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A century of *Public Administration*: Traveling through time and topics

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Abstract

Public Administration (PA) has been a unique witness and protagonist of scholarship in the field of public administration over the course of an entire century. On the occasion of the journal's 100th anniversary, we conduct a systematic analysis of the publication history using bibliometric methods enhanced by natural language processing. The findings show how disciplinary influences, geographical settings, and methodological orientations have changed over time. In our main analysis, we extract 63 thematic clusters on the basis of linguistic similarities and track their evolution through five eras of PA scholarship. Overall, the results show both the journal's strong British roots and its evolution toward an increasingly international, interdisciplinary, and dynamic community. The findings also indicate the state of the field as a “fragmented adhocracy,” with changing modes of differentiation over time.

1 | INTRODUCTION

Ever since the *Royal Society* launched the *Philosophical Transactions* in 1665 to inform about the work and achievements of scientists throughout Europe, scholarly journals have become important catalysts in the development of academic fields and disciplines (Price, 1963). Today, writing for publication in peer-reviewed journals is an almost ubiquitous practice in academia. Such journals have long expanded from their original function of disseminating knowledge among readers and engaging them in critical discourse. Through peer review, particularly for journals at the top of the rankings, professional reputation is allocated and academic careers are boosted or broken. For these

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and other important functions, self-reflections on the evolution of an academic field should not, and cannot, miss the role of the community's most influential journals, and often it is a journal's anniversary that gives the occasion for such "belly button pieces" (Raadschelders, 2011, p. 917) in the first place (Kumar et al., 2020; Ni et al., 2017).

In the field of public administration, the eponymous journal—*Public Administration* (PA)—is the longest-running outlet, celebrating its 100th volume in 2022. We are not aware of any other journal in the field that would invite us for a longer travel backward in time to when the field took its early roots. PA is thus a unique witness and protagonist of the field's development over the course of an entire century, and its archives are a treasure for those who want to discover this history. Of course, PA reflects only one trajectory in the much broader history of the field, as there are many other important journals, each with its own tradition and profile. Although the audience of PA has become increasingly global over the past decades, its British roots and European tradition are impossible to miss. Public administration journals thus make a case for the "situatedness of knowledge" (Mannheim, 1936), as they disseminate knowledge that is embedded in particular sociohistorical contexts. Such contingencies do not only emerge from the changing social organization of scholarship, but also from the field's deep engagement and co-evolution with administrative practice.

This embeddedness of knowledge production into particular historical, geographical, cultural, and institutional contexts is a root cause for the fragmentation of public administration as an academic field. If there is any point of integration, it is the object of study, that is, governmental organizations, the public sector more comprehensively, and the public realm at large (Pollitt, 2010). Scholars from different disciplinary backgrounds study this object and bring in various professional habits and standards, notably from political science, public policy, management, economics, sociology, and law (Hustedt et al., 2020). The degree of reputational control by defining overarching goals and standards is rather low, as scholars have high autonomy in setting research priorities and evaluation criteria within their subcommunities. At the same time, public administration scholars have multiple audiences beyond academia, including policymakers, public managers, consultants, etc., representing a broad range of interests and awarding different forms of reputation. This plurality of internal and external stakeholders gives rise to a reputational work organization that has been referred to as "fragmented adhocracy" (Whitley, 1984), with high levels of task uncertainty and low levels of interdependence among subcommunities.

The fragmentation or, more positively termed, plurality of public administration scholarship makes it both worthwhile and challenging to study one of its core journals, and to study it over a period of 100 years. In addition to the sheer size of the body of knowledge that has accumulated in the archives of PA, the fragmentation of the field makes it difficult for single researchers to maintain a comprehensive overview. Each member of the community has an idiosyncratic perspective on the field and its history; a perspective that has been shaped in the academic socialization and is imbued with a particular *zeitgeist*. Looking back on an endeavor that began 100 years ago without bringing too many personal views and contemporary perspectives in is thus not a trivial pursuit.

We address this challenge by applying a systematic, computer-aided approach to literature reviewing, which expands bibliometrics (Zupic & Čater, 2014) into natural language processing (NLP; Manning & Schütze, 2005). Our approach can be referred to as "NLP-enhanced bibliometrics" (Atanassova et al., 2019), combining methods from the broad portfolio of large-scale text analytics. Of course, advanced methods of text mining do not suspend all personal views and prior knowledge, particularly in the calibration of the methods and interpretation of results (Hannigan et al., 2019). However, such methods first and foremost give voice to others than those who apply them: the thousands of authors who have contributed to PA over the years. Through their writing and citing behaviors, they have collectively yet unintendedly drawn the "big picture" of scholarship that our methods extract from the journal's text corpus. Our analysis might be considered a grassroots approach, as all authors had the same chance to contribute to the picture, irrespectively of whether they were published in the inaugural volume of 1923 or in one of the more recent volumes. Nonetheless, the authors still remain the "unsung heroes" in our study because our analytical focus is primarily on the use of language, rather than on renowned scholars and their seminal works.

The goal of this article is, hence, to identify and indicate the major lines of development in the journal's publication history. We seek to identify the changing topics published in PA, but given the sociohistorical situatedness of

this scholarship, we also pay attention to the disciplinary, geographical, and methodological influences that have shaped the journal over time. Somewhat paradoxically, however, a journal article may not be the best genre for carrying out and reporting a longitudinal study spanning a century, as it does not offer the space to go into details. We thus settle for “visualizing what we know” (Börner, 2010) and hope that our maps will invite readers to embark on their own journey of discovery through time and topics. For reasons of both brevity and readability, the outline of our analytical approach and procedure in the next section is limited to general information that is indispensable for an understanding of our methods and results; more specific technical details are presented in Appendix A. Some more information is provided in the subsequent results section, where it is needed to understand the data visualizations that guide our reasoning.

2 | ANALYTICAL APPROACH AND PROCEDURE

This study started out as a bibliometric project but quickly expanded into text mining with NLP (Manning & Schütze, 2005). Bibliometrics is the statistical analysis of scholarly communication, mostly (yet not exclusively) focusing on written communication through articles in peer-reviewed journals (Price, 1963; Zupic & Čater, 2014). Beyond mere citation counts, often fed into simple rankings of influential authors and their works, scholars use bibliometric methods to study the intertextual relations among documents, which are established by references. By citing other works and providing these sources in a bibliography, authors successively and cumulatively weave a web of their publications. Bibliometricians extract this web by converting citation data into information on the similarity between documents. A well-established and—if tested on a large scale—well-proven assumption is that documents are the more similar the more references they share in their bibliographies (Kessler, 1963) or the more frequently they are jointly cited in other documents (Small, 1973).

When it comes to analyze *PA*, or any other journal of similar age, bibliometric methods quickly reach their limits. The reason is simple: Citing other works, and citing them extensively, has established as an ubiquitous academic practice not earlier than in the second half of the 20th century. A look into the first volumes of *PA* reveals that only a few articles provide sources in footnotes or bibliographies. When the journal was founded in 1923 as *The Journal of Public Administration*, its main purpose was to inform about the work of the *Institute of Public Administration* (since 1954 *Royal Institute of Public Administration* [RIPA]) and to disseminate knowledge among its members in the overarching attempt to professionalize the civil service (Corner, 1923; Nottage & Stack, 1972). Although this mission involved putting “into permanent form the contributions which are made, from time to time, to the science of public administration” (Anonymous, 1923, p. 3), *PA* was first and foremost a practitioner journal (Rhodes, 2022, this issue). Practitioners neither had the skills nor the time to engage in academic studies, for such research “infers a quiet and meditative withdrawal from the hustle and hurly-burly of worldly affairs, of undisturbed prolonged and connected thought” (Roberts, 1931, p. 350). Articles were predominantly written in an essayistic style and included only few references, if at all (Dargie & Rhodes, 1996). Even if references were distributed more evenly across the century, the challenge remains that citation databases do not cover the first half of the 20th century, leaving researchers with a tremendous effort of data collection. Therefore, standard applications of bibliometrics would strongly bias the results toward the more recent decades while largely neglecting earlier scholarship that paved the way.

Given this challenge, we decided to adhere to bibliometrics' focus on the similarities between articles but *not* to extract a similarity measure from citation data. With increasing capacities to analyze even largest amounts of textual data, NLP has gained importance, with first applications in public administration scholarship (Kowalski et al., 2020; Pandey et al., 2017). The repertoire of NLP includes measures of document similarity, but in this case, the similarity is calculated on the basis of the language used in the full texts of documents. Broadly speaking, such methods decompose each full text into a “bag-of-words” (Zhang et al., 2010), counting how many times each word occurs in the text. The result is a representation of the text in a vector that indicates a kind of linguistic “fingerprint” left by the authors. As these vectors can be compared for every pair of documents in a large text corpus, the method

substitutes for the missing similarity information from citation data. The assumption is that authors who work on similar topics use similar language, such that their written texts will have overlaps in the terminology used.

Following this approach, the analytical procedure started with the download of all full texts of articles published in *PA* since its inaugural volume. We also downloaded citation data available from the Social Science Citation Index, reaching back to 1965, because they offer some insights that cannot be gained with NLP but are still noteworthy even if the period of citation analyses is limited to only half a century. We then converted, reduced, and reorganized the initial data and analyzed them in a series of sequential steps. Figure 1 shows the entire analytical procedure. We do not explain each step at length here but instead refer to Appendix A for technical notes.

