

Trends in sociolinguistics research in the last decade: Bibliometric analysis

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Abstract: Sociolinguistics, which bridges linguistics, sociology, and other disciplines, explores the complex relationship of language with society. This research was conducted to find trends in sociolinguistic studies from 2014 to 2023, and this bibliometric analysis was conducted to reveal significant scholarly activities and themes studied. The study provides an in-depth quantitative and qualitative overview of the vast sociolinguistic literature produced during this period. Using keywords such as "sociolinguistics" and "bibliometric analysis", the analysis identified and assessed relevant articles in the 2014-2023 timeframe. The bibliometric data, analyzed with VOSviewer and Biblioshiny, measured publication frequency and author interconnections and identified thematic clusters. In addition, it evaluated interdisciplinary contributions from fields such as Social Sciences, Arts and Humanities, Computer Science, Psychology, and Engineering to sociolinguistics. The main findings show a spike in research activity around 2016, reflecting the growing interest in sociolinguistics. Various disciplines contribute and provide multidimensionality to the field. Important keywords include linguistics, language, and humanity, highlighting research into the structure of language, language as a means of social communication, and its role in human development. The finding of the word technology illustrates the growing technological developments in sociolinguistics. The appearance of the word "gender" signifies ongoing research into the complex relationship between language and gender. This study offers a comprehensive understanding of the dynamics of sociolinguistic research, underscores its relevance in the changing social and technological landscape, and suggests directions for further research.

Keywords: *Bibliometric analysis, Sociolinguistics, Trend studies.*

1. Introduction

In the dynamic landscape of linguistic research, sociolinguistics is a multifaceted domain that explores the intricate relationship between language and society. Over the past decade, from 2014 to 2023, the discipline experienced a surge in scholarly activity, with researchers investigating various aspects of language use in diverse social contexts. Sociolinguistics, situated at the intersection of linguistics, sociology, psychology, anthropology, education, cultural studies, and media studies, investigates the interaction between language and society (Abubakari, 2020; Dippold et al., 2020; Lomotey & Csajbok-Twerefou, 2021; Wan, 2022). Sociolinguistics has established the theoretical significance of language variation, not only in or in criticism of language theory itself but as a fundamental aspect of social organization (Heugh et al., 2021; Uwen et al., 2020). Sociolinguistics studies the relationship between language and society, including language variation, identity, multilingualism, gender, and adolescent language (Deckert & Vickers, 2011; Maegaard, 2019). Understanding the evolution and trends of sociolinguistic research over the past ten-year period is crucial to appreciating the dynamics of language as it evolves in the face of social, cultural, and technological change.

Sociolinguistics, a multidisciplinary field at the intersection of linguistics, sociology, psychology, anthropology, and other social sciences, has experienced significant growth and evolution over the past decade (Auer et al., 2015; Säily et al., 2017). The years 2014 to 2023 have seen a surge in research activity, reflecting a growing interest in understanding the intricate relationship between language and society. This study embarks on a comprehensive bibliometric analysis, delving into the vast sociolinguistic literature produced during this period. Using bibliometric methods, we aim to uncover trends, patterns, and thematic developments in sociolinguistics, highlighting the dynamic landscape of the field. This bibliometric analysis quantifies the output and explores the diverse thematic contributions from various disciplinary perspectives (Moral-Muñoz et al., 2020), including Social Sciences, Arts and Humanities, Computer Science, Psychology, and Engineering.

Several studies related to sociolinguistics have been conducted. Sociolinguistic research focuses on how people use language in communities to accomplish things and represent themselves to the world (Langman & Sayer, 2012). It involves studying variations in language form and use influenced by social, situational, attitudinal, temporal, and geographical factors (Friginal & Bristow, 2017). The field has undergone significant qualitative and quantitative development since the 1950s, with advances in theory, methodology, and interdisciplinary directions (Hernández-Campoy, 2014). Studying sociolinguistic situations is methodologically important for making observations, investigations, and clarifications, developing models, and creating a clear terminological basis (Eshonkulova, 2019). These studies highlight that language shapes human interaction by analyzing variations in language form and use influenced by various social, situational, attitudinal, temporal, and geographical factors. Although many studies have been related to sociolinguistics, no sociolinguistic research specifically examines it using bibliometric methods.

Conducting a bibliometric analysis of sociolinguistic publications from 2014 to 2023 is important for several reasons. First, it provides a comprehensive overview of the quantitative aspects of scientific output, revealing the volume of research activity in this domain. Second, such an analysis allows us to track trends in research interests over the years, highlighting the ebb and flow of topics that have attracted the attention of sociolinguists. Third, understanding the bibliometric landscape allows researchers, policymakers, and educators to identify research gaps, prioritize areas for further investigation, and make informed decisions regarding future research directions. This article aims to uncover the intricacies of sociolinguistic bibliometrics, offering insights into the ever-evolving nature of language studies and its relevance in our ever-changing social tapestry.

2. Literature Review

2.1. Sociolinguistics

Sociolinguistics is a dynamic field that examines the intricate interplay between language and society, encompassing a wide range of research areas and perspectives, and calling for a more active engagement with modern social theory. Sociolinguistics involves studying linguistic practices within a language community, considering social factors such as variation, language use in interaction, language development in contact, and language regulation through education or policy (Herk, 2015; Vicente, 2017). Sociolinguistic research encompasses linguistic variation correlated with social categories, language use in interaction to affirm status and norms, language development in contact, and language regulation through education or policy (Herk, 2015; Lynch, 2014). While sociolinguistics has shown empirical and descriptive strengths, there is a call for more active engagement with modern social theory, aiming to reunite sociolinguistics with influential modern theorists of society and social action (Coupland et al., 2014).

2.2. Bibliometric Analysis

Bibliometric analysis is a quantitative approach used to study the evolution of knowledge in different research fields based on related publications (Marvi & Foroudi, 2023; Toaza & Esztergár-Kiss, 2024). Bibliometric analysis is a quantitative study of bibliographic material, providing a general picture of a research field classified by papers, authors, and journals. It is used to understand various aspects of scientific and practical areas, including identifying influential writers, most-cited articles,

and trends in specific research areas (Merigó & Yang, 2017; Supian & Ismail, 2022). The data for bibliometric analysis is collected from scientific databases such as Scopus, Web of Science, Google Scholar, and others (Koo & Lin, 2023). In conclusion, bibliometric analysis is a valuable tool for understanding the evolution of knowledge in various research fields, identifying influential research, and visualizing trends.

3. Methods

This study uses a bibliometric research design to analyze sociolinguistic literature published between 2014 and 2023. Bibliometric analysis is a quantitative study of bibliographic material that provides an overview of a field of research (Merigó & Yang, 2017). Bibliometric data were obtained by systematically searching the reputable scientific database Scopus. Keywords such as "sociolinguistics," "language variation," and "bibliometric analysis" were used to identify relevant articles. Articles that meet the inclusion criteria must fall from 2014 to 2023 and focus on aspects of sociolinguistics, such as the analysis of language variation, language use in social contexts, and the impact of technology on language. The bibliometric data obtained will be analyzed using reputable bibliometric software, including VOSviewer and Biblioshiny (Arruda et al., 2022; Thakuria et al., 2023). The analysis will include publication frequency, interlinkages between authors, topic clusters, and research trends over the period under study (Donthu et al., 2021). In addition to quantitative analysis, a qualitative approach will be used to evaluate the contributions of various disciplines, such as Social Sciences, Arts and Humanities, Computer Science, Psychology, and Engineering, to the sociolinguistic literature. In evaluating continuity and trends, the research will emphasize fluctuations in the number of publications, identification of growth peaks, and review of key years within the period. WordCloud analysis will be conducted to identify key terms (Atenstaedt, 2021) that dominated the sociolinguistic literature during the research period, providing visual insights into the most significant topic foci. To ensure the validity and reliability of the results, recognized statistical and bibliometric techniques will be applied, and the selection of credible data sources will be prioritized.

