Geotemas, Pau dos Ferros, RN, Brasil
ISSN: 2236-255X, v. 16, 2026.

GLOBALIZATION IN BRAZILIAN GEOGRAPHY (1990-2017): ANALYSIS OF PERIODICAL PRODUCTION

Globalização na Geografia Brasileira (1990-2017): análise da produção periódica

Globalización en la geografía brasileña (1990-2017): análisis de la producción periódica



Adriano Barbosa dos Santos
Univerisidade Federal de Pernambuco (UFPE)
E-mail: santosabgeo@gmail.com

Rodrigo Dutra Gomes
Univerisidade Federal de Pernambuco (UFPE)
E-mail: rdutragomes@gmail.com

Article History
Received: 05 may, 2026
Accepted: 14 september, 2026
Published: 12 november, 2026

ABSTRACT

The present research analyzes knowledge production on globalization in Brazilian Geography based on a bibliometric and descriptive study of 96 articles published in 28 journals between 1990 and 2017. A growth in publications was observed from the 2000s onward, with a strong regional concentration along the Southeast–South axis, which accounted for approximately 76% of the journals. One-fifth of the institutions accounted for two-thirds of the total production, revealing institutional centralization and structural inequalities. Themes related to Economic, Agrarian, and Urban Geography predominated, with an emphasis on the territorial transformations associated with contemporary capitalism. The centrality of Milton Santos stands out. While this intellectual hegemony provided critical depth to the debate, it also highlighted the challenge of epistemological pluralization. Globalization and mundialization emerged as differentiated, articulated, and complementary concepts in the research. The results indicate that Brazilian Geography not only interprets globalization but also incorporates its academic and institutional dynamics..

Keywords: Global; scientific production; regional concentration; globalization and mundialization.

https://doi.org/10.33237/2236-255X.2026.8035

This is an open access article under the CC BY Creative Commons license
Copyright © 2026 Revista Geotemas

RESUMO

A presente pesquisa analisou a produção do conhecimento sobre a globalização na Geografia brasileira com base em estudo bibliométrico e descritivo de 96 artigos em 28 periódicos entre 1990 e 2017. Observou-se crescimento das publicações a partir dos anos 2000 e forte concentração regional no eixo Sudeste–Sul, responsável por cerca de 76% dos periódicos. Um quinto das instituições respondeu por dois terços da produção, revelando centralização institucional e desigualdades estruturais. Predominam temáticas da Geografia Econômica, Agrária e Urbana, com ênfase nas transformações territoriais do capitalismo contemporâneo. Destaca-se a centralidade de Milton Santos. Essa hegemonia conferiu densidade crítica ao debate, mas apontou o desafio da pluralização epistemológica. Os conceitos de globalização e mundialização aparecem diferenciando-se, articulando-se e complementando-se nas pesquisas. Os resultados indicam que a Geografia brasileira não apenas interpreta a globalização, mas também integra suas dinâmicas acadêmicas e institucionais.

Palavras-chave: Global; produção científica; concentração regional; globalização e mundialização.

RESUMEN

La presente investigación analizó la producción de conocimiento sobre la globalización en la Geografía brasileña a partir de un estudio bibliométrico y descriptivo de 96 artículos en 28 revistas entre 1990 y 2017. Se observó crecimiento de publicaciones a partir de los años 2000 y fuerte concentración regional en el eje Sureste-Sur, responsable de cerca del 76% de las revistas. Una quinta parte de las instituciones representó dos tercios de la producción, revelando centralización institucional e inequidades estructurales. Predominan temas de Geografía Económica, Agraria y Urbana, con énfasis en las transformaciones territoriales del capitalismo contemporáneo. Destaca la centralidad de Milton Santos. Esta hegemonía aportó densidad crítica al debate, pero señaló el desafío de la pluralización epistemológica. Globalización y mundialización aparecen diferenciándose, articulándose y complementándose en las investigaciones. Los resultados indican que la Geografía brasileña no solo interpreta la globalización, sino que también integra sus dinámicas académicas e institucionales.

Palabras clave: Global; producción científica; concentración regional; globalización y mundialización.

1 INTRODUCTION

The production of knowledge is shaped by a range of objective and subjective factors that inevitably influence how phenomena are perceived and understood. From an epistemological perspective, globalization is a process characterized by intense and evolving theoretical and practical dynamics, and the various discourses surrounding the topic necessarily reflect this complexity. In this context, although globalization has generated a substantial body of research, comparatively little attention has been devoted to the production of knowledge about globalization itself. This limitation restricts opportunities for theoretical and methodological development by leaving the dynamics of knowledge production insufficiently examined. More broadly, within Brazilian Geography, considerable attention has been devoted to geographical phenomena in the empirical world, while much less has been said about the production of geographical knowledge itself, including its

principles, organization, development, and ramifications. It is therefore necessary to investigate the paths Brazilian Geography has followed in addressing globalization through scientific production and to problematize the internal organization of this research, both quantitatively and qualitatively, from an epistemological perspective. In this context, several questions arise: What is the profile of scientific production on globalization in Brazilian Geography? How has globalization been studied within Brazilian Geography? Which institutions have produced the largest number of studies? In which regions of Brazil has the topic been most extensively researched? Which journals have served as the main publication outlets? Who are the most frequently cited authors? Which books constitute the principal references? And what are the predominant interpretations of globalization from the perspective of Brazilian Geography?

Considering these questions, this study analyzes the scientific production of Brazilian Geography on globalization, highlighting the main characteristics of the debate. The empirical corpus consists of articles published in Brazilian scientific journals between 1990 and 2017. The 1990–2017 timeframe is justified by the convergence of profound transformations both in the object of study and in the institutional conditions under which geographical knowledge was produced. The year 1990 marks an important historical turning point associated with the end of the Cold War, including the fall of the Berlin Wall and the collapse of the Soviet Union, the intensification of global financial integration through deregulation, the emergence of regional economic blocs, and the creation of the World Trade Organization. In Brazil, this period also marked the beginning of market-oriented reforms under the Collor administration, followed by the Real Plan in 1994. These developments placed Brazil more directly within the intensified globalization of the late twentieth century and required geographers to develop new conceptual tools for understanding emerging processes.

At the same time, the period from 1990 to 2017 coincided with the institutional consolidation of graduate education in Geography in Brazil, with the number of programs increasing from 13 to 77, representing growth of approximately 500%, as well as with the professionalization of scientific publishing and the digitalization of academic journals (Aguilar et al., 2023; Reyes Novaes and Lamego, 2022). These developments made more robust bibliometric analyses possible. The period also includes the years of greatest scholarly productivity of Milton Santos, whose major works on globalization were published during this interval, including The Nature of Space (1996) and Toward Another Globalization (2000), and became major references in Brazilian Geography.

The endpoint of 2017 is justified by the conclusion of a political and economic cycle

in Brazil, marked by the coup against the Dilma Rousseff government and the acceleration of neoliberal reforms, as well as by broader global developments such as Brexit, the election of Donald Trump, and the rise of nationalist movements. These events signaled the weakening of the neoliberal consensus and the beginning of a new phase that would require specific analysis. In addition, the period allows for the use of a complete and relatively stabilized documentary corpus, capturing a broad cycle of debate ranging from the initial enthusiasm surrounding notions such as the “global village” in the 1990s to growing criticism regarding the sustainability of the globalization model during the 2010s. In this sense, the periodization is consistent with interpretations that identify the 1990s as the beginning of a more intense phase of globalization and makes it possible to understand how Brazilian Geography constructed its interpretation of one of the discipline’s central themes at the end of the twentieth century and the beginning of the twenty-first.

The study is bibliometric, bibliographic, exploratory, and descriptive in nature and adopts a mixed-methods approach combining quantitative and qualitative analysis. The empirical corpus consists of articles published between 1990 and 2017 in Brazilian journals directly associated with Geography and classified in the CAPES Qualis system between A1 and B4 in the 2013–2016 evaluation cycle. Articles were selected through searches of journal websites and academic databases according to two main criteria: (1) the presence of the term “globalization” in the title or, alternatively, (2) the use of terms and concepts directly associated with the topic, such as “mondialization,” “internationalization,” “global economy,” or “global geopolitics,” in the title, abstract, or keywords.

Based on the material identified, a database was constructed for descriptive statistical analyses of the temporal, regional, thematic, and authorial profiles of the scientific production. These analyses were complemented by content analysis of the articles, and the results were synthesized in charts and figures and subsequently integrated with an interpretation of broader epistemological aspects. At the qualitative level, content analysis focused on the ways in which globalization was conceptualized, the use of fundamental geographical categories, and the centrality of particular authors, thereby supporting an examination of general epistemological tendencies.