3 | RESULTS

Figure 2 shows some features of the basic text corpus resulting from Step 2 of the analytical procedure. As the analysis required some time to be prepared for this anniversary symposium, it does not span the entire century but only 98 volumes up until and including 2020. In total, we retrieved 3202 articles with more than 21 million words. The distribution over time shows a drop of publication activity during World War II and a fast recovery in postwar times. The subsequent decrease of articles per volume since the early 1950s is paralleled by an increase in article length. The tendency to publish fewer but longer articles, which is reversed only in the last decade, might reflect a broader trend of professionalization with increasing methodological requirements and growing reporting standards (Chester, 1951; Dargie & Rhodes, 1996; Simey, 1952). Since the early 1990s, *PA* offers more publication space to the likewise growing scholarly community, as the number of articles per volume has increased since then. Interestingly, authors show a slight tendency to use shorter sentences particularly since the early 1980s, which indicates that linguistic standards have changed over time. Depending on

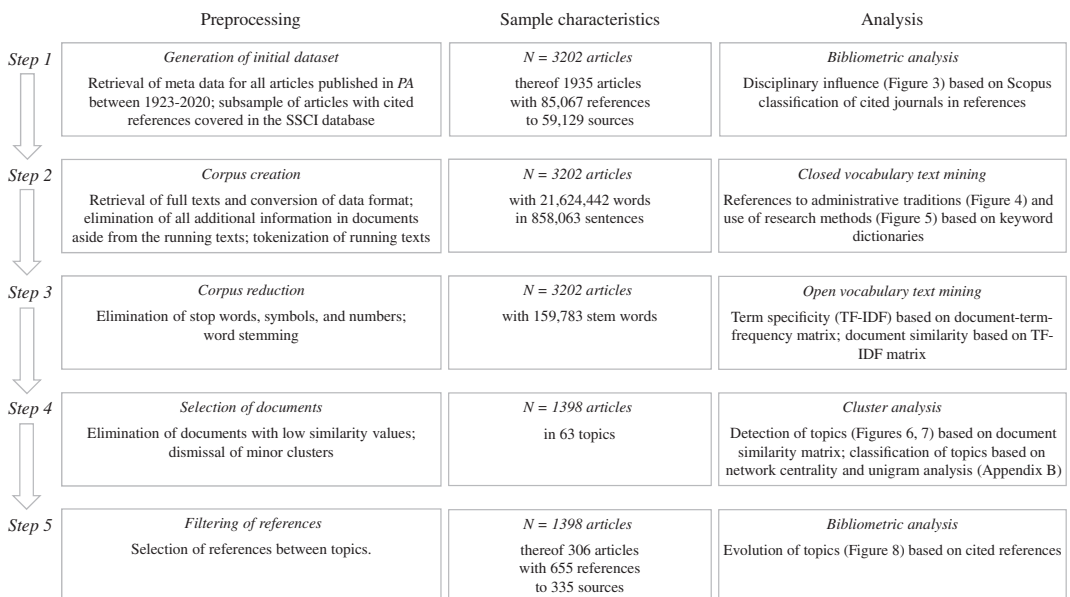


FIGURE 1 Steps in the analytical procedure. For reasons of brevity and readability, technical details of the procedure are omitted from the text and instead presented in Appendix A. The figure is available for download in high resolution at <https://doi.org/10.7910/DVN/ON6407>

the perspective, this finding might be interpreted as a change toward more clarity and simplicity or as a loss of richness in the art of writing.

3.1 | PA and disciplines

Figure 3 summarizes the results of our first more conventional (i.e., citation-based) bibliometric analysis (Step 1; Figure 1). The diagram shows the extent to which articles published in the second half of the century have referred to journals from a broad range of disciplines in the social sciences. In aggregation, references from PA to journals within the field of public administration, including journal self-citations, account for the largest part of all coded sources (33.1%). The strongest outside influences come from political science (25.0%) and management (12.5%),

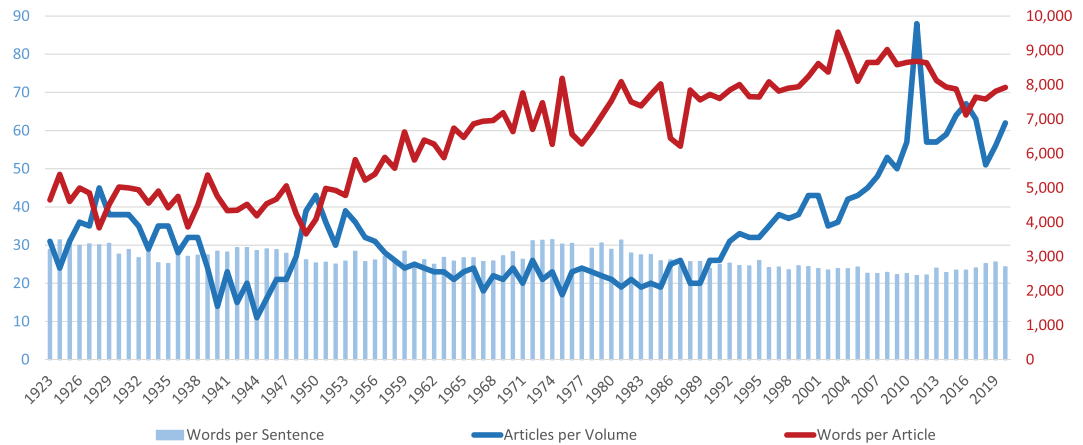


FIGURE 2 Characteristics and distribution of the analyzed text corpus. The left Y-axis shows the number of words per sentence and articles per volume, the right Y-axis indicates the number of words per article. The figure is available for download in color and high resolution at <https://doi.org/10.7910/DVN/ON64O7> [Color figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]

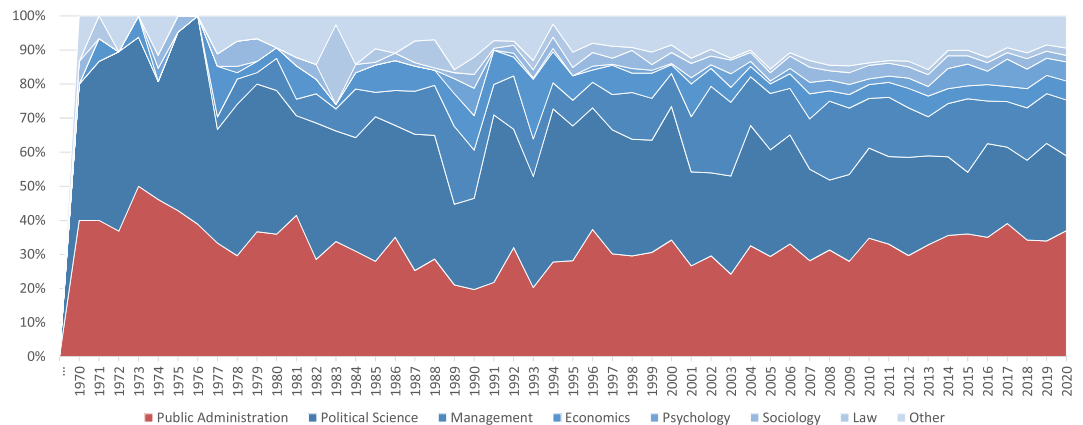


FIGURE 3 Disciplinary influence. The diagram builds on the journal classification of the Journal Citation Reports and shows the shares of references from PA to journals in particular disciplines for all references to classified journals. The figure is available for download in color and high resolution at <https://doi.org/10.7910/DVN/ON64O7> [Color figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]

followed by economics (5.1%), psychology (3.7%), and sociology (2.9%) with much smaller shares. Law, though one of the “root disciplines” of public administration (Rosenbloom, 1983), accounts for an almost negligible number of references (1.7%). The residual category includes references to journals from 34 other disciplines in the social sciences, in sum accounting for 15.9% of all coded references.

These results lend only partial support to the often-claimed insularity of the field, as scholarship in PA draws to considerable extent on research from two foundational disciplines (i.e., political science and management; Rosenbloom, 1983). Our findings thus differ substantially from other bibliometric studies on this subject (Andrews & Esteve, 2015; McGuigan et al., 2021; Wright, 2011). Whereas previous studies have coded only for few top journals in political science and management, we adopted a much longer journal list from the Journal Citation Reports (JCRs), including 3132 journals from 41 disciplines in the social sciences. This approach is less prone to an underestimation of interdisciplinarity and helps to put the findings into perspective: Less than one third of outgoing references from PA are within-field references to public administration, whereas more than two-thirds go beyond the field to other disciplines. When combined, journals in political science and management account for a higher share among all coded references than public administration journals. With regard to these two disciplines, we conclude that there is little evidence for an insularity of public administration but much indication of a vivid interdisciplinarity.

However, we do find support for an insularity of public administration with regard to the third of the founding disciplines, that is, law (Rosenbloom, 1983). The divergent evolution of public administration and administrative law has recently been analyzed (Osorio et al., 2021) and our study echoes these findings. It should be noted here that our method might underestimate the influence of law because in legal scholarship, publishing in journals does not play the same pivotal role than in many other fields. This aspect brings us to a broader limitation of our approach: We focused exclusively on references to journals, accounting for 43.9% of all references, and within this subset, we coded only for journals listed in selected categories of the JCRs (covering 33.1% of all references). We cannot know the extent to which the representation of disciplines across these journals generalizes to the full body of references. A further limitation is our exclusive focus on references from PA to other journals, whereas we do not examine the extent to which PA is cited in other journals. Previous studies have consistently shown that in this reverse perspective the isolation of public administration scholarship stands out more clearly, as other disciplines take only little notice of it (Andrews & Esteve, 2015; McGuigan et al., 2021; Wright, 2011).