This research will provide an in-depth understanding of the evolution and dynamics of sociolinguistics research over the past decade, highlighting the contributions of various disciplines and offering an up-to-date view of research trends and foci within the field.

3.1. Research Question

1. How have publications about Sociolinguistics developed in recent years?
2. What types of documents were published regarding Sociolinguistics?
3. Which countries are most active in researching Sociolinguistics?
4. What language is used the most in publications on Sociolinguistics?
5. What areas of research are studied in Sociolinguistics?
6. Which organizations are most researching Sociolinguistics?
7. Which authors often publish research on Sociolinguistics?
8. What documents are most frequently cited in research on Sociolinguistics globally?
9. What are the words that appear most frequently in research on Sociolinguistics?
10. What are the trending topics in research on Sociolinguistics?
11. How is research grouped on Sociolinguistics based on topic similarities?
12. How is the network of connectedness between documents often cited in research Sociolinguistics?

4. Results

4.1. Publication of Sociolinguistics Research According to Years

The total number of publications for 10 years was 3643. In the period from 2014 to 2023, research activity in the field of sociolinguistics experienced interesting fluctuations. In 2014, there were 240 research publications, marking the beginning of the period. In 2015, this figure increased slightly to 273 publications and then experienced a sharper increase in 2016, with 310 publications. The upward trend continued until its peak in 2022, with 479 publications. Even though it will decrease in 2023 to 316

publications, this number is still quite high. On average, there were approximately 362 publications annually during this period. These trends reflect varying dynamics in sociolinguistic research interest, with some years recording significant growth while others experience decline. Despite these fluctuations, the continuity of research activity over this period indicates that sociolinguistics remains a subject of interest to researchers.

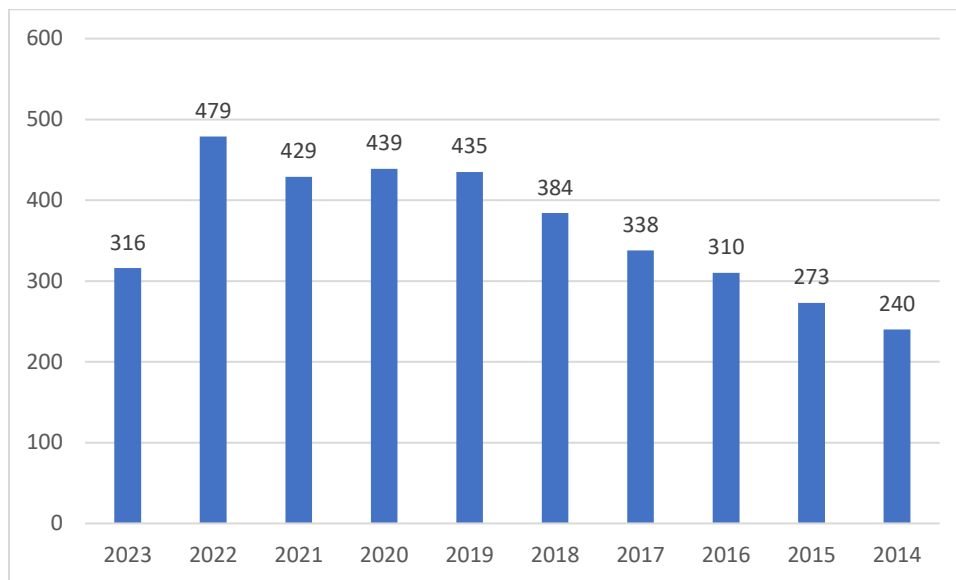


Figure 1.
Publication of Sociolinguistics research according to years.

4.2. Publication on Sociolinguistics According to Document Type

Data regarding the types of publication documents in sociolinguistics can be seen in Figure 2. A total of 2,135 articles constitutes the main contribution to the sociolinguistic literature, reflecting the high focus and interest in this form of publication. 557 book chapters demonstrate research contributions on a larger scale or interdisciplinary collaboration. Besides, books are an important source in sociolinguistic literature, with 437 titles that provide comprehensive insight or studies on certain topics. The 313 reviews critically evaluate the sociolinguistic literature, providing readers with valuable insights.

Meanwhile, 141 conference papers reflect participation and contributions in scientific forums. Editorial style (Editorial) in number 31 provides a guide or summary of the latest developments in this field. In addition, notes (Notes) and corrections (Erratum), totals 17 and 8, respectively, show a commitment to research accuracy and integrity. Other document types include 2 conference reviews, 1 data paper, and 1 letter, creating diversity in format and type of contribution to the sociolinguistic literature. This distribution reflects the plurality of research approaches and methods in understanding and exploring linguistic diversity in social contexts.

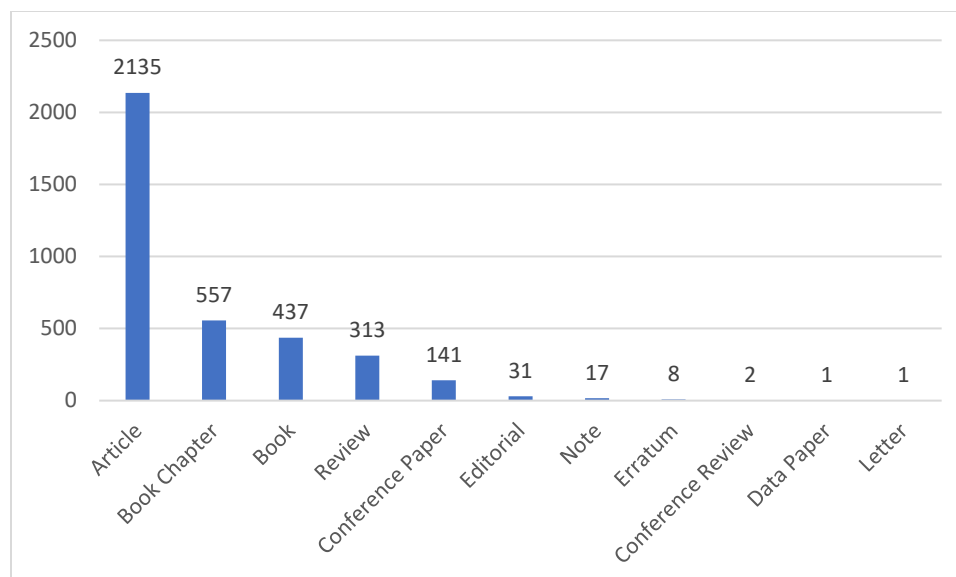


Figure 2.
Publication on Sociolinguistics according to document type.

4.3. Publication of Sociolinguistics Research According to Countries

Data regarding research publications in sociolinguistics by country can be seen in Figure 3. This figure shows the 15 countries with the highest number of publications. Overall, 112 countries have published research on this topic.

The United States dominates in sociolinguistic research contributions with 779 publications, reflecting its central role in investigating linguistic diversity in its complex social context. The UK shows a significant contribution with 432 publications, reflecting the importance and contribution of the academic community in this country to the understanding of language change and social relations. With 273 publications, Spanish indicates substantial involvement in sociolinguistic research, perhaps reflecting interest in language variation among Spanish-speaking communities. Germany contributed with 179 publications, highlighting the country's role in exploring sociolinguistic aspects, perhaps related to the richness of regional dialects and language variations. The Russian Federation provided 162 publications, demonstrating interest in linguistic diversity in the context of a broad Russian-speaking society. With 133 publications, Canada contributes to sociolinguistic understanding in its multilingual and multicultural society. Australia features 130 publications reflecting interest in language change in societal contexts dominated by multiple cultures and languages. French, with 105 publications, contributes to the sociolinguistic literature, perhaps reflecting the interest in understanding language variation in the French cultural context. Italy provided 100 publications, reflecting interest in sociolinguistic research focused on linguistic diversity among Italian language communities. Belgium contributed 99 publications, demonstrating involvement in exploring language change and variation in French- and Dutch-speaking societies.

