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Marxism and Class-Based Analysis in the Body of Knowledge: The Scientometric Analysis and Research Agenda

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Abstract: This study provides a comprehensive scientometric analysis to examine the incorporation and impact of Marxist theory and class-based analysis within the broader academic knowledge base. By utilizing Scientometric data from renowned scientific databases covering the last seventy years, we can pinpoint important patterns, notable authors, essential publications, subject groups, and relevant keywords relating to Marxism and class analysis. These findings show increasing interest in the topic, especially after the 2000s. This analysis emphasizes the importance of theoretical study and the working class as topics that often appear in recent research. Additionally, we analyze the distribution of research output and country collaborations, observing substantial clustering in the Americas and the United Kingdom. Despite increasing interest in this topic, our analysis reveals gaps in existing research, namely in the practical implementation and integration of different disciplines. Based on these observations, we suggest a study plan that prioritizes the need for more detailed empirical investigation, examination of social class dynamics in non-Western settings, and the incorporation of Marxist analysis into current topics such as globalization and the working class. This agenda aims to increase the significance and practicality of class-based analysis in understanding contemporary socio-economic phenomena.

Keywords: Marxism; class-based analysis; scientometric analysis; theoretical study; working class; critical realism.

1. INTRODUCTION

For more than a century, Marxism has been a pillar of the social sciences with its in-depth critique of capitalism and emphasis on class conflict (Maffettone, 2021). Marxist theory, which is based on the ideas of Karl Marx and Friedrich Engels, offers a strong analytical framework for comprehending the intricacies of class relations, economic exploitation, and social transformation. Although the popularity and acceptance of Marxist analysis have varied, its fundamental concepts still have a strong impact on several academic fields, influencing current discussions on inequality, power, and social justice (Eidlin & McCarthy, 2020; Ford, 2024; Fuchs, 2021).

Class-based analysis has been resurrected in scholarly discourse in recent years due to the global financial crises and the renewed interest in economic inequality (Ost, 2015; Peet, 2011). Notable recent instances of these facts include Piketty (2014), who posits that excessive accumulation of capital can pose a threat to democracy and advocates for a wealth tax as a means to impede the rapid concentration of wealth. Additionally, according to the OECD (2015), increased inequality has a negative impact on economic growth and hinders prospects. Specifically, a high level of wealth disparity restricts investment opportunities and, as a result, growth.

The increasing emphasis on Marxist theory highlights its ongoing significance in solving contemporary socio-economic concerns. Yet, the extensive and fragmented nature of the knowledge about Marxism and class analysis poses challenges to understanding its influence and development. This study systematically investigates the integration and influence of Marxist and class-based analysis within the academic literature through a scientometric approach.

Scientometric analysis, which involves quantitatively assessing scientific publications, offers a robust method for mapping the intellectual landscape and identifying key trends, influential works, and emerging research fronts (Leydesdorff & Milojević, 2015).

By leveraging Scientometric data from major scientific databases over the past seven decades, this study aims to provide a comprehensive overview of how Marxist theory and class-based analysis have permeated various academic disciplines. We seek to identify prominent authors, influential publications, thematic clusters, and geographical distributions of research outputs. Furthermore, this study aims to highlight existing gaps in the literature and propose a research agenda that can guide future academic inquiries.

In the following sections, we outline the methodology employed in our scientometric analysis, present the findings and their implications, and discuss potential directions for future research. Through this comprehensive examination, we contribute to a deeper understanding of the role and impact of Marxist and class-based analysis in contemporary academic discourse.

2. METHODS

The methods employed data extraction and scientometric analysis with CiteSpace V. 6.3.R2 Advanced software. The data extraction step involves selecting a database and developing a search strategy. The scientometric analysis stage involves analyzing an overview of the body of knowledge and creating a scientific map (Figure 1).

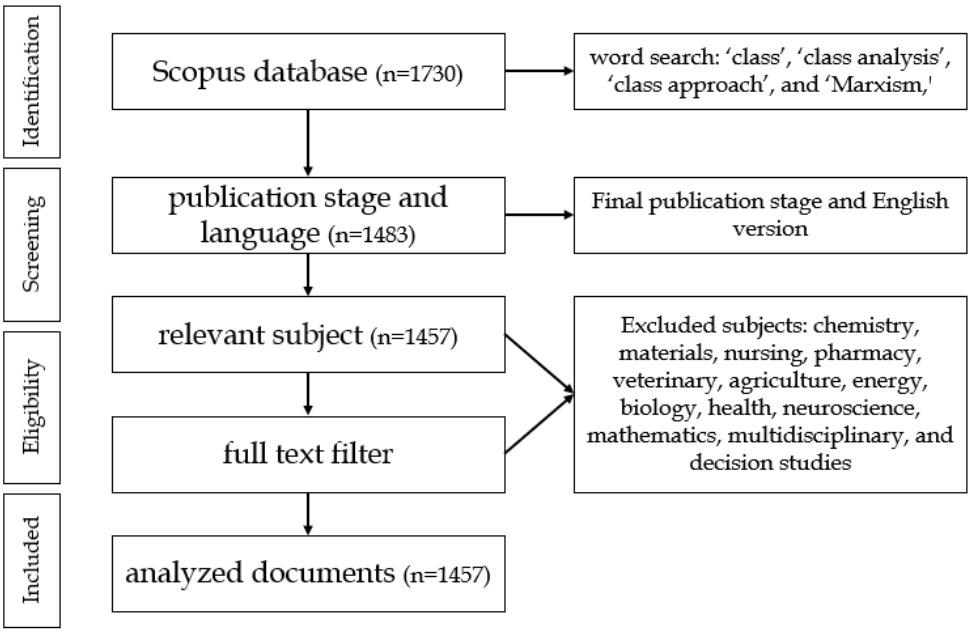

Figure 1. Methods of the study

2.1 Selection of databases

Locating the particular database used—Scopus, an Elsevier creation—was the first step in this investigation. The study used the well-known Scopus database to investigate the potential inclusion of worldwide literature on "Marxism and Class-based Analysis," The database was selected as Scopus is a large, multidisciplinary database with information from numerous national and regional organizations worldwide. Furthermore, every year, Scopus journals are evaluated according to four quantitative standards: CiteScore, h-Index, SJR (SCImago Journal Rank), and SNIP (source normalized impact per publication), see details on https://www.scopus.com/. Therefore, the journals covered in Scopus are regarded to satisfy the criteria for peer review quality set by several countries' degree-accreditation bodies as well as by various research

funding agencies for their award recipients. Also, Scopus academic content can be retrieved with the CiteSpace software.