The charts were generated from the raw data using Microsoft Excel and subsequently refined graphically using MANUS. The qualitative analysis examined the ways in which globalization was conceptualized, the use of key analytical categories, and the prominence of particular authors in order to identify broader epistemological patterns within the analyzed literature.

The article is organized as follows. First, it presents the analysis and description of the data derived from the selected articles. This section consists of descriptions and interpretations of the charts and figures generated from the dataset, with the aim of providing a basis for other scholars to critically examine the scientific production identified. Second, the article presents broader epistemological considerations organized into four subsections, beginning with the issue of centralization in scientific production and followed by a discussion of the concepts of globalization and mondialization.

By systematically mapping articles published in ranked journals between 1990 and 2017, a period marked by major geopolitical transformations, the consolidation of graduate education in Geography, and the predominance of particular theoretical frameworks, this study seeks to provide a body of evidence that can support critical reflection on the ways in which Brazilian Geography has constructed its knowledge and, more specifically, interpreted the world. Beyond describing numbers, charts, and figures, the study seeks to provide elements that enable faculty members, students, and researchers to question theoretical centralities, identify silences, recognize trends and forms of diversity, and thereby contribute to a more qualified epistemological about the production of geographical knowledge in the country.

2 GLOBALIZATION THROUGH ANALYSIS: DESCRIPTION OF PERIODICAL SCIENTIFIC PRODUCTION

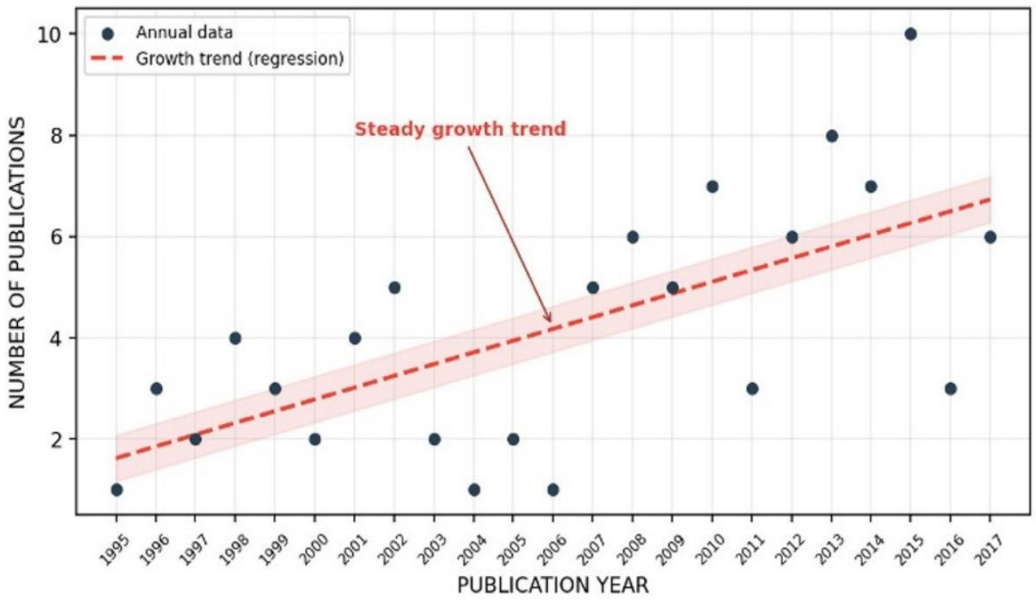
The publication of articles in academic journals is one of the principal means through which scientific knowledge is disseminated. Geography is part of this broader system and includes a wide range of specialized journals that publish research in Brazil and internationally. In Brazil, most graduate programs in Geography maintain academic journals, particularly electronic publications, with regular issues comprising submitted and peer-reviewed articles. In addition to universities, professional associations such as the Association of Brazilian Geographers (AGB) and the Brazilian National Association of Graduate Studies and Research in Geography (ANPEGE) also publish scientific journals.

A total of 28 journals were analyzed, yielding 96 articles. Figure 1, “Historical Trend in Scientific Production,” shows a general increase in the number of articles on globalization in Geography between 1990 and 2017. During the early years, particularly throughout the 1990s, publication levels remained relatively low, typically ranging from one to two articles per year. Beginning in the mid-2000s, particularly around 2007, the number of publications

increased more sharply, reaching approximately nine to ten articles in 2016 and 2017. Despite some year-to-year variability, the positive slope of the trend line confirms an overall increase in research output over time.

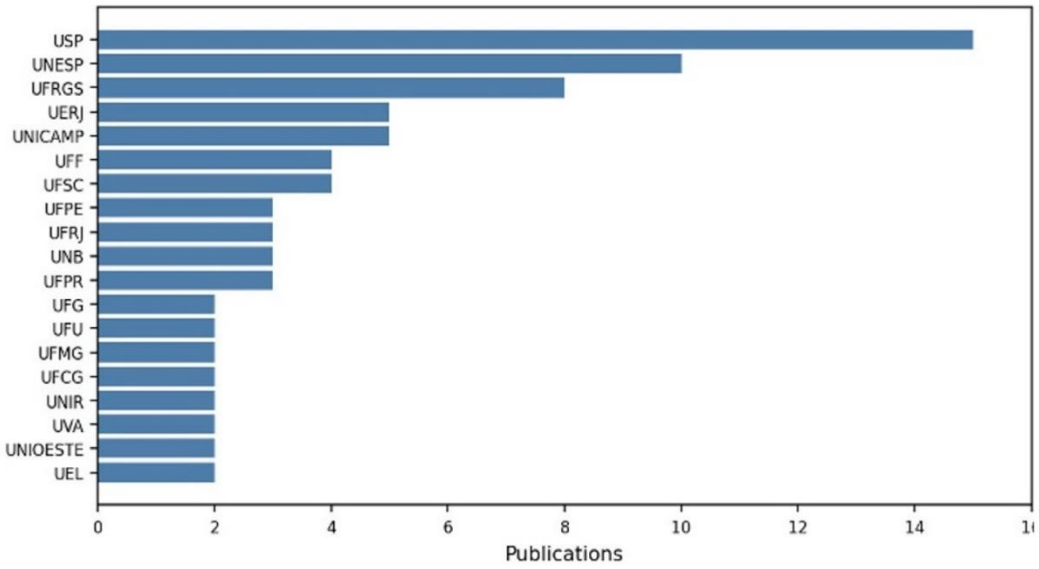
This growth trajectory reflects the broader context discussed in the introduction. Following the economic stabilization associated with the Real Plan in 1994 and the intensification of globalization, geographical research on globalization expanded progressively. Overall, scientific publication on globalization within Brazilian Geography showed consistent growth throughout the period analyzed, with no clear indication of saturation.

Figure 01 – Historical trend inscientific output



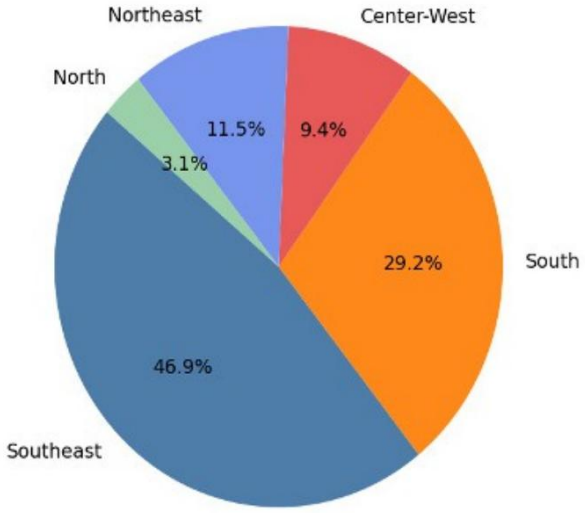
Source: Authors (2025)