Brazil (Brazil), with 92 publications, Brazil plays an important role in research on the Portuguese language and its variations throughout its territory. Netherlands (Netherlands) with 90 publications, the Netherlands has research related to the Dutch language and variations in this country. South Africa (South Africa), with 75 publications, South Africa shows interest in language variations related to the country's unique social and cultural context. China (China), with 71 publications, China reflects the increasing interest in sociolinguistic studies in the country, particularly in diverse Chinese language contexts. Switzerland (Switzerland), with 70 publications, Switzerland contributes to research on language variation in multilingual contexts in this country.

Overall, these data reflect the diverse contributions of countries to the sociolinguistic literature, reflecting the global interest in understanding the relationship between language and society. These

data reflect the global diversity in sociolinguistic research, highlighting the contributions of different countries to our understanding of the relationship between language and society.

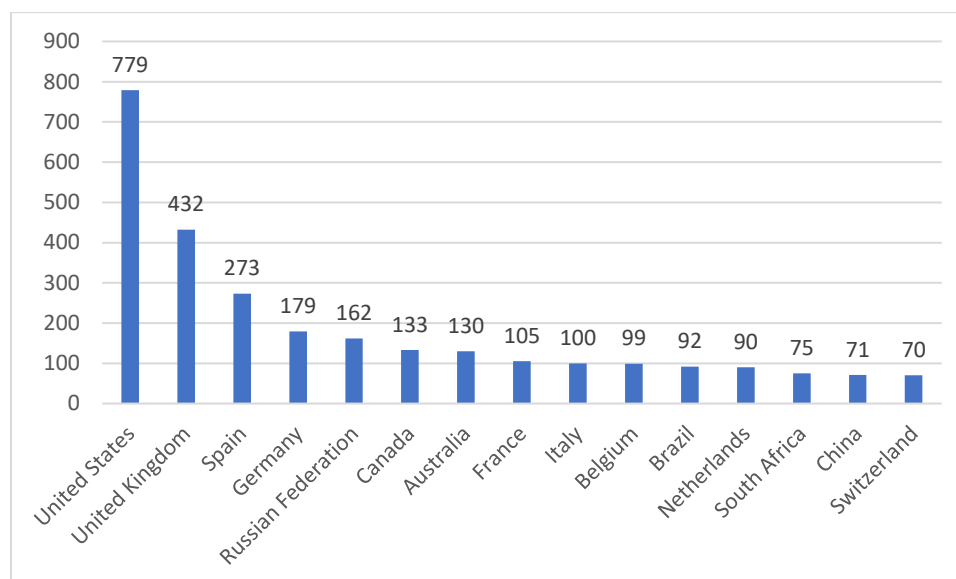


Figure 3.
Publication of Sociolinguistics research according to countries.

4.4. Publication of Sociolinguistics Research According to Languages

Data regarding research publications in sociolinguistics by language can be explained in Figure 4. Figure 4 visualizes the 15 languages with the highest ranking. In total, there are 38 languages used.

English dominates in sociolinguistic literature with 3028 publications. English reflects a dominant position as an international language in sociolinguistic research. Spanish (Spanish) with 257 publications, Spanish has a significant contribution, reflecting interest in varieties of Spanish throughout the world. With 85 publications, Russian is important in studying language variation over a wide region. With 68 publications, French contributes research mainly in the context of variations of the French language and its influence worldwide. With 63 publications, Portuguese shows significant contributions, especially related to the variations of Portuguese in various contexts. With 22 publications, Italian plays a role in researching dialect variations of the Italian language. Polish (Polish) with 21 publications, Polish has contributed to sociolinguistic literature, especially related to Polish language variations. With 20 publications, German provides insight into the dialect variations of the German language. With 14 publications, Hungarian represents a contribution to the understanding of language variations in the region. With 13 publications, the Czech language contributes research mainly in the context of Czech language variations.

These data reflect the linguistic diversity that is the focus of sociolinguistic research, highlighting the diversity and complexity of language variation in different parts of the world. English dominates as the primary medium for disseminating this knowledge, but contributions from various other languages demonstrate global interest in understanding the relationship between language and society in local and global contexts.

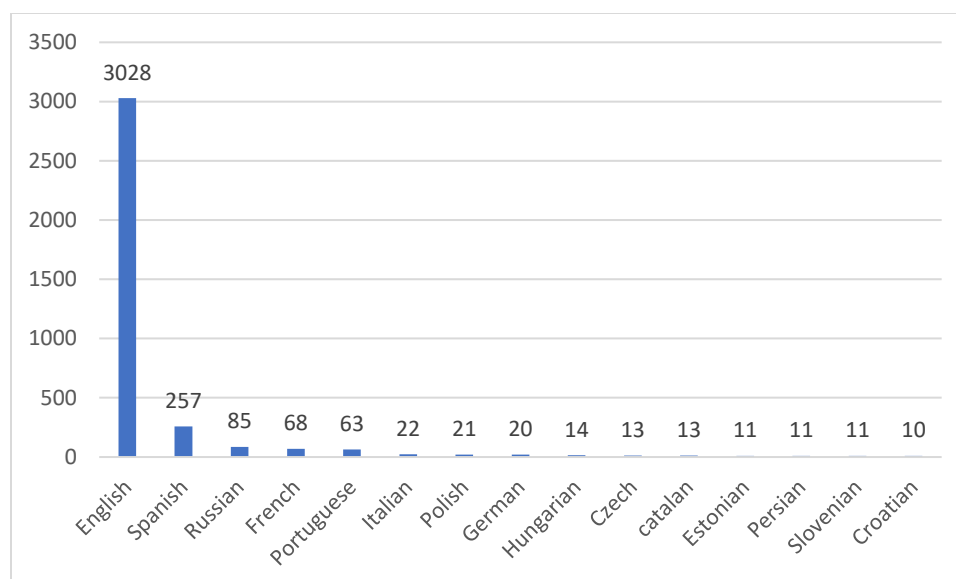


Figure 4.
Publication of Sociolinguistics research according to languages.

4.5. Publication On Sociolinguistics According to Research Areas

Data regarding research publications in the field of sociolinguistics according to research areas can be seen in Figure 5. In Figure 5, the 15 highest research areas are shown. In total, there are 25 research areas.

Social Sciences is dominant in research contributions with 3312 publications, and social sciences are the main basis for sociolinguistic research. It focuses on social, cultural, and societal aspects influencing language use and change. Arts and Humanities (Arts and Humanities) With 2937 publications, arts and humanities have greatly contributed to sociolinguistic literature. It includes the study of literature, culture, and other aspects of the humanities that impact language. Computer Science (Computer Science) With 210 publications, computer science has contributed to computational language analysis and information technology-based methods in understanding language variations. Psychology (Psychology) With 165 publications, psychology has contributed to understanding the psychological aspects of language use and social interaction. Engineering (Engineering) With 47 publications, engineering provides a special perspective on technology and development in a language context.

Management, Business, and Accounting With 46 publications, this science contributes to understanding sociolinguistic aspects of business and management.

Mathematics (Mathematics) With 38 publications, mathematics makes special contributions, perhaps related to mathematical models in language analysis. Neuroscience With 34 publications, neuroscience contributes to the sociolinguistic literature by focusing on the neurological aspects involved in understanding and using language. Economics, Econometrics, and Finance With 33 publications, economics contributes to socioeconomic aspects and their impact on language. Medicine With 27 publications, medical science has contributed to understanding the relationship between language and health, including in medical practice.

Environmental Science With 16 publications, environmental science has contributed to sociolinguistic aspects in the natural environment context. Earth and Planetary Sciences: With 15 publications, this science contributes to the sociolinguistic literature focusing on aspects of language in a geoscience context. Multidisciplinary With 15 publications, this research covers approaches from various disciplines, highlighting the complexity of sociolinguistics. Health Professions With 14 publications, the health professions have made contributions related to sociolinguistic aspects in the context of the health professions. Physics and Astronomy With 10 publications, physics and astronomy

contribute to the sociolinguistic literature, perhaps related to understanding the technical aspects of language in the context of science.

