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# THE HISTORY OF THE PHENOMENON OF AFFIXATION IN TURKIC LANGUAGES AND ITS IMPACT ON THE UZBEK LANGUAGE

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Abstract: The Turkic languages are agglutinative in that affixation is the primary means of expressing grammatical and derivational meanings. This morphemic system has demonstrated extraordinary diachronic stability throughout the Turkic family, specifically through the widespread application of suffixation. The Uzbek language, as a member of Karluk branch, is continuous with the central Turkic languages in kind; it retains the basic suffixal structure of Old and Middle Turkic languages and is heavily influenced by contacts with Persian, Arabic, and now Russian. Despite this, while Turkic morphology has been a topic of intense historicocomparative research, especially from an areal perspective, the history of affixation from Old Turkic through Middle Turkic and Modern Uzbek has not been systematically traced, and clear cases of contact-induced phonological and/or semantic change in affixation are neglected. In this paper, the historical process of emergence in Turkic languages and the extent of the structural and functional impact of this process on Uzbek are analysed. Comparative analysis shows that Uzbek has the main Turkic suffixes preserved, such as -lik, -chi, -da, but phonetic reduction and loss of vowel harmony in Uzbek essentially changed meanings. This work combines historicalcomparative and typological methods to connect ancient philological evidence with modern morphological data, providing a comprehensive framework for understanding continuity and change in affixation in Uzbek. The findings thus improve theoretical understanding of the resilience of inflectional morphology under contact and offer practical recommendations for Uzbek language teaching, lexicography, and computational linguistics.

**Keywords:** Turkic languages; Uzbek; affixation; morphology; agglutination; language contact; diachronic linguistics.

# ИСТОРИЯ ЯВЛЕНИЯ АФФИКСАЦИИ В ТЮРКСКИХ ЯЗЫКАХ И ЕГО ВЛИЯНИЕ НА УЗБЕКСКИЙ ЯЗЫК

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**Аннотация:** Тюркские языки относятся к агглютинативному типу, где аффиксация является основным средством выражения грамматических и деривационных значений. Эта морфемная система демонстрирует исключительную диахроническую устойчивость на протяжении всей истории тюркских языков, особенно через широкое использование суффиксации. Узбекский язык, принадлежащий к карлукской ветви, сохраняет базовую суффиксальную структуру древнетюркского и среднетюркского языков, но находится под сильным влиянием персидского, арабского и, в более позднее время, русского языков. Несмотря на значительное внимание, уделённое тюркской морфологии в историко-

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сравнительных исследованиях, систематическая реконструкция истории аффиксации от древнетюркского через среднетюркский к современному узбекскому языку до сих пор отсутствует, а случаи фонологических и семантических изменений, вызванных языковыми контактами, остаются малоизученными. В данной работе анализируются исторические процессы формирования аффиксации в тюркских языках и степень их структурного и функционального влияния на узбекский язык. Сравнительный анализ показывает, что в узбекском языке сохранились основные тюркские суффиксы, такие как-lik, -chi, -da, однако фонетическая редукция и утрата гармонии гласных привели к существенным изменениям их значений. Исследование сочетает историко-сравнительный и типологический методы, соединяя древние филологические источники с современными морфологическими данными, что позволяет выработать целостное представление о преемственности и изменениях в системе аффиксации узбекского языка. Полученные результаты углубляют теоретическое понимание устойчивости флективной морфологии в условиях языковых контактов и имеют практическое значение для преподавания узбекского языка, лексикографии и вычислительной лингвистики.

**Ключевые слова:** тюркские языки; узбекский язык; аффиксация; морфология; агглютинация; языковой контакт; диахроническая лингвистика.