Figure 02 – Academic center publishing on globalization



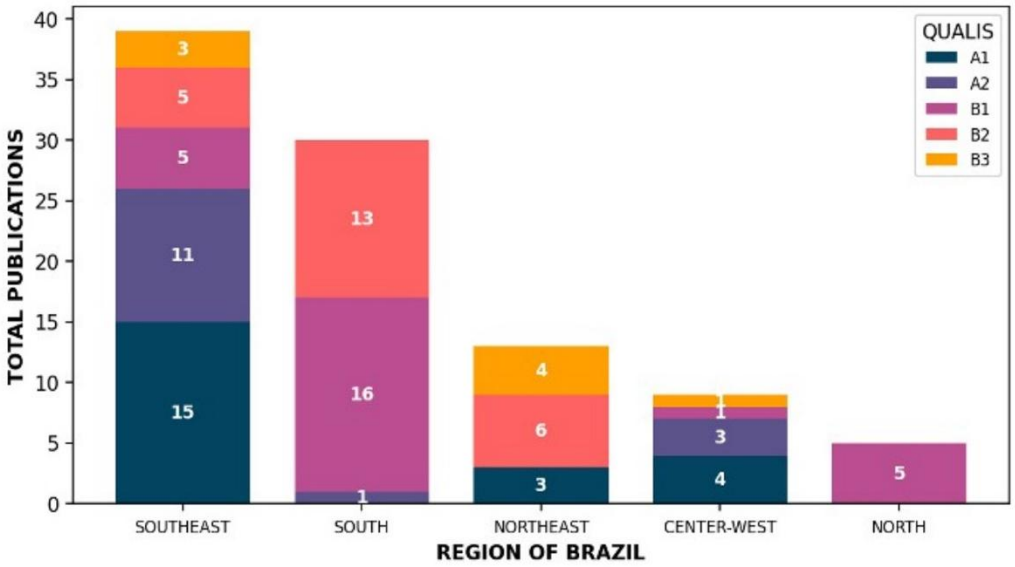
Source: Authors (2025)

Figure 03 – Distribution of journal by region



Source: Authors (2025)

Figure 04 – Distribution by region and Qualis rating



Source: Authors (2025)

Figure 02 shows the number of publications on globalization by academic institution, including research centers and Geography departments. The leading institutions are the USP, with approximately 15 publications; São Paulo State University, with about 9; and the UFRGS, with approximately 7–8, followed by other institutions with smaller numbers of publications. Regional concentration is particularly evident, as nearly all of the main research centers are located in the Southeast and South. The UFPE, in the Northeast, appears further down the ranking, while in the North only the UFRR, through *Acta Geográfica*, shows a noticeable presence, although it is not among the leading producers.

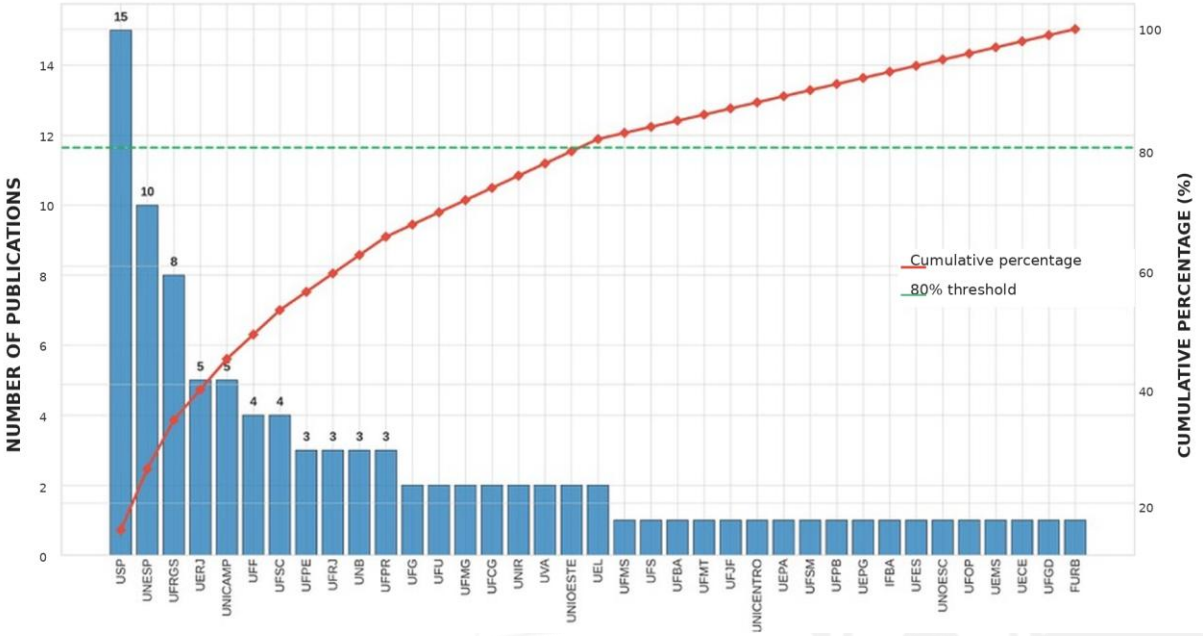
It is important to emphasize that these data are directly related to the broader national context during the period analyzed, as well as to the fact that most graduate programs were concentrated, for much of that period, in major urban centers in the Southeast and South. The expansion of graduate education into inland areas was not yet as visible or consolidated (Reyes Novaes and Lamego, 2022). Accordingly, geographical research on globalization was also concentrated in institutions located in the Southeast and South, reproducing the well-known imbalance in Brazilian academic production (Moreira, 2006), whereby older and better-resourced universities tend to account for a larger share of scientific output.

Confirming this regional concentration, Figure 3 presents the percentage distribution of the five Brazilian regions among the journals that published articles on globalization in Geography. The Southeast accounts for approximately 46.9% of the journals, followed by the South, with 29.2%. Together, these two regions represent 76% of the total. The remaining

regions show much lower participation: the Northeast accounts for 11.5%, the Central-West for 9.4%, and the North for only 3.1%. This distribution reflects the greater concentration of graduate programs, researchers, and well-established institutions in the Southeast and South. The North, with approximately 3% of the journals, reveals an important gap, although local initiatives such as *Acta Geográfica* are present. Figure 3 therefore reinforces the pattern of geographical imbalance, with the Southeast and South concentrating most of the journals and the other regions occupying a minority position, a configuration that may also have influenced both the themes addressed and the circulation of research.

Figure 04 relates the country's regions to the Qualis-CAPES classification of the journals (A1, A2, B1, B2, and B3), thereby revealing both the volume and ranking level of scientific production. The Southeast leads in total output, with approximately 39 publications, followed by the South, with about 30; the Northeast, with approximately 13; the Central-West, with 8; and the North, with 5. The Southeast also concentrates the largest number of publications in higher-ranked journals, with approximately 15 articles in A1 journals and 11 in A2 journals. The Central-West, despite its smaller overall number of publications, includes 4 articles in A1 journals and 3 in A2 journals. This pattern shows that the Southeast not only has the highest publication volume but also the strongest presence in highly ranked journals, reinforcing the centrality of the region within the most highly valued publication channels.

Figure 05 - Concentration of production by institution: institution x cumulative percentage

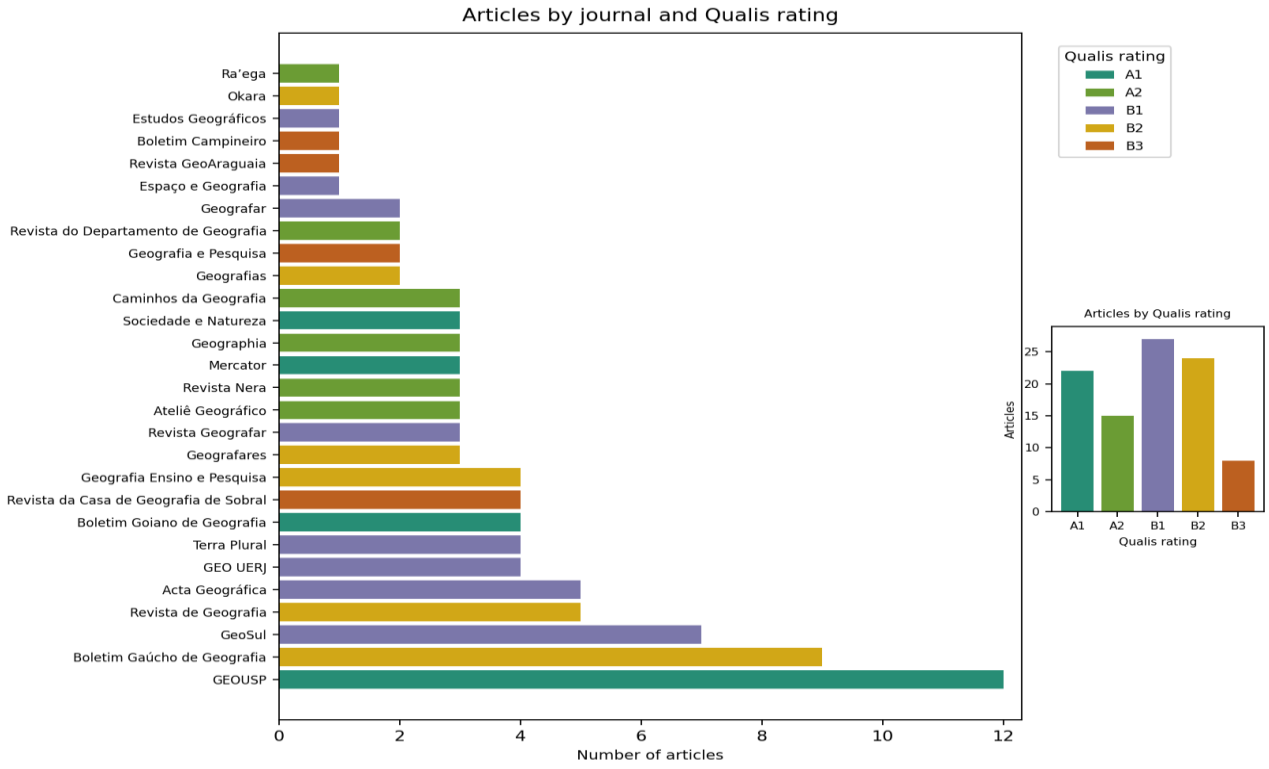


Source: Authors (2025)