2.2 Search strategy

We searched this Scopus database extensively for pertinent material. The search technique used titles, abstracts, and keywords in three steps. First, we searched for documents containing 'class,' 'class analysis,' 'class approach,' and 'Marxism,' the results were 1730 documents. Furthermore, in terms of publication stage and language, we limited the document search to the final publication and English. Finally, to strengthen the data specification, we excluded the documents that covered certain subjects, such as chemistry, materials, nursing, pharmacy, veterinary, agriculture, energy, biology, health, neuroscience, mathematics, multidisciplinary, and decision studies. It was counted for 1457 documents between 1951 and 2023.

2.3 Scientometric analysis

In order to measure, analyze, and comprehend the evolution, influence, and structure of science, scientometrics use quantitative data such as academic publications, citations, research collaborations, and particular indices (Leydesdorff & Milojević, 2015). In the end, it finds patterns in scientific studies (Belikov & Belikov, 2015; Garfield, 2009; Leydesdorff & Milojević, 2015; Mingers & Leydesdorff, 2015). The two main components of scientometric analysis are the examination of current research trends and the examination of scientific visualization (Ivancheva, 2008). To measure the influence of researchers and the number of publications they have made, scientometric indicators are used in the analysis of current research trends (Belikov & Belikov, 2015; Ivancheva, 2008). Scientific visualization provides a visual representation of the cognitive and social structure of a particular research topic, illustrating its topology and its evolution over time (Belikov & Belikov, 2015).

CiteSpace, SciMAT, BibExcel, VOSviewer, and the R Package are among the numerous available programs for scientometric analysis. These tools have unique conceptual models, calculation procedures, visualization outputs, and their own benefits and drawbacks. The Scopus data was visualized and analyzed using CiteSpace V. 6.3.R2 Advanced, a tool that was developed by Professor Chao-Mei Chen of Drexel University in the United States, for this investigation.

CiteSpace is a sophisticated program that provides quick access to information on specific topics. Its research focuses on information visualization and analysis using knowledge graphs and scientific frontier atlases (Yu et al., 2023). The study used specific processing conditions, including subject areas limited to social science or related subjects. The term type was described as burst terms, while the node type was stated as the keyword.

In order to conduct numerous analyses, such as co-authorship, co-occurrence, citation, and co-citation, data from the Scopus database was imported into CiteSpace. CiteSpace establishes specific criteria for databases and articles that are imported. In general, the number of publications should fall within the range of 400 to 3000, with the exception of dissertations. The co-authorship analysis comprises the authors' names, organizational affiliations, and countries of origin. The intensity of the relationship between keywords is measured by co-occurrence analysis, which is related to all keywords used in the publications (Lozano et al., 2019; Mainali et al., 2022). The frequency of connections between the two entities is the basis for this measurement. Citation analysis encompasses the most frequently cited articles, journals, authors, author affiliations, and countries or regions. The co-citation analysis type encompasses cited references, cited sources, and cited authors, which are the articles, journals, and authors that are most frequently cited by other documents or research. This indicates a connection between these sources (Osareh, 1996; Surwase et al., 2011). The publication period is divided into two sections: 1951-2000 and 2001-2023, with the objective of identifying the variations in

keyword occurrence trends. The frequency of occurrence and the relationships among keywords are used to identify research gaps. Research gaps are likely to be indicated by keywords that are infrequently encountered, have weak interrelationships, or are not connected to other keywords (Börner et al., 2003; Eppler & Burkhard, 2008).

In this study, we decided to import 1457 publications from Scopus. The terms extracted from these documents were examined for co-occurrence, clustering, and burst patterns. Following the acquisition of the relevant knowledge map, individual publications were analyzed to determine the present state, hotspots, and future research trends in Marxism and Class-based Analysis research from 1951 to 2023.

3. RESULT AND DISCUSSION

The results section thoroughly explains the discoveries derived from the data analysis, which can be illustrated using visual aids like charts and graphs. During the debate, the authors will clarify their comprehension of the findings and hypothesize their importance for present and future research. We utilized Scientometric analysis, which includes citation, co-citation, and co-occurrence analysis, to facilitate the visualization of the overall structure of scientific knowledge.

3.1 Current research status and hotspots

Marxism and class-based analysis were the subjects of 1457 publications in all between 1951 and 2023. These articles were chosen by concentrating exclusively on reviews or articles and removing specific record kinds, like program files and editing materials, from databases. Class-based analysis and Marxism were found terms in the papers' titles, index terms, and abstracts. Figure 2 shows the total yearly publications. The tendency clearly rises overall while fluctuating. We may divide the trend shown in the column chart into two different periods:

1. During the first development era, from 1951 to 2000, the annual average publication of articles was around 5, and the growth rate fluctuated. This is the initial stage where the focus is directed toward Marxism and class-based analysis.
2. During the rapid development from 2000 to 2023, the number of published articles on Marxism and Class-based Analysis significantly increased, averaging 54 per year. While the increase fluctuated, from 2000 to 2023, it peaked at almost 100 publications, followed by fluctuating conditions in the following year, and, finally, in 2023, reaching a total of 76 articles.