# TURKIY TILLARDA AFFIKSATSIYA HODISASINING TARIXI VA UNING OʻZBEK TILIGA TA'SIRI

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Annotatsiya: Turkiy tillar agglutinativ tizimga mansub boʻlib, ularda affiksatsiya grammatik va so'z yasovchi ma'nolarni ifodalashning asosiy vositasidir. Ushbu morfemik tizim butun turkiy tillar oilasi boʻylab, ayniqsa suffiksatsiyaning keng qoʻllanilishi orqali, tarixan yuqori darajadagi barqarorlikni namoyon etgan. Karluk tarmoqlariga mansub oʻzbek tili oʻz mohiyatiga koʻra markaziy turkiy tillar bilan uzviy bogʻliq boʻlib, qadimgi va oʻrta turkiy tillarning asosiy suffiksal tuzilishini saqlab qolgan, shu bilan birga fors, arab va hozirgi davrda rus tili bilan boʻlgan aloqa natijasida sezilarli darajada ta'sirlangan. Shunga qaramay, turkiy tillar morfologiyasi koʻplab tarixiy-taqqoslama tadqiqotlarda oʻrganilgan boʻlsa-da, qadimgi turkiy tildan oʻrta turkiy va zamonaviy oʻzbek tiligacha boʻlgan affiksatsiya jarayonining toʻliq izchil tahlili hali tizimli ravishda amalga oshirilmagan, shuningdek, kontakt ta'siri natijasidagi fonologik va semantik oʻzgarishlar yetarli darajada yoritilmagan. Mazkur maqolada turkiy tillarda affiksatsiya jarayonining tarixiy shakllanishi va uning oʻzbek tiliga boʻlgan strukturaviy hamda funksional ta'siri tahlil qilinadi. Taqqoslama tahlil natijalari shuni ko'rsatadiki, o'zbek tilida -lik, -chi, -da kabi asosiy turkiy suffikslar saqlanib qolgan, biroq fonetik qisqarish va unli tovushlar uygʻunligining yoʻqolishi ularning ma'nolarini sezilarli darajada oʻzgartirgan. Ushbu tadqiqot tarixiy-taqqoslama va tipologik usullarni uygʻunlashtirib, qadimiy filologik manbalar bilan zamonaviy morfologik ma'lumotlarni bogʻlaydi hamda oʻzbek tilidagi affiksatsiya tizimidagi izchillik va oʻzgarishlarni chuqur tushunishga ilmiy asos yaratadi. Tadqiqot natijalari

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kontakt ta'siri ostida morfologik tizimlarning barqarorligini nazariy jihatdan yoritish bilan birga, o'zbek tili o'qitish metodikasi, leksikografiya va kompyuter lingvistikasida amaliy tavsiyalarni taklif etadi.

Kalit soʻzlar: turkiy tillar; oʻzbek tili; affiksatsiya; morfologiya; agglutinatsiya; til kontakti; diaxron lingvistika.

#### Introduction

As a family, the Turkic languages display a clear agglutinative structure, in which word formation and grammatical relations are primarily expressed through suffixation. II Turkic languages are characterized by a heavy reliance on suffixes, absence of grammatical gender, and highly developed systems of vowel harmony. Affixation has historically been a morphological driver and typological characteristic within this family, rendering an illuminating family for studying language change, contact and internal evolution. This article examines the history of affixation dynamics along Turkic languages and discusses in what way affixation affected the forms of the Uzbek language and how the overall phenomenon of suffixing was developed, changed, and eventually reflected in the morphology of Uzbek.

In more detail, it investigates the connection of affixation which is a long-term process of development in Turkic languages and its transference or adaptation to Uzbek. Through an identification of fundamental motifs such as agglutination, derivational and inflectional suffixation, vowel harmony and language contact we take up how Uzbek preserves, transforms, or deflects from standard Turkic patterns of affixation. Uzbek, for instance, retains Turkic-type suffixing morphology. Meanwhile, contact with Persio-Arabic and Russian has mediated the morphological change to Uzbek which has created a hybrid system of Turkic heritage and external influence (Abdujaparov 2017, 2018).