3.2 | PA and administrative traditions

The next analysis focuses on the coverage of different administrative traditions in PA throughout the century (Step 2; Figure 1). Administrative traditions are groups of countries with a shared history and common cultural heritage as well as similarities of the broader political systems (Painter & Peters, 2010; Peters, 2021). Figure 4 depicts the share of countries in particular administrative traditions for all geographical terms in the text corpus, as identified by using a dictionary for coding in-text references. On average, the Anglo-Saxon tradition has gathered by far the most in-text references (64.2%), followed by continental Western Europe with the Germanic (9.9%), Napoleonic (8.4%), and Scandinavian (4.9%) traditions. Further traditions with noteworthy shares are (Post-)Colonial South Asia and Africa (6.1%), as well as East-European and (Post-)Soviet (3.1%) countries. References to the East Asian (1.3%), Islamic (1.1%), and Latin American (0.9%) traditions are almost negligible when aggregated over the full lifespan of the journal.

The findings confirm the marginalization of non-Western perspectives in public administration scholarship, which has already been demonstrated for the least developed countries (Gulrajani & Moloney, 2012). However, our longitudinal perspective draws a more nuanced picture. First, it provides evidence for the global aspirations of the journal in its foundational decade (Nottage & Stack, 1972). It took the journal 80 years to reclaim its initial international orientation. Second, scholars have paid considerable attention to the Global South during the decolonization in the 1950s and 1960s, although this research likely ignored indigenous systems of administration (Basheka, 2012).

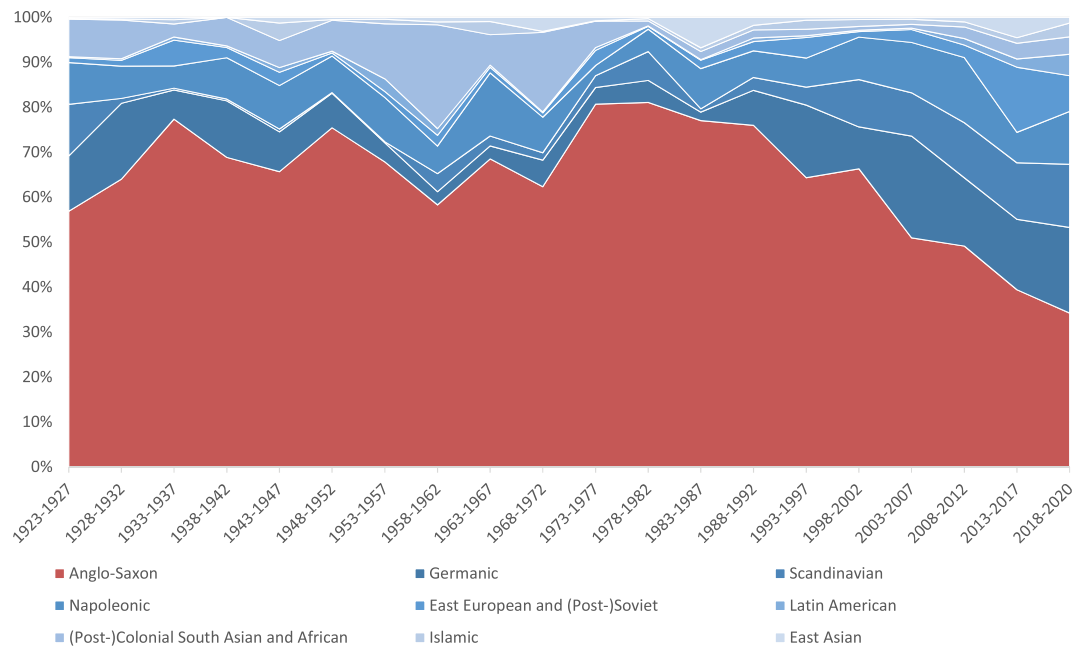


FIGURE 4 Administrative traditions. The diagram builds on a closed vocabulary text mining and shows the shares of in-text references to administrative traditions for all references to administrative traditions in the full texts of PA articles. The figure is available for download in color and high resolution at <https://doi.org/10.7910/DVN/ON64O7> [Color figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]

Third, the data show a clear trend toward more diversity after the Anglo-Saxon tradition peaked in the late 1970s. In particular, the internationalization has accelerated since the 1990s, when *Comparative and International Administration* (Rhodes, 1992) and the *European Forum* (Bogason et al., 1999) were introduced as new sections in the journal. This development has also been reflected in an increasingly global composition of the editorial teams since then (Aoki et al., 2022, in this issue). In addition to editorial policies, the internationalization is likely to be driven by the alignment of academic practices and career systems across the world, which place an increased emphasis on publications in international journals (Lodge, 2022, in this issue). It might also be a response to the changing nature of administrative problems in a globalized world, which increasingly refute national compartmentalization (Hou et al., 2011).

Evidently, the statistical analysis of term frequencies neither allows for conclusions about the reasons for the outlined developments nor does it reveal how the articles utilize the evidence from the different administrative traditions. The algorithm cannot distinguish between original data in empirical studies and simple references to results from other administrative contexts. Still, by revealing contextual information in the articles, our measures go beyond the coding of author affiliations for assessing the international orientation of a literature, which is a common practice in bibliometric analyses. Furthermore, the assignment of countries to administrative traditions glosses over country-specific developments and ignores overlaps between traditions (Painter & Peters, 2010). However, administrative traditions provide a “comparative bureaucracy” (Peters, 2021, p. 1) grounded in the historical genesis of administrative systems.

3.3 | PA and methods

Figure 5 informs about the use of quantitative and qualitative research methods in PA articles. The analysis followed the same text mining approach as above (Step 2; Figure 1) but applied a dictionary for research methods (Vogel

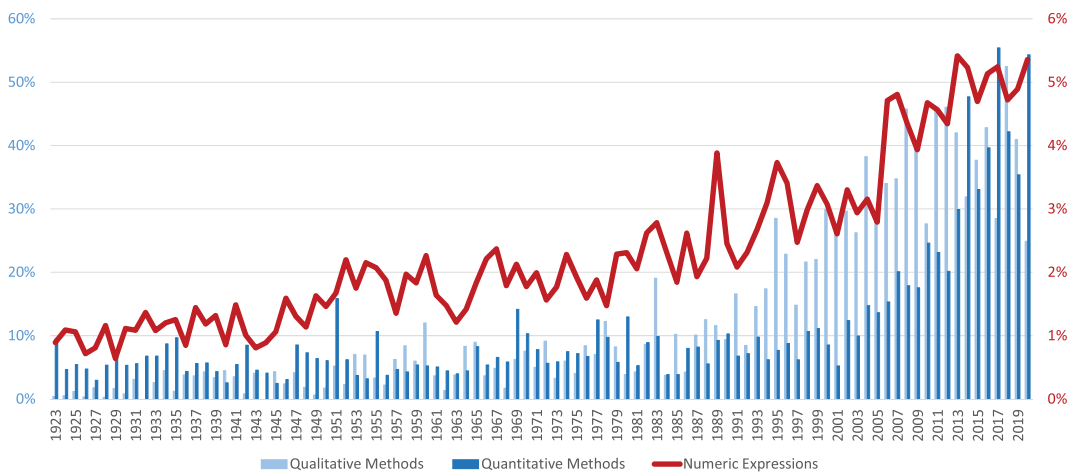


FIGURE 5 Research methods. The diagram builds on a closed vocabulary text mining and shows shares of articles referring to quantitative or qualitative methods, respectively. The red line shows the share of numeric expressions for all terms in the full texts. The figure is available for download in color and high resolution at <https://doi.org/10.7910/DVN/ON64O7> [Color figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]

et al., 2017). The graph further includes the frequency of numeric expressions in the articles, which might serve as a supplementary proxy for quantitative analyses. On average across the entire century, we identify a low share of articles using quantitative (10.8%) or qualitative (12.9%) methods. However, our data also show a considerable methodological development toward the end of the century.

The findings confirm earlier assessments that public administration scholarship had for a long time been “methodologically underdeveloped” (Groeneveld et al., 2015, p. 62). Until the 2000s, less than 10% of PA articles used statistical analyses, and even the enthusiasm for quantitative methods during the postwar period (Stallings & Ferris, 1988) left imprints only in a slight rise of numeric expressions (Figure 5). Much of the earlier work can be described as “capturing and recording” and “case reporting” (Chester, 1946, p. 94), both of which were acknowledged as research methods. The very idea of research was “to get out of the heads of the practitioners and into published material” (Chester, 1962, p. 54) for the main purpose of informing teaching and practice. A comparative analysis of public administration journals in the 1970s showed that more than two-thirds of articles published in PA used “historical” methods, which was the highest share among all analyzed journals (Bowman & Hajjar, 1978). However, such articles did not build on qualitative methods in the systematic manner that we know from contemporary research. The widespread use of qualitative methods is a phenomenon only of the last three decades, and in this regard, PA has deviated from the quantitative orientation of other top journals in the field, particularly when compared to North American journals (Ospina et al., 2018; Wright et al., 2004). The stronger roots of interpretivism in the European intellectual tradition might provide an explanation for the qualitative profile of PA (Bevir & Rhodes, 2022, this issue). Over the last decade, however, the journal has likewise become more quantitative, primarily at the expense of conceptual articles.

These results provide testimony for the methodological development and sophistication of PA toward the end of the twentieth century (see also Rhodes et al., 1995). Nonetheless, the probabilistic classification of articles based on keywords bears some limitations. We compiled the dictionary with contemporary methodological terminology, but scientific practices have changed substantially over the century. For example, standards for qualitative methods were not established until the 1970s, and, previously, even the term “qualitative research” was uncommon in the social sciences (Wolcott, 2009). While this primarily concerns the first 50 years, recent estimates might be affected as well, because the level of methodological sophistication in qualitative public administration research remained low until the turn of the

millennium (Brower et al., 2000; Lowery & Evans, 2004). Besides, the extent to which authors use technical terms in their writing varies considerably between articles of a similar methodology, even in the same publication year, causing a margin of error in our estimates (Appendix A). Furthermore, mixed methods studies (Hendren et al., 2018) are identified as both qualitative and quantitative, which potentially inflates the share of empirical studies. Owing to these limitations, the actual distribution of methods within each volume can deviate from our estimates. What we can conclude with certainty is that PA is answering Simon's (1946) call for more systematic empirical knowledge today more than ever before.