Figure 05 presents both absolute data and a comparative distribution, with institutions ranked in descending order according to the number of published articles. The results show that a small number of institutions account for a substantial share of the total output. The leading institution published approximately 15 articles, representing about 15% of the total, followed by other institutions with progressively lower figures. Taken together, the eight most productive institutions account for roughly 50–60% of the total scientific production. A long, relatively flat tail can also be observed, consisting of universities with only one or two articles and therefore contributing only occasionally to the overall output. This pattern confirms a high degree of institutional concentration, reflecting inequalities in resources, academic tradition, and research capacity. Research on globalization was therefore largely conducted by a limited number of well-established academic centers, while most institutions participated only sporadically.

Figure 6 presents the number of articles on globalization by journal, with colors indicating their Qualis-CAPES classification (A1, A2, B1, B2, and B3). The distribution across the 28 journals analyzed reveals a clear concentration in a small number of periodicals. *GEOUSP* (A1) published 12 articles, accounting for approximately 12.5% of the total identified output. It was followed by *Boletim Gaúcho de Geografia* (B2), with 9 articles, and *GeoSul* (B1), with 7. The three most productive journals published 28 articles, representing nearly 30% of the entire sample and indicating a significant degree of editorial centralization. This concentration is not restricted to a single Qualis category, as journals ranked A1, B1, and B2 are all represented among the most productive periodicals.

Figures 06 and 07 – Distribution of articles by journal (6) and total number of Articles by qualis extract (7)



Source: Authors (2025)

The distribution shown in Figure 07 reinforces the pattern of centralization, indicating that research on globalization circulated primarily through a limited number of highly visible national journals. Journals ranked A1, A2, and B1 accounted for 56 articles (58.3%), along with several important regional journals, whereas most periodicals addressed the topic only occasionally. A small number of journals concentrated multiple publications, while many others included only a limited number of articles, suggesting thematic dispersion and the absence of a broad and continuous research core devoted to globalization.

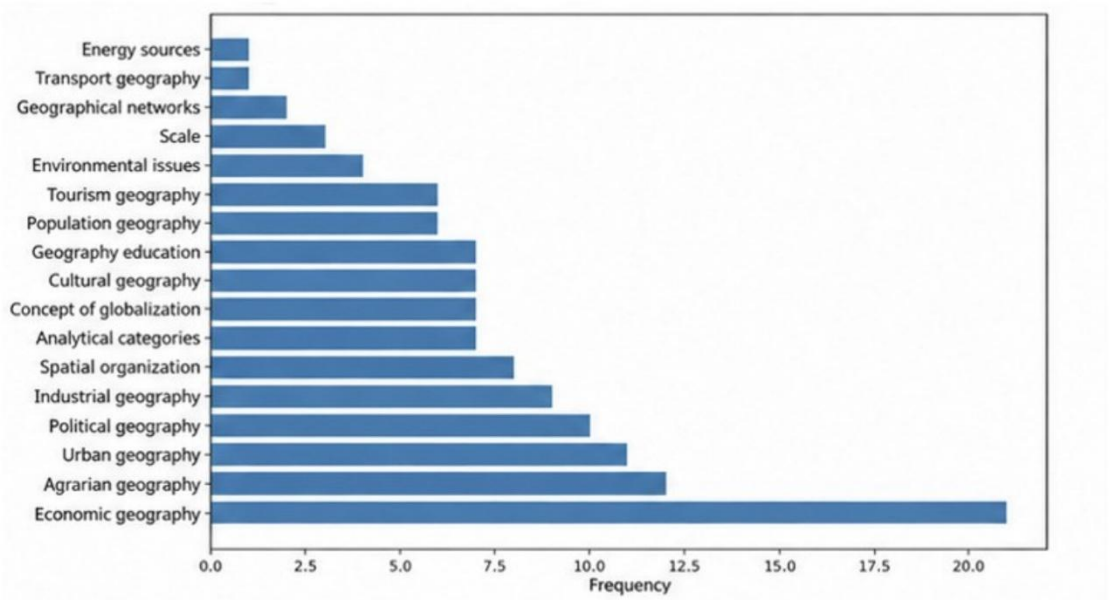
Taken together, the figures confirm a clear pattern of centralization. The Southeast and South occupy a leading position, with institutions such as USP, UNESP, and UFRGS among the main contributors. Journals from the North, Northeast, and Central-West regions account for a more modest share of the total number of articles (24%). In addition, most publications in high-ranked journals (A1/A2) are concentrated in these major academic centers, particularly in the Southeast. This configuration reveals a principal research axis organized around well-established universities and more prestigious journals, alongside a network of smaller

research centers and regional periodicals with more sporadic participation. Such a pattern reinforces the centralization of scientific production and highlights the need to strengthen research and academic journals in other regions in order to reduce regional imbalances.

Figures 08, 09, 10, and 11 address the thematic profile of the literature, as well as the most frequently cited authors and books. Figure 8 shows that “Economic Geography” is the dominant theme, with approximately 21 occurrences, followed by “Agrarian Geography” and “Urban Geography,” with approximately 12 and 11 occurrences, respectively. Other significant themes include “Political Geography” (10 occurrences), “Industrial Geography” (9 occurrences), and “Cultural Geography” (7 occurrences). Conceptual topics such as “Concept of Globalization” and “Categories of Analysis” appear with moderate frequency, with approximately 6–7 occurrences each, suggesting an interest in discussing definitions and analytical frameworks related to the phenomenon.

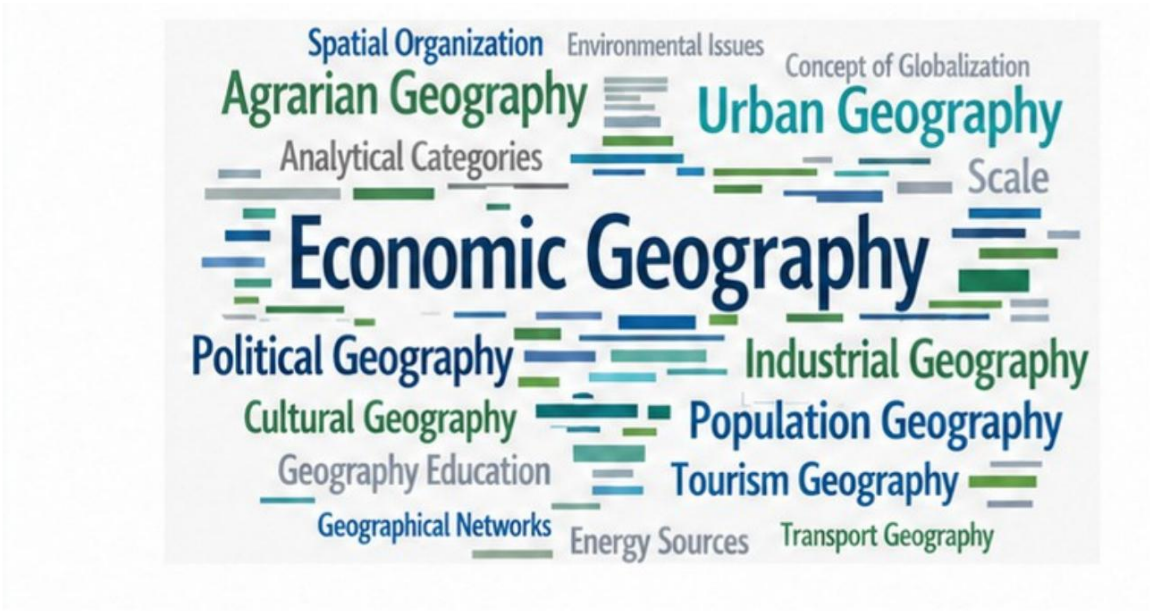
This distribution indicates that, although globalization affects multiple processes and phenomena, researchers have tended to privilege broad economic and spatial analyses, particularly in economic, agrarian, urban, and political geography, over more specific topics. From an interpretive perspective, the data suggest that the debate has been strongly centered on economic transformations and the organization of space in both rural and urban contexts, possibly reflecting the structural changes produced by globalization in urban and rural economies. The presence of themes such as *concept of globalization* and *categories of analysis* also indicates a concern with providing a theoretical foundation for the field of study, although this occurs on a smaller scale than empirical applications in areas such as economic and agrarian geography. This emphasis may also reflect established research traditions associated with specific academic groups or with the most productive institutions.