Though research has been done previously on affixation in Turkic languages, this paper finds that the exact type of influence and the processes of its implementation into the Uzbek language is still undescribed in detail. For example, in "The Morphological Function of Affixes in Uzbek and Turkish" discusses differences in core paradigms of suffixation between Uzbek and Turkish, while very briefly touching upon the diachrony as well as the contact between the two languages. In addition, some of the recent computational work on Uzbek morphology (affix-stripping algorithms, stemming and lemmatization algorithms etc.) is based on common recent affix-stripping practices, therefore lacks the historical weight, latitude, or even contact influence (etc.) (e.g. Springer et al. In sum, we are left with a knowledge gap as to how affixation from older Turkic stages is tracked in to Uzbek in terms of the evolution of patterns of suffix-shape, productivity and phonology under contact and internal dynamics.

From a methodological perspective, the analysis is of a historical-comparative and typological nature. It reviews affixation in Old Turkic and Middle Turkic sources (based on for example, Erdal, A Grammar of Old Turkic) and correlates these with gown morphemic information in fashionable Uzbek, along with corpus-based computational examine from below of Uzbek. The analysis highlights diachronic change (the evolution and morphological changes of suffixes) and synchronic structure and follows a qualitative descriptive framework with typological

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generalisations and, where data is available, quantitative measures from recent computational studies.

Thus the research is presumed to demonstrate the Turkic-heritage suffixation system is robust in Uzbek, but that particular exceptions or adaptations will emerge as evidence of phonological change, lexical borrowing and language-contact interaction. It is even too early to speculate on what suffix-types will turn out to be the most productive in Uzbek, how they will compare to Classical Turkic predecessors, or how typological theories of agglutination and contact-induced change will account for the results. These results meanwhile will have implications for both theoretical morphology and practical applications and will provide insights show to further study poorly understood affix-variants, dialect-level variation, and computational models of Turkic-Uzbek impersons dynamics.

# Methodology

The historical-comparative and typological method are used in the study to reveal the development of affixation in the Turkic language family and its effect on the morphological system of the Uzbek language. This research starts with determining the object and scope of the analysis the affixation processes that have formed the Turkic languages from the periods of Old Turkic and Middle Turkic to modern Turkic languages like Turkish, Kazakh and Uzbek. The original linguistic data derive from ancient inscriptions (the Orkhon-Enisei texts), classical chaghatay literature, and modern Uzbek material. The phonetic, semantic, and morphological history of major suffixes and prefixes are traced historically in a comparative-historical approach, while their present-day synchronic functional roles are established by considering a number of synchronic analyses. Data of this type are quantitatively referenced and compared in tabular form, using established academic corpora and reference grammars such as Compendium of the Turkic Languages (Johanson &; Csató 1998) and Comparative Grammar of Turkic Languages (Clauson 1972) for regularities in affix classification. It incorporates both contextual and differential-semantic analysis to determine both the similarities and divergences between the Turkic and Uzbek affixal systems, particularly in terms of morphophonemic variation and their meanings. This methodology relates affix functions (derivation, inflection and intensification) to correspondences, providing a systematic reconstruction of the processes whereby Turkic morphological patterns served to enrich and stabilize the structure of Uzbek. This combined, syncronic-diachronic approach achieves a fitting description and a theoretical framework through which cycle-after-cycle of affixation constitutes the driving force of the language change in Turkic Uzbek.

## **Results and Discussion**

In addition, there are some findings worth mentioning in terms of affixation of Turkic languages in general and its effect on the Uzbek language. The first of these is that the historical-comparative analysis of major suffix-types across early Turkic, later Middle Turkic and modern Uzbek demonstrates that the preferencial use of suffixes as opposed to prefixes is held constant throughout all Turkic contexts. This corresponds with wider typological characterisations of Turkic as a family such as agglutinative features and the numerous forms of suffixation. That paradigm persists in Uzbek: affixes remain the driving force of derivation and inflection. In both Uzbek and Turkish affixes reflect to a tightly prescribed Turkic origin: suffixation is dominant; prefixes are absent as one study records.

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The following table comparison summarises some of the major affix-types identified in the study providing a key with regards to the distribution and transformation.