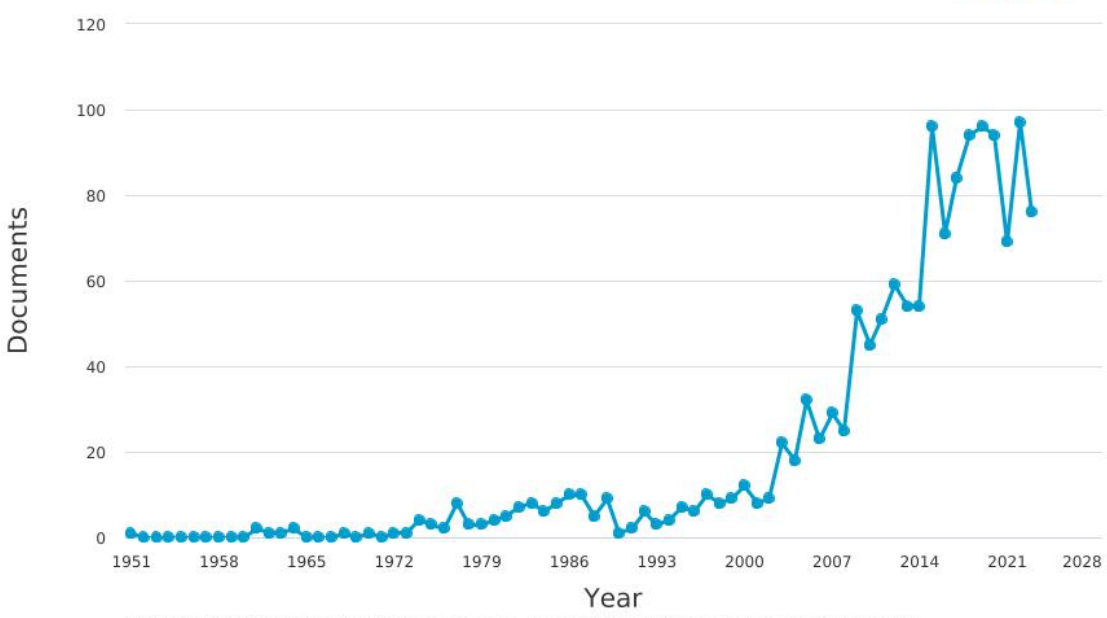

Figure 2. Number of publications during 1951-2023

Research on Marxism and class-based analysis encompasses ten different document types, including articles, conference papers, book chapters, reviews, conference reviews, books, notes, editorial materials, corrections, and data papers. Research articles constitute the majority (62%), followed by book chapters (18.8%) and reviews (10%), with the other types each representing less than 10% (see Figure 3). The scope of research has become multi-disciplinary, as evidenced by the diverse subject distribution. However, as highlighted in Figure 4, Social Sciences are the most prominent, with 1156 publications, or 62% of the total. Arts and Humanities rank second with 637 publications (28.9%), and Economics, Econometrics, and Finance follow with 197 publications (9%). Categories such as Business, Management and Accounting, Environmental Science, Earth and Planetary Sciences, Computer Science, Medicine, Psychology, and Engineering each have fewer than 100 documents.

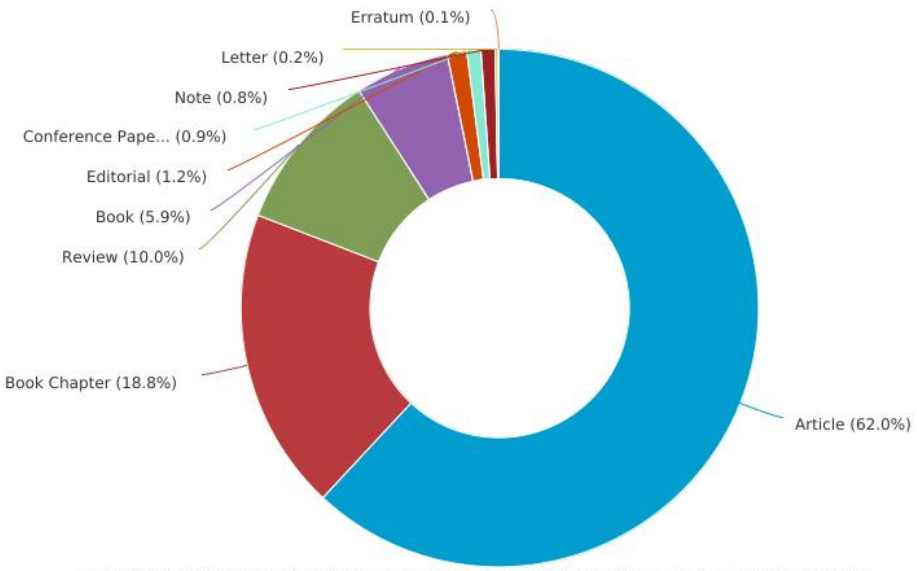

Figure 3. Types of publications during 1951-2023

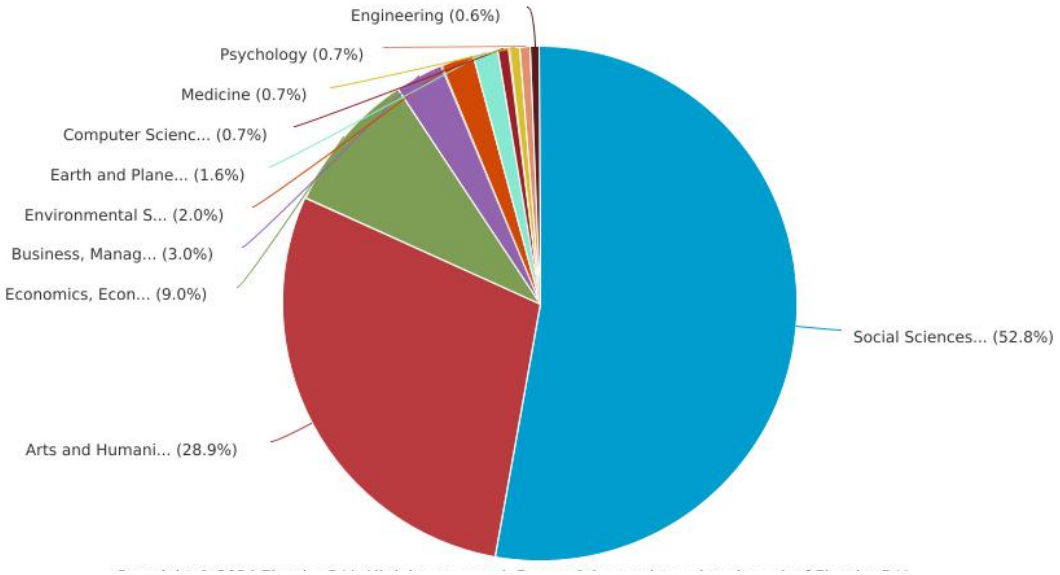

Figure 4. Subjects of publications during 1951-2023

3.2 Citation analysis in Marxism and Class-based Analysis research

To tackle complex scientific problems and encourage innovative thinking, it is crucial to promote collaboration among nations, organizations, and scholars across various research fields. This study has developed collaboration maps, such as an author collaboration network, institution collaboration network, country collaboration network, and geographical collaboration network. These maps, derived from collected literature data, aim to highlight prominent scientific researchers, institutions, and countries, as well as their social relationships.