Figures 08 – Publication themes



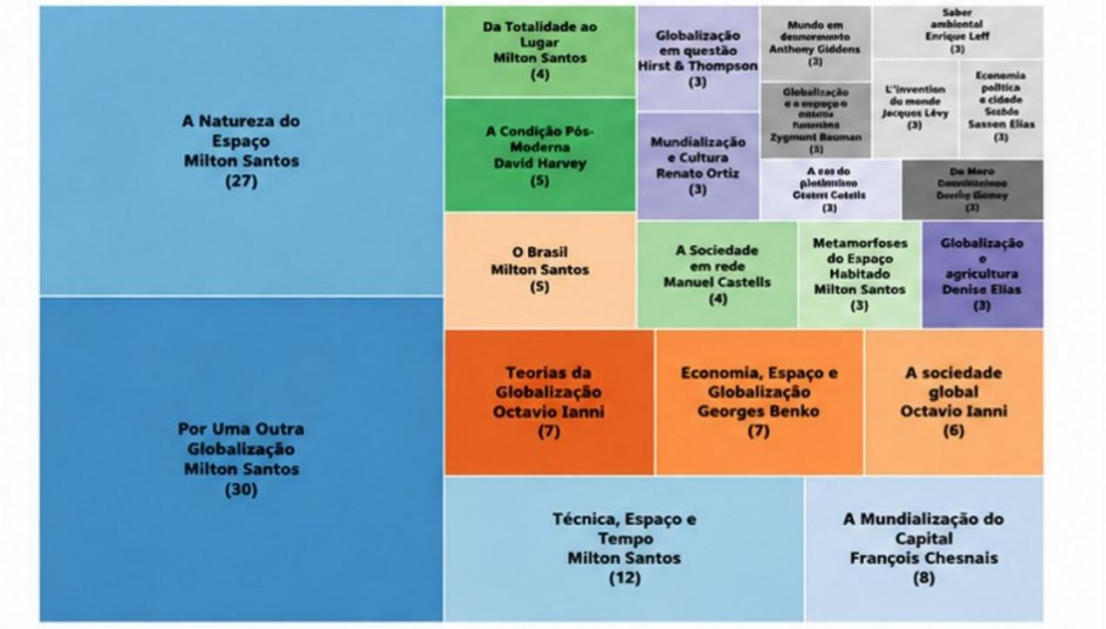
Source: Authors (2025)

Figures 08 – Word cloud of publication themes



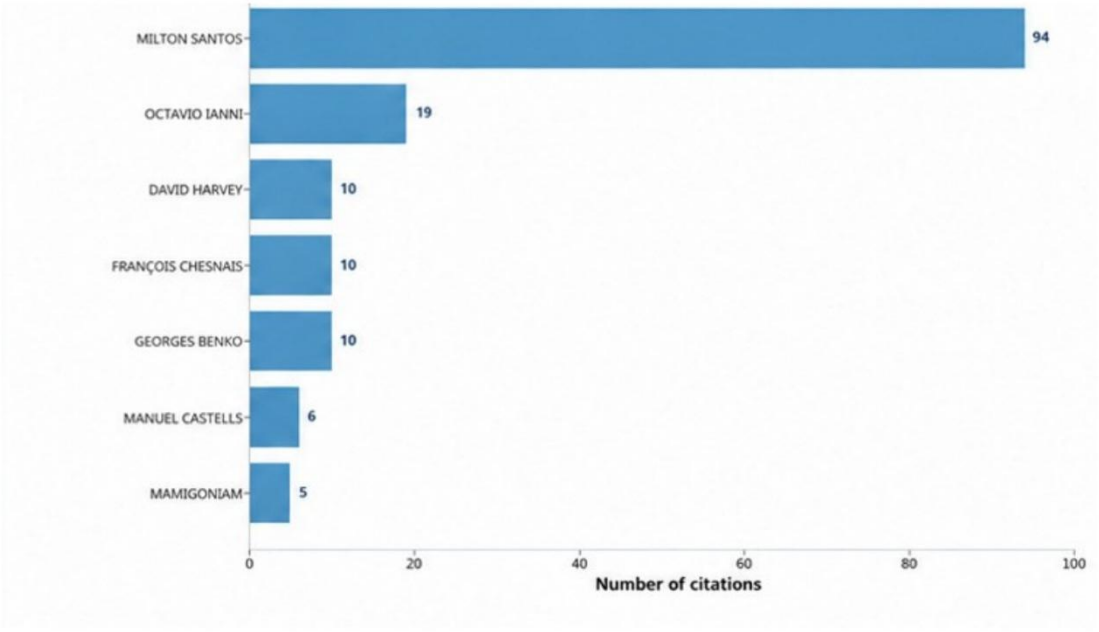
Source: Authors (2025)

Figures 10 – Overview of citations: works and authors



Source: Authors (2025)

Figures 11 – Citations by lead author



Source: Authors (2025)

Figure 10 (Citation Overview) presents the main works and authors cited in the analyzed articles. Each cell in the chart contains the title of a work, its author, and the number of citations received by that work. The entire chart should be understood as representing the totality of the publications, while the size of each internal box corresponds to its numerical

representativeness within the dataset. It is immediately apparent that works by Milton Santos are the most frequently cited. *Toward Another Globalization*, for example, received approximately 30 citations, *The Nature of Space* 27, and *Technique, Space, Time* 12. Other prominent works include François Chesnais's *The Globalization of Capital*, with 8 citations; Octavio Ianni's *Theories of Globalization* and *The Global Society*, with 7 and 6 citations, respectively; Georges Benko's *Economy, Space and Globalization*; and Manuel Castells's *The Rise of the Network Society*, with 4 citations, among others. Works by David Harvey, such as *The Condition of Postmodernity*, with 5 citations, as well as titles by other major authors such as Giddens and Castoriadis, appear with lower frequencies.

The figure reveals that Milton Santos's bibliography overwhelmingly dominates the theoretical foundations of the analyzed articles, totaling 81 citations to his books, followed at a considerable distance by Octavio Ianni, with 13 citations. This concentration suggests that academic debates on globalization in Brazil are strongly grounded in the interpretive tradition established by these authors, particularly Milton Santos, who introduced concepts and analytical perspectives that were widely adopted in subsequent research. The presence of works by Ianni, Castells, and Harvey indicates a moderate international or regional influence, although on a much smaller scale. Overall, the citation landscape suggests the existence of a relatively consensual core of references structuring the literature, reinforcing the idea that the production of knowledge on globalization in Brazilian Geography journals has been anchored in a limited number of influential authors and works, in line with the predominance of economic and social themes identified above.

In the distribution of citations by primary author shown in Figure 11, Milton Santos stands out with 94 recorded citations, far surpassing any other author. Octavio Ianni ranks second, with 19 citations, followed by David Harvey, François Chesnais, and Georges Benko, each with 10 citations. Manuel Castells follows with 6 citations, and Armen Mamigonian with 5. No other author reaches double digits, reinforcing Milton Santos's substantial theoretical influence within the Geography literature on globalization. The difference between 94 and 19 citations suggests that Milton Santos is cited in a very large proportion of the articles, whereas other authors appear more sporadically.

This pattern suggests several potential effects. On the one hand, academic debates may be partially confined within certain paradigms, exemplified by the prominence of Santos and Ianni, thereby limiting epistemological diversity. On the other hand, Santos's influence may be understood as resulting from his recognition within Brazilian Geography, or possibly from a preference for nationally produced theoretical approaches. The visual data also indicate strong

thematic and institutional clustering. There is relatively little explicit thematic or authorial diversification. Consequently, influential international theorists such as Harvey and Castells occupy a secondary position, perhaps because of a preference for national approaches disseminated from major academic centers, graduate programs, and undergraduate programs to other regions of the country, particularly considering that Milton Santos became a professor at the University of São Paulo in 1983. In any case, the dominance of a single author suggests that theoretical explanations largely converged around a common intellectual trajectory, potentially indicating the consolidation of a relatively unified paradigmatic corpus within the discipline. This configuration also supports earlier observations concerning academic imbalance: just as scientific production is regionally concentrated in the Southeast and South and institutionally concentrated in a limited number of universities, there is also a degree of epistemological centralization in the topics and references employed.