Table 1 Selected affix types in Turkic languages and Uzbek

Affix type	<b>Example</b> in	Example in	Commentary/source
	Classical	Modern Uzbek	·
	Turkic / Middle		
	Turkic		
Derivational suffix "-	OT türi-lik	Uzbek yaxshilik	Reflects continuity of suffix;
lik/-lık" (nominaliser)	"diversity /	"goodness"	semantics stable.
	kindness"	_	
Locative-case suffix "-	Middle Turkic	Uzbek uyda "at	Shows phonetic adaptation
da/-de/-ta/-te"	orda-ta "at the	home"	(back/front vowel harmony
	court"		partially lost).
Agentive suffix "-çi/-ci"	Turkic yazı-çı	Uzbek kitobchi	Demonstrates productive
	"scribe"	"book-person,	derivation in Uzbek.
		librarian"	
Intensifier/repetitive	Turkic oylaş	Uzbek kitoblash	Illustrates adaptation and
suffix "-la(ş)"	"become like a	"to read	functional extension.
	moon"	intensively"	

Second, the effects of historical contact and substrate/superstrate dynamics have been found substantial. Although Uzbek is purely of the Karluk branch of Turkic and indeed it is also a descendant of the literary tradition of the Chagatai it is permeated with Arabic and Persian influence. The outcome is a mixed morphological profile: Turkic-type suffixation plays a structural role, but the substantively non-Turkic level (e.g. linguistically borrowed prefixes or new surface forms of suffixes) emerges in Uzbek.

Third, it is important to note the typological shift in Uzbek to some extent the standard Uzbek contains no or only underlying traces of even suffixal vowel-harmony constraints, which are widespread among Turkic languages. The phonological divergence that is relevant for this paper manifests itself as an inflectional adaptation of how suffixes are realised and is transparent as a structural adaptation from Turkic-to-Uzbek. So, although affix-types may be inherited on a historical level, the Uzbek phonetic and functional realisation of these pieces differs in perceptible fashions.

This empirical base gives rise to a few themed discussions. The ongoing nature of Turkic suffixation into Uzbek can be interpreted to reinforce the idea that affixation represents an enduring morphological strategy through Turkic family history and that Uzbek retains a fundamental morphological core that is well-Turkic in orientation. However, the change (by

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contact, phonology, and semantics), in the case of Uzbek, indicates flexibility and change rather than simple inheritance. Take, for example, the agentive suffix "-chi", which still functions productively in Uzbek, although its phonetic triggers and combinatory restrictions may differ (due to partial loss of vowel harmony). What follows is the central issue of the interplay between historical inheritance and contact-induced change.

In addition to this, the study exposes an awareness gap: key suffix-types are well documented however there is little in-depth analysis of micro-variants of affixes. Lastly, though the general diachronic trajectory from Middle Turkic to Uzbek is established in accounts from linguistic histories, the particular morphophonemic changes of affixation namely, in how suffix shapes have morphed, fused, and/or semantically shifted have undergone scant research. Moreover, no decent typological modelling has been done on the effect of non-Turkic, esp, Persian-derived, morphological features in the Uzbek affixation system. Translation: the frontier is in no-case landforms and touch, no longer broad evolutionary stories.

From a theoretical perspective, these results provide insight into the retention and evolution of agglutinative systems involving affixation under language contact and changes due to internal phonological factors. They show how a predominately suffixing system (common to Turkic) can assimilate to an altered phonological environment (loss of vowel harmony) and extensive lexical borrowing while also preserving much of its core morphological productivity. This makes the Uzbek case a valuable addition to the study of typological theory on agglutination, morphological persistence, and the morphological blocks of contact.

Next, on a practical level and considering also the implications for Mongolic language teaching, the outcomes affect morphological parsing and the computational modelling of Uzbek. Namely, proper identification of Uzbek affixes both native Turkic and foreign borrowings is an important preprocessing step for Uzbek NLP tools. An Uzbek stemmer based on affix stripping that accounts for the morphological richness of Uzbek and relatively large set of suffix-classes has been recently explored in (Uzunova et al.2019). The mapping of historical suffix-types to their contemporary Uzbek equivalents (a partial example is shown in Table 1 above) can help in the training of morphological lexicons, affix-detection algorithms, and the teaching of aspects of Uzbek such as suffix productivity and derivation-patterns to Uzbek-learners [3]. In addition, this work serves as a model for studying affixation transfers in other contact-influenced Turkic languages (Kyrgyz, Kazakh, Uyghur, etc.).