These data reflect the diversity of approaches and fields of study involved in sociolinguistic research, indicating that understanding the relationship between language and society requires contributions from various disciplines.

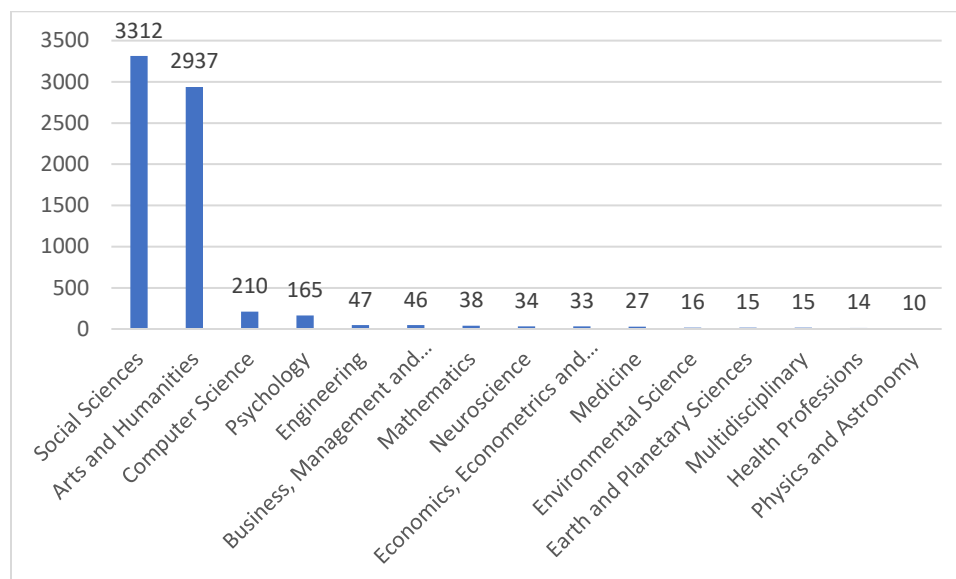


Figure 5.
Publication on Sociolinguistics according to research areas.

4.6. Publication on Sociolinguistics According to Organizations

Data regarding research publications in the field of sociolinguistics based on organizational affiliation can be explained in Figure 6. Figure 6 shows the 15 affiliations with the highest ranking.

University of Toronto with 54 publications, the University of Toronto reflects the institution's significant contribution to sociolinguistic research. These publications may cover a variety of topics related to language and society. KU Leuven With 42 publications, KU Leuven (Katholieke Universiteit Leuven) contributes to sociolinguistic research, reflecting the role of this institution in understanding language variation and its impact. Universidad de Granada With 35 publications, Universidad de Granada, contributes to sociolinguistic literature, perhaps focusing on language variation in Spanish. Københavns Universitet With 32 publications, Københavns Universitet (University of Copenhagen) contributes to the understanding of language variation in Denmark and the surrounding region. University of Pennsylvania with 30 publications, the University of Pennsylvania is actively involved in sociolinguistic research, perhaps focusing on the impact of language in the context of the United States.

Universiteit Gent With 30 publications, Universiteit Gent, contributes to sociolinguistic literature, perhaps focusing on language variation in Belgium. Universiteit Leiden With 29 publications, Universiteit Leiden, contributes to language variation research, perhaps emphasizing Dutch contexts. The University of Hong Kong With 28 publications, The University of Hong Kong plays a role in the sociolinguistic literature, perhaps focusing on language variation in the region. Georgetown University: With 28 publications, Georgetown University has contributed to understanding the relationship between language and society, perhaps emphasizing the United States context. Helsingin Yliopisto With 27 publications, Helsingin Yliopisto (University of Helsinki) participates in linguistic variation research, perhaps emphasizing Finnish.

Michigan State University With 27 publications, Michigan State University engages in sociolinguistic research, perhaps focusing on language variation in the United States or global contexts. Pennsylvania State University with 26 publications, Pennsylvania State University contributes to the

sociolinguistic literature, perhaps emphasizing language variation in the context of the United States. City University of New York With 26 publications, the City University of New York (CUNY) makes contributions to the understanding of language variation, perhaps with an emphasis on the multilingual and multicultural context of New York. University of Oxford With 26 publications, the University of Oxford participates in sociolinguistic research, perhaps emphasizing the context of English and its variations. The University of Edinburgh with 26 publications, The University of Edinburgh is involved in sociolinguistic literature, perhaps emphasizing language variation in Scottish and UK contexts.

These data reflect the role of various academic institutions in sociolinguistic research, showing that understanding language and society is a collaborative effort involving various higher education institutions worldwide.

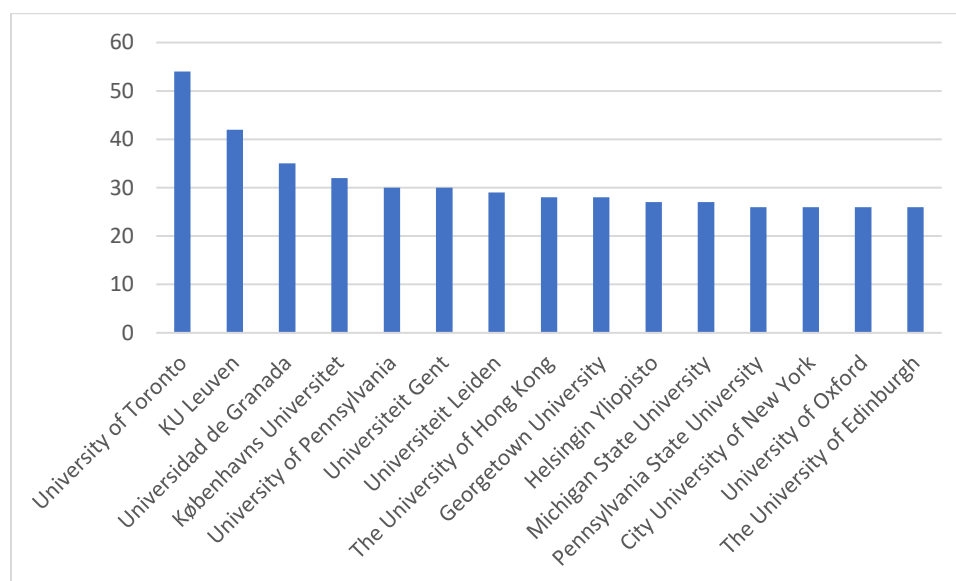


Figure 6.
Publication on Sociolinguistics according to organizations.

4.7. Publication on Sociolinguistics According to Authors

Data regarding research publications in the field of sociolinguistics based on authors can be explained in Figure 7. Figure 7 shows the 15 authors with the highest number of articles.

Authors who stand out in the sociolinguistic literature include Angouri, J. with 15 publications and Meyerhoff, M. with the same number. Angouri, J. is renowned as a prolific writer who explores various aspects of language and society. Meanwhile, Meyerhoff, M. focuses on language variations in various social contexts. Another author who has recorded significant achievements is Blommaert, J., with 14 publications, who is known for perhaps analyzing the relationship between language power and identity. On the other hand, authors such as Arroyo, J.L.B., Nagy, N., and Canagarajah, S., with 13, 13, and 12 publications, respectively, made important contributions to understanding language variation and its social aspects. Other authors, such as Rampton, B., Rutten, G., and Tagliamonte, S.A., have also significantly impacted 12, 11, and 11 publications, respectively. Special contributions in the sociolinguistic literature also come from authors such as Bolton, K., Deumert, A., and Szmrecsanyi, B., each with 10 publications and others with some that reflect their relevance and contribution to this field.

These data reflect the authors' diverse contributions to the sociolinguistic literature, covering various research approaches and topics. Overall, these data reflect the diversity and complexity of sociolinguistic research.