3.2.1. Author Collaboration Network in Marxism and Class-based Analysis

The author collaboration network analyzes the level of cooperation and mutual connection among various authors, as depicted in Figure 5. The network consists of 180 nodes representing authors and 13 links representing connections between them. The size of each node corresponds to the number of times the author is referenced, while the breadth of the lines shows the number of joint articles. The network diagram has a low overall density of 0.0008, indicating it is not sufficiently compact. Table 1 summarizes the top 10 writers ranked by their frequency of cooperation. The frequency of Chakrabarti, A. (2008) in the first place is 7, with its initial occurrence in a cooperative connection in 2008. The second place is occupied by Brass, T. (2008) and Carver, T. (2011), with a frequency of 6 and first appearance in 2008 and 2011, respectively. Furthermore, four authors were categorized into third rank, with a frequency of five: Cole, M. (2011), Morton, A.D. (2007), Das, R.J. (2017), and Dhar, A. (2015) that first occurrence in 2009, 2017, and 2018, respectively. The rest were Banfield, G. (2009), Cumbers, A. (2009), and Burawoy, M. (2003), with four frequencies and first appearing in 2015, 2019, and 2020. The statement suggests that the scholars involved in the Marxism and class-based analysis study are widely spread out and have few academic connections.

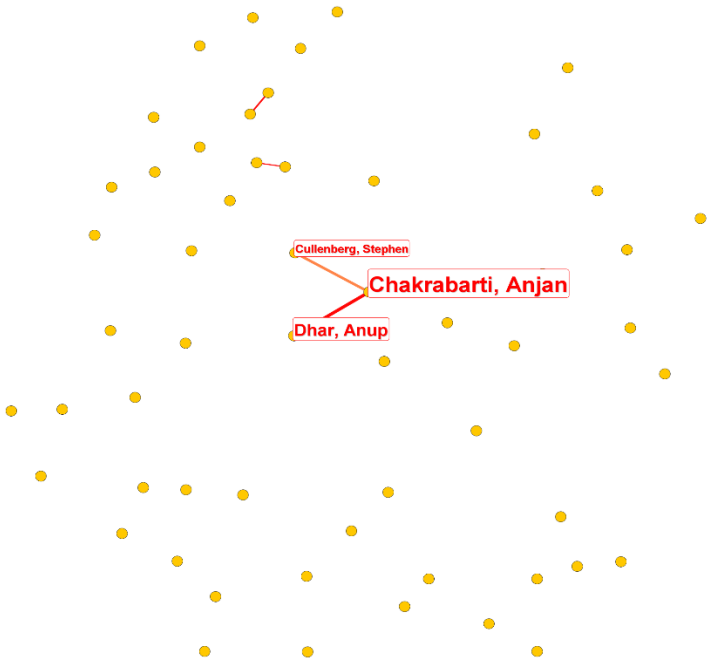

Figure 5. A visualization of the author's collaboration network.

Table 1. Top 10 authors based on frequency in Marxism and class-based analysis in 1951-2023.

Author	Year	Freq
Chakrabarti, A.	2008	7
Brass, T.	2008	6
Carver, T.	2011	6
Cole, M.	2009	5
Das, R.J.	2017	5
Dhar, A.	2018	5
Morton, A.D.	2009	5
Banfield, G.	2015	4
Burawoy, M.	2020	4
Cumbers, A.	2019	4

3.2.2 Institution Collaboration Network in Marxism and Class-based Analysis

Table 2 shows the leading institutions in the study of Marxism and class-based analysis; although York University from Canada began to influence in 2017, it is the most influential institution in this study, at 2.95. Next, followed by the Department of Sociology, the State University of New Jersey, with an influence between 2014 and 2023 of 2.62 and the highest frequency of 38. Five institutions – the University of Sheffield, the University of Manchester, the University of Chicago, the University of Melbourne, and the University of California – had an impact as of 2013 with 2.58, 2.39, 2.36, 2.3, and 1.76, respectively. Furthermore, the Department of Political Science, University of Chicago, was found to be the institution with the longest influence in this study over 3 decades (1986-2013).

Table 2. Top 10 institutions based on frequency in Marxism and class-based analysis in 1951-2023.

Author	Burst	Freq	Year
York University, Canada	2.95	9	2017
Department of Sociology, the State University of New Jersey, USA	2.62	38	1976
University of Sheffield, England	2.58	5	2007
Syracuse University, USA	2.51	4	1982
Department of Political Studies, University of Chicago, USA	2.42	4	1986
University of Manchester, England	2.39	4	2008
Department of Political Science, University of Chicago, USA	2.36	18	1986
State University of New York, USA	2.33	4	1988
University of Melbourne, Australia	2.3	5	2005
University of California, USA	1.76	18	1985

Figure 6 illustrates the institution collaboration network analysis in Marxism and class-based analysis research, where each node represents a distinct institution. This network comprises 188 nodes and 27 linkages, with an overall density of 0.0015. The size of each node indicates the number of documents issued by the organization—the larger the node, the more documents the institution has produced. The largest node belongs to the Department of Sociology at Rutgers, the State University of New Jersey, USA. The linkages demonstrate the cooperation between institutions: the more substantial the interaction, the more numerous the links. This network reveals complex connections among various institutions, indicating a diverse and extensive range of current and ongoing collaborations.

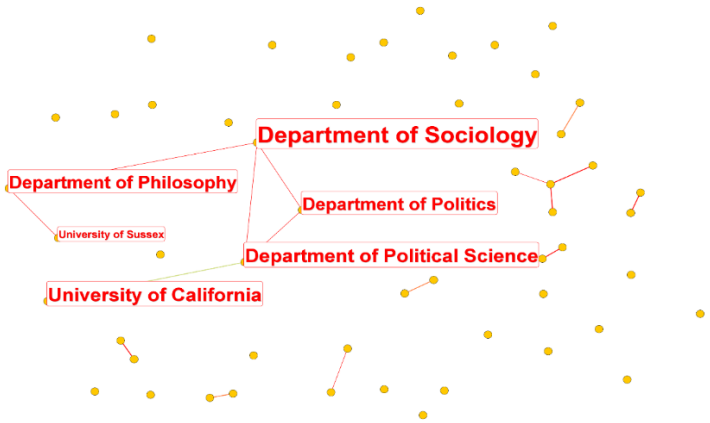

Figure 6. A visualization of the institution's collaboration network.

3.2.3 Country Collaboration Network in Marxism and Class-based Analysis

The country cooperation network features 49 nodes and 74 links, representing countries or regions, with an overall density of 0.0181 (Figure 7). Table 3 lists the top 10 nations or territories contributing the most to the output. The United States is the largest contributor, with 340 published articles, followed by the United Kingdom with 284 articles, Canada with 99, and Australia with 66. Other countries have fewer than 50 publications each. Despite being the second-largest contributor, the United Kingdom has the highest centrality strength at 0.2,

indicating its significant mediating role in Marxism and class-based analysis research and its importance in fostering international collaborations.

Interestingly, although Canada ranks third in publication frequency, its centrality is lower than that of Australia, China, Germany, Brazil, and the Netherlands. On the other hand, South Africa and France have the lowest centrality scores (0.00), highlighting that regions like Asia still have limited influence in this field.