3.4 | PA and topics

3.4.1 | Thematic network of PA

Although the previous analyses have revealed some of the basic features of scholarship published in PA, they have been largely silent on the formative topics throughout the journal's publishing history. This is the focus of our main analyses resulting from Steps 4 and 5 of the procedure (Figure 1). Figure 6 shows which thematic clusters have emerged over the century, when they peaked, and how they are interrelated. The network is the result of an aggregation and clustering procedure based on document similarities, outlined in more detail in Appendix A. The colored nodes represent topics, with the node color indicating the median publication year of related articles and the node size being proportional to the number of these articles. The articles, symbolized by the nodes in light gray, are linked to a thematic cluster if they have a certain level of similarity with a minimum share of clustered articles. As articles can be linked to multiple thematic clusters, they establish connections between the topics and bring them closer together the more similar they are. In total, we extracted 63 thematic clusters with more than five related articles each. The table in Appendix B provides for each cluster some information on its structure and content. Given limitations of space, we cannot elaborate on each cluster and instead direct our focus to the major lines of thematic development over time.

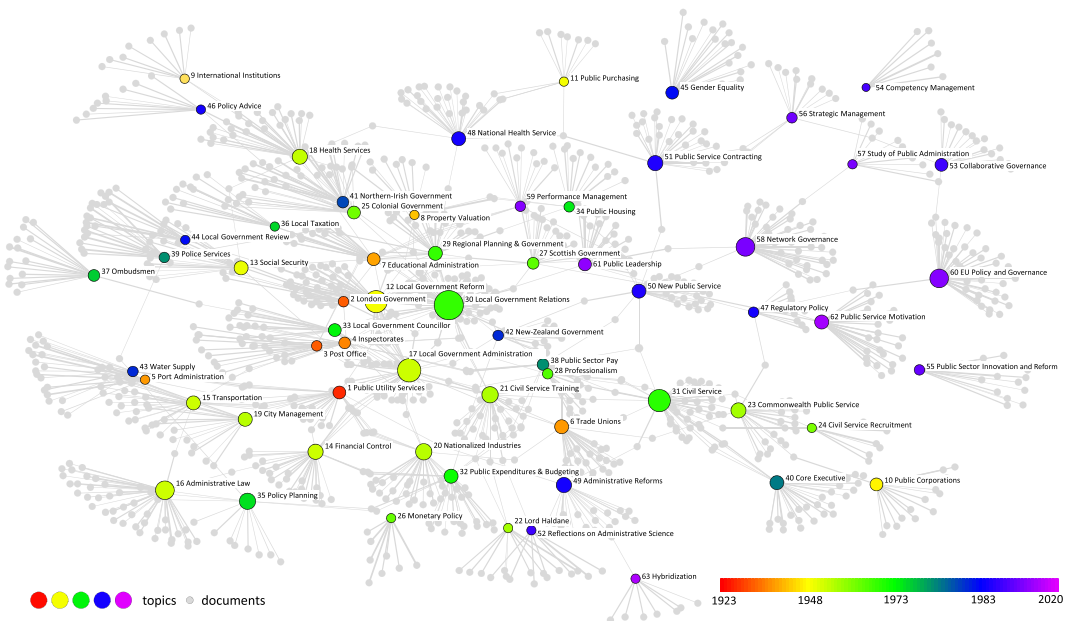


FIGURE 6 Research topics. The figure is available for download in color and high resolution at <https://doi.org/10.7910/DVN/ON6407> [Color figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]

A first observation is that the network core is populated by topics that peaked in the first half of the century and thus appear outdated from today's perspective. Among the largest and most central clusters are those dealing with local government with regard to its reform (topic #12), internal administration (#17), external relations to central government (#4 and #30), and political representation (#33). Similarly, the clusters on city management (#2 and #19) and regional government (#29) have a focus on particular jurisdictions in the politico-administrative system. Other thematic clusters revolve around policy fields in the provision of public infrastructure, such as postal services (#3), transportation (#5 and #10), social security (#13), health (#18), and public utility services (#1) more generally, with the latter being the "oldest" cluster in the network. Another pattern of topic emergence is the focus on management and policy functions, such as planning (#35), budgeting (#32), purchasing (#11), and controlling (#14). Although all these thematic clusters reflect a large variety of scholarship, they also reveal how strongly *PA* scholarship had been driven by phenomena or objects of practical interest for a long period of time. Although topics have changed, this period can still be regarded as one of continuous development. This continuity is indicated by the colorful region around the core of the network, ranging from red (1920s) to green (1970s). While this scholarship spans a considerable amount of time, the clusters are still densely interconnected and in close proximity, which reflects a smooth thematic evolution.

A discontinuity in the journal's thematic development occurs in the late 1980s and the early 1990s, as most blue and purple clusters are located in a distinct region of the network. Although these clusters are still connected to scholarship in other regions, there is a trench separating them to a visible extent. The similarity of scholarship on each side of the trench is thus considerably larger than the similarity across the trench. This emancipatory move is closely associated with the demise of the *RIPA* in 1992 and the sale of the journal to Blackwell's (Chapman, 1992; Shelley, 1993), a turning point in the journal's history. It marked the becoming of *PA* as "a hard-core academic journal" (Rhodes, 2022, this issue), for editorial policies no longer had to consider the practical interests of the *Institute's* members. Since then, the main target group were academics, and revenues were predominantly generated from subscriptions by university libraries.

The beginning of the "new" era of *PA* coincides with the New Public Management (NPM) movement, as reflected in the emergence of clusters on government reforms in NPM's country of origin (i.e., New Zealand; #42) and public sector reforms more generally (#49 and #55). Further clusters cover both the external and the internal dimension of NPM: The external marketization of public services is reflected in clusters on the privatization of water supply (#43), public service contracting (#51), and regulatory policies more broadly (#47). The internal dimension appears in clusters on the managerialization of the National Health Service (NHS; #48), on the foundation of a new public service (#50), as well as on strategic (#56) and performance management (#59). However, although NPM marks the beginning of a new era, not all thematic clusters that have emerged since then comply with this agenda. More recent topics, such as collaborative governance (#53), network governance (#58), or public leadership (#61), indicate a post-NPM era of public administration research (Christensen & Lægreid, 2011).

Although the divide into an "old" and a "new" era of *PA* scholarship is visually apparent from the thematic network, historical accounts on the field's intellectual development suggest a more fine-grained differentiation into more eras, paradigms, or reform stages. With some notable exceptions (Dunsire, 1999; Hood, 1995; Rhodes et al., 1995; Robson, 1975), such historiographies have predominantly taken a US-American viewpoint. A more *PA*-specific division comes to the fore when the additional analysis in Figure 7 is combined with findings from the previous analyses and enriched by considerations of the broader historical context. The stack chart shows how the clustered articles are distributed across the full range of publication years. The legend illustrates two (hypothetical) extreme cases: one with horizontal lines, in which all topics are equally studied over the entire century, and one with vertical lines, indicating a disruptive succession of only temporarily trending topics. *PA* is between these extremes, suggesting that periods in which groups of topics receive broad attention alternate with more transitional periods of accelerated change. The overall pattern indicates an increasingly rapid succession of topics as the slopes of the lines steepen over the years. In full awareness that any separation into distinct eras is to some extent arbitrary, we draw four lines of demarcation, suggesting five eras of *PA* scholarship. The trends in writing style, disciplinary orientation,

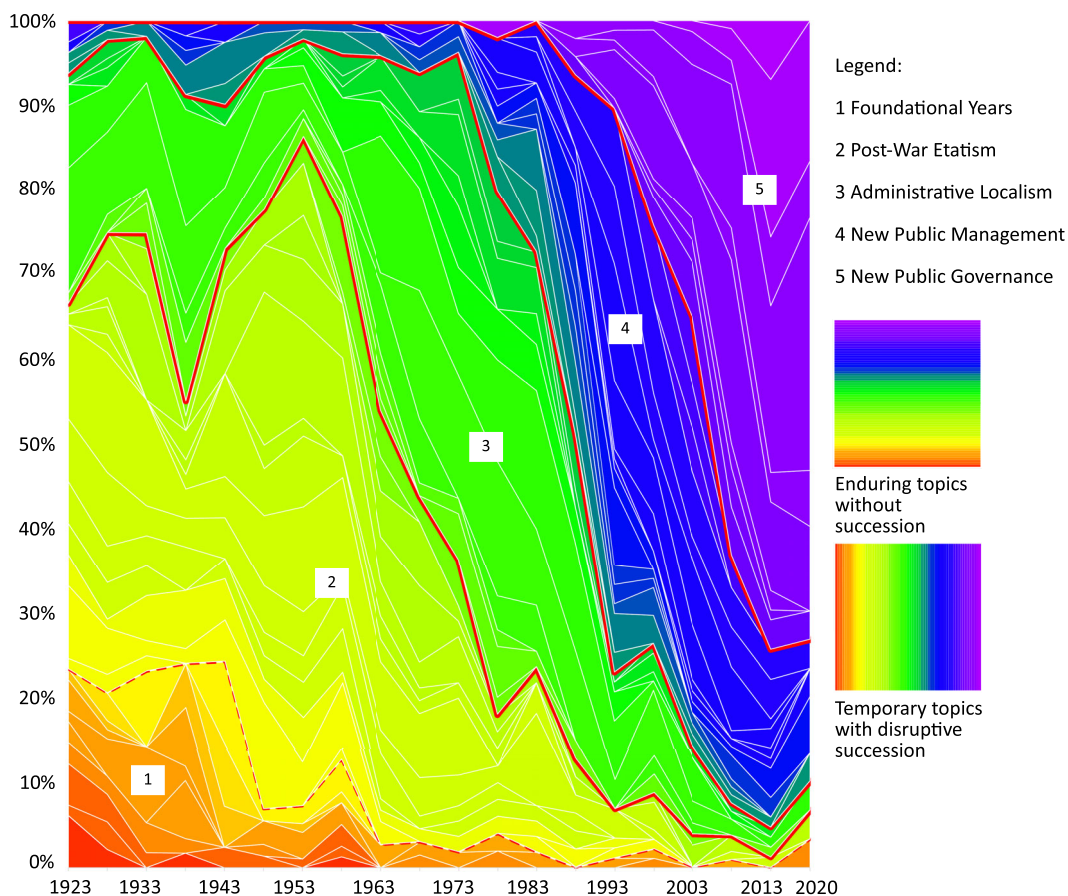


FIGURE 7 Five eras of PA scholarship. For the color index, see Figures 6 or 8. The figure is available for download in high resolution at <https://doi.org/10.7910/DVN/ON64O7> [Color figure can be viewed at wileyonlinelibrary.com]