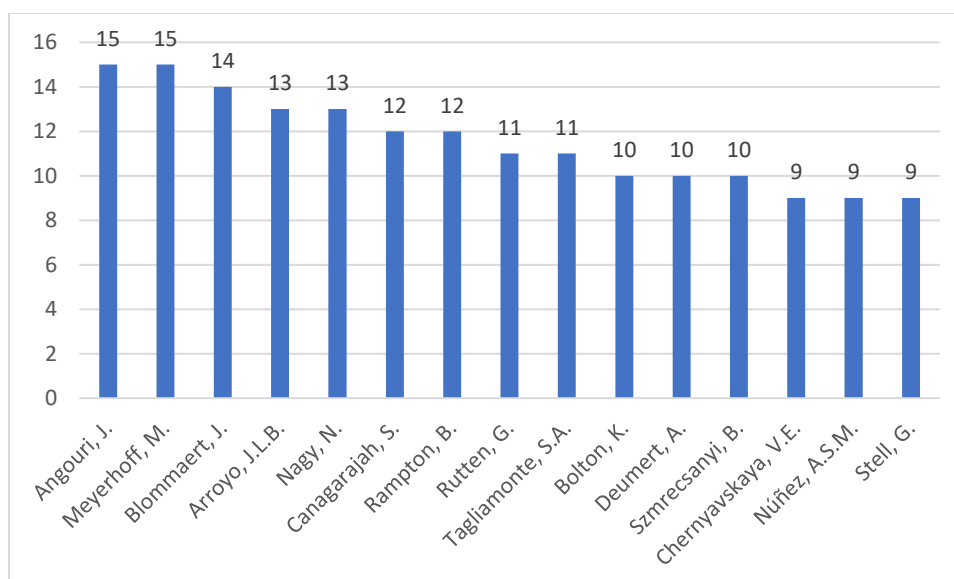


Figure 7.
Publication on Sociolinguistics according to authors.

4.8. Most Globally Cited Documents

Figure 8 lists the most frequently cited documents globally in sociolinguistic research, the total number of citations per year and normalized citations. These documents are:

"Metrolingualism: Language in the City"(Pennycook & Otsuji, 2015): With 412 citations, this work introduces the concept of metrolingualism with an average of 45.78 citations per year. "A Multilingual Perspective on Translanguaging"(MacSwan, 2017): This article has been cited 309 times, with an average of 44.14 citations per year and a normalized TC of 33.79. "Translanguaging and Identity in Educational Settings" (Creese & Blackledge, 2015): With a total of 271 citations, this article has an average of 30.11 citations per year and a normalized TC of 19.33. "Linguistic Justice: Black Language, Literacy, Identity, and Pedagogy"(Baker-Bell, 2020): This work received 269 citations, averaging 67.25 per year and a normalized TC of 52.67. "Chronotopes, Scales, and Complexity in the Study of Language in Society"(Blommaert, 2016): This article has been cited 255 times, with an average of 28.33 citations per year and a normalized TC of 18.19.

"Heritage Languages and Their Speakers"(Polinsky, 2018): With a total of 210 citations, this work has an average of 35.00 citations per year and a normalized TC of 27.06. "Comparison and benchmark of name-to-gender inference services" (Santamaría & Mihaljević, 2018): This article received 186 citations, averaging 31.00 per year and a normalized TC of 23.97. "The Cultural Politics of English as an International Language" (Pennycook, 2017): With a total of 183 citations, this article has an average of 26.14 citations per year and a normalized TC of 20.01. "Confronting Epistemological Racism, Decolonizing Scholarly Knowledge: Race and Gender in Applied Linguistics" (Kubota, 2020): This article received 158 citations, with an average of 39.50 citations per year and a normalized TC of 30.94. "Translanguaging and Literacies" (García & Kleifgen, 2020): With 140 citations, this article averages 35.00 per year and a normalized TC of 27.41.

These data reflect the global impact and recognition in the scientific community of some works illustrating the diversity of topics in the sociolinguistic domain. This list reflects the significant impact of these works in sociolinguistic research, focusing on various aspects of language, society, identity, and linguistic justice. These works have been widely cited in the literature, demonstrating their relevance and contribution to understanding language and society.

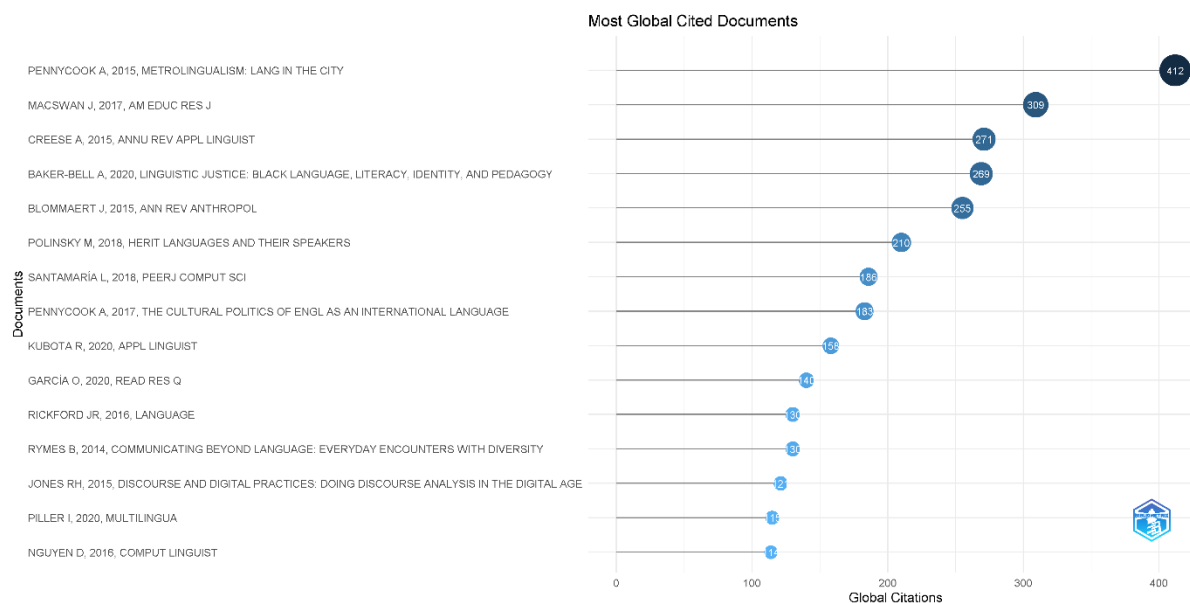


Figure 8.
Most globally cited documents.

4.9. Analysis WordCloud

Figure 9. WordCloud analysis based on frequencies shows a focus on various aspects in the fields of sociolinguistics and computational linguistics. Some of the terms that appear most often include:

Linguistics appears 115 times, indicating the centrality of this term in the discussion. Language with a frequency of 68, this term reflects attention to understanding language in a social context. Human indicates a focus on the human dimension of linguistics, appearing 64 times. Females and males appear 50 and 48 times, respectively, indicating particular attention to gender roles in this study. Speech Appears 39 times, highlighting research related to spoken discourse. Social Networking (Online) and social media, with frequencies of 27 and 15, respectively, indicate increasing interest in studying language interactions in online and social media contexts.

Sociolinguistics and Sociolinguistics: Showing interest in the social dimensions of language, appearing 26 and 14 times, respectively. Speech Perception, Psycholinguistics, and Phonetics: Describes research in the psychological aspects of language, appearing 21, 17, and 16 times respectively. Artificial Intelligence and Natural Language Processing Systems: Shows the convergence between linguistics and technology, appearing 10 and 18 times. Gender: Appears 11 times, highlighting the focus on the role of gender in language comprehension.

These data reflect the diversity of sociolinguistic and computational linguistics literature topics, from purely linguistic aspects to integration with modern technologies such as artificial intelligence and natural language processing.