3 EPISTEMOLOGICAL ASPECTS OF GLOBALIZATION IN BRAZILIAN GEOGRAPHY

The bibliometric description provides a broad framework through which it is possible to problematize epistemological aspects of the ways in which Brazilian Geography has approached globalization as an object of investigation. Based on the data obtained, we now discuss two epistemological issues: (1) the problem of centralization in scientific production and (2) the use of the concepts of globalization and mondialization.

3.1 Aspects of the Bibliometric Description: Centralization in Scientific Production

Two aspects of the scientific literature on globalization were particularly noteworthy: (1) the centrality of Milton Santos as a paradigmatic reference and (2) regional concentration and uneven geographical development, whereby academic production not only investigates spatial inequalities but also reproduces them institutionally and epistemologically.

3.1.1 The Centrality of Milton Santos

The importance of Milton Santos extends beyond the quantitative dimension of citations. He represents a major epistemological reference both for interpreting the constitution and modes of existence of the contemporary world and for shaping the questions, concepts, and vocabulary employed in research. Books such as *Toward Another Globalization*, *The Nature of Space*, and *Technique, Space, Time* appear far more frequently

than works by other authors. Their “paradigmatic” role (Kuhn, 1978) becomes evident when we observe, on the one hand, that even when other authors are cited, the discussion often develops in dialogue with propositions formulated by Milton Santos and, on the other hand, that his presence remains consistent throughout the period analyzed and across the regional distribution of journals.

This may suggest a paradigmatic dynamic that, initially clustered in the Southeast and South, was subsequently disseminated and institutionalized in universities and research groups in other regions of Brazil through the expansion of graduate education (Sidone et al., 2016). Bibliometric studies have confirmed the influence of Milton Santos, particularly since the 1990s, on Brazilian Geography more broadly, both in academic journals and graduate programs, and not only in studies specifically concerned with globalization (Souza, 2023; Pinto, 2022; Pinto et al., 2021).

Two situations emerge from this pattern. First, the “Miltonian” tradition has persisted over time through practical applications to diverse subjects, including urban processes (Zorzal and Silva, 2020), agriculture (Silva, 2005), industry (Júnior, 2012), and tourism (Assis, 2012), among others. It has provided a theoretical and methodological framework that has repeatedly been confronted with empirical evidence through a process involving testing and the possibility of falsification (Popper, 2008). Concepts and formulations such as the “technical-scientific-informational milieu” and the “inseparability of systems of objects and systems of actions” have not only been tested throughout the period analyzed but also appear to have increased in influence. This suggests that Santos’s thought has been continuously updated and tested in terms of its theoretical and methodological relevance to the ways in which Brazilian Geography conceptually interprets spatial processes associated with globalization, such as productive restructuring, regional inequality, financialization, and exclusionary modernization.

Considering the period from 1990 to 2017, the neoliberal agenda associated with the Washington Consensus deepened social inequalities and increased the vulnerability of the economies of countries considered peripheral in relation to international capital. Many capital flows leaving economically vulnerable countries were redirected to the United States, which during the same period experienced one of the largest economic expansions in its recent history. In practical terms, this made the United States relatively indifferent to the repercussions of such crises on local populations in affected countries (Ruckert and Carneiro, 2018). Within this context, throughout the two decades analyzed, Milton Santos’s critical interpretation provided a theoretical and methodological framework that helped explain this situation geographically from the perspective and specific conditions of non-hegemonic

countries.

A second issue concerns the danger of theoretical monotony (Pinto, 2022, p. 201) in the ways globalization is problematized, potentially making it more difficult to formulate new questions outside the dominant approach. The idea that the hegemony of a paradigm carries this risk is present in Kuhn's classic formulation (1978, p. 13), in which paradigms are defined as "universally recognized scientific achievements that, for a time, provide model problems and solutions for a community of practitioners."

When a paradigm becomes consolidated, what Kuhn (1978) termed "normal science" emerges, characterized by the expansion of research firmly grounded in one or more past scientific achievements. It is therefore a phase marked by the predominance of a particular paradigm. If we consider the existence of a "Miltonian paradigm," it could be argued that it entered, and may still occupy, a phase of normal science, expanding from the 1990s onward, with citations and references demonstrating the cumulative and successful use of this theoretical framework.

The danger of paradigmatic monotony is related, in our view, to Kuhn's (1978) concept of "incommensurability." Because different paradigms organize and interpret scientific experience in different ways, employing their own concepts, problems, methods, and criteria, they become incommensurable insofar as they cannot simply be compared according to a single common standard. For Kuhn (1978), members of scientific communities educated within a given paradigm tend to protect it from problems that challenge its assumptions. Consequently, scientists working within established paradigms rarely accept a new theory immediately and completely, and paradigm replacement often occurs slowly and progressively.

During the period analyzed (1990–2017), which was characterized by the geographical expansion of universities, graduate programs, and scientific production in Brazil, the institutional concentration of scientific activity in the Southeast–South axis (Sidone et al., 2016) contributed to the formation of theoretical and methodological preferences. Moreover, integration into national and global scientific networks remained relatively limited during part of this period. What occurred instead was an intensification and expansion of regional networks, within which major intellectual figures became central references for geographical communities across Brazil.

Thus, with regard to globalization, the centrality of a Miltonian paradigm can initially be understood as a source of theoretical and methodological cohesion and as a shared critical perspective for interpreting global processes. In this sense, Santos's influence provided a common vocabulary for the analyzed literature, without necessarily preventing dialogue with

other theoretical perspectives and spatial experiences. In other words, this hegemony may also have facilitated regional diffusion by providing a common language based on a robust theoretical framework.

On the other hand, theoretical monotony may constrain innovation when categories become crystallized despite recent transformations in capitalism and the maturation of new paradigmatic perspectives. In our assessment, however, the expansion of a Miltonian paradigm in the context of “normal science” does not appear to have resulted in intellectual stagnation or to have prevented dialogue with other perspectives. The issue, therefore, is not to avoid a particular theoretical framework, but rather to guard against tendencies toward paradigmatic rigidity by adopting a dialogical perspective open to interaction with other approaches.

3.1.2 Regional Concentration and Uneven Geographical Development

It is noteworthy that although Brazilian geographical research on globalization emphasizes the spatial inequalities generated by globalization itself, academic Geography also exhibits a structure of knowledge production characterized by substantial regional and institutional concentration and inequality. The analysis reveals a marked concentration of scientific production. Approximately 20% of the institutions—including USP, UFRJ, UNICAMP, UNESP, and UFMG—account for roughly two-thirds of the total output. Regionally, the Southeast and South concentrated the majority of published articles, reflecting historical inequalities in the distribution of resources. To examine this situation, it is useful to draw on some of the authors most frequently cited in the analyzed literature.

Octavio Ianni (2000), for example, argues that globalization reorganizes hierarchies across multiple scales and institutions. His perspective can therefore contribute to understanding the geographical academic field itself, both in terms of international hierarchies and dependencies involving authors and theories and, at the national level, in terms of scalar and institutional center–periphery relations among Brazilian regions. The unequal distribution of research infrastructure, access to databases, and academic networks suggests that geographical scholarship on globalization reproduces historically naturalized hierarchies, including the centrality of particular institutions—such as USP and UFRJ—and of certain authors, including Milton Santos, David Harvey, and Georges Benko. These patterns reflect historical decisions and trajectories while simultaneously reinforcing longstanding regional inequalities within Brazil.

The observed data suggest a differentiation among traditional centers, emerging

institutions, and academic peripheries. Traditional centers consolidated in the South and Southeast occupy the highest positions in Figure 5, functioning as the “core” of research on globalization and accounting for more than 44% of all mapped publications. This concentration is associated with greater access to research funding, established international networks, and highly ranked graduate programs.

Emerging institutions appear in an intermediate position and include universities associated with the expansion of higher education into Brazil’s interior and beyond the traditional core, such as UEL, UNIOESTE, UFG, UFU, UFCG, and UNIR. In these cases, the data reflect the efforts of specific research groups participating in processes of decentralization and regional diversification in the study of global dynamics.

Academic peripheries appear in Figure 5 as a long tail composed of nearly 20 institutions with only one article each. This pattern appears to reflect the structural challenges peripheral institutions face in gaining access to major circuits of research funding and infrastructure. At the same time, however, it also demonstrates some diffusion—although still limited during the period analyzed—of research on globalization across different territorial contexts in Brazil.