empirical contexts, and methodological preferences complement this picture. Due to the gradual development from the first to the second era, also signified by the moderate slope in the succession of topics, these periods are separated only by a dotted line.

3.4.2 | Eras of PA

The first era with a particularly strong focus on practical issues of governing and administering might be called the *Foundational Years*, including topics with a median publication year before the mid-1940s. In the early years of PA, and lasting until the 1960s (Dargie & Rhodes, 1996), authors were primarily distinguished practitioners writing for other practitioners, preferably in an essayistic style. Articles were rather short (Figure 2), and the level of methodological sophistication was low (Figure 5); data, if reported, primarily served descriptive purposes. Inspired by concurrent advancements in industrial administration, the journal was primarily interested in the “efficiency of public services” (Anonymous, 1923, p. 3), such as public utilities (#1) or postal services (#3). A telling example is a conference on office management in 1927 to which the *Institute* invited industrial managers for their expertise (Gibbon, 1927). Although most articles concerned domestic issues in Great Britain and the colonies of the British Empire, the early volumes also included references to the Germanic, Napoleonic, and Scandinavian administrative

traditions (Figure 4). International conferences at the *Institute* and visits to other public administration institutes facilitated the journal's global orientation during the foundational era (Nottage & Stack, 1972).

The following era of "Post-War Etatism" peaked during the 1950s and lasted until the early 1960s. Although Simon's (1947) seminal work *Administrative Behavior* had induced a first wave of academic professionalization in North America during this time (Mackenzie, 1951), many European scholars remained skeptical toward Simon's generic behavioral approach and instead emphasized the specific democratic context of public organization (Bowman & Hajjar, 1978; Robson, 1961). Contemporary issues on the British agenda, such as the nationalization of industries (#20) or the transition of former colonies to independent nations (#25), reflect the embeddedness of PA research within the historical context (Oliver & Pemberton, 2004). The average length of articles increased during this period (Figure 2), and their style slowly became more similar to what contemporary readers are familiar with. The trend toward a more analytical style at the expense of normatively charged essays is also apparent from the increasing use of numeric expressions and a growing number of references to academic methods, although these developments were rather modest (Figure 5). Publishing quantitative analyses was still so uncommon that the editorial introduction of two articles on statistical methods was almost apologetic (Chester, 1951). At the same time, the interest in administrative systems beyond the Anglo-Saxon tradition climbed back to pre-war levels (Figure 4). Overall, the post-war era closely resembles the foundational period in PA, which is further supported by the rather smooth succession of topics (Figure 7) and strong thematic continuities, such as the persistent interest in the education, training, and promotion of civil servants.

Many of these gradual changes reversed during the subsequent era of "Administrative Localism," ranging from the mid-1960s until the early-1980s. Topics remained centered around major British policies, and the diversity of referenced administrative traditions reached an all-time low by the end of the 1970s (Figure 4). British public administration was largely detached from international trends (Fry, 1999; Rhodes, 1996; Rhodes et al., 1995; Ridley, 1972) although its policy-driven approach shared some ideas with the New Public Administration movement, which simultaneously developed in the United States (Frederickson, 1980). The era was strongly influenced by a landmark reform for the reorganization and decentralization of government authority in 1972, the "Local Government Act," which concerned most of the topics (e.g., #29, #30, #33, and #36). Furthermore, the increasing demand for professionals within the civil service (#28 and #31) as well as the monetary policies associated with the devaluation of the Pound Sterling (#26) were of primary British concern (Oliver & Pemberton, 2004). The pace of methodological professionalization slowed down during this time (Figure 5), and the language of the articles became again more complex (Figure 2). At the same time, the share of authors with an academic affiliation rose considerably to almost 80% (Dargie & Rhodes, 1996; Rhodes et al., 1995). Toward the end of this era, the imprint of political science decreased while the influence of management and economics steadily increased (Figure 3).

The change in disciplinary orientation continued throughout the 1980s. We consider Hood's (1991) famous article in PA as the symbolic shift to the "NPM" era although some articles published during the 1980s had already heralded the advent of the new era. Although we have already discussed how the trench in the network (Figure 6) signifies thematic discontinuities, the stack chart (Figure 7) shows the rapid pace of the transition: Topics that had accounted for less than 10% up until the 1980s increased to about 70% within only two decades. The contracting of public services to private providers (#51) and the emphasis of a new service ethos (#50) were among the most trending topics. Although this development still echoed contemporary British policies (Pollitt, 1996), it quickly gained relevance around the world. The NPM era was also a period of disciplinary pluralization, internationalization, and methodological professionalization. Management and economics had established as disciplines from which authors sourced to a significant extent (Figure 3). The introduction of the *Public Management* section in PA since 1990 facilitated this development (Rhodes et al., 1995). Articles covering administrative traditions beyond the Anglo-Saxon world substantially grew in number (Figure 4). Authors made increasing use of research methods although this trend first accelerated only on the qualitative side of the methodological spectrum (Figure 5).

We label the fifth era "New Public Governance" (NPG; Osborne, 2006), with work on collaborative governance (#53) and network governance (#58) reflecting the current era most clearly. The dynamic succession of topics

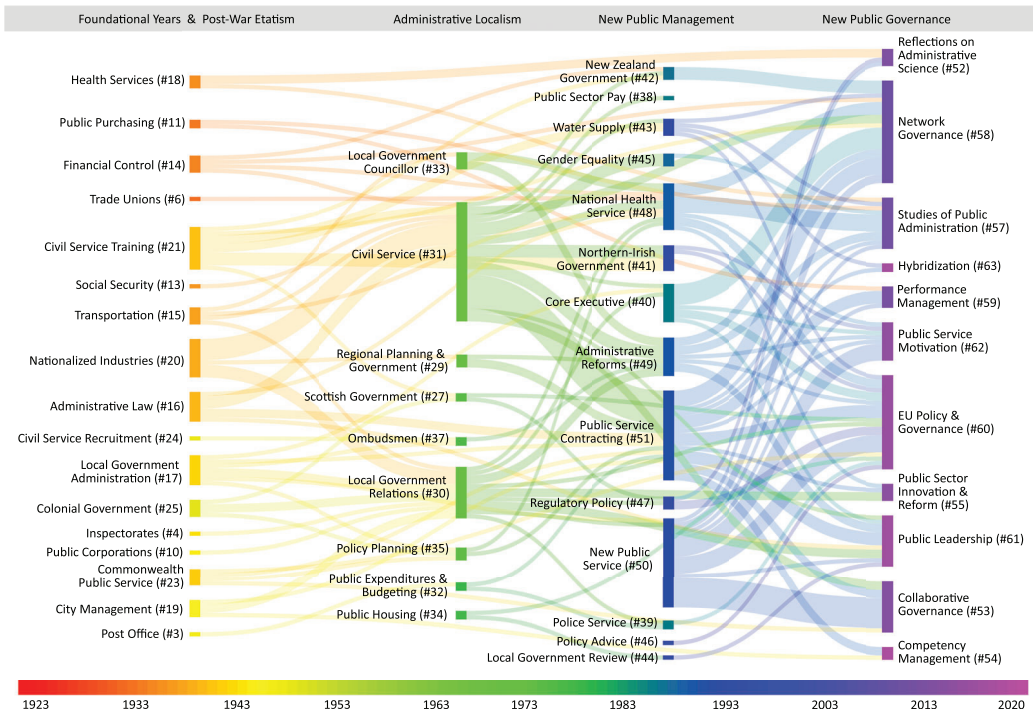


FIGURE 8 Evolution of research topics. The figure is available for download in color and high resolution at <https://doi.org/10.7910/DVN/ON64O7> [Color figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]

continued, and NPG topics accounted for most publications already in the 2008–2012 period. However, although NPM has often been declared dead (Dunleavy et al., 2005), some of its core elements, such as strategic management (#56) and performance management (#59), continue to thrive throughout the NPG era. In disciplinary terms, a distinguishing feature of the contemporary era is the rise of psychology as a supplier discipline of PA research (Figure 3); a change that is most likely driven by research on public leadership (#61) and public service motivation (#62) as well as the behavioral public administration movement (James et al., 2017). These developments might also explain the pace with which quantitative methods have caught up in the first two decades of the millennium, now being roughly on a level with qualitative methods (Figure 5). The NPG era has also been the first period in the history of the journal in which references to administrative systems outside the Anglo-Saxon tradition take the major share (Figure 4).