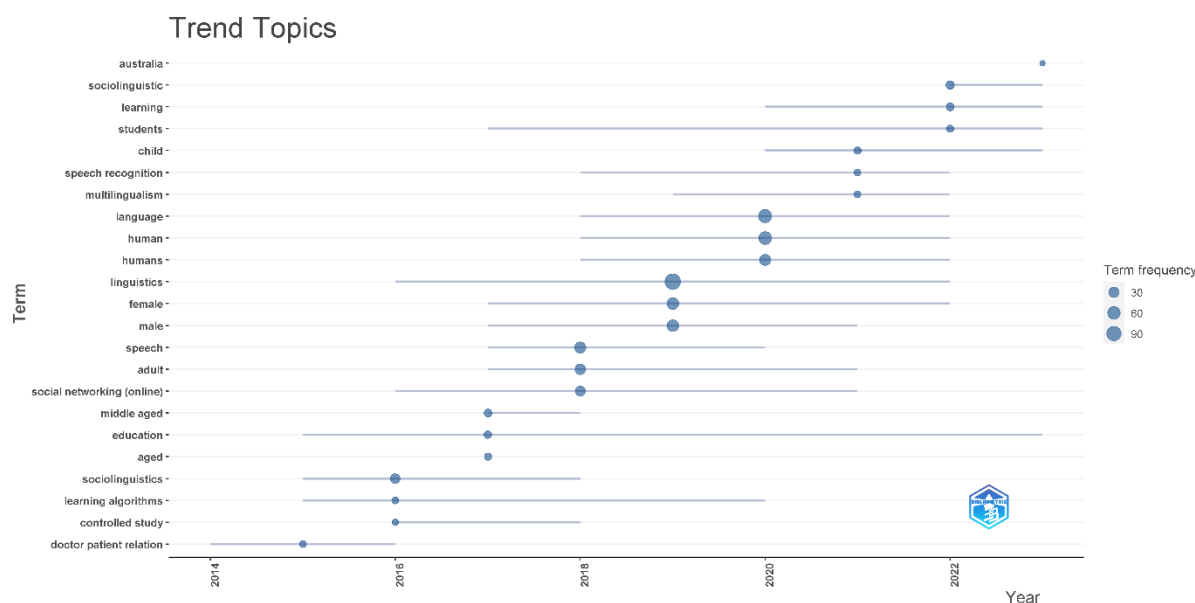


Figure 10.
Trend topics.

4.11. Thematic Map

The data in Figure 11 reflects thematic in several clusters, representing the focus and relationships of keywords in the sociolinguistic literature. Here is a description of some of the main clusters:

- 1) Cluster 1 - Language Ideologies:
Main Keywords: language ideologies, ethnography, language ideology, translanguaging, migration.
This cluster highlights topics related to language ideology and its aspects, such as ethnography and migration.
- 2) Cluster 2 - Interactional Sociolinguistics:
Main Keywords: interactional sociolinguistics, language, discourse analysis, pragmatics, indexicality.
Focus on interactional aspects in sociolinguistic studies, including language analysis, pragmatics, and indexicality.
- 3) Cluster 3 - Chilean Spanish:
Main Keywords: Chilean Spanish.
Cluster ini spesifik untuk studi bahasa Spanyol di Chili.
- 4) Cluster 4 - Sociophonetics:
Main Keywords: sociophonetics, phonetics.
Highlights the study of the relationship between sound and social phenomena in the context of phonetics.
- 5) Cluster 5 - Computational Sociolinguistics:
Main Keywords: computational sociolinguistics, style.
Focuses on applying computational methods in analyzing language styles in sociolinguistic contexts.
- 6) Cluster 6 - Linguistic Landscape:
Main Keywords: linguistic landscape.
Studying the representation of language in physical space and the environment.
- 7) Cluster 7 - Cognitive Sociolinguistics:
Main Keywords: cognitive sociolinguistics.
Examining the interaction between cognitive and social factors in language use.

8) Cluster 8 - Multilingualism:

Main Keywords: multilingualism, language contact, bilingualism.

This cluster focuses on the topics of multilingualism and language contact.

9) Cluster 9 - Historical Sociolinguistics:

Main Keywords: historical sociolinguistics, variationist sociolinguistics, dialectology.

Investigates language evolution and linguistic variation in historical context.

10) Cluster 10 - Sociolinguistics:

Main Keywords: sociolinguistics, identity, gender, variation.

These clusters cover various aspects of sociolinguistic studies, including identity, gender, variation, and other general topics.

Each cluster has a different centrality weight (betweenness centrality, closeness centrality, PageRank centrality) that reflects its relative significance in the thematic network. These data provide an overview of the distribution of topical focus in the sociolinguistic literature and the contribution of each topic to the general framework in this field.

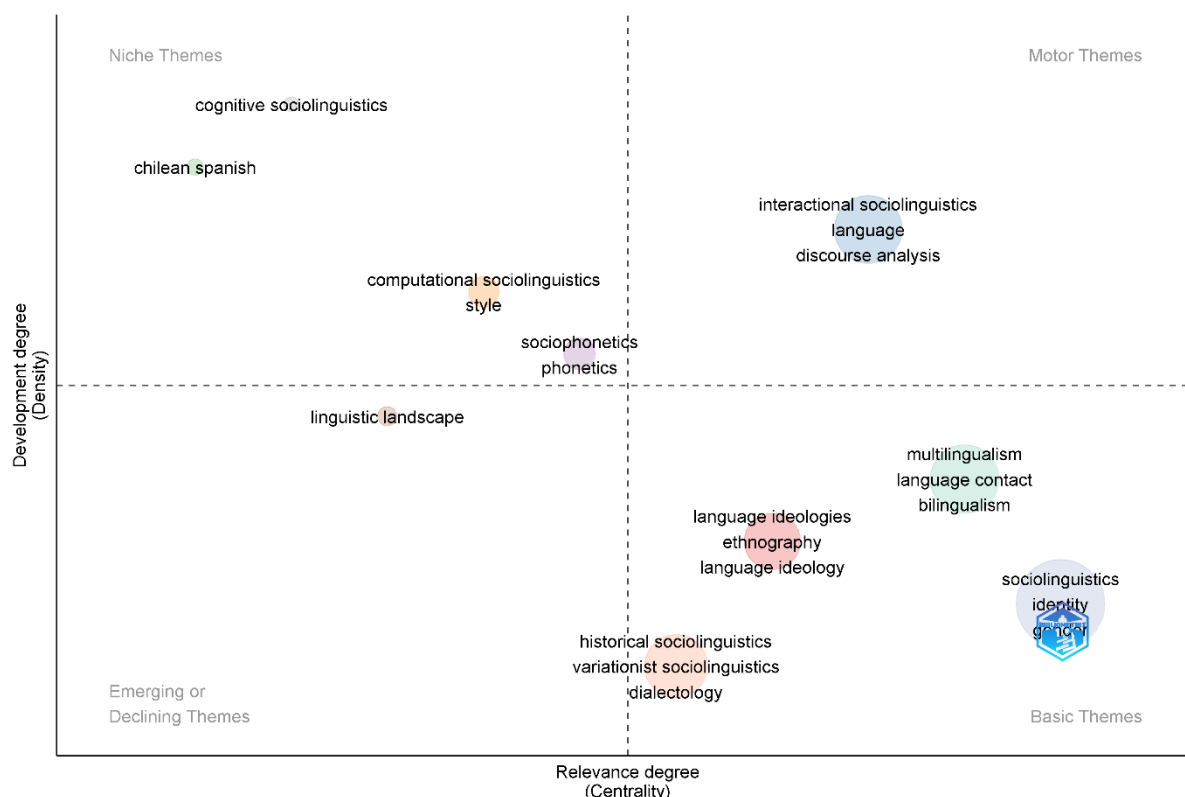


Figure 11.
Thematic map.