This uneven geographical development of academic production appears to reflect contradictions similar to those identified by Harvey (2006) in broader capitalist dynamics and can therefore be interpreted as part of those wider processes. As other authors have noted (Sidone et al., 2016), regional inequality in scientific production is directly associated with pronounced disparities in the distribution of scientific and technological resources. The Southeast and South have historically benefited from the concentration of universities and consolidated research institutes, as well as from greater availability of human and financial resources resulting from policies implemented by funding agencies such as the São Paulo Research Foundation (FAPESP), the National Council for Scientific and Technological Development (CNPq), the Coordination for the Improvement of Higher Education Personnel (CAPES), and the Brazilian Innovation Agency (Finep) (Sidone et al., 2016).

These spatial inequalities may also express processes analogous to accumulation by dispossession. Even though higher education expanded geographically during the period analyzed, there appears to have been a degree of appropriation of data and empirical knowledge from peripheral regions by central institutions, for example through graduate education at the specialization, master’s, and doctoral levels. This can be interpreted as a form of “epistemic extractivism,” as suggested by Grosfoguel (2016). At the regional scale, a spatial division of scientific labor emerges in which major academic centers simultaneously conduct research on peripheral areas—often maintaining links with graduates who return to or work in

these regions—and formulate theories and methodologies that peripheral institutions subsequently apply in their own research.

This context inevitably produces epistemological orientations. Research agendas during the analyzed period often reflected problems associated with large urban centers, while inland, Amazonian, agricultural frontier, and marginalized community experiences—including those of riverine populations, peasants, and Indigenous peoples—were comparatively underrepresented between 1990 and 2017 in studies connecting such experiences to processes of globalization. It is therefore necessary to investigate whether, in the contemporary period, there remains a risk that interpretations derived from particular experiences in peripheral locations are generalized into broader processes understood primarily through the perspective of academic centers. If confirmed, such a pattern could indicate insufficient confrontation between theory and empirical evidence and, consequently, limited generation of new problems, interpretations, and alternative theoretical approaches.

3.2 Globalization or Mondialization?

In the analyzed articles, the concepts of globalization and mondialization are among the principal references used to interpret global processes, raising questions regarding the relationship between them: Are they synonymous or associated processes? Or are they concepts capable of expressing different phenomena? How do they appear in the research? Which processes do they represent and interpret?

Answers to these questions vary according to the theoretical approaches adopted in the studies, in which the concepts may overlap, complement one another, or be employed separately. Among the authors cited in the analyzed articles, geographer Olivier Dollfus proposes a distinction by arguing that globalization corresponds to a phase of mondialization beginning in the 1980s, characterized by economic liberalization, the expansion of large corporations, and the diffusion of information technologies structuring world markets (Dollfus, 1995). From this perspective, mondialization may be understood as a long-term historical process that includes, for example, European maritime expansion, whereas globalization represents its contemporary configuration under present-day capitalism. This interpretation is consistent with Milton Santos's understanding of globalization as characterized by the intensification of flows and the action of hegemonic forces articulating space on a planetary scale (Santos, 2000).

In the analyzed studies, some articles treat globalization and mondialization as closely

related concepts used to interpret interconnected dimensions of the same process (Alberti et al., 2003; Mondardo, 2009; Santos, 2009), while others relate them but establish analytical distinctions. Silva (2005, p. 16), for example, associates globalization with processes involving production, markets, institutions, and economic agents, whereas mondialization refers to a broader process that also encompasses ways of life, culture, consumption, and everyday life. Despite the centrality of particular theoretical frameworks, these concepts can therefore assume different historical, economic, political, cultural, and spatial emphases depending on the research topic (Figure 9) and the authors mobilized in each argument. In general terms, globalization is used to refer to contemporary configurations of a broader historical process of mondialization. This formulation, however, should not be understood rigidly, since some studies use the terms in an integrated manner while others differentiate them analytically.

In relation to globalization, this articulation between historical temporality and contemporary configuration makes it possible to understand globalization not as an entirely new process, but rather as a stage characterized by the intensification of capitalist relations on a global scale. Santos (2009) emphasizes that the formation of the globalized world has historical antecedents that predate the contemporary expansion of digital technologies. According to the author, technical networks increase interdependence among places but do not eliminate differences among them, because their implementation and operation remain subordinated to the interests of agents controlling the most strategic flows (Santos, 2009).

This interpretation emphasizes that globalization does not constitute a homogeneous process of world-space formation. Although technical networks connect certain territories with great intensity, other territories remain marginalized or are incorporated in subordinate ways. The existence of technical infrastructure capable of connecting different places therefore does not imply that all actors participate under equal conditions of mobility, decision-making power, or appropriation of economic benefits. Globalization has thus been interpreted as simultaneously producing integration, fragmentation, and fluidity for some actors while generating immobility for others as part of the same process (Santos, 2009).

Chesnais (1996), another frequently cited author, attributes a somewhat similar meaning to the concept of mondialization, although he privileges an economic perspective in discussing the constitution of global integration. According to Chesnais (1996), “globalization” originated as a term in U.S. business schools in the early 1980s and was subsequently disseminated by corporate consultants, the financial press, and neoliberal discourse. Because of this origin, the term tends to portray worldwide integration as a natural, inevitable, and beneficial process while obscuring the power relations, corporate interests, and inequalities structuring the international

economy.

For Chesnais (1996), the term “mondialization of capital” is more appropriate because it makes explicit the underlying nature of the process: the reproduction of capital through its internationalization. It is therefore not a neutral, universal, or homogeneous dynamic, but rather a process based on economic concentration, financialization, and the expansion of major corporations and financial institutions. This distinction is important because it separates the material dimension of capitalist expansion from its ideological representation. Whereas globalization may appear as a narrative of openness, integration, and the overcoming of borders, the mondialization of capital highlights the agents and factors controlling these flows, as well as the territories that are valorized and the social groups that bear the costs of this integration.

Chesnais’s interpretation has been mobilized by several authors. Oliveira (2015), for example, employed the concept of the mondialization of capital to problematize transformations in capitalism, the advance of neoliberalism in agriculture, and their consequences. In this case, mondialization was used to represent economic and territorial concentration in rural areas, with corporations and commodity trading companies exerting pressure on farmers and landowners in order to monopolize control over production chains and intensify the financialization of agricultural production.

Using a similar interpretation but employing the concept of globalization, Antonio Filho (2002) questions the distribution of benefits associated with global integration. According to the author, it is insufficient merely to recognize that economies have become increasingly interconnected; it is also necessary to identify the agents that control this interdependence and the groups that benefit from it, particularly major transnational corporations in industry and finance. From this perspective, the discourse of a “global village” obscures the existence of profoundly unequal territories in which opportunities for participation in global circuits are determined by the economic and political position of each country and social group.

Taking globalization as a central concept, studies focusing on the expansion of transnational corporations (TNCs) and their global operations have examined how the processes discussed by Antonio Filho (2002) unfold territorially. Galvão and Pereira (2017), for example, emphasize that TNCs allocate investments according to available opportunities, territorializing and deterritorializing activities and processes in response to incentives provided by local governments. These dynamics may deepen differences among countries, reduce the potential for convergence, and generate vicious cycles of poverty. According to the authors, this situation makes the creation of effective supranational institutions, an inductive, normative, and

regulatory state, and active participation by civil society increasingly urgent (Galvão and Pereira, 2017).

Within the context of the problems highlighted by Antonio Filho (2002) and Galvão and Pereira (2017), one important line of inquiry concerns the simultaneous transformation of rural and urban areas. With regard to rural spaces, Elias (2013), drawing on Milton Santos, understood globalization as a rationality that subordinated agriculture to the demands of productivity, competitiveness, and integration into international markets. The diffusion of the technical-scientific-informational milieu introduced new objects, norms, and flows into agricultural territories, linking commodity production to agro-industries, input suppliers, financial systems, and circulation networks. Globalized agribusiness therefore ceased to be exclusively a rural activity and began to reorganize cities, services, infrastructure, and labor markets (Elias, 2013).

Studies of cities, in turn, have also examined the consequences of globalization and mondialization. World cities in peripheral countries have been discussed, as in Santos (2012), as gateways for the inflow and outflow of capital, information, and influence while remaining unequally integrated into global circuits. In general, these discussions emphasize that the concentration of investment in areas capable of offering higher returns has produced peripheral cities characterized, on the one hand, by modern infrastructure, advanced services, and international connectivity, while, on the other hand, containing peripheral neighborhoods, risk-prone areas, and spaces with precarious access to urban facilities and services (Santos, 2012).

In Brazilian Geography, the concept of globalization has been used more frequently than that of mondialization. This predominance, however, does not mean that studies neglect the structural economic relations emphasized by theorists of mondialization such as Chesnais. In some cases, globalization is the term used to describe the contemporary expansion of capital, technical networks, transnational corporations, and financial flows, whereas mondialization is employed to emphasize the historicity, scope, and structural dimension of this process.