3.4.3 | Evolution of PA

Separating lengthy periods of time into distinct periods always runs the risk of overemphasizing differences between these periods and underestimating the extent to which they evolve from one another. Our final analysis (Figure 1; Step 5) therefore reveals how the topics in different eras were connected through the “flow” of references across the century. The Sankey diagram (Figure 8) shows the extent to which PA articles clustered in one era were cited by articles clustered in the following eras. The graph shows four “pillars,” each comprising the topics whose median publication years lie within the respective period. Owing to the limited availability of citation data from the first half of the century, the diagram consolidates the first two eras into one. This merger is justified also for thematic reasons, as there are strong thematic continuities connecting these eras. The width of the connecting streams indicates how

strongly a former topic provided foundations that authors considered worth citing when studying a topic in a later era. Correspondingly, the size of a bar depends on the number of such intellectual relationships between topics from different eras. The diagram does not include all clusters from the previous analyses as some of them did not contain articles that were cited in subsequent eras. Such era-specific interests are mostly linked to temporary problems in administrative practice (e.g., property valuation, #8).

The diagram can be interpreted in two directions with different implications. In chronological order from left to right, the chart indicates the degree of scholarly attention that a topic received in subsequent eras. Civil service training (#21) and nationalized industries (#20) provided the strongest foundations to subsequent scholarship although journal self-citations are rather equally distributed across the topics in these early years. Remarkably, some of these initial topics retained their relevance for a long time. The thematic cluster on administrative law (#16), for example, was still referenced in the literature on public service contracting (#51) in the NPM era, making a case for a dialog between public administration and law (Osorio et al., 2021). In the later periods, few topics attracted a clear majority of citations. In the era of Administrative Localism, the works on civil service (#31) and local government relations (#30) had by far the largest influence on subsequent scholarship. Indeed, the civil service reforms following the Fulton Report in 1968 (Chapman, 1968) were an early indication of the upcoming NPM era (Fry, 1990, 1991; Johnson, 1985). The NPM topics of public service contracting (#51) and the new public service (#50) have received most attention in the post-NPM era—most likely within the leitmotif of reintegrating the compartmentalized public service (Christensen & Lægreid, 2007).

When interpreted from right to left, the Sankey diagram highlights *PA*'s most pertinent topics with historical trajectories within the journal. In today's NPG era, network governance (#58) as well as EU policy and governance (#60) are the topics with the strongest intellectual roots in *PA*. Especially, the latter continues the journal's European and political science traditions. Public service contracting (#51) is the topic of the NPM era that is most deeply embedded into the journal, followed by the cluster on the NHS (#48). In contrast, the cluster on new public service (#50) has hardly any intellectual foundations in *PA* and is thus literally "new." During the era of Administrative Localism, both of the highly recognized thematic clusters (i.e., civil service, #31; local government relations, #30) are the topics that also strongly rely on previous *PA* scholarship. Taken together, the evident continuity suggests an evolutionary dynamic rather than a disruptive change of topics.

The thematic evolution indicates numerous relationships spanning topics across time, both expected and unexpected. For example, the literature on local government relations (#30) draws upon work on local government administration (#17), yet it remained unrecognized by the later publications on local government review (#44). Still, this observation does not imply the absence of relationships. In the identification of thematic clusters, we reduced the sample to a considerable extent, potentially excluding topic-bridging works. Similarly, the lack of citation data from the earlier eras might obscure intellectual relationships. Given the change of referencing practices over the decades, it is little surprising that thematic clusters in the first pillar are, on average, the least cited. Nonetheless, the analysis indicates some trajectories in the thematic evolution of *PA* until today.

4 | CONCLUSION

Throughout the journal's publication history, self-reflections on the development of the journal and the broader field have repeatedly found their way into *PA*. For example, a thematic cluster of its own (#22) emerged with appreciations of the life-time achievements of Lord Richard Burdon Haldane (1856–1928), particularly in the fields of higher education and administration (Bridges, 1957; Haldane, 1923; Heath, 1928). Haldane, philosopher and politician, was a founding member of the journal, and his legacy had lived on for a long time in a prize for distinguished practitioner essays, now revived as *PA*'s best article award. Articles in another cluster (#52) have reflected on the status of public administration as a science and its relationships to other sciences. Remarkably, this cluster brings together documents from very different eras, beginning with an article in the inaugural volume and spanning almost the entire

publication history (Bogumil, 2005; Merson, 1923; Ridley, 1972). The journal has also provided a platform for an exchange on the institutionalization of public administration in higher education across the world (#57; Hood, 2011; Kickert & Toonen, 2006; Su et al., 2013), turning comparative public administration into a self-reflective mode.

In this tradition of self-observations, our study has contributed an analysis of scholarship published in *PA* throughout the first century of the journal's history. It is important for scholarly communities not to forget where they come from when moving forward, for a "field of study that is unaware of past intellectual and practical concerns is [...] unlikely to offer insight into contemporary challenges" (Lodge, 2022, in this issue). A bibliometric analysis on the occasion of a top journal's anniversary might be a useful intervention to sharpen this historical awareness. We hope that our findings invite for such self-reflections, the more so as this study has not offered the space to elaborate on a century of scholarship in the detailed manner it deserves. Given our technical approach based on bibliometrics and NLP, we consider our study to be a complementary piece to retrospective and programmatic reflections on more personal accounts (Lodge, 2022; Rhodes, 2022, in this issue). Each step of the analytical procedure had certain limitations the most important of which have been briefly discussed above. As a more general limitation across these steps, it is worth repeating that the results obtained from bibliometric analyses depend to some extent on the researchers' technical decisions. We have taken these decisions to the best of our abilities but not without bringing our own knowledge of the field.

The results virtually draw a colorful picture of the journal's history. The case of *PA* is an exercise in how a journal, and a scholarly field more broadly, co-evolves with the object of study and is thus embedded into the political and societal contexts of its times. It also shows that throughout its history, *PA* scholarship has been in a fragmented state. However, the kind of fragmentation has changed over time: In the first three eras, British idiosyncrasies (Lodge, 2022, in this issue; Rhodes, 1996) are strongly reflected in the publications, corresponding to the journal's institutional affiliation and dedication. The predominance of geographical references to the journal's country of origin was not specific to *PA* but common in the broader field of publishing (Bowman & Hajjar, 1978). In this "old" *PA*, the national fragmentation of scholarship was more pronounced than the thematic fragmentation as the topics continued to be interrelated even over long periods of time. In the "new" *PA*, spanning the two recent eras, the mode of fragmentation has somewhat reversed: The strong push toward internationalization has resolved much of the national fragmentation, but, at the same time, the thematic fragmentation (or "hyperspecialization"; Rhodes, 2022, in this issue) has increased as emerging topics have changed more frequently and show less similarities to each other. Despite these fragmentary forces, and countervailing them, contemporary scholarship has common roots, the deepest of which go back to the foundation of *PA* a century ago.

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DATA AVAILABILITY STATEMENT

All figures are available for download in high resolution at <https://doi.org/10.7910/DVN/ON64O7>.

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APPENDIX A

Technical notes on the analytical procedure (Figure 1)

Step 1: Generation of initial dataset and bibliometric analysis.

We started with retrieving metadata for documents published in PA between 1923 and 2020 from the Scopus database. We limited our search query to documents in the “article” and “review” categories and did not consider any other document type, such as editorials, errata, letters, and book reviews. Please note that in the text, tables, and figures, we refer to all analyzed documents as “articles,” although some of them technically fall into the “review” category (with sometimes blurring boundaries between both). For volumes that were missing in Scopus, we downloaded metadata from the publisher's website, which we also used for a download of all available full texts. We manually deleted some of the retrieved documents because they were wrongly classified as article or review. In total, the initial database consisted of $n = 3202$ documents which met the selection criteria and for which full texts were available.

For the more conventional bibliometric analyses, we downloaded citation data from the Social Science Citation Index (SSCI) in the Web of Science, as this database provided more complete and standardized data than Scopus. However, a manual cleaning of the cited references was still necessary because bibliometric data usually suffer from some “noise.” Authors might make spelling or other errors when citing references, they might cite various editions of the same book, and there might be a loss of information in the transfer of data to the citation index. We therefore manually reviewed the cited references and resolved inconsistencies where obvious. The resulting database is a sub-sample of the initial database outlined above, consisting of 1935 articles with 85,067 references to 59,129 sources.

A first analysis building on the bibliometric data was an automated coding of disciplines in the body of references. For this purpose, we built on the SSC edition of the JCRs and classified cited journals according to their subject category. Before running the coding, we modified the original journal classification by aggregating some subfields to broader disciplinary categories. For example, we merged various specializations within psychology, such as developmental, educational, and social psychology. The resulting coding scheme comprised 41 disciplines, all of which were represented in the body of references. In total, 28,022 references were assigned to at least one

disciplinary category (a journal can be assigned to more than one discipline). We then calculated the share of references to journals in a particular discipline among all coded references.

Step 2: Corpus creation and closed vocabulary text mining.

The full texts of the articles were converted to a machine-readable data format. We then deleted journal headers, author bios, endnotes, reference lists, and appendices, thus reducing the files to the main text of the articles. A necessary first step in NLP is tokenization, which divides the documents into sentences, words, and symbols (Webster & Kit, 1992). We applied space-based tokenization to extract unigrams (i.e., single words). Figure 2, presenting some basic characteristics and distributions of the text corpus, is based on this data. The decomposition of the texts further produced a document-term-frequency matrix, in which each row represents a document and each column a token (i.e., term). The cells indicate the occurrence of a token relative to the total number of tokens for a particular document.