4.12. Co-Citation Network

Co-citation Network data overviews the relationship and significance between various sociolinguistic studies and researchers. Here are some key points from this data:

a) Cluster 1: Initial Research and Main Contributors

Labov W. (1972-1 and 1966) had high betweenness and closeness values, indicating a central role and close involvement in this network. Labov was a major contributor to this period. Eckert P. (2012, 2000-1, 2008) also has a strong position, indicating his contribution to this network. Trudgill P. (1986 and 1974) and Milroy L. (1980 and 1987) are other researchers who play a central role in this cluster.

b) Cluster 2: Famous Figures in Sociolinguistics

Bourdieu P. (1991), Gumperz J.J. (1982), Goffman E. (1981 and 1959), Agha A. (2007), and Coupland N. (2007) are well-known figures with major contributions to the field of sociolinguistics. Chomsky N. (1965) also appears here, pointing out the link between theoretical linguistics and sociolinguistics.

c) Cluster 3: Contemporary Sociolinguistics

Blommaert J. (2005 and 2010), Garcia O. (2014 and 2009), Canagarajah S. (2013), and Pennycook A. (2007 and 2010) are researchers active in contemporary sociolinguistics. This cluster reflects the latest research and developments in the field of sociolinguistics.

We can identify researchers and studies with significant impact and involvement in sociolinguistic networks using metrics such as betweenness, closeness, and PageRank. These data provide insight into the field's evolution and identify important contributions from various researchers.

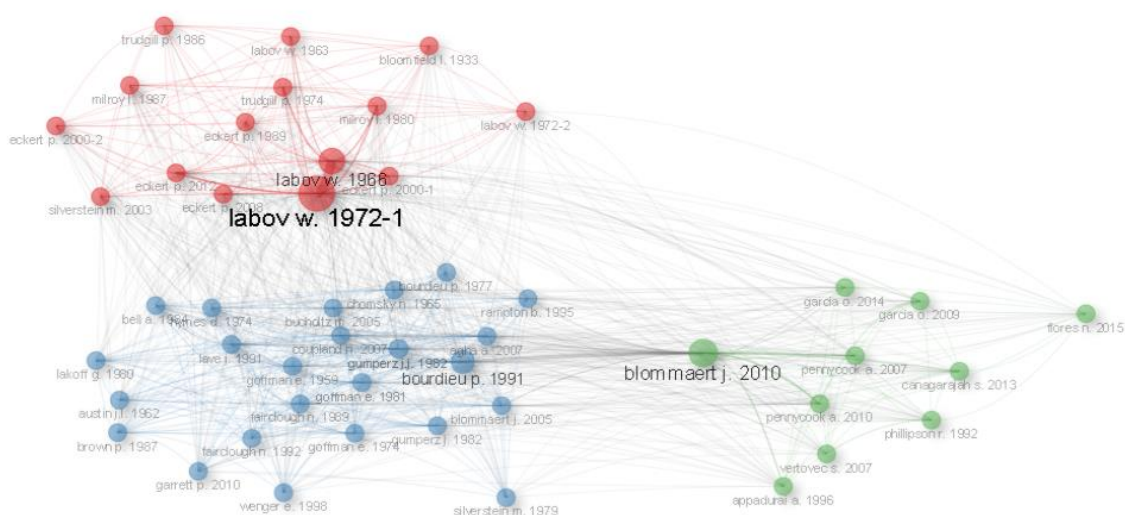


Figure 12.
Co-citation network

5. Discussion

The total number of publications over 10 years was 3643, reflecting the high research activity in sociolinguistics. The analysis by year provides an interesting picture of research trends over the period. In 2014, 240 research publications were recorded, marking the beginning of this period. A positive trend was seen in 2015 with an increase to 273 publications, then reached a significant growth peak in 2016 with 310 publications. This upward trend reflects increasing research interest in the field of sociolinguistics. Research interests in sociolinguistics include applying language by communities to achieve goals and represent themselves in the world (Lumala & Mullany, 2020; Wang, 2019). Sociolinguistics as a research field investigates the relationship between language and society, involving disciplines such as linguistics, sociology, psychology, anthropology, education, cultural studies, and media studies, with the study of sociolinguistic situations requiring a methodology for observing objects, conducting research, and developing description models (Araq, 2020; Eshonkulova, 2019).

In subsequent years, fluctuations in the number of publications were seen. The upward trend peaked in 2022 with 479 publications, reflecting developments and evolution in sociolinguistic research topics. Although it decreased in 2023 with 316 publications, this number remains relatively high. On average, there were approximately 362 publications annually during this period. Despite fluctuations, the continuity of research indicates that sociolinguistics remains a subject of interest to researchers. These trends show varying dynamics in sociolinguistic research interest from year to year. An increase in

publications in certain years may reflect developing trends or specific topics receiving more attention. Nonetheless, the continuity of research activity throughout the period confirms that sociolinguistics remains a relevant and interesting area of research.

The contribution of various research areas to the sociolinguistic literature highlights the diversity of approaches and focuses of study in this discipline. In the period studied, Social Sciences stands out as the dominant contributor with 3312 publications, reflecting its central role as the main foundation of sociolinguistic research. The many publications indicate a consistent and dominant interest in understanding the relationship between language and social dynamics (Duff, 2019; Gero et al., 2023). The main focus of research in the social sciences is on social, cultural and societal aspects that significantly impact language use and evolution. These findings underscore the importance of social science as a key contributor to understanding the complexity of the relationship between language and social structure. Sociolinguistic studies is a social sciences field focusing on language's role in shaping human social experiences and identities (Lomotey & Csajbok-Twerefou, 2021; Nguyen, 2023). Sociolinguistics is a leading science that emerged from increasing observation and inference in the natural sciences and social phenomena (Maria Dimova & Stirk, 2019; Nizomova, 2023).

Arts and Humanities, with a contribution of 2937 publications, arts and humanities play an important role in sociolinguistic literature. Intensive involvement in the study of literature, culture, and other aspects of the humanities highlights that sociolinguistic literature not only focuses on the structural aspects of language but also explores the impact of culture and humanity on language (Galeeva & Potapova, 2019; Gero et al., 2023). This category's striking diversity of publications reflects a holistic approach to sociolinguistics, demonstrating that language understanding is inseparable from complex cultural dimensions.

Computer Science (Computer Science) with 210 publications, computer science makes a growing contribution to sociolinguistic discourse, showing increasing interest in combining information technology with language analysis. The focus on computational language analysis and information technology-based methods reflects adaptation to technological advances, proving that technological integration is an integral part of the development of sociolinguistic research (Alshaabi et al., 2021; Duseja & Jhamtani, 2019; Vandekerckhove et al., 2019). These findings demonstrate that natural language processing and computational data analysis are increasingly important for understanding language variation in changing social contexts.

Psychology, with a contribution of 165 publications, psychology plays a significant role in the sociolinguistic research framework from 2014 to 2023. Psychology's contribution includes exploring the psychological aspects of language use and social interaction. This finding marks an awareness of the importance of understanding the psychological dimension in a sociolinguistic context, which includes aspects such as perception, attitudes and motivation that influence language use in society (Amin, 2020; Johnson & White, 2020). Sociolinguistics views language as a social phenomenon, while social psychology focuses on individual psychological processes in a social context (Ismatullaeva et al., 2022; Uyheng & Montiel, 2021). Sociolinguistics views language as a social phenomenon, while social psychology focuses on individual psychological processes in a social context (F. Li & Li, 2023).

With 47 publications, engineering highlights the important role of technology and development in language contexts. These findings reflect a trend of increasing need to understand the impact of technology on language development and social interaction (Al-Jarf, 2021; Dooly & Vinagre, 2022; Holzinger et al., 2020). Thus, engineering enriches the theoretical foundations of sociolinguistics and presents practical technological solutions to challenges in managing and analyzing language data. Technology plays an important role in sociolinguistic research. It has implications for communication, education, knowledge dissemination, and idea formulation (Blommaert, 2021; Cladis, 2020). Sociolinguistic scales have been used as imaginative concepts to reorganize sociolinguistic facts and address fundamental problems such as meaning, situation, and indexicality (Blommaert, 2021; Cladis, 2020).

The results of the WordCloud analysis, based on frequency, reveal various aspects that are in focus in sociolinguistics and computational linguistics during the research period from 2014 to 2023. This analysis provides insight into key terms that consistently appear in the literature. In the period

investigated, "Linguistics" appears 115 times, reflecting its centrality and significance in scientific discussions of sociolinguistics and computational linguistics. These findings confirm that research in this period consistently centered on language, including its social and technological aspects (Hinrichs & Bohmann, 2020; Puertas et al., 2021). The centrality of the term "Linguistics" characterizes the continuing interest in understanding the structure, use, and evolution of language as a social and technological phenomenon (G. Li et al., 2021; Whanchit & Sukkaew, 2023).

A frequency of 68 for the word "Language" highlights the research focus on understanding language in social contexts. This analysis shows that research during this period did not just limit itself to the formal aspects of language but also involved in-depth exploration of how language is formed, used, and changed in society. The word "Language" emphasizes the role of language as a complex social communication tool. The 64 occurrences of the word "Human" indicate a special emphasis on the human dimension in the linguistic context. These findings reflect research interest in understanding the impact of human factors on language evolution and change. This analysis highlights that a deeper understanding of linguistics requires recognition of the role and interaction of humans in language development (de Varennes, 2021; Holler & Levinson, 2019; Ouyang et al., 2022).

Thus, these findings reinforce that sociolinguistics and computational linguistics during this period have developed an understanding of language as a social and technological phenomenon, considering the centrality of linguistics, the social context of language, and the impact of humans on its development.

In the WordCloud analysis, the term "Gender" appeared 11 times, highlighting a particular emphasis on the role of gender in language comprehension. These findings reflect the continuing interest in exploring how gender influences and is influenced by language. The frequency with which the word "Gender" appears indicates that research in sociolinguistics and computational linguistics from 2014 to 2023 continues to explore the complex dynamics between language and gender. Sociolinguistics examines the relationship between language and society, including the influence of gender (Bui, 2021; Verkerk & Di Garbo, 2022). Dominant networks of gender prejudice and stereotypes are reproduced and perpetuated through discourse and language (Foulidi et al., 2019).

This WordCloud analysis provides an overview of the thematic landscape in the sociolinguistic and computational linguistics literature, showing that such studies involve multiple dimensions of language. In particular, the focus on gender roles indicates an awareness of the complexity and diversity of the role of language in forming, maintaining, and reproducing gender concepts. These studies may involve aspects such as gendered language use (Cameron, 2020; Canetto, 2021; Guendouzi, 2008), language changes related to gender roles in society, and how technology and social media moderate language representations related to gender (Alkhamash, 2021; Coats, 2021; Molnar, 2022).

Data on topic trends in sociolinguistic research and related fields provide valuable insight into the evolution of research interests and focus over ten years. Research on doctor-patient relations peaked in 2016, indicating a high level of interest in understanding language interactions in medical care. The particular focus on communication between doctors and patients illustrates an awareness of the importance of language in healthcare settings (Marino et al., 2023; Petrocchi et al., 2019). These findings strengthen the argument that understanding language in medicine is not just about technical terms but also about interpersonal dynamics that influence patient experiences.

The increased interest in learning algorithms through 2020 reflects the close relationship between computational linguistics and machine learning. These developments note the adaptation to new technologies in language analysis. With advances in technology, the use of learning algorithms has become integral in understanding language variation and linguistic structure, indicating that this approach is increasingly accepted in sociolinguistic contexts (Alkhamash, 2021; Marino et al., 2023; Petrocchi et al., 2019). Linguistic learning algorithms have been the focus of several studies. Machine learning models have been developed to assess the linguistic accessibility of health translations, comparing them with original health resources.

Over several years, the continued focus on language in adult and child age groups indicates continued interest in language development. These studies reflect a desire to understand how language develops across the lifespan, both in the early stages of life and during language maturation in adulthood. These findings demonstrate the importance of understanding language variability across

different age groups, providing valuable insights for sociolinguistic research (Charlesworth et al., 2021; Heidlage et al., 2020). Language development in adults and children is a complex process involving dynamic adaptation and social relationships. Adults adapt their language when talking to young children, a phenomenon known as child-directed speech (Kohnert et al., 2020; Ladányi et al., 2020).

Cluster analysis is a data analysis technique used to group objects or data into homogeneous groups based on the similarity of certain characteristics. The first cluster, related to language ideology, focuses on ethnography and migration. Keywords such as "language ideologies," "ethnography," "language ideology," "translanguaging," and "migration" reflect the growing interest in understanding the ways language ideologies shape and are influenced by ethnographic and migration factors. These findings confirm that sociolinguistic research focused on language structure and critically considered the ideological aspects that shaped language understanding in social and cultural contexts (Barrett et al., 2022; Manuel, 2022; Rosen, 2022). Language and cultural ideologies are closely interrelated. Discourse theory and discourse analysis highlight the relationship between language, culture, and ideology, emphasizing how these practices are shaped by diverse cultures and social entities (Bilá & Ivanova, 2020).

The second cluster highlights interactional aspects in sociolinguistic studies, including language analysis, pragmatics, and indexicality. Major keywords such as "interactional sociolinguistics," "language," "discourse analysis," "pragmatics," and "indexicality" reflect a focus on the complex relationship between language and social interaction. These findings indicate that research in this period was not only interested in language structure but also in the way language was used in particular social situations, including in-depth analyses of pragmatics and indexicality (Ciecierski, 2021; Eckert, 2019; Juul Nielsen & Heltoft, 2023). The focus on interactional aspects provides deeper insight into how language is used and interpreted in everyday communication. Research has investigated the relationship between language aptitude and pragmatics learning, suggesting that there is a separate component of language aptitude that is specifically related to second language pragmatics (Field, 2006; Juul Nielsen & Heltoft, 2023; Yousefi & Mardian, 2020).

The articles above provide a comprehensive view of the evolution and dynamics in sociolinguistic research over the last decade. These findings emphasize the importance of interdisciplinary collaboration, strengthening the scientific basis of sociolinguistics and ensuring its relevance in the face of ever-evolving social, cultural, and technological developments. This comprehensive discussion underscores the spirit of sociolinguistics as a multidimensional field, encompassing diverse themes, interdisciplinary collaborations, and an evolving landscape characterized by technological integration. Continued interest in the social and human dimensions of language, coupled with emerging trends, positions sociolinguistics as a dynamic and sustainably relevant field of research.

6. Conclusion

Based on bibliometric analysis, this article provides an in-depth overview of research trends in sociolinguistics over the past ten years. The total of 3643 publications during this period reflects the high research activity in sociolinguistics. The significant growth trend in 2016 reflects increased research interest in this area. Despite fluctuations in subsequent years, the continuity of research activities confirms that sociolinguistics remains interesting for researchers. Contributions from various disciplines, such as Social Sciences, Arts and Humanities, Computer Science, Psychology, and Engineering, reflect the diversity of approaches in sociolinguistic research. Social Sciences dominates with 3312 publications, demonstrating its central role in understanding the relationship between language and social dynamics. Arts and Humanities, with 2937 publications, highlights a holistic approach to sociolinguistics, while Computer Science, with 210 publications, shows increasing interest in combining information technology with language analysis. Keywords such as "Linguistics," "Language," and "Human" that appear on WordCloud indicate a research focus on language structure, the role of language as a tool of social communication, and the impact of humans on language development. The appearance of the word "Gender" 11 times shows the continuity of research into the complexity of the relationship between language and gender. Analysis of topic trends highlights a focus on doctor-patient relationships, learning algorithms, language in adult and pediatric age groups,

language ideologies, and interactional aspects. The increasing interest in learning algorithms reflects the close relationship between computational linguistics and machine learning.

In conclusion, this article provides a comprehensive insight into the dynamics and evolution of sociolinguistic research, emphasizing its relevance in the face of social, cultural, and technological change. The continued interest in certain aspects, such as language and gender relations, shows that sociolinguistics remains relevant and dynamic as a multidimensional research field. Further research could be directed at understanding the role of gender in language, especially concerning the manifestation of prejudice and stereotypes in discourse. How language influences and reflects gender concepts can be the subject of in-depth research.

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