Future research will have a multi-faceted agenda. Empirical further work should include:

- (1) the first full corpus-based quantitative study of affix-frequency and productivity in modern Uzbek corpora (with both literary and spoken), mapping which suffixes are the most active, as well as their frequency distributions compared to other Turkic languages;
- (2) a micro-study on dialects, contrasting Uzbek dialects (Kipchak-Uzbek, Oghuzinfluenced Uzbek) to identify affix-variants and stacking patterns at the regional level;
- (3) a historical reconstruction of necessary suffix-allomorphs from Old Turkic→Middle Turkic→Chagatai→Uzbek, based on inscriptions and manuscripts, in order to trace out phonetic and semantic changes;
- (4) a project on modelling language-contact: mapping exactly the entry of Persian/Arabic affixal or prefixal features in terms of Uzbek and also whether they changed the productivity of Turkic suffix types.

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In principle, further work should incorporate the Uzbek case into typologies of agglutinative-contact languages: how do agglutinative systems reorganize themselves under significant lexical borrowing? Theresult is a more robust intrusion against prefix intrusion, then do suffixing systems endure the other end of the stringless?... When vowel harmony erodes, are there consistent functional changes (e.g., suffixes become less productive derivationally)? More generally, in the fields of computational linguistics and second language acquisition, a larger affix-database for Uzbek (tagging suffix type/origin/productivity/phonetic variants) would help increasingly precise morphological analysis, as well as comparative modules for Turkic language learners (Haris & Rakhimova 2018).

To sum up, this research shows that the phenomenon of affixation in the Turkic languages has a long history of harmony and that its impact on the Uzbek language is strong but mediated through phonology and contact-induced change. The kind of data set that could really clarify the details of the evolution and regional variation of the Turkic suffixing system, as well as its interaction with non-Turkic morphological patterns in the modern language, does seem avail-able in Uzbek, as the core of the system is still visible and productive there. Conclusion By bridging the gap between large-scale diachronic typology and micro-morphological analysis, future research could further both the development of theoretical understanding and practical applications (language teaching & NLP) on the example of Uzbek and, by extension, other Turkic studies.

## Conclusion

This brief cross-language study on affixation as a way of morphological realization along with its impact on the Uzbek language highlights the fact that there is an inverse correlation between the use of suffixation across the Turkic family, where suffixes have been extraordinarily resistant to change, and the prevalent use of prefixes, where they are largely absent in morphologically agglutinative Uzbek, as is suggested by the typology based on general Turkic features. That evidence shows that even as Uzbek was (and is) transformed in some ways by heavy Persian, Arabic and Russian influence, it keeps much of its Turkic suffixational morphology in a hybrid system where Turkic suffixation remains productive (even as vowel harmony has eroded). Both its theoretical and practical implications are clear: on the theoretical side, the findings illuminate how languages with agglutinative morphologies are able to endure contact and internal change without losing their defining traits while being restructured for an expansive vocabulary; on the practical side, the mappings discussed here serve as the foundation for improved modelling of morphology, teaching, and computational processing of Uzbek. Additionally, the research highlights distinct gaps-in-knowledge: most prominently, the demand for detailed diachronic tracking of affix-allomorphs, quantitative corpus-based investigation of suffix-productivity in disparate dialects of Uzbek and exploration of level of contact-mediated borrowing of affix-types. Therefore more research is needed to do large-scale corpus studies on contemporary / historical texts, dialectal comparison of suffixal micro-variants and comparative typologies tying Uzbek affixation to the rest of Turkic languages in contact to comprehensively map the processes of retention, change and innovation in Turkic affixational systems.

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