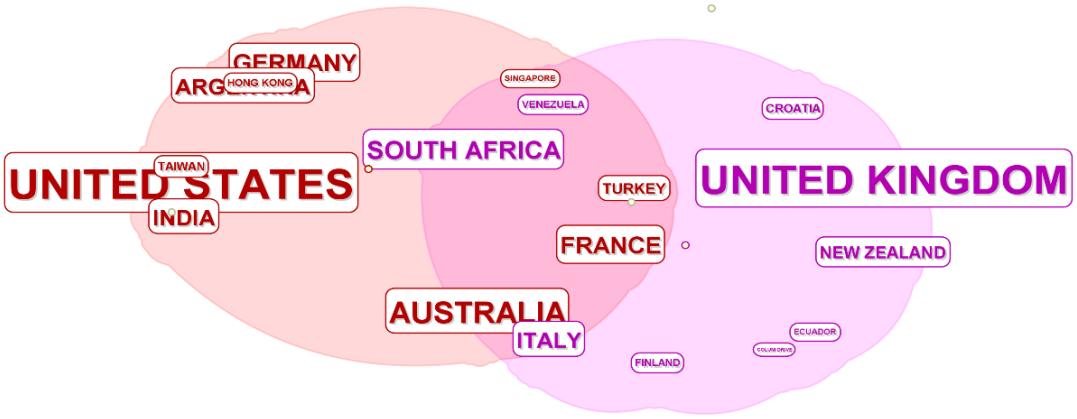

Figure 7. A visualization of the country's collaboration network.

Table 3. Top 10 countries/territories based on frequency in Marxism and class-based analysis research in 1951-2023.

Countries	Year	Freq	Centrality
United States	1974	340	0.19
United Kingdom	1977	284	0.2
Canada	1977	99	0.03
Australia	1964	66	0.07
China	2011	33	0.07
South Africa	1977	27	0
Germany	1983	24	0.05
Netherlands	1998	24	0.02
France	1974	22	0
Brazil	2003	19	0.05

3.3 Co-citation analysis in Marxism and Class-based Analysis research

Co-citation analysis helps characterize the dynamic structure of scientific progress and reveals the internal relationships and patterns within the scientific literature. In studying document relations, literature retrieval, and literature structure, co-citation refers to the scenario where two documents are linked by being cited together in one or more other documents. This means two documents with a co-citation relationship are always passively connected, awaiting further citations to solidify their link. This adaptability makes co-citation analysis particularly suited to fields with constantly evolving research topics.

In essence, Marxism and class-based analysis research is a dynamic and continuously developing field of knowledge. This article conducts a co-citation analysis of authors, documents, and journals to examine the evolution of research in Marxism and class-based analysis. The goal

is to gain a comprehensive understanding of the existing body of knowledge and to establish a leadership position in this area.

3.3.1. Document co-citation network in Marxism and Class-based Analysis

Traditional document reviews typically depend on qualitative analysis through narratives, which are heavily influenced by individual judgments and interpretations. However, CiteSpace software can visually represent these subjective judgments, enhancing the study's persuasiveness by complementing narrative strategies. Document co-citation analysis, a method used to identify key or central literature in the research on Marxism and class-based analysis, benefits from this visual representation.

Figure 8 shows the comprehensive view of the document co-citation network, which includes 2689 nodes and 57156 links, resulting in an overall network density of 0.0158. Each node represents an article, and the citation rings display the complete citation history of each article. The colors of the citation tree rings correspond to the citation time, while the thickness of a line indicates the number of citations within that period. Using multivariate statistical techniques like cluster analysis, the complex relationships within the co-citation network are condensed into a manageable number of groups, which are then visually depicted for easier interpretation.

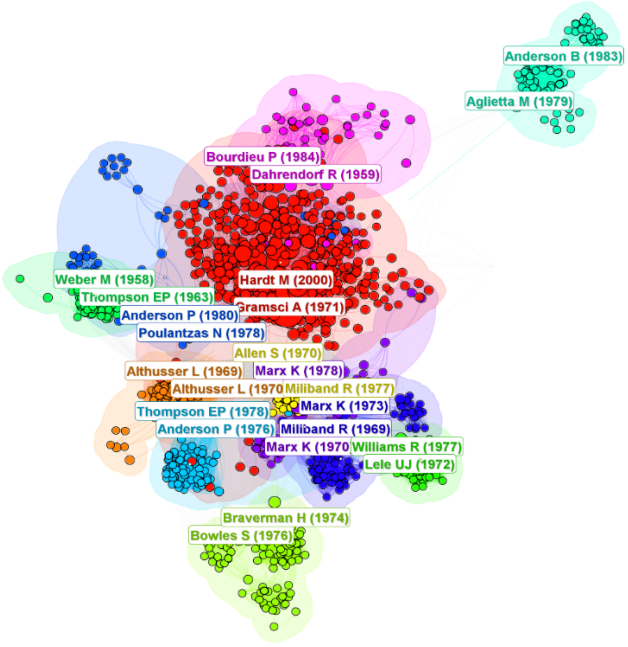

Figure 8. A visualization of the document co-citation network.

The outcomes of the top 10 clusters are concisely presented in Figure 9. "Size" refers to the number of publications within each cluster. The largest cluster, labeled cluster #0 "emergentist Marxism," includes 77 references and has a silhouette value of 0.742. The key article cited in this cluster is "Emergentist Marxism: Dialectical Philosophy and Social Theory" by S. Creaven (2013). This esteemed publication extensively explores emergentist Marxism, asserting that a comprehensive comprehension of intricate social and physical systems necessitates the incorporation of critical realism and materialist dialectics. Creaven analyzes Marx's dialectical framework, encompassing the interplay between existence and consciousness, the dynamics of production forces and relations, the foundational base and overarching superstructure, the hierarchical class system, and the inherent struggle between social classes. He illustrates how these dialectics assist social analysts in conceptualizing geo-history as displaying discernible evolutionary patterns rather than being haphazard or uncertain regarding consequences.

