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MEANS OF MEANING REPRESENTATION IN VISUAL DICTIONARIES: A LEXICOGRAPHIC AND COGNITIVE ANALYSIS

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АННОТАЦИЯ: В данной статье исследуются средства репрезентации значения в визуальных словарях с точки зрения современной лексикографии и когнитивной лингвистики. Цель исследования заключается в выявлении основных механизмов передачи значения посредством вербальных и визуальных компонентов в структуре визуальных словарей. В работе использованы описательный, сравнительный, когнитивный и функциональный методы анализа. Результаты показывают, что значение в визуальных словарях формируется посредством взаимодействия изображений, графических элементов, тематической организации, цветового кодирования и языковых единиц. Установлено, что мультимодальная природа визуальных словарей способствует более эффективному усвоению лексики и формированию концептуальных связей. Делается вывод о том, что визуальные словари представляют собой особую форму репрезентации знаний, объединяющую языковые и визуальные способы кодирования информации.

Ключевые слова: визуальные словари, визуальная лексикография, репрезентация значения, мультимодальность, когнитивная лингвистика, семантика, визуальная коммуникация, цифровая лексикография.

ABSTRACT: This article investigates the means of meaning representation in visual dictionaries from the perspectives of contemporary lexicography and cognitive linguistics. The study aims to identify the principal mechanisms through which meaning is conveyed by verbal and visual components within visual dictionary structures. Descriptive, comparative, cognitive, and functional methods were employed. The findings indicate that meaning in visual dictionaries is constructed through the interaction of images, graphical elements, thematic organization, color coding, and linguistic units. The multimodal nature of visual dictionaries facilitates vocabulary acquisition and conceptual understanding by establishing direct associations between lexical items and visual representations. The study concludes that visual dictionaries constitute a distinctive form of knowledge representation that integrates linguistic and visual modes of communication.

Keywords: visual dictionaries, visual lexicography, meaning representation, multimodality, cognitive linguistics, semantics, visual communication, digital lexicography.

INTRODUCTION

The increasing integration of visual communication into contemporary society has significantly influenced the development of lexicographic resources. Traditional dictionaries have long relied on textual definitions and linguistic explanations to represent meaning. However, advances in educational technology, cognitive science, and digital communication have stimulated the emergence of visual dictionaries as an alternative model of lexical representation.

Visual dictionaries are no longer viewed solely as supplementary educational materials. They have evolved into sophisticated multimodal systems that combine linguistic and visual information to facilitate knowledge acquisition and semantic understanding. The growing importance of visual

literacy and multimodal communication has further reinforced the relevance of visual dictionaries in language education, professional communication, and digital learning environments.

One of the central issues in visual lexicography concerns the mechanisms through which meaning is represented. Unlike traditional dictionaries, where meaning is primarily expressed through verbal definitions, visual dictionaries employ a variety of representational tools including illustrations, photographs, diagrams, symbols, icons, colors, and spatial organization. These elements function together to create a coherent semantic structure.

Despite the increasing popularity of visual dictionaries, the question of how meaning is represented within them remains insufficiently explored. Existing studies often emphasize pedagogical benefits while overlooking the complex semiotic and cognitive processes underlying visual meaning construction. Consequently, there is a need for a systematic investigation of the means of meaning representation in visual lexicographic resources.

The objective of this study is to identify and analyze the principal means through which meaning is represented in visual dictionaries and to examine their role in lexical comprehension and knowledge organization.

LITERATURE REVIEW AND METHODS

Research on meaning representation in lexicography has traditionally focused on textual definitions, semantic relations, and lexical structures. Classical lexicographic theory considers definitions to be the primary means of conveying lexical meaning. However, contemporary approaches influenced by multimodal theory and cognitive linguistics recognize that meaning may be communicated through multiple semiotic resources.

According to multimodal scholars, meaning emerges from the interaction of different modes including language, images, layout, color, and spatial arrangement. Visual dictionaries exemplify this principle by integrating verbal and visual signs into a unified communicative system.

Cognitive linguistics provides additional theoretical support. It argues that human understanding is grounded in perception, conceptualization, and mental imagery. Visual representations facilitate conceptual processing by activating cognitive schemas associated with lexical items.

The present study employs:

- descriptive analysis;
- comparative analysis;
- cognitive-semantic analysis;
- functional analysis.

The research material includes printed visual dictionaries, digital visual dictionaries, illustrated educational dictionaries, and online lexicographic resources.

RESULTS AND DISCUSSION

Images as Primary Meaning Carriers

The most fundamental means of meaning representation in visual dictionaries is the image itself. Images establish a direct connection between linguistic signs and real-world referents.

Unlike textual definitions, which require linguistic decoding, images allow users to access meaning through visual perception. This process is particularly effective when representing concrete nouns such as animals, plants, household objects, tools, and parts of the human body.

Visual representation reduces ambiguity and supports immediate recognition. In many cases, a single image can communicate information that would otherwise require lengthy textual explanations.

The effectiveness of images is closely related to the principles of cognitive processing. Human memory tends to retain information more effectively when verbal and visual information are presented simultaneously.

Illustrations and Drawings

Illustrations differ from photographs in that they selectively highlight conceptually relevant features. While photographs provide realistic representations, illustrations can simplify complex information and focus attention on essential characteristics.

For example, anatomical visual dictionaries often employ detailed illustrations rather than photographs because illustrations allow individual structures to be labeled and organized more systematically.

Illustrations therefore function not merely as decorative elements but as cognitive tools for conceptual clarification.

Diagrams and Schematic Representations

Another important means of meaning representation is the diagram.

Diagrams are particularly useful for representing:

- processes;
- systems;
- mechanisms;
- hierarchical relationships;
- spatial structures.

Unlike ordinary images, diagrams emphasize relationships rather than appearance.

In technical and scientific visual dictionaries, diagrams often serve as the primary vehicle of semantic representation because they reveal how components interact within a system.

Color Coding as a Semantic Device

Color functions as an important semiotic resource in visual dictionaries.

Color coding may serve several purposes:

- categorization of lexical fields;
- differentiation of semantic groups;
- highlighting key information;
- indicating functional relationships.

For example, biological visual dictionaries frequently use different colors to distinguish anatomical systems, while technical dictionaries may use color contrasts to identify specific components.

Color therefore contributes not only to visual attractiveness but also to semantic organization.

Labels and Verbal Annotations

Although visual dictionaries rely heavily on images, linguistic elements remain indispensable.

Labels perform several functions:

- naming objects;
- identifying parts of structures;
- establishing lexical-visual correspondence;
- facilitating terminology acquisition.

Meaning in visual dictionaries emerges not from isolated images but from the interaction between images and labels.

This interaction creates a multimodal semantic network that supports comprehension and retention.

Spatial Organization and Layout

The arrangement of visual and verbal elements plays a significant role in meaning construction.

Spatial organization determines:

- information hierarchy;
- conceptual relationships;
- reading pathways;
- attention distribution.

Visual dictionaries frequently employ thematic layouts in which related concepts are grouped together. Such organization reflects cognitive categorization processes and supports meaningful learning.

Icons and Symbols

Icons and symbols represent another important means of semantic communication.

Unlike realistic images, symbols convey information through convention and abstraction.

Common examples include:

- warning signs;
- technological symbols;
- transportation icons;
- digital interface symbols.

The use of symbols enables visual dictionaries to represent abstract and functional meanings that cannot easily be depicted through photographs.

Multimodal Integration

The most significant characteristic of visual dictionaries is the integration of multiple representational modes.

Meaning is not generated by images alone or by words alone. Rather, it emerges from the interaction among:

- images;
- labels;
- diagrams;
- colors;
- symbols;
- layout structures.

This process may be described as multimodal meaning construction.

The effectiveness of visual dictionaries derives from their ability to activate multiple cognitive channels simultaneously, thereby enhancing understanding and memory retention.

IMPLICATIONS FOR MODERN LEXICOGRAPHY

The analysis demonstrates that visual dictionaries challenge traditional assumptions regarding lexical representation.

First, they expand the notion of dictionary definition by incorporating visual explanation.

Second, they support user-centered lexicography by addressing diverse learning styles and cognitive preferences.

Third, they contribute to the development of digital lexicography, where interactive visual resources increasingly complement traditional textual descriptions.

As artificial intelligence and digital technologies continue to evolve, visual dictionaries are likely to become more interactive, adaptive, and personalized.

CONCLUSION

The study has demonstrated that meaning representation in visual dictionaries is achieved through a complex interaction of visual and verbal elements. Images, illustrations, diagrams, color coding, labels, symbols, and spatial organization collectively contribute to the construction of lexical meaning.

Unlike traditional dictionaries, visual dictionaries employ multimodal strategies that correspond closely to cognitive processes involved in perception and learning. Their effectiveness lies in their ability to connect language with conceptual knowledge through visual-semantic associations.

The findings suggest that visual dictionaries should be regarded as sophisticated multimodal knowledge systems rather than simple collections of illustrated lexical items. Future research may focus on digital visual dictionaries, artificial intelligence applications, and cross-cultural aspects of visual meaning representation.

REFERENCES

1. Atkins, B.T.S., Rundell, M. The Oxford Guide to Practical Lexicography. Oxford: Oxford University Press, 2008.
2. Hartmann, R.R.K., James, G. Dictionary of Lexicography. London: Routledge, 2001.
3. Svensén, B. A Handbook of Lexicography. Cambridge: Cambridge University Press, 2009.
4. Kress, G., van Leeuwen, T. Multimodal Discourse: The Modes and Media of Contemporary Communication. London: Arnold, 2001.
5. Kress, G., van Leeuwen, T. Reading Images: The Grammar of Visual Design. London: Routledge, 2021.
6. Mayer, R.E. Multimedia Learning. Cambridge: Cambridge University Press, 2021.
7. Lew, R. Dictionaries and Lexicography in the AI Era. Humanities and Social Sciences Communications, 2024.
8. Arias-Badia, B., Torner, S. Bridging the Gap Between Website Accessibility and Lexicography. Universal Access in the Information Society, 2024.
9. Fuentes Morán, M.T. The Concept of Lexicographic Condensation: A Review of Digital Lexicography. Lexikos, 2023.
10. Vega Moreno, É. Towards a Typological Expansion of Lexicographic Works. Revista de Lingüística y Lenguas Aplicadas, 2023.
11. Jewitt, C. Introducing Multimodality. London: Routledge, 2014.
12. Granger, S., Paquot, M. Electronic Lexicography. Oxford: Oxford University Press, 2012.
13. Cabré, M.T. Terminology: Theory, Methods and Applications. Amsterdam: John Benjamins, 1999.
14. Temmerman, R. Towards New Ways of Terminology Description. Amsterdam: John Benjamins, 2000.
15. Crystal, D. Language and the Internet. Cambridge: Cambridge University Press, 2011.