The document-term-frequency matrix was the input for two lexicographic analyses based on predefined dictionaries (Indurkha & Damerau, 2012; Hickman et al., 2020). First, we were interested in the geographical situatedness of PA scholarship and thus applied a dictionary with more than 400 words or phrases indicative of countries or regions, including obsolete denominations (e.g., “Soviet Union”). This coding prepared the analysis of the different administrative traditions, specifically the extent to which these are subject to research published in PA (Figure 4). Second, as our focus also was on methodological developments, we applied a dictionary including more than 7300 descriptors of different types of data and methods (Vogel et al., 2017). The list distinguishes terms for quantitative (e.g., “regression analysis” and “factor loading”) and qualitative methodologies (e.g., “grounded theory” and “ethnography”) and provides a value for the frequency of methodological descriptors for each document. Prior to the analysis, we calibrated the dictionary based on 207 randomly selected articles. We first calculated the mean term frequencies for subsamples of quantitative and qualitative methods. We subtracted the standard deviation from the mean frequencies and assigned to the resulting score a probability of 1 for classifying an article as quantitative or qualitative, respectively. When estimating the probability for a quantitative or qualitative article, we benchmarked the frequency of methodological terms against the score we obtained from the calibration. Accordingly, an article received a probability of 0.5 for being a qualitative study if it used qualitative terms half as frequent as the score from the benchmark. Probabilities were capped at 1. To triangulate the results, we also calculated the frequency of numeric expressions per document, as the application of quantitative methods should correlate with the use of numbers in the texts (Figure 5).

Step 3: Corpus reduction and open vocabulary text mining.

This step prepared the data for the open vocabulary text mining. It was conducted in Python (version 3.9.6) using the modules nltk (version 3.6.2) and scikit-learn (version 0.24.2). More precisely, the applied techniques reduced the size of the corpus, highlighted frequently occurring terms and concepts, and enhanced the predictive validity of the subsequent cluster analyses (Hickman et al., 2020). We first removed punctuation (e.g., “!,” “?,” etc.), stop words (e.g., “the,” “if,” “we,” etc.), symbols (e.g., “@,” “%,” etc.), and numbers from the corpus. Furthermore, we standardized the corpus by lowercase conversion and reduced term variations to their root words using Porter’s (1980) stemming algorithm. For example, “formal” is the stem word for “Formalization,” “formalize,” “formalized,” “formality,” etc. “motive” is the stem for “motivation,” “motivated,” “motivates,” and so forth. We then transformed the document-term-frequency matrix (see Step 2) into a term frequency (TF)-inverse document frequency (IDF) matrix (Sparck Jones, 1972). As a method of term weighting, TF-IDF acknowledges that rare words are more valuable for distinguishing one document from another than terms that are common throughout the corpus. For example, “public” and “administration” are (literally) descriptive of the corpus as a whole and will occur frequently across documents. For the same reason, however, both terms are of little value for identifying patterns of scholarly communication within the corpus. TF-IDF adjusts the frequency of a term by weighting it with the number of documents in which the term occurs at least once. The inverse of the document frequency accounts for the negative effect of an increasing number of documents for the distinctiveness of a word (Wu et al., 2008).

The salience of terms in the TF-IDF matrix was the input for an assessment of the similarity of documents. Cosine similarity (Bhattacharyya, 1946) is a widespread measure in NLP because it is less affected by variations in document length than other similarity measures. It quantifies the distance between the term vectors of any two documents by comparing only the terms contained in both documents (Huang, 2008). The cosine θ of the angle between

the two vectors oscillates between 0, indicating no semantic relationship, and 1, suggesting a complete textual overlap. The resulting document similarity matrix designates semantic relationships between every pair of documents.

Step 4: Selection of documents and cluster analysis.

For the detection of topics, we applied a network-based clustering algorithm (Girvan & Newman, 2002) to the document similarity matrix, thus detecting clusters (i.e., topics) based on the links between nodes (i.e., documents). To focus on major lines of development and arrive at a manageable number of coherent topics, we first reduced the matrix by excluding relationships between documents with low similarity values ($\theta \leq 0.4$). We applied the clustering algorithm to the reduced matrix and yielded the highest goodness-of-fit ($Q = 0.810$) for a solution with 91 clusters. We then further reduced the network by dropping small clusters with five or less documents, as clusters are more likely to represent peripheral topics the smaller they are. Through this stepwise reduction of the network, we finally arrived at 1398 documents clustered in 63 topics (Figure 6). In our interpretation and labeling of the clusters, we prioritized documents according to their within-cluster centrality. The document with the highest local centrality in a cluster is provided in Appendix B. The table also includes word clouds resulting from unigram analyses based on the document-term-frequency matrix, showing the most common terms for each topic.

Step 5: Filtering of references and bibliometric analysis.

In a final step, we filtered the bibliometric data (see Step 1) for references only among articles published in PA and clustered in Step 4. Owing to the limited availability of citation data, this step reduced the sample to 306 PA articles with 655 references to 335 older PA articles. It also eliminated 12 topics because assigned articles were unrelated, that is, they neither received a citation from more recent topics nor did they refer to one of the older topics. We used the citation data to visualize the intellectual links between topics across the history of PA in a Sankey diagram (Figure 8).

APPENDIX B

Thematic clusters [Color figure can be viewed at wileyonlinelibrary.com]

Cluster	Label	Median Year	Most Central Document ^a	Top 30 Unigrams	Cluster	Label	Median Year	Most Central Document ^a	Top 30 Unigrams
Size ^a	Span				Size ^a	Span			
1	Public Utility Services	1927–1959	Dakyns, A. L. (1938). The control of the central authority over the activities of public undertakings. <i>PA</i> , 16(2), 157–172.	municipal act cost case public service company local change	6	Trade Unions	1938–1976	Houghton, A. L. N. D. (1933). Collective bargaining in the civil service. <i>PA</i> , 11(1), 86–97.	council side industry union trade service staff civil public arbitral
2	London Government	1932–1961	Warburg, O. (1929). Some problems of London government today. <i>PA</i> , 7(1), 20–29.	council local london authority plan public	7	Educational Administration	1939–2010	Frizell, J. B. (1939). Education in Scotland – II: The unit of administration. <i>PA</i> , 17(3), 307–321.	educate school public local author administrator
3	Post Office	1932–1959	Waldegrave, A. J. (1926). The post office and its contacts. <i>PA</i> , 4(1), 41–51.	service post office reform act	8	Property Valuation	1942–1954	Hicks, J. R., & Hicks, U. K. (1941). An economic view of rating reform. <i>PA</i> , 19(3), 181–201.	valuation value house rate local act
4	Inspectorates	1936–2019	Moss, J. (1939). The inspectorate as a link between central and local authorities. The Ministry of Health in relation to public assistance. <i>PA</i> , 17(3), 233–245.	inspect case local work inspector reform act law poor	9	International Institutions	1945–1960	Purves, C. (1945). Personnel and finance. <i>PA</i> , 23(1), 12–20.	nation league service work secretariat internal
5	Port Administration	1938–1995	Beales, H. L. (1938). Administration of ports. (d) A historical survey. <i>PA</i> , 16(4), 407–414.	authority port dock cost public	10	Public Corporations	1947–1960	Self, H. (1947). The public accountability of the corporation. <i>PA</i> , 25(3), 131–140.	general control public administrator corporate board state govern service

Cluster	Label Size ^a	Median Year Span	Most Central Document ^b	Top 30 Unigrams
11	Public Purchasing 8	1949 1927– 2000	Mackinney, F. W. (1927). The organization of municipal supplies. <i>PA</i> , 5(3), 291–310.	depart office store purchase service public health work
12	Local Government Reform 39	1949 1923– 1990	Gibbon, I. G. (1931). Local government act, 1929. Administrative measures. <i>PA</i> , 9(2), 120–147.	service act govern local county area council
13	Social Security 27	1950 1927– 1997	Bell, J. G. (1927). Administrative aspects of social insurance. National health insurance. <i>PA</i> , 5(4), 344–357.	work social scheme benefit insurance family fund public service
14	Financial Control 26	1953 1924– 2013	Collins, E. A. (1962). The price of financial control. <i>PA</i> , 40(3), 289–309.	audit control public auditor account committee depart
15	Transportation 30	1953 1924– 1992	Hurcomb, C. (1931). The new transport and its administrative problems. <i>PA</i> , 9(2), 190–213.	public road transport
16	Administrative Law 48	1953 1923– 1996	Jennings, W. I. (1932). The report on ministers' powers. <i>PA</i> , 10(4), 333–351.	case depart court judicial power appeal tribunal administrator review act member public govern law decision
17	Local Government Administration 80	1953 1924– 2009	Hammond Etherton, G. (1924). Employment and organization of committees in local government administration. <i>PA</i> , 2(4), 389–398.	office service work local committee administrat council
18	Health Services 30	1954 1930– 2002	Wells, A. Q. (1951). The hospital service. <i>PA</i> , 29(1), 39–50.	service committee hospital medical health
19	City Management 16	1955 1925– 2018	Barratt, C. (1956). Impressions of urban local government in the United States. <i>PA</i> , 34(3), 267–287.	local city mayor public
20	Nationalized Industries 45	1955 1928– 1979	Nottage, R. (1957). Reporting to parliament on the nationalised industries. <i>PA</i> , 35(2), 143–167.	industry board public

Cluster	Label Size ^a	Median Year Span	Most Central Document ^b	Top 30 Unigrams
21	Civil Service Training 45	1956 1925– 2002	Stowe, K. R. (1961). Staff training in the national assistance board: Problems and policies. <i>PA</i> , 39(4), 331–352.	administrate course train office
22	Lord Haldane 9	1957 1928– 1983	Lord Bridges (1957). Haldane and the machinery of government. <i>PA</i> , 35(3), 254–265.	lord committee haldane educate university
23	Commonwealth Public Service 27	1957 1934– 2003	Caiden, G. E. (1964). The independent central personnel agency: The experience of the Commonwealth public service of Australia. <i>PA</i> , 42(2), 133–161.	government commission service public
24	Civil Service Recruitment 6	1961 1937– 1967	Milner, F. (1947). Recent developments in the work of the civil service commission. <i>PA</i> , 25(2), 61–70.	civil class service candidate examine method
25	Colonial Government 21	1962 1938– 2006	Williams, A. A. (1957). Administrative adjustment of a colonial government to meet constitutional change. <i>PA</i> , 35(3), 267–288.	administrator govern colony office
26	Monetary Policy 8	1963 1925– 2013	McKerihan, C. R. (1936). The state in relation to banking. <i>PA</i> , 14(4), 429–444.	government new rate public bank policy
27	Scottish Government 20	1964 1933– 2001	Keating, M. J. (1976). Administrative devolution in practice: The secretary of state for Scotland and the Scottish office. <i>PA</i> , 54(2), 133–145.	scotland government scottish public town local office new
28	Professionalism 8	1965 1929– 1980	Harris, W. G. (1969). The Fulton report. 3. The role of the professional in the civil service. <i>PA</i> , 47(1), 33–48.	professional report department public work administrator group office civil service engineer ministry
29	Regional Planning & Government 26	1968 1938– 2004	Joseph, K. (1964). Local authorities and regions. <i>PA</i> , 42(3), 215–226.	local office regional authority plan government
30	Local Government Relations 99	1968 1923– 2011	Banwell, H. (1959). The new relations between central and local government. <i>PA</i> , 37(3), 201–212.	government service local authority

Cluster	Label Size ^a	Median Year Span	Most Central Document ^b	Top 30 Unigrams
31	Civil Service 87	1969 1923– 2020	Dunnett, J. (1969). The Fulton report. 2. Equipping the civil service for its tasks. <i>PA</i> , 47(1), 13–32.	service civil minister public policy
32	Public Expenditures & Budgeting 28	1972 1924– 1997	Peden, G. C. (1983). The treasury as the central department of government, 1919–1939. <i>PA</i> , 61(4), 371–385.	treasury department expenditure government public plan spine
33	Local Government Councillor 11	1974 1953– 2008	Heclo, H. H. (1969). The councillor's job. <i>PA</i> , 47(2), 185–202.	local committee councillor member party policy political
34	Public Housing 12	1975 1930– 2013	Thompson, J. M. (1931). The administration of municipal housing estates. <i>PA</i> , 9(2), 148–154.	tenant house local authority social policy public
35	Policy Planning 18	1976 1932– 1985	Shone, R. (1966). The machinery for economic planning: II. The national economic development council. <i>PA</i> , 44(1), 13–28.	department planning government plan policy unit point
36	Local Taxation 9	1977 1925– 2001	Bennett, R. J. (1981). The local income tax in Britain: A critique of recent arguments against its use. <i>PA</i> , 59(3), 295–311.	local tax income rate critique income tax income
37	Ombudsmen 16	1978 1960– 2011	Gregory, R., & Alexander, A. (1972). 'Our parliamentary ombudsman'. Part 1: Integration and metamorphosis. <i>PA</i> , 50(3), 313–331.	ombudsman parliamentary investigate report commissioner case public government office complaint member
38	Public Sector Pay 8	1984 1926– 2020	Beaumont, P. B. (1978). The obligation of the British government as an employer in the British civil service. <i>PA</i> , 56(1), 13–24.	wage pay sector public governed rate civil service public
39	Police Services 12	1984 1926– 2013	Parker, K. A. L. (1990). The police service after the war: Structure and administration. <i>PA</i> , 68(4), 453–475.	authority police office force public service governed
40	Core Executive 26	1986 1933– 2011	Brady, C., & Catterall, P. (1997). Managing the core executive. <i>PA</i> , 75(3), 509–529.	cabinet department minister prime minister policy government

Cluster	Label Size ^a	Median Year Span	Most Central Document ^b	Top 30 Unigrams
41	Northern-Irish Government 14	1991 1950– 2008	Lord Windlesham (1973). Ministers in Ulster: The machinery of direct rule. <i>PA</i> , 51(3), 261–272.	northern local ireland governed service public policy government
42	New-Zealand Government 6	1994 1987– 2002	Wistrich, E. (1992). Restructuring government New Zealand style. <i>PA</i> , 70(1), 119–135.	perform public new executive chief governed minister account policy government
43	Water Supply 15	1994 1930– 2017	Pugh, N. J. (1939). Municipal trading – water supply. <i>PA</i> , 17(3), 276–292.	service water private public supply water supply water supply
44	Local Government Review 8	1997 1996– 1997	Leach, S., & Stoker, G. (1997). Understanding the local government review: A retrospective analysis. <i>PA</i> , 75(1), 1–20.	local review unitary public commission county council government
45	Gender Equality 18	1997 1940– 2020	Brimelow, E. (1981). Women in the civil service. <i>PA</i> , 59(3), 313–335.	gender women equality service public policy management civil service public
46	Policy Advice 8	2000 1946– 2018	Williams, K. (2018). Coherence in identity, process and outcome: Three strategies for attaining legitimacy in policy knowledge. <i>PA</i> , 96(1), 53–69.	work policy research government report think regional public policy government
47	Regulatory Policy 9	2000 1979– 2017	Bartle, I., & Vass, P. (2007). Self-regulation within the regulatory state: Towards a new regulatory paradigm? <i>PA</i> , 85(4), 885–905.	public state sector commission regulate policy self government
48	National Health Service 26	2000 1982– 2016	Sheaff, R., & West, M. (1997). Marketization, managers and moral strain: Chairmen, directors and public service ethos in the National Health Service. <i>PA</i> , 75(2), 189–206.	nhs policy care health service clinic management public service public service public
49	Administrative Reforms 32	2000 1923– 2013	Hesse, J. J. (1993). From transformation to modernization: Administrative change in Central and Eastern Europe. <i>PA</i> , 71(1–2), 219–257.	change public politics state administration government system policy service new civil reform
50	New Public Service 26	2001 1988– 2017	Stewart, J., & Walsh, K. (1992). Change in the management of public services. <i>PA</i> , 70(4), 499–518.	value public sector management public service public service public

Cluster	Label Size ^a	Median Year Span	Most Central Document ^b	Top 30 Unigrams	Cluster	Label Size ^a	Median Year Span	Most Central Document ^b	Top 30 Unigrams
51	Public Service Contracting 37	2001 1972– 2020	Deakin, N., & Walsh, K. (1996). The enabling state: The role of markets and contracts. <i>PA</i> , 74(1), 33–47.	service government contract management public local	56	Strategic Management 9	2009 1999– 2014	Andrews, R., Boyne, G. A., Law, J., & Walker, R. M. (2008). Organizational strategy, external regulation and public service performance. <i>PA</i> , 86(1), 185–203.	strategy public effect local service organization performance
52	Reflections on Administrative Science 7	2004 1923– 2005	Bogumil, J. (2005). On the relationship between political science and administrative science in Germany. <i>PA</i> , 83(3), 669–684.	administrator public science government social politics	57	Study of Public Administration 9	2010 1995– 2013	Hood, C. (2011). It's public administration, Rod, but maybe not as we know it: British public administration in the 2000s. <i>PA</i> , 89(1), 128–139.	administrator research public policy
53	Collaborative Governance 16	2004 1998– 2011	Lowndes, V., & Skelcher, C. (1998). The dynamics of multi-organizational partnerships: An analysis of changing modes of governance. <i>PA</i> , 76(2), 313–333.	government community partnership development public sector	58	Network Governance 55	2010 1994– 2020	McGuire, M., & Agranoff, R. (2011). The limitations of public management networks. <i>PA</i> , 89(2), 265–284.	govern local public network actor manage new policy
54	Competency Management 6	2005 2005– 2005	Page, E. C., Hood, C., & Lodge, M. (2005). Conclusion: Is competency management a passing fad? <i>PA</i> , 83(4), 853–860.	management policy public competition civil development framework reform service	59	Performance Management 12	2011 1991– 2020	Micheli, P., & Pavlov, A. (2020). What is performance measurement for? Multiple uses of performance information within organizations. <i>PA</i> , 98(1), 29–45.	level inform measure perform public agency service use
55	Public Sector Innovation & Reform 19	2008 1991– 2020	Walker, R. M. (2006). Innovation type and diffusion: An empirical analysis of local government. <i>PA</i> , 84(2), 311–335.	local public government innovate management organization	60	EU Policy & Governance 59	2011 1996– 2020	Christensen, J. G. (2010). EU legislation and national regulation: Uncertain steps towards a European public policy. <i>PA</i> , 88(1), 3–17.	nation policy eu european

Cluster	Label Size ^a	Median Year Span	Most Central Document ^b	Top 30 Unigrams
61	Public Leadership 18	2012 1988– 2020	Van Wart, M. (2013). Administrative leadership theory: A reassessment after 10 years. <i>PA</i> , 91(3), 521–543.	public leader sector change value strategy theory
62	Public Service Motivation 27	2014 1980– 2020	Vandenabeele, W. (2008). Government calling: Public Service Motivation as an element in selecting government as an employer of choice. <i>PA</i> , 86(4), 1089–1105.	employee level public service job motive public red tape psm
63	Hybridization 7	2015 2010– 2015	Denis, J.-L., Ferlie, E., & van Gestel, N. (2015). Understanding hybridity in public organizations. <i>PA</i> , 93(2), 273–289.	professional public managerial hybrid identity

Note. ^a Number of clustered articles; ^b Determined by within-cluster degree centrality.