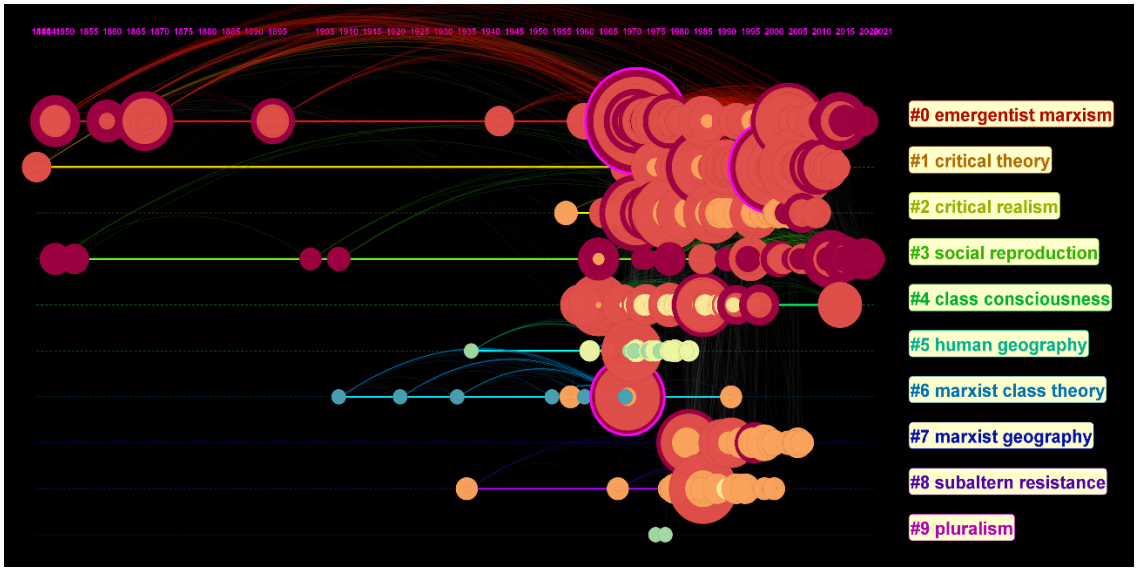

Figure 9. A visualization of the top 10 themes of Marxism and class-based analysis research in 1951-2023.

Furthermore, cluster #1 "critical theory" contains 68 members and has a silhouette value of 0.6. The principal citing article in this cluster is David Eden's "*Autonomy: Capitalism, Class, and Politics*." Eden explores how Autonomist Marxism, particularly in the works of Antonio Negri, Paulo Virno, the Midnight Notes Collective, and John Holloway, challenges conventional notions of class and contemporary capitalism and their implications for politics. His analysis not only juxtaposes these approaches in a novel and productive manner but also critiques each perspective and delves into their shared concerns. By proposing new ideas on emancipatory praxis, Eden's book offers valuable insights into the current social and political tensions and conflicts.

Cluster #2 "critical realism" and cluster #3 "social reproduction" each consist of 52 members, with silhouette values of 0.6 and 0.728, respectively. In cluster #2, the major citing reference is a book chapter by Grant Banfield, which argues for a materialist view of history as essential for radical criticism, incorporating elements from the philosophical movement of critical realism to support Marxist analysis. In cluster #3, Neil Gray is the primary citing reference. Gray's work reviews and expands the concept of class composition, providing the first comprehensive theory of spatial composition and highlighting its importance to contemporary spatial politics.

Clusters #4 through #9 contain fewer than 50 members, with silhouette values ranging from 0.839 to 0.989. The key works within these clusters include: Mills, C (1994) *Rational choice marxism and social class boundaries*, Gabriel, J (1978) *Marxism and the concept of racism*, Israel, J (1970) *Remarks concerning some problems of Marxist class theory*, Cumbers, A (2009) *Marxism/Marxist geography I*, Brass, T (2002) *On which side of what barricade? subaltern resistance in Latin America and elsewhere*, and Blair, Hw (1980) *Mrs Gandhi's emergency, the Indian elections of 1977, pluralism and Marxism: problems with paradigms*.

Table 5 presents the top 10 papers citing the article by Gramsci mentioned earlier. Typically, these citing papers are recently published. By exploring the topic of Marxism and class-based analysis research, one can gain a comprehensive understanding of the evolution of scientific knowledge and the shifts in significant research areas. Additionally, "*Selections from the Prison Notebooks*," authored by Gramsci, has made a notable contribution to this field, as reflected in additional documents listed in Table 5 within cluster #0.

Table 4. Top 10 references based on frequency in Marxism and class-based analysis research in 1951-2023.

Title	Author	Year	Freq	Cluster
Selections From the Prison Notebooks	Gramsci A	1971	14	0
Empire	Hardt M	2000	12	1
A Brief History of Neoliberalism, V0, P0	Harvey D	2005	11	1
Capital: A Critique of Political Economy, Volume 1	Marx K	1976	7	2
The Making of The English Working Class	Thompson EP	1963	7	4
The New Imperialism	Harvey D	2003	6	0
Grundrisse	Marx K	1973	5	1
The Limits to Capital	Harvey D	1982	5	0
Reading Capital	Althusser L	1970	5	2
The Poverty of Theory and Other Essays,	Thompson EP	1978	5	2

Table 5. Top 10 citing articles of the article entitled 'Selections from the Prison Notebooks.'

Title	Author	Year	Citation	Source
Who are the victims of low-carbon transitions? Towards a political ecology of climate change mitigation	Benjamin K. S.	2021	407	Energy Research & Social Science
The political economy of infant and young child feeding: confronting corporate power, overcoming structural barriers, and accelerating progress	Phillip B., et al.	2023	93	Breastfeeding
Critical Pedagogy: An Introduction	Antonia D	2023	633	The Critical Pedagogy Reader
Intersectionality as Critical Social Theory	Patricia H. C.	2021	2201	Contemporary Political Theory
Social media and populism: an elective affinity?	Paolo G	2018	673	Media, Culture & Society
Post-Truth, Fake News and Democracy	Johan F	2019	363	Mapping the Politics of Falsehood
The Politics of Fear: What Right-Wing Populist Discourses Mean	Ruth W	2015	3065	The Politics of Fear
The Third Digital Divide: A Weberian Approach to Digital Inequalities	Massimo R	2016	612	The Third Digital Divide
From Social Harm to Zemiology: A Critical Introduction	Victoria C	2021	150	From Social Harm to Zemiology
The Changing Space for NGOs: Civil Society in Authoritarian and Hybrid Regimes	Stefan Toepler	2020	159	Voluntas

3.3.2. Author co-citation network analysis in Marxism and Class-based Analysis

Author co-citation analysis allows us to pinpoint influential figures in the realm of Marxism and class-based analysis research, providing valuable insights for organizations seeking to recruit top talent. The network comprises 1236 nodes and 24951 linkages, with an overall density of 0.0327, as depicted in Figure 10. Notably, the analysis focused solely on the first author.