Thus, the analyzed articles indicate that, although conceptual distinctions exist and the two terms are not necessarily equivalent, globalization and mondialization refer to interconnected processes. In general terms, globalization tends to emphasize the contemporary configuration of technical, economic, financial, and corporate networks and their territorial and social effects, whereas mondialization may highlight the historical expansion of capitalist relations, the internationalization of capital, cultural circulation, and transformations in everyday practices. The distinction between these concepts, however, should not result in a rigid separation. Rather than referring to isolated phenomena,

globalization and mondialization designate dimensions that can be articulated in interpreting the same historical transformation.

4. FINAL CONSIDERATIONS

The analysis demonstrates the consolidation of the debate on globalization within Brazilian Geography while also revealing important structural and epistemological limitations. The results indicate quantitative growth in scientific production, strong regional concentration in the Southeast and South, and marked institutional and authorial centralization. In this sense, the scientific field partially reproduces the same spatial inequalities that it seeks to analyze.

From a theoretical standpoint, the centrality of Milton Santos assumes a paradigmatic character. His formulation of the technical-scientific-informational milieu and his critical interpretation of globalization have structured key concepts, research questions, and analytical categories within the Brazilian debate. This theoretical predominance has generated important contributions, including conceptual density, analytical coherence, and sensitivity to the realities of the Global South. At the same time, however, it may constrain the renewal of research questions in response to recent transformations. The issue is not to avoid any particular theoretical framework but, rather, to remain open to dialogue and theoretical plurality in order to prevent epistemological rigidity. The expansion and diversification of theoretical perspectives therefore become both strategic and necessary.

The characteristics of scientific production, marked by institutional concentration, also indicate the risk of reproducing external hierarchies within critical knowledge production. At the conceptual level, the recurrent use of the terms globalization and mondialization during the period analyzed points to the need for greater theoretical precision. Similarly, categories such as space, territory, region, and landscape require reconsideration in light of the intensification of flows, the multiplication of territorialities, and the increasing complexity of urban and rural landscapes.

Globalization was predominantly interpreted as a process of deepening capitalism. Although this interpretation remains relevant, it must increasingly engage with emerging phenomena such as intensified financialization, platform capitalism, the socio-environmental crisis, new geopolitical configurations, the rise of the far right, the climate crisis, and transformations in labor relations. New studies focusing on scientific production over the past nine years may reveal the extent to which these perspectives have been incorporated into the

field.

Several questions therefore remain open for future research: Has Brazilian Geography successfully combined its critical tradition with theoretical innovation? Has it expanded its regional reach and participation in international debates on globalization? More specifically, how can the accumulated theoretical depth of the field be preserved without producing paradigmatic rigidity? How can scientific production be decentralized and research practices democratized? And how can geographical categories be updated in the contemporary period to better interpret ongoing processes of globalization?

REFERENCES

AGUILAR, R. L. de; FONSECA, C. N. da; CHRISTAN, P. A expansão da pós-graduação em Geografia no Brasil entre 1991 e 2020. **Terr@ Plural**, [S. l.], v. 17, p. 1–19, 2023.

ALBERTI, E. A.; REIS, J. T.; BEZZI, M. L. Considerações sobre a estruturação da nova ordem mundial: a globalização. **Geografia (Londrina)**, v. 12, n. 2, p. 163–178, 2003.

ANTONIO FILHO, F. D. Globalização: para quem? **Geosul**, v. 17, n. 33, p. 7–21, 2002.

ASSIS, L. F. de. **Entre o turismo e o imobiliário: velhos e novos usos das segundas residências sob o enfoque da multiterritorialidade – Camocim/CE**. 2012. Tese (Doutorado em Geografia) – Universidade de São Paulo, São Paulo, 2012.

BENKO, G. **Economia, espaço e globalização na aurora do século XXI**. São Paulo: Hucitec, 1996.

CHESNAIS, F. **A mundialização do capital**. São Paulo: Xamã, 1996.

DOLLFUS, O. Mondialisation, compétitivités, territoires et marchés. **L'Espace Géographique**, n. 3, p. 270–280, 1995.

ELIAS, D. Globalização, agricultura e urbanização no Brasil. **Acta Geográfica**, Boa Vista, Edição Especial Geografia Agrária, p. 13-32, 2013.

GALVÃO, C. A.; PEREIRA, V. de F. Empresas transnacionais (ETNs) e os países pobres: reflexões sobre a governança global. **Geosul**, v. 32, n. 63, p. 7–48, 2017.

GROSFOGUEL, R. Do «extrativismo económico» ao «extrativismo epistêmico» e «extrativismo ontológico»: uma forma destrutiva de conhecer, ser e estar no mundo. **Tabula Rasa**, n. 24, p. 123–143, 2016.

HARVEY, D. **Limits to Capital**. London; New York: Verso, 2006.

IANNI, O. **Teorias da globalização**. Rio de Janeiro: Civilização Brasileira, 2000.

JÚNIOR, E. A. P. Nova dinâmica global, indústria e reestruturação do espaço – discussão teórica e a experiência dos municípios de Horizonte e Pacajus (CE). **Revista da Casa da Geografia de Sobral (RCGS)**, v. 2, n. 1, 2012.

KUHN, T. **A estrutura das revoluções científicas**. São Paulo: Perspectiva, 1978.

MONDARDO, M. L. Identidades territoriais e Globalização: a relação entre espaço, política e cultura no processo de des-reterritorialização. **Geo UERJ**, Ano 11, v.2, n.19, p.111-137, 2009.

MOREIRA, R. **Pensamento geográfico brasileiro**. v. 3. São Paulo: Contexto, 2006.

OLIVEIRA, A. U. A mundialização do capital e a crise do neoliberalismo: o lugar mundial da agricultura brasileira. **GEOUSP Espaço e Tempo (Online)**, v. 19, n. 2, p. 228–244, 2015.

PINTO, V. A. M. **Geometrias de poder e espacialidades da produção científica da geografia brasileira de 1998 a 2018**. 2022. Tese (Doutorado em Geografia) – Universidade Estadual de Ponta Grossa, Ponta Grossa, 2022.

PINTO, V. A. M.; SILVA, J. M.; JUNCKES, I. J. Hegemonias temáticas, conceituais e de atores da Geografia: o caso da revista da Anpege no Brasil. **Revista da ANPEGE**, v. 17, n. 32, p. 65-82, 2021.

POPPER, K. R. **Conjecturas e refutações: o progresso do conhecimento científico**. Brasília: Editora Universidade de Brasília, 2008.

REYES NOVAES, A.; LAMEGO, M. A. Brazilian universities and graduate programmes in geography: Institutional developments and political challenges. **Transactions of the Institute of British Geographers**, v. 47, n. 1, p. 16-22, 2022.

RÜCKERT, Aldomar A. & CARNEIRO, Camilo Pereira. “Políticas territoriais na América do Sul: infraestruturas de conexão e repercussões em regiões periféricas”. In: RÜCKERT, A. A.; SILVA, A. C. P. da; SILVA, G. de V. (Orgs.). **Geografia Política, Geopolítica e Gestão do Território**: integração sul-americana e regiões periféricas**.** Porto Alegre: Editora Letra1, p.11-39, 2018. DOI 10.21507/9788563800367-01

SANTOS, M. **A natureza do espaço: técnica e tempo, razão e emoção**. São Paulo: Hucitec, 1996.

SANTOS, M. **Por uma outra globalização:** do pensamento único à consciência universal. Rio de Janeiro: Record, 2000.

SANTOS, M. P. A cidade mundial dos países em desenvolvimento acirra a diferenciação de lugares urbanos no processo de globalização. **Espaço & Geografia**, v. 15, n. 1, p. 173-206, 2012.

SANTOS, R. C. B. Redes técnicas e globalização. **Boletim Gaúcho de Geografia**, v. 34, n. 1, p.95-102, 2009.

SIDONE, O. J. G.; HADDAD, E. A.; MENA-CHALCO, J. P. A ciência nas regiões brasileiras: evolução da produção e das redes de colaboração científica. **Transinformação**, v. 28, n.1, p. 15–32, 2016.

SILVA, C. H. C. As cidades mundiais na contemporaneidade. **Geosul**, v.20, n.39, p.7-27, 2005.

SOUZA, K. P. de. **Produção acadêmica, rede científica e formação da comunidade epistêmica no Programa de Pós-Graduação em Geografia da Universidade Federal de Uberlândia:** uma contribuição dos estudos métricos da informação. 2023. Tese (Doutorado em Geografia) – Universidade Federal de Uberlândia, Uberlândia, 2023.

ZORZAL E SILVA, M. Transformações urbanas sob os efeitos dos processos de globalização: os casos de Vitória-ES-Brasil e de Tete-Moçambique-África. **Geografares**, n. 14, p. 1-31, 2020.

***