

THE ACTIVITY OF PREFIXAL UNITS IN THE TERMINOLOGICAL SYSTEM OF THE UZBEK LANGUAGE

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Abstract

The article examines the activity of prefixal units in the terminological system of modern Uzbek. Prefixation, marginal in the general lexicon of an agglutinative and suffixing language, is disproportionately frequent in terminology, and the reason lies in the properties that terminology requires of its units: systematicity, transparency, brevity and international recognisability. The study describes the distribution of prefixal formatives across four terminological domains — medicine, technology and information technology, economics, and law and administration — and shows that each domain is associated with a characteristic set of formatives, such as giper- and gipo- in medicine, avto-, elektro- and kiber- in technology, makro- and mikro- in economics, and anti- and de- in law and administration. It then examines the term-forming advantages of prefixation, namely its capacity to build regular oppositional pairs and to produce compact equivalents of analytic descriptions, and the normative problems it creates, principally orthographic variