ABSTRACT

On the dissertation for the degree of Doctor of Philosophy (PhD)
by profession "6D021300 – Linguistics"
Ayazbayeva Saule Ayazaykyzy
"Consonance-coherence models of Kazakh suffixes"

General Overview of the Work. In the course of the research, the morphemic composition of word-forming suffixes denoting substantivity (forming nouns), qualitativity (forming adjectives), processuality (forming verbs), and other types is identified. Their systemic and functional features are analyzed from a linguistic perspective. Most of these studies are based on the principles of synharmonism, that is, on the laws of vowel harmony. This is due to the fact that the natural phonetic system of the Kazakh language fully adheres to the law of synharmonism, which constitutes the core of Kazakh synharmology.

A synharmological analysis conducted exclusively from the standpoint of the harmony law makes it possible to most fully reveal the internal structural regularities of the language and the interrelation of its sound system. Such an approach not only contributes to a deeper understanding of the systemic organization of Kazakh phonetics but also provides a theoretical foundation for modeling the sound nature of the language and for adapting these regularities to contemporary trends in digital linguistics and automated phonetic analysis technologies.

Relevance of the Research Topic. In traditional phonetics, speech sounds were studied in the complex of their synharmological and phonetic characteristics, including articulatory, acoustic, and perceptual aspects. However, in modern linguistics, the task of clearly distinguishing these two levels and analyzing them independently as separate objects of study has become increasingly relevant. In this regard, there arises a necessity to systematize the directions of phonetic and synharmological analysis as autonomous linguistic disciplines, as well as to specify their methodological and theoretical foundations.

This approach contributes to a deeper understanding of the morphonological and synharmological systems of the Kazakh language and reveals the interrelation between its phonetic and morphemic structures. The representation of phonetic data in digital format, the modeling of sound phenomena, and the dynamic visualization of vowel harmony laws through multimedia tools open up new possibilities for developing an interactive-linguistic model of studying and researching the phonetic system of the Kazakh language.

Object of the research – the suffixal segments of the Kazakh language, that is, the structural system of morphemic units governed by the laws of sound harmony and assimilation.

Subject of the research – the patterns of harmony and assimilation of suffixal segments in the Kazakh language and their interactive-innovative models.

The aim of the research is to determine the composition of transformations of Kazakh suffixes based on the principles of vowel harmony and combinatorial connections, and to prepare a visual interactive scheme representing them.

Scientific Novelty of the Research. A current direction in Kazakh linguistics is a new understanding of the morphological nature of affixes. In the course of the study, the definitions proposed by scholars regarding endings and suffixes were analyzed, and their functional distinction was clearly identified: endings are systematically characterized as inflectional forms, whereas suffixes are considered derivational forms.

The morphemic composition of nominal (forming nouns), qualitative (forming adjectives), verbal/processual (forming verbs), and other types of suffixes was determined, and their structural system was described. Particular attention was paid to the correlation between orthographic and orthoepic variants of affixes in the Kazakh language.

Orthographic analysis of affixes made it possible to systematize their pronunciation patterns and refine their phonetic representation. As a result of the study, certain traditional inaccuracies in defining the sound composition of suffixes were corrected, and a complete morphophonological structure of Kazakh suffixes was proposed.

Orthoepic suffixes were considered as actual (true) phonetic units of the Kazakh language. Based on their comparison with orthographic variants, the concepts of “false (hidden) suffixes” and “true suffixes” were introduced. These concepts allowed for a description of the morphological system of the Kazakh language at the phonetic level and the creation of a phonetic register of suffixes based on their real pronunciation.

Key Statements Submitted for Defense:

- The place of singarmology within general linguistics, its formation as an integral part, and its use as a research tool replacing “phonology” is a natural development. The main task of singarmology is to model the natural system of linguistic harmony and to systematize its semantic and structural regularities. Based on this approach, visualizing the interrelation of singarmological terms through interactive models can become an innovative method for analyzing and teaching the law of sound harmony in the Kazakh language.

- Systematic identification of articulatory characteristics helps to clarify their harmonic functions and the regularities of morphemic variation. The results of such research create favorable conditions for adapting the Kazakh language to applied tools and technical systems – in other words, for expanding its functional scope as the state language in the digital and technological environment while preserving its natural harmonic system. Thus, the scientific description and articulatory classification of Kazakh sounds has not only theoretical significance but also practical value, enhancing the language’s innovative potential;

- Analysis of articulatory and acoustic features of sounds makes it possible to identify their harmonic functions, mutual interaction within the syllabic system, and limits of assimilation. Methodological and technical improvements in this direction

will elevate the teaching and practical use of the Kazakh harmonic system to a qualitatively new level;

- Since the structural units of Kazakh phonetics occur in pairs (hard/soft, rounded/unrounded, etc.), the natural singarmonic flexibility of the language plays a significant role in modeling the system of suffixal harmony and assimilation. Such structural concordance greatly facilitates the application of modern information technologies and the processing of linguistic models in digital format. Therefore, the broad utilization of the natural harmonic flexibility of Kazakh phonetics is a key condition for increasing the language's innovative adaptability – that is, for ensuring its effective functioning in digital and applied contexts;

- The subordination of such morphemic chains to the law of phonetic harmony reflects the natural linguistic patterns of the Kazakh language. Creating their visual model in slide format makes it possible to demonstrate singarmological methodology at a modern scientific level. This model serves as an effective interactive means of explaining the harmonic structure of Kazakh morphemics.

Theoretical Significance of the Research. The results of the study contribute to the development of the theory of singarmology in Kazakh phonetics. The work provides a systematic analysis of the sound composition of the Kazakh language and establishes the relationship between the features of vowel harmony and combinatorial agreement. The identified system of vowel harmony and combinatorial agreement features supplements the theoretical framework of Kazakh singarmology, allowing a new characterization of its structural models. The findings lay a foundation for integrating the phonetic patterns of the Kazakh language with modern linguistic approaches, including systemic-structural, cognitive, and digital linguistics. Thus, the research expands the theoretical principles of Kazakh phonetics and singarmology, promoting a deeper scientific understanding of the natural sound system of the language.

Practical Significance of the Research. The results of the study enable a new organization of phonetic and morphological material used in teaching the Kazakh language. In particular, the scientific conclusions and models obtained provide a basis for the effective application of interactive, visual, and multimedia methods in teaching Kazakh phonetics. The models of vowel harmony and morphophonological schemes of suffixes proposed in this work can be incorporated into Kazakh language curricula, as well as used in the development of textbooks and instructional manuals. The research outcomes can also be applied in the creation of electronic textbooks, interactive exercises, language-learning applications, and in enhancing the content of courses such as "Kazakh Language Phonetics" and "Kazakh Singarmology." Moreover, they can serve as a foundation for preparing a new generation of textbooks and methodological guides.

Approval and Dissemination of Research Results. The key statements and findings of the dissertation have been discussed at scientific and methodological seminars for PhD students and at the meetings of the Department of Turkology and Language Theory at Al-Farabi Kazakh National University. The main scientific results and conclusions of the study have been published in both domestic and

international journals, and presented at international scientific-theoretical and practical conferences in the form of 10 articles. Among them: 1 article published in the Scopus database, 4 articles in the proceedings of international conferences, and 5 articles in journals included in the list of the Committee for Quality Assurance in the Field of Science and Higher Education of the Ministry of Science and Higher Education of the Republic of Kazakhstan. List of Publications:

1. S. Ayazbayeva, A. Junisbek, M. Taldibaeva. Adapted Transcription Symbols for Turkic Sounds. *Journal of Language and Literature*, ISSN: 2078-0303, Vol. 7, No. 3, August 2016, pp. 326–331.

2. S.A. Ayazbayeva. Model for the Formation of Morphological Variants of Kazakh Affixes. *KazNU Bulletin. Philology Series*, Almaty, 2015, No. 3 (155), pp. 330–336.

3. S.A. Ayazbayeva. Modeling the Syllable Structure of Kazakh Language Suffixes. *KazNU Bulletin. Philology Series*, Almaty, 2016, No. 2/2 (160), pp. 46–52.

4. S.A. Ayazbayeva. Interactive Innovative Models of Kazakh Affixes. *Science and Life of Kazakhstan*, Astana, 2017, No. 2 (44), pp. 172–174.

5. S.A. Ayazbayeva. Model for the Formation of Morphological Variants Using Kazakh Affixes. *Zharchy Bulletin*, Bishkek, 2016, No. 1, pp. 111–115.

6. S.A. Ayazbayeva. Issues of Affix Classification in the Kazakh Language. Proceedings of the International Methodological Conference “Kazakh Language in the Communicative Cultural System: Theory and Practice,” Almaty, 2015, pp. 78–80.

7. S.A. Ayazbayeva. Problems of Prosodology and Segmentology. Proceedings of the International Scientific-Theoretical Conference “Professor Ä. Qurishzhanuly and the Turkic World: Language, History, Spirituality,” Almaty, 2015, pp. 292–297.

8. S.A. Ayazbayeva. Syllable Structure of Kazakh Language Suffixes. Proceedings of the International Scientific-Methodological Conference “Linguistic Paradigms and Linguodidactics in Kazakh Linguistics,” Almaty, 2016, pp. 68–76.

9. Noun Suffixes: Models of Vowel Harmony and Combinatorial Agreement. Proceedings of the International Scientific-Methodological Conference dedicated to the 95th anniversary of the distinguished scholar, Doctor of Philology, Professor Ämir Raqysh Sätuly, “Kazakh Language in the Communicative Cultural System: Theory and Practice,” Almaty, 2025, pp. 292–297.

10. Qualitative Suffixes: Models of Vowel Harmony and Combinatorial Agreement. Proceedings of the International Scientific-Theoretical Conference dedicated to the 75th anniversary of Doctor of Philology, Professor Smagulova Güldarkhan Nurghazykyzy, “Value Systems in the Context of Language and Culture,” Almaty: Kazakh University, 2025, pp. 270–274.

Structure of the Research. The study consists of an introduction, two chapters (theoretical and practical-methodological), a conclusion, a list of references, and appendices.

The introduction justifies the relevance of the research, defines its aim, objectives, and methods, formulates the hypothesis, establishes the research

algorithm, and highlights the scientific novelty, theoretical and practical significance, as well as the key statements submitted for defense.

The first chapter defines the original sound system of the Kazakh language. Describing its internal structural organization is one of the most important and timely directions in contemporary phonetic science. This task requires a rethinking of traditional phonetic studies in Kazakh linguistics from new theoretical and methodological perspectives. Although in traditional phonetics sounds were considered holistically–taking into account singarmological and phonetic (articulatory, pronunciation, acoustic) characteristics–there is currently a growing need to clearly differentiate these two levels and consider them as independent objects of study. This necessitates the systematization of phonetic and singarmological analyses as separate linguistic domains and a clarification of their methodological principles.

The second chapter systematizes the morphological composition of Kazakh affixes (suffixes) based on a new methodological approach. The functional differences between endings and suffixes are clearly distinguished. The morphemic composition of nominal (forming nouns), qualitative (forming adjectives), verbal/processual (forming verbs), and other types of suffixes is determined, and their structural system is described. Special attention is given to the correlation between orthographic and orthoepic variants of affixes in Kazakh. The affixes are subjected to a comparative analysis from orthographic and orthoepic perspectives, with pronunciation models and phonetic stability presented in special diagrams. Some long-standing but erroneous approaches in traditional phonetics to defining the sound composition of suffixes were analyzed, resulting in the proposal of a complete morphophonological profile of the affixes. The relationship between orthographic and orthoepic suffixes was clarified, and the concepts of “true suffixes” and “false (hidden) suffixes” were introduced. These concepts allow for the description of the morphological structure of the Kazakh language at the phonetic level and formed the basis for creating a phonetic register of suffixes. This innovative approach establishes a methodological model for the integrated study of Kazakh phonetics and morphology, opens opportunities for a deep understanding of internal linguistic patterns, and contributes to the development of digital modeling of Kazakh phonetics.

The conclusion presents the main findings and results of the study.