The most prominent node corresponds to the referenced author Marx K, with a frequency of 553. The node with an orange outer ring has a centrality value of 0, indicating Marx K's pivotal position in the field. Table 4 lists the names of the 10 most frequently referenced writers, with citation frequencies exceeding 41. Marx K's node boasts the highest centrality value of 0.19, underscoring its importance. High centrality reflects the significant impact of scientific contributions. Other authors like Gramsci A, Hardt M, Harvey D, and Thompson EP also possess centrality values above 0.5, warranting consideration. The identification of Marx K as the primary author aligns with the document's co-citation analysis findings, affirming the credibility of our research from an alternate perspective.

3.3.3 Journal co-citation network in Marxism and Class-based Analysis

The scientific literature on Marxism and class-based analysis draws from various academic journals, providing a robust foundation for literature collection. Understanding the prominence of key journals in this discipline is crucial for researchers. Table 6 lists the primary journals cited in the field of Marxism and class-based analysis, with the top 10 journals including: *New Left Review, Historical Materialism, The German Ideology, Selections from the Prison Notebooks, Rethinking Marxism, Economy and Society, American Sociological Review, Capital, A Brief History of Neoliberalism,* and *Cambridge Journal of Economics*.

Among these, New Left Review is the most frequently cited journal, with 197 co-citations. American Sociological Review attains the highest centrality, securing the top rank with a score of 7.50. This indicates its significant role in connecting with other journals within the field. Notably, A Brief History of Neoliberalism is another pivotal journal, boasting a centrality score of 6.10, which is particularly valuable for scholars engaged in Marxism and class-based analysis research.

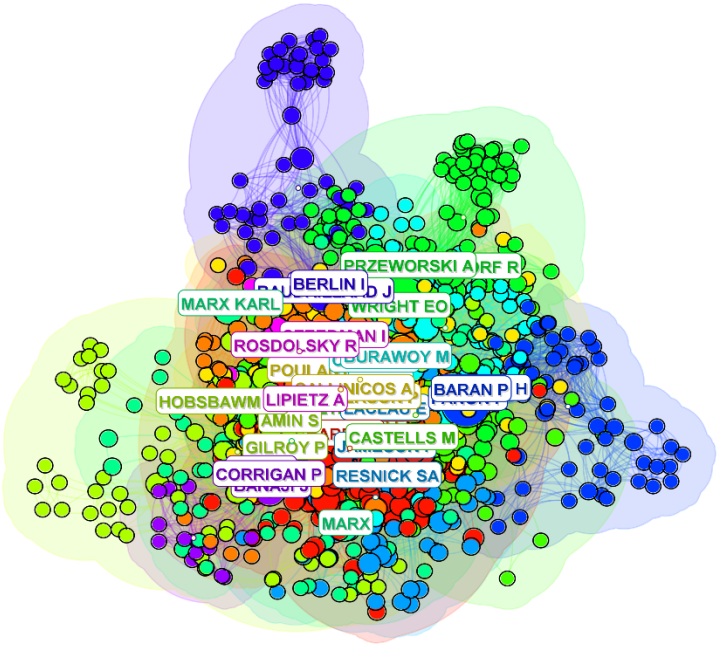

Figure 10. A visualization of the author's co-citation network.

Table 6. Top 10 most cited books/journals based on frequency in Marxism and class-based analysis research in 1951-2023.

Book/Journal Title	Frequency	Centrality	Year
New Left Review	197	3.33	1978
Historical Materialism	82	4.85	2007
The German Ideology	73	3.61	1985
Selections from the Prison Notebooks	71	6.06	2003
Rethinking Marxism	69	6.09	2005
Economy and Society	59	4.41	1974
American Sociological Review	48	7.50	1979
Capital	44	3.87	1985
A Brief History of Neoliberalism	40	6.10	2010
Cambridge Journal of Economics	32	4.27	1987

3.4 Co-occurrence analysis in Marxism and Class-based Analysis research

3.4.1. Burst detections of keywords

Keywords serve as condensed representations of the primary substance of a scholarly work, encapsulating the author's ideas and perspectives effectively. The concept of "sudden detection of keywords" refers to terms that experience a surge in usage, attracting significant attention from scholars during specific periods. The emergence and fluctuation of specific terms can be utilized to gauge the current frontiers and trends in an academic field.

Table 8 presents the top 10 keywords exhibiting the most pronounced bursts in the field of Marxism and class-based analysis research: *Theoretical Study, Working Class, Socialism, Political System, Politics, Article, Asia, Political Systems, Globalization,* and *Eurasia*. The keyword with the highest frequency strength is 'Theoretical Study', occurring 43 times, followed by 'Working Class' with a frequency of 23, and 'Socialism' with a frequency of 17. Subsequent keywords include 'Political System' (15), 'Politics' (14), 'Article' (13), 'Asia' (11), 'Political Systems' (7), 'Globalization' (7), and 'Eurasia' (6). These keywords emerge prominently, reflecting the distinctive characteristics of specific time periods.

Through thorough analysis, it becomes evident that the prevailing subjects of interest in this academic domain undergo shifts over time. For instance, during the 1990s, research in Marxism and class-based analysis predominantly focused on 'political system' and 'socialism'. However, in recent years, there has been a notable shift towards topics like 'Eurasia' and the 'working class'.

Table 7. Top 10 most keywords based on frequency in Marxism and class-based analysis research in 1951-2023.

Book/Journal Title	Frequency	Centrality	Year	Begin	End
Theoretical Study	43	0.13	1979	1988	2006
Working Class	23	0.04	1968	2015	2016
Socialism	17	0.06	1988	1968	2001
Political System	15	0.04	1980	1968	2003
Politics	14	0.02	1968	1977	1989
Article	13	0.02	1968	1968	1994
Asia	11	0.01	1968	1981	2009
Political Systems	7	0.01	1968	1968	1989
Globalization	7	0	1992	2002	2010
Eurasia	6	0	1981	2004	2009

4. CONCLUSION

This article offers a comprehensive scientific assessment of 1457 data points on Marxism and class-based analysis, drawing from the Scopus database and analyzed using CiteSpace software. Insights derived from citations, co-citations, and co-occurrences reveal substantial growth in the body of literature on Marxism and class-based analysis, particularly since 2000. However, research remains fragmented, with minimal collaboration among experts.

The United States emerges as the primary contributor, hosting numerous high-yield institutions. Europe and Asia also contribute significantly across various sectors. Noteworthy researchers in this field include Gramsci A, Hardt M, Harvey D, Marx K, Thompson EP, and Althusser L. Journals like New Left Review, Economy and Society, American Sociological Review, and Cambridge Journal of Economics play key roles in fostering connections with other periodicals.

