

PANORAMA ON THE SUBJECT OF ORGANIZATIONAL ECOLOGY OF ITS

FIRST 40 YEARS (1977-2019): A BIBLIOMETRIC STUDY

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SUMMARY

This article presents an overview of the profile of studies conducted on Organizational Ecology in the period 1977-2019. The articles were extracted from the Scopus database within the business thematic area, after which the most relevant authors were analyzed, as well as keywords and magazines with the largest number of publications, thus finding 114 articles. It was possible to confirm the greater incidence of institutional theory in recent years, as well as the presence of practical implications and China as a unit of analysis. The study was limited to only one database and did not go deep into the methods, results and conclusions of the articles.

KEYWORDS: Organizational science, organizational ecology, bibliometrics, general systems theory.

1. INTRODUCTION

According to Aristotle, man is a political animal (*zoon politikon*), neither an animal nor god; focused on the search for the common good, without forgetting his necessary private goods. And if, in ancient times, solitary life was the rule of a few, the phenomenon of urbanization increases this social and political characteristic of men, as needs and desires seem to multiply and, consequently, goods and services for their satisfaction. The complexity of the web of relationships affects not only individuals, but also organizations. The general systems theory (TGS), proposed by Bertalanffy (1975) helped to clarify the theory of organizations, demonstrating the intensity of the phenomenon of interdependence as it identifies the characteristics of our times. One of the theoretical fields born of TGS is organizational ecology, which seeks to study not only individual companies, but the behavior and characteristics of a broader system, formed by a set of organizations that affect and are affected by each other (Trist, 1977 ; Schwarz, 2018), including the study of important topics such as organizational isomorphism (Ganga Contreras et al, 2017) and the emerging symbiotic mutualism, which studies organizations that regard sustainability and mutual benefit as the basis of their ventures (Gopi, 2017). With the popularization of terms such as ecosystems (organizational, entrepreneurial or innovative), the authors note the need to carry out a systematic study on the origin and the treatment given to the subject by the academy, through the analysis of scientific documents published in the Scopus database, reference in scientific documents in the business and administration areas.

2. LITERATURE REVIEW

The interdependence of nations, organizations and groups is the subject of study in different areas. In certain environments, the growth of formal intergovernmental organizations has slowed (Abbott et al, 2016) new organizational forms, transgovernmental networks and private transnational regulatory organizations (PTROs) are rapidly expanding. Organizational ecology (EO) has been dedicated to investigating the characteristics, opportunities, threats and challenges generated by these environments marked by intense exchanges and relationships whose understanding is fundamental to guarantee the survival and success of public (Posthuma, 2001) and private ventures (Xue et al, 2019; Zhao et al, 2019). In this context, the study of relationships - network density - is of great importance (Aksaray and Thompson, 2017), as it studies not only the occasional contacts / exchanges among the actors, but issues such as collaboration and trust, aiming at long-term relationships, also studied in the family business environment (Caccamo, 2018), showing what Díez-de-Castro and Péris-Ortiz (2018) call

organizational legitimacy, a construct that has interfaces with important discussions on ethics and corporate social responsibility. Al-Turk and Aldrich (2019) point out that, despite the relevance of these fields of study, the impact of EO was limited to an exclusive set of researchers, when compared to the New Institutional Theory. Lander and Heugens (2017) identify that the collaboration of institutional theory and organizational ecology can benefit studies and increase their explanatory power.

Very recent empirical studies have been using the theory of organizational ecology, among which we can mention: the entrepreneurship studied from the perspective of organizational ecology (Mazzei et al, 2017) and the use of EO as a teaching-learning approach by MacMillan and Komar (2018), and also the identification of behavior and potential in the industry (Cabras et al, 2017; Lazzeretti and Capone, 2017; Beck et al, 2019). In addition to these, how government risk capital affects private risk capital (Bertoni et al, 2019), to analyze recent decisions by American states that impact public financing of that country's artistic market (Gallagher, 2015). Hsu et al (2019) proposed a study that investigates how customer feedback collaborates with business dynamics, clarifying that these actors are part of this fragile and complex organizational interdependence mechanism. The advancement of social media is an element that adds challenges to understanding organizational ecology in studies on branding in the context of small and medium-sized enterprises (PMEs) (Odoom et al, 2017; Odoom et al, 2019). Peng et al (2000) conducted a survey of 1147 Asian multinationals to assess issues related to the behavior and the level of success of subsidiaries on foreign soil. The study of the behavior of religious groups involved in humanitarian campaigns (Bok, 2009) and fundraising for social causes (Nicholson-Crotty, 2009) demonstrates the wide reach of organizational ecology. Hornuf et al (2018), in an attempt to identify the influential factors for financing unsophisticated investors, and how it affects the survival and success of startups, opens up promising perspectives for organizational ecology.

3. METHODOLOGY

To achieve the objective of the article, a bibliographic review was carried out which consisted of the execution of 4 stages.

3.1. Document extraction

The documents were extracted from the Scopus database, using the parameters below:

- Keywords: “organizational ecology”;
- Thematic area: “BUSINESS”;
- Period: (1977 to 2019).

3.2. Portfolio treatment

The researchers used Endnote software for initial treatment of the bibliographic portfolio, which consisted of excluding duplicates and documents with missing information (title; abstract; author; keywords).

3.3. Search lens application

In this stage, the researchers sought to identify the most relevant authors, magazines and keywords, as well as their temporal perspective, in order to check the evolution of the theme over the years.

3.4. Results presentation

The results of the application of the research lens were organized in different tables and figures. In addition, relevant information on the formation of the bibliographic portfolio is also shown: authors, co-authors, keywords, journals with higher numbers of publications and convergence of keywords and words present in titles and abstracts using the VOS Viewer software.

4. ANALYSIS AND DISCUSSION OF RESULTS

Extraction

- 223 articles.

Treatment

- 3 articles without an abstract;
- 1 article without an author;
- 10 articles without keywords.

Final = 114 articles.

Lenses

- Number of publications per year;
- Number of publications per magazine;
- Number of occurrence of keywords;
- Co-authorship network;
- Network of words used in titles and abstracts.

4.1. Tables and discussion of results

Figure 1 shows a slow, but steady growth in the publication of articles on the topic from 1977 to 2019. It is worth mentioning that in the last four decades, the total number of publications reached 223, with 2013 and 2017 being the years with the highest number of publications, with 15 articles published in each. In addition, the last 10 years (2010-2019) accounted for 53.8% of publications, showing an increase in the number of publications within this theme.

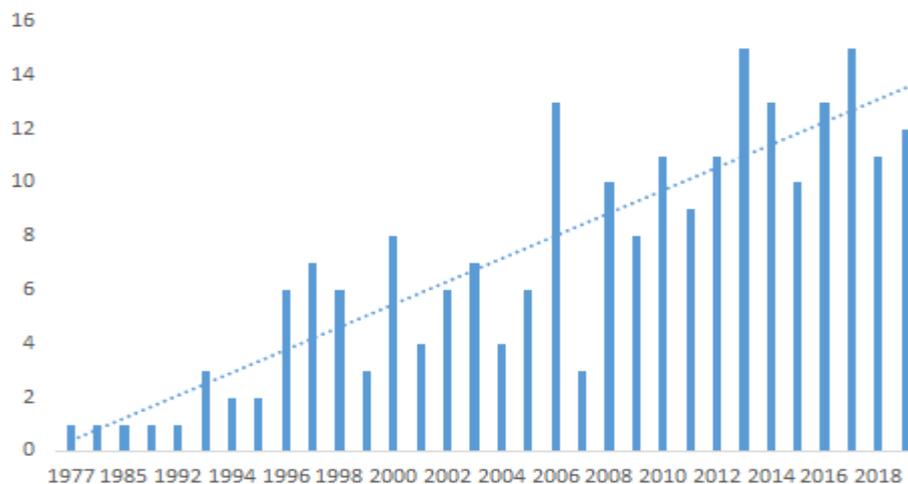


Fig. 1. Publication of articles per year with a trend line.

Source: The authors.

Another important statistic to analyze is the number of articles published in each journal, and analyzing the 14 articles present in table 1, we see that 49% had the highest number of publications in 3 journals: Organization Studies, Organization Science and the Strategic Management Journal. This is coherent, since the theme of Organizational Ecology falls within the scope of these journals.

| Magazines | Articles published | % of articles |
|---|--------------------|---------------|
| Organization Studies | 16 | 17% |
| Organization Science | 15 | 16% |
| Strategic Management Journal | 15 | 16% |
| Academy of Management Journal | 8 | 9% |
| Advances in Strategic Management | 7 | 7% |
| Management Science | 6 | 6% |
| Journal of Organizational Change Management | 4 | 4% |
| Technological Forecasting and Social Change | 4 | 4% |
| Voluntas | 4 | 4% |
| Journal of Business Venturing | 3 | 3% |
| Journal of International Business Studies | 3 | 3% |
| Journal of Management Studies | 3 | 3% |
| Journal of World Business | 3 | 3% |
| Research Policy | 3 | 3% |
| Total | 94 | 100% |

Table 1. The 14 journals that had the most articles published.
 Source: The authors.

Through the results that were found it was possible to identify the main keywords, the most apparent being part or all of the search term itself followed by Competition, Density dependence, Societies and institutions and Strategic planning, in addition, it is interesting to point out the presence of two countries, the United States and China, in the words found.

| Keyword | Occurrence |
|-------------------------------|------------|
| Organizational ecology | 121 |
| Ecology | 21 |
| Competition | 12 |
| Density dependence | 10 |
| Societies and institutions | 10 |
| Strategic planning | 10 |
| Commerce | 9 |
| Institutional theory | 8 |
| Organizational change | 8 |
| Resource partitioning | 8 |
| China | 7 |
| Entrepreneurship | 7 |
| Industrial management | 7 |
| Innovation | 7 |
| Survival | 7 |
| Event history analysis | 6 |
| Industry | 6 |
| United States | 6 |
| Construction industry | 5 |
| Evolution | 5 |
| Organizational ecology theory | 5 |
| Organizational forms | 5 |
| Strategy | 5 |

Table 2. The 23 most used keywords
Source: The authors

Analysis of bibliometric networks (VOS Viewer) and discussion of results

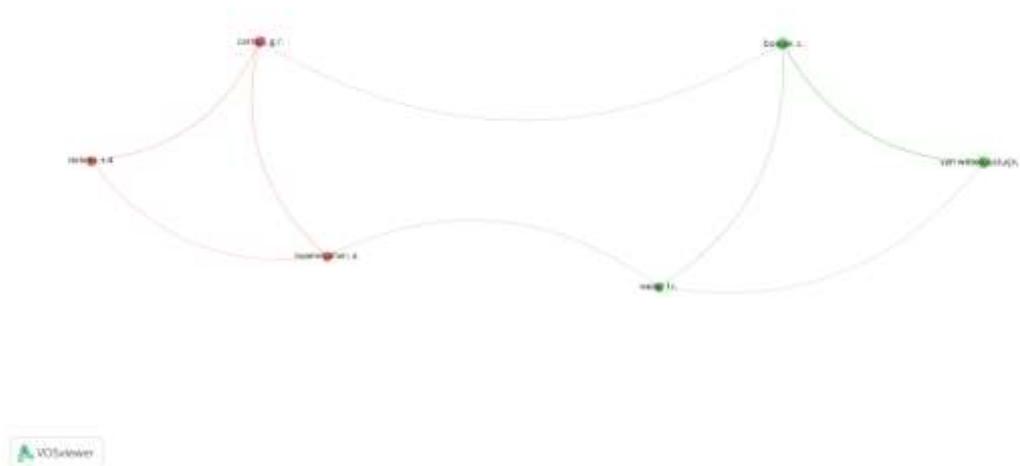


Fig. 2. Co-authorship network
Source: The Authors

After applying the VOS Viewer software, used for the generation and visualization of bibliometric networks, it was possible to identify two co-authorship clusters (figure 2). In the green colored cluster, the two authors with the largest number of articles published on the subject in the last 40 years are present, namely: Bonne, C. and Van Witteloostujin, A., both with 8 articles, being co-authors of 6 articles. Another point to note is that the clusters are related twice, once with the co-authorship of Carrol, GR and Bonne, C. and the other with the co-authorship of Wezel, FC and Swaminathan, A. In total, there are 16 co-authorities in this group of 6 researchers.

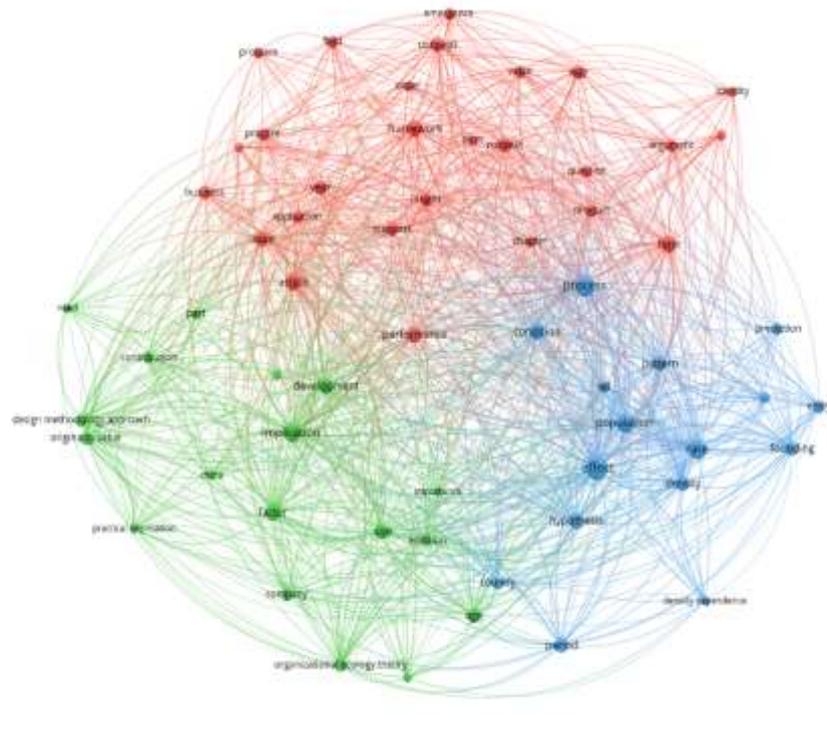


Fig. 3. Word network
Source: The Authors

When we analyze the frequency of words present in the titles and summary of the articles, figure 3, we find 3 clusters very related, being the word most equidistant from the centroid of the performance clusters. In addition, we can better understand the characteristics of each grouping using the most relevant words, namely, in the blue cluster, population, effect and process, in the green cluster, implication, development and factor, and in the red cluster, performance, framework and support .

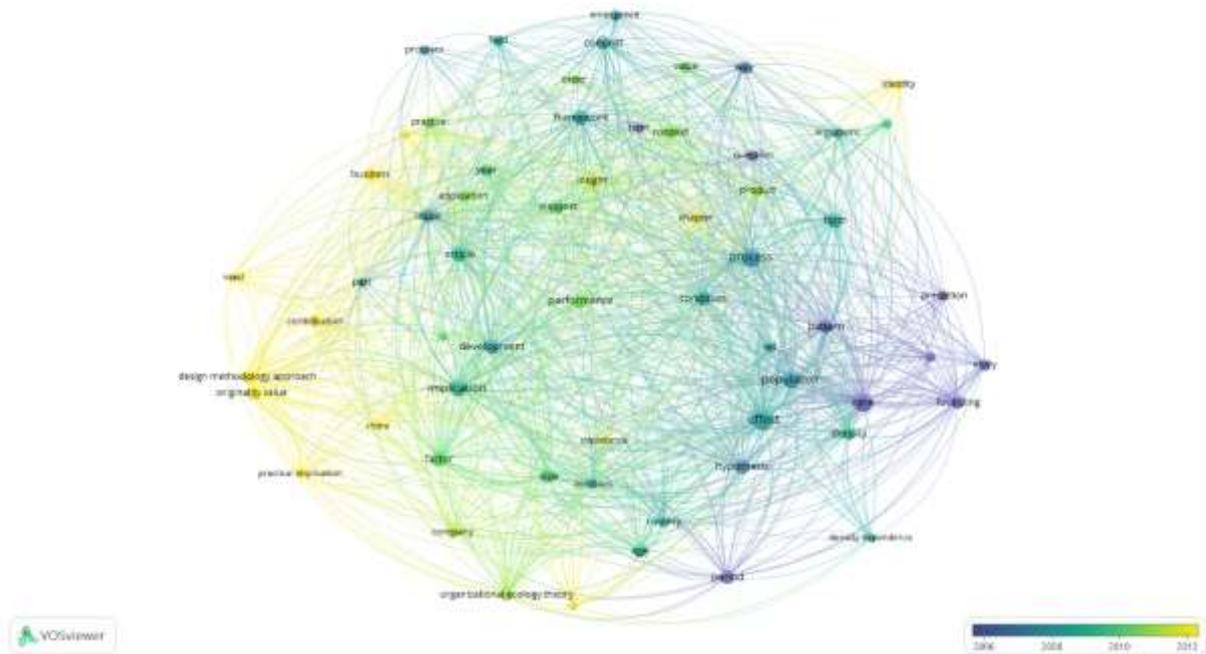


Fig. 5. Word network over the years
Source: The Authors

Another way to analyze the words most found in the titles and abstracts is to look at the word map, figure 5, in the temporal perspective, where it is possible to identify that most of the words in the green cluster in figure 3 were used more recently while that of the blue cluster were used earlier. We can highlight the words china, design methodology approach and practical implication among the most used recently and the words organization population, prediction and period as the ones that were used in the past.

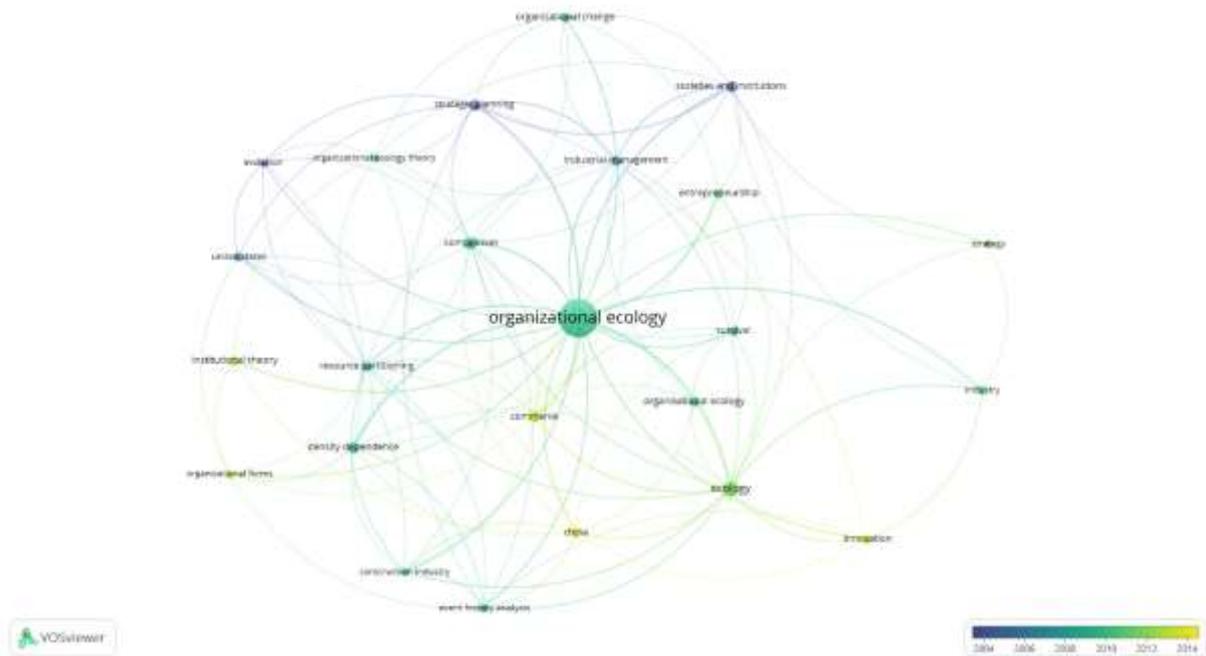


Fig. 6. Keyword network over the years
Source: The Authors

Still in the temporal perspective, in figure 6, we can analyze the keyword network over the years. Thus, we see that among the keywords that are among the most used today we have: innovation, china, commerce, institutional theory and organization forms, and among the most used words in the past, we find societies and institutions, strategic planning, evolution, united states, industrial management and organizational change.

5. CONCLUSIONS

Thus, we can conclude that not only the orientation of the contribution of institutional theory made by Lander and Heugens (2017) has been accepted by the literature in recent years, as shown in figure 6, but it has also increased the incidence of practical implications in studies and China as a unit of analysis, figure 5. Unlike what Al-Turk and Aldrich (2019) pointed out, few co-authorship clusters were found, with the sum of the two authors with the largest number of publications being less than 10% of the articles published in the last 40 years. We can also point out the limitations of this research, where only one database was used and the researchers did not go so deep regarding the methods, results and conclusions of the 114 articles found.

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