

The Core Clustering and Characteristics of the Research on Construction Grammar in China in the Past Two Decades

Yuanyuan Yang*, Hejia Zhang, Bochun Yang, Ziyi Zhou

School of Chinese Language and Literature, Bohai University, Jinzhou, Liaoning, China

**Corresponding Author.*

Abstract: In this paper, 1092 research papers in the Chinese Social Sciences Citation Index (CSSCI) from 2003 to 2023 on the topic of “Construction” were analyzed from multiple perspectives using CiteSpace software. The study reveals the core clusters and their characteristics within the field. The core clustering map of cutting-edge issues shows the correlation and thematic concentration among research papers, revealing the core clustering of construction grammar research in the last two decades. It is found that the field is characterized by three main features: multiple introductions of main theories, multiple applications oriented to teaching and learning, and analytical interdisciplinarity. In terms of theory introduction, the initial studies mainly focused on introducing and interpreting the theory of construction grammar; in terms of teaching application, application strategies such as the “construct-chunk” analysis method were proposed.

Keywords: Construction Grammar Research; Keyword Clustering; Core Clustering; Characterization; “Construct-Chunk” Analysis; Interdisciplinary Research

1. Introduction

This paper takes the academic papers published in core journals as the research object, exhaustively downloads the research papers in Chinese Social Sciences Citation Index (CSSCI) with the theme of “Construction” research, and uses CiteSpace to analyze and interpret the multi-level clustering information such as citation relationship, keywords, and subject words among the research literature from multiple perspectives. We use CiteSpace to analyze and interpret the multi-level clustering information such as

citation relationship and keywords and subject words, so as to realize the mining and presentation of the research frontiers in the field of construction syntax research in China. In the CSSCI classification of China Knowledge Network, we conducted an exhaustive search on the related literature from 2003 to 2023 with the search condition of “constructions”, and obtained a total of 2,574 papers. All the papers were imported into CiteSpace 6.4.R1 software to analyze the relationship network between the research papers as a whole. The distribution of the number of papers published in core journals in the field of construction grammar since 2003 is shown in the figure 1, and the number of papers published in core journals is on the rise, and will reach the peak in 2022.

2. The Core Clustering of the Research on Construction Grammar in China in the Past Two Decades

Since there is a difference in the number of constructed papers in CSSCI and CSSCI classified papers in CNKI in the same field, this is mainly based on the fact that CNKI China Knowledge Network does not distinguish between source journals and extended editions, and includes the supplemental parts of journals that are not included in the CSSCI platform, and at the same time the updating frequency of the two is inconsistent, and the CSSCI platform lags behind comparatively. Because the data output of CNKI platform lacks the corresponding title information, this part of the plotting adopts 1092 relevant papers from CSSCI platform to analyze the citation, co-citation and clustering of the relevant literature in the field of construction studies published in Chinese Social Science Citation Index CSSCI source journals between 2003 and 2023. The citation relationships between the literature were extracted to obtain a list of highly cited

literature within the field, see Table 1:

Table 1. List of Highly Cited Literature in Construction Grammar Research

Cited	Paper Title	Author	Journal	Year of publication
20	The Basic Idea of Interactive construction Grammar and Its Research Paths	Shi Chunhong	Contemporary Rhetoric	2016
18	The Basic Ideas of Construction Grammar	Shi Chunhong	Journal of Northeast Normal University (Philosophy and Social Science Edition)	2021
17	“Recruitment” and “job search”: synergetic mechanisms for two-way interaction in structural repression	Shi Chunhong	Contemporary Rhetoric	2014
16	From grammatical constructions to rhetorical constructions to grammatical constructions	Lu Jianming	Contemporary Rhetoric	2016
15	Constructional view on syntactical structures and the relevant theories	Shi Chunhong	Chinese Linguistics	2013
14	A Sketch of Construction Grammar	Yan Chensong	Journal of PLA University of Foreign Languages	2006
14	The Interaction of Grammar and Rhetoric in Light of Construct Suppression	Shi Chunhong	Contemporary Rhetoric	2012
12	The Value and Limitation of the Theory of Construction Grammar	Lu Jianming	Journal of School of Chinese Language and Culture Nanjing Normal University	2008
11	Dynamics of Syntax and Semantics of Words and Phrases, An Interpretation of the Construction Grammar Approach	Lu Jianming	Journal of Foreign Languages	2004
11	The Construction Grammar and study of Chinese	Lu Jianming	Studies of the Chinese Language	2004
11	Construction and Image Schema	Lu Jianming	Journal of Peking University (Philosophy and Social Sciences)	2009
10	The generative mechanism of sentences like "Wangmian died father": Sentence generation by blending in Chinese	Shen Jiakuan	Studies of the Chinese Language	2006
10	Theoretical Approaches to and Application of Construction Grammar	Shi Chunhong	Chinese Linguistics	2017
10	The Constructional Features of “lai + NP” and Its Productivity	Shi Chunhong	Contemporary Rhetoric	2018

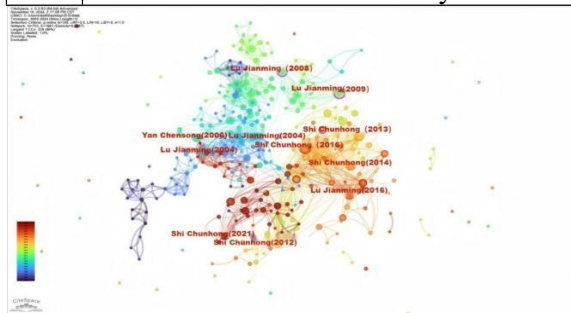


Figure 1. Core Clustering Graph of Frontier Issues, 2003-2023

The emergence of Constructive Linguistics is not accidental; it is only by placing it in the

broader context of the development of contemporary linguistics that we can understand the historical reasons for the emergence of this discipline, and that we can better help us to understand and apply its theoretical perspectives [1]. From the overall mining of the theme of the research frontiers, we can not simply consider the number of citations of research literature, but also combine the affinity between research literature and research themes, research literature with a high degree of resemblance and relevance will be close to each other in the

mapping, and literature with a common research theme will be connected with each other to form a network, which will lead to the formation of clusters. Research literature with high frequency in Table.1 is likely to be cited by different research clusters, and then dispersed into different research themes, and the examination of research literature in the main clusters helps to summarize the research themes of the core clusters.

Based on the citation relationship and theme relevance mining of 1092 research literatures and their 14948 references, a core clustering map of cutting-edge issues is drawn (see Figure 1.), which demonstrates the most concentrated clusters in the research literatures, and most of the clusters in the map are relatively concentrated, with relatively strong associations among the research literatures, and a number of color blocks are formed in accordance with the time of emergence, and the size of the nodes represents the strength of associations of the research literatures in clusters with the size of the nodes represents the strength of the association between the research literature and other literature in the cluster. According to the order of the nodes from the largest to the smallest, the different branches of the clusters are examined separately.

3. Key Features of the Core Clustering of Construction Grammar Research in the Last Two Decades

3.1 More on the Main Theoretical Features

From the analysis of the node themes in the mapping, it can be seen that the theory of construction Grammar has had a great impact on language research in China since it was introduced to the domestic academic community. The network of network relations in this time period is centered on the nodes of Deng [1] Yan [2], Lu [3, 4], and the theme of the research is the introduction and elaboration of construction Grammar. At the early stage of the introduction of the theory of construction grammar, many scholars such as Lu Jianming, Yuan Yulin, Wang Li, Liu Danqing, etc. commented on the theory, translating construction as “frame” “block” “syntax” “structure” “structure”, and so on. The term “construction” was translated as “frame”, “block” “sentence” “structure” “framework”

“format” “composition” etc., and was later generally adopted as “structure” “structure” “format” and “composition”. The translation of “composition” is widely used.

Construction grammar was formed on the basis of criticizing transformational grammar, and the phenomena that could not be explained by transformational grammar in the past can be explained by the theory of construction grammar. The articles introducing the theory of construction grammar have repeatedly mentioned “existential syntax”, i.e., “NPL+V+with+NP”. If analyzed by the theory of argument structure of transformational grammar, it is difficult to explain why the verb's inflection belongs to the extra-territorial argument but is found after the verb; other scholars have proposed that the verb's inflection belongs to the extra-territorial argument but is found after the verb. Goldberg's theory of compositional grammar can provide a reasonable explanation for this difficult phenomenon, proposing an existential composition consisting of existent object, existent place, and existent mode, which indicates that the grammatical meaning of “existence, static”.

The academic value and limitations of the theory of construction grammar are also the focus of the analysis. Looking at the views of various scholars, we find that their basic propositions are similar. The value is reflected in the following: it can assist in the understanding of previously unexplained grammatical phenomena; it helps to further explore the semantic composition of sentences; it facilitates the explanation of the reasons and justifications for the emergence of different syntactic forms; and it broadens the horizons of grammatical research, causing reflection and reflection on the previous grammatical theories. The limitations are: there are differences in the understanding of the definition of constructions; there is the isolation of constructions, ignoring the correlation between the same constructions; Goldberg abandons the projective viewpoint and the related rules of combination, believing that “there is no strict demarcation between the lexicon and the syntax”; and the over-expansion of the scope of constructions has created contradictions that are difficult to be interpreted. etc.

In addition, after the importation of the theory

of construction grammar, with the exchange and collision of cultures, the contact between Chinese and other languages has become more and more frequent, and has been influenced by other languages and influenced other languages as well. From the perspective of mapping, the comparative study of various languages of construction grammar, especially the English-Chinese comparison has also gradually become a focus of theoretical research.

3.2 Teaching-Oriented and Multi-Application

Shi Chunhong believes that the basic meaning of “teaching-oriented” refers to both “teaching-based” and “teaching-oriented”, so Chinese language research “oriented to second language teaching” includes both ontology research and research on teaching strategies for teaching Chinese as a second language, as well as research on the process and awareness of Chinese as a second language acquisition. Therefore, the study of Chinese language for second language teaching includes not only the study of the ontology and teaching strategies in the teaching of Chinese as a second language, but also the study of the process, mechanism and awareness of Chinese language acquisition as a second language. The two are not two independent entities, but essentially the problems and goals they face are the same, and they promote each other. Based on the network of relationships formed by nodes such as Su [5], Lu [6] and Shi [7], it is found that scholars have not only based on the detailed examination of the structure of the construct itself, but also made some progress in the application of the construct towards teaching.

In terms of the applied research on composition at this stage, it basically involves three aspects: firstly, syntactic structures that can be abstracted and extracted from specific structural types, mainly involving traditional sentence types, sentence forms and sentence categories, especially special sentence forms (double-object sentences, “put” sentences, “be” sentences, etc.), special sentence categories (interrogative sentences, supplicative sentences, etc.) and specific categories of expressions (accusative, complementary, etc.); secondly, the Chinese-specific expression modes (accusative, complementary, etc.), “to be” sentence, existent-present sentence, etc.),

special sentence types (interrogative sentence, imperative sentence, etc.), and expressions of specific categories (accusative, complementary, etc.); secondly, frame structures with Chinese characteristics, which include not only the fixed format of the traditional comprehension and the use of related words, but also prepositional frame structures and phrases with disjunctive properties; thirdly, frame structures with Chinese characteristics, which are not only the traditional comprehension and the use of related words, but also the use of the traditional comprehension and the use of related words. The second is frame structure with Chinese characteristics, which, in addition to the traditional understanding of the fixed format and the use of associated words, also includes some prepositional frame structures and phrases with a disjunctive nature.

Through the analysis of the distribution of the research topic network, it is found that the core of the research on the application of construction grammar at this stage is the “construct-chunk” analysis proposed by Sudan Jie and Lu Jianming, which combines the theory of construction grammar with the theory of cognitive chunks [7]. The proposition of this approach is that: a construct is a chain of chunks, the meaning of constructs is the projection of the imagery schemas in the cognitive domain in language, and each part of the internal semantic configuration of a construct is generally loaded in the form of a chunk. Each part of the internal semantic configuration is generally loaded in the form of a chunk. Constructions are composed of chunks, and the sequence of chunks forms a chain of chunks, and the meaning of constructions is expressed through the chain of chunks that are linearly linked. In the process of teaching, teachers should convert the taught grammatical structures into constructs and summarize their construct meanings at the stage of lesson preparation, and then cut them into a number of chunks to form a chain of chunks. In the course of the lesson, students are introduced to the meaning of the construct, the constituent chunks and the chain of chunks, etc., so as to guide them to master the grammatical structure step by step. The research on the application of construction grammar represented by the “construct-chunk” analysis mostly applies the strategy of “big dictionary, small grammar”, which implements

the information on the selection restrictions of grammatical combinations and structures into words and constructs, so as to make a systematic analysis of the construction system, the structure of thesis elements, the structure of sentences, and the way of coordination. In this way, a systematic description of the structure system, elemental structure, syntactic construction, and coordination is provided, which is then utilized in the classroom practice of teaching and acquisition.

Lu Jianming pointed out that academics can serve applications effectively for further development, and all scholars engaged in ontological research should consciously serve applications, for example, in the field of Chinese language teaching [8]. Contemporary Chinese language keeps pace with the times and has different manifestations in different times. With the cross-development with other disciplines, especially the development of language-related theories and technologies, scholars, from their own specialties, have respectively devoted themselves to language teaching, language training, language translation, promotion of the national common language, and even research in the fields of language planning and governance, language rehabilitation, and linguistic information processing, etc., in order to help solve the realistic social problems. The research of language research has proved to be an application-oriented approach to the study of language. It has been proved that such application-oriented attempts in language research have set the coordinate system for the Chinese language in the grand picture scroll of human cultural and social development. Along the vein of language, it is found that language research is surrounded by many systematic scientific methods, which provide a complex and rigorous logical system and a larger scale for its research cases, thus helping to make up for certain theoretical deficiencies and further promote the development of ontological theories.

3.3 Analytical Cross-Disciplinary Characteristics

From the point of view of language types, most of the articles in the field of constructs in China are based on monolingualism or bilingualism, and generally lack of typology and cross-language research [9]. No language

in the world is absolutely “pure” or “pure”, there are commonalities among languages and universal laws in grammar [10], and the search for cross-linguistic research based on construction grammar can help scholars to fully explore the language contact between multiple languages, predict the development trend of language mixing, further enrich the linguistic theory, and deepen the cognition of language. The search for cross-linguistic research based on construction grammar helps scholars to fully explore the facts of language contact between multiple languages, predict the development trend of language mixing, further enrich the theory of linguistics, and deepen the depth of language cognition.

Cross-disciplinary research is an inevitable trend of academic development, reflecting the trend of comprehensive development of science. In terms of disciplines, the research on construction grammar in China is mostly within a single discipline, and the cross-disciplinary and interdisciplinary research between disciplines is still relatively weak, and the combination of construction grammar with neurolinguistics, computational linguistics, cognitive psychology and other disciplines is still relatively low. Dai Qingxia believes that there are several major trends in the development of modern linguistics, one of which is that the portrayal and analysis of language should be shifted from a single perspective and method to multiple perspectives and methods. Only by expanding the horizon of linguistic research can we get closer to the objective facts. The comprehensive and interdisciplinary nature of current linguistic research is becoming more and more prominent, and we need to think about and study linguistic issues from multiple dimensions, perspectives and levels, use diversified research methods such as corpus method and experimental method in an integrated way, collect manifold convergent evidence to confirm or falsify theoretical assumptions related to construction grammar, make full use of research results of other disciplines, and enhance the dialogic exchange between construction grammar and cognitive psychology, neurolinguistics, We will make full use of the research results of other disciplines, enhance the dialog and cross-fertilization between construction grammar and cognitive psychology, neurolinguistics,

computational linguistics and other disciplines, and enhance the compatibility between construction grammar and other theories.

Acknowledgments

This paper is supported by Liaoning Provincial Social Science Foundation “Construction of Chinese Grammar Think Tank Based on Domain Knowledge graph Technology” of China (No. L23AYY008)

References

- [1] Yunhua Deng, Yuzi Shi. On the Progress and Limitations of Constructive Grammar Theory. *Foreign Language Teaching and Research*, 2007, (05):323-330.
- [2] Chensong Yan. A Sketch of Construction Grammar. *Journal of PLA University of Foreign Languages*, 2006, (04):6-11.
- [3] Jianming Lu. The Construction Grammar and study of Chinese. *Chinese Language*, 2004, (05):412-416.
- [4] Jianming Lu. The Value and Limitation of the Theory of Construction Grammar. *Journal of School of Chinese Language and Culture Nanjing Normal University*, 2008, (01):142-151.
- [5] Sudan Jie, Jianming Lu. Syntactic Analysis and Teaching Method of “Composition-Block”. *World Chinese Language Teaching*, 2010, 24(04):557-567.
- [6] Jianming Lu. Construction and Image Schema. *Journal of Peking University (Philosophy and Social Sciences)*, 2009, 46(03):103-107.
- [7] Chunhong Shi. The basic status and research orientation of the research on Chinese constructs for second language teaching. *Language Teaching and Research*, 2011, (06):98-108.
- [8] Jianming Lu. The relationship between teaching Chinese as a foreign language and Chinese ontology research. *Language and Literature Application*, 2005, (01):58-62.
- [9] Xu Wen, Weiguo Si. 20 Years of Research on Chinese Constructive Grammar: Review and Prospect. *Journal of PLA College of Foreign Languages*, 2021, 44(05):43-51.
- [10] Qiuwu Ma. Two different research paradigms: language and linguistics. *Journal of Tianjin Foreign Studies University*, 2024, 31(01):32-43.