Recent research focuses on key areas such as theoretical study, working class, sociology, political systems, politics, articles, Asia, political systems, globalization, and Eurasia. Scientometric analysis proves invaluable for detecting connections between works and studying knowledge development in Marxism and class-based analysis. However, certain limitations exist, such as the lack of exhaustiveness in keyword searches, potentially leading to the exclusion of incomplete data. To enhance research accuracy and scope, future studies should gather data using varied terms and conduct specific analyses on prominent journals in this field using tools like CiteSpace or other scientific measurement software.

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5. Reference

Banfield, G. (2009). Marxism, critical realism and class: Implications for a socialist pedagogy 1. In *Class in Education* (pp. 128–152). Routledge.

Belikov, A. V., & Belikov, V. V. (2015). A citation-based, author- and age-normalized, logarithmic index for evaluation of individual researchers independently of publication counts. *F1000Research*, *4*, 884. https://doi.org/10.12688/f1000research.7070.1

Börner, K., Chen, C., & Boyack, K. W. (2003). Visualizing knowledge domains. *Annual Review of Information Science and Technology*, *37*(1), 179–255.

Brass, T. (2008). Capitalism and Bonded Labour in India: Reinterpreting Recent (Re-) Interpretations. *The Journal of Peasant Studies*, *35*(2), 177–248. https://doi.org/10.1080/03066150802150969

Burawoy, M. (2003). For a Sociological Marxism: The Complementary Convergence of Antonio Gramsci and Karl Polanyi. *Politics & Society*, *31*(2), 193–261. https://doi.org/10.1177/0032329203252270

Carver, T. (2011). The Marxian Tradition. *The Oxford Handbook of the History of Political Philosophy*, 393.

Chakrabarti, A., & Dhar, A. (2015). The Question Before the Communist Horizon. *Rethinking Marxism*, *27*(3), 357–359. https://doi.org/10.1080/08935696.2015.1042703

Chakrabarti, A., & Dhar, A. K. (2008). Development, Capitalism, and Socialism: A Marxian Encounter with Rabindranath Tagore's Ideas on the Cooperative Principle. *Rethinking Marxism*, *20*(3), 487–499. https://doi.org/10.1080/08935690802137787

Cole, M. (2011). Social class, Marxism and twenty-first-century socialism: Mike Cole. In *Education, Equality and Human Rights* (pp. 241–262). Routledge.

Das, R. J. (2017). David Harvey's theory of uneven geographical development: A Marxist critique. *Capital & Class*, *41*(3), 511–536. https://doi.org/10.1177/0309816816678584

Eidlin, B., & McCarthy, M. A. (2020). Introducing rethinking class and social difference: A dynamic asymmetry approach. In *Rethinking Class and Social Difference* (pp. 1–23). Emerald Publishing Limited.

Eppler, M. J., & Burkhard, R. A. (2008). Knowledge visualization. In *Knowledge management: concepts, methodologies, tools, and applications* (pp. 781–793). IGI Global.

Ford, D. R. (2024). What's so Marxist about Marxist Educational Theory? *Policy Futures in Education*, 14782103241232840.

Fuchs, C. (2021). Cornel west and Marxist humanism. In *Foundations of Critical Theory* (pp. 191–226). Routledge.

Garfield, E. (2009). From the science of science to Scientometrics visualizing the history of science with HistCite software. *Journal of Informetrics*, *3*(3), 173–179. https://doi.org/10.1016/j.joi.2009.03.009

Ivancheva, L. (2008). Scientometrics Today: A Methodological Overview. *Collnet Journal of Scientometrics and Information Management*, *2*(2), 47–56. https://doi.org/10.1080/09737766.2008.10700853

Leydesdorff, L., & Milojević, S. (2015). Scientometrics. In J. D. B. T.-I. E. of the S. & B. S. (Second E. Wright (Ed.), *International Encyclopedia of the Social & Behavioral Sciences (Second Edition)* (pp. 322–327). Elsevier. https://doi.org/https://doi.org/10.1016/B978-0-08-097086-8.85030-8

Lozano, S., Calzada-Infante, L., Adenso-Díaz, B., & García, S. (2019). Complex network analysis of keywords co-occurrence in the recent efficiency analysis literature. *Scientometrics*, *120*, 609–629.

Maffettone, S. (2021). *Marx in the 21st century: A critical introduction*. Taylor & Francis.

Mainali, K. P., Slud, E., Singer, M. C., & Fagan, W. F. (2022). A better index for analysis of co-occurrence and similarity. *Science Advances*, *8*(4), eabj9204.

Mingers, J., & Leydesdorff, L. (2015). A review of theory and practice in scientometrics. *European Journal of Operational Research*, *246*(1), 1–19. https://doi.org/10.1016/j.ejor.2015.04.002

Morton, A. D. (2007). Disputing the geopolitics of the states system and global capitalism. *Cambridge Review of International Affairs*, *20*(4), 599–617. https://doi.org/10.1080/09557570701680621

Organization for Economic Cooperation and Development (OECD). (2015). *In It Together: Why Less Inequality Benefits All*. OECD. https://doi.org/10.1787/9789264235120-en

Osareh, F. (1996). *Bibliometrics, citation analysis and co-citation analysis: A review of literature I*.

Ost, D. (2015). Class after communism: Introduction to the special issue. In *East European Politics and Societies* (Vol. 29, Issue 3, pp. 543–564). Sage Publications Sage CA: Los Angeles, CA.

Peet, R. (2011). Inequality, crisis and austerity in finance capitalism. *Cambridge Journal of Regions, Economy and Society*, *4*(3), 383–399.

Pike, A., Birch, K., Cumbers, A., MacKinnon, D., & McMaster, R. (2009). A Geographical Political Economy of Evolution in Economic Geography. *Economic Geography*, *85*(2), 175–182. https://doi.org/10.1111/j.1944-8287.2009.01021.x

Piketty, T. (2014). Capital in the Twenty-First Century: a multidimensional approach to the history of capital and social classes. *The British Journal of Sociology*, *65*(4), 736–747.

Surwase, G., Sagar, A., Kademani, B. S., & Bhanumurthy, K. (2011). *Co-citation analysis: An*

overview.

Yu, W., Zhang, L., & Yang, C. (2023). The impact of the digital economy on enterprise innovation behavior: Based on CiteSpace knowledge graph analysis. *Frontiers in Psychology*, *14*. https://doi.org/10.3389/fpsyg.2023.1031294