtsgeschichte der Neuzeit*, which rose above the other works in popularity in the late 1960s. In addition, Schulz's *Prinzipien*, Koschaker's *Europa*, Pringsheim's *Greek Law*, Wieacker's *Römische Rechtsgeschichte* and Coing's *Europäisches Privatrecht* show considerable increase in annual citation rates since the late 1990s.

The growth in citations since 2000 could be related to the growth in the number of Roman law publications. An analysis of GS publications with the words “Roman

law”, “diritto romano”, “derecho romano”, “droit romain” or “römische Recht/römischen Recht/römisches Recht/römischen Rechts” in the title indeed suggests that the frequency of so-called Roman law publications has increased considerably.³⁸ Therefore, the growth of the citation rate to the eight works studied in this paper does not differ greatly from the general trend in publishing rates in this field. At the time of new publication, citations are often high at first with initial interest in the new work, but then taper off unless the book becomes a classic cornerstone of its field. The works studied here show consistent citation histories, even though the number of citations per year might not be particularly high.

There are two important limitations to the availability of material to consider. One concerns the language of the publications, and the second concerns the research field.

The first limitation is that of language: publications in English are best represented, especially in structured databases, such as WoS and Scopus, diminishing the relative importance of publications in other languages. Therefore, an interesting question regarding the relationship between the publishing language and the level of recognition remains unanswered. When Schulz and Pringsheim were exiled in Britain, they had to change the language of their publications from German to English. Did they therefore gain a relative advantage over those authors who remained in Germany and continued to publish in German (such as Wieacker and Coing)? Unfortunately this question cannot be answered on the basis of citations of these works in GS and WoS/Scopus, because the material indexed in GS and the content of structured databases, such as WoS and Scopus, skews so heavily towards English anyway.

The second limitation is that structured international databases (such as WoS and Scopus) offer a limited coverage of humanities and social science publications and citations, especially in books and languages other than English.³⁹ For example, when comparing citations of Schulz’s *Principles of Roman Law*, GS gives 208 citations, whereas WoS (Core Collection) gives 23 (as of June 2017). Several studies comparing the international database coverage with comprehensive national publication data drawn from the institutional research information systems show that law is among the least covered fields. This is because in law, articles in books and monographs, as well as national languages, play an important role in the dissemination of research results. GS indexes publication data from a wider range of documents available online, but the data is poorly structured and its coverage is weakly documented.

The authors’ suggestions for possible future avenues for research of this subject are for a more detailed analysis detailing from how many different authors these citations originate, and whether they appear mainly in journal articles or in monographs.

38 Pölönen & Hammarfelt 2019.

39 For a comparison between different mapping tools, see Cobo 2011: 1382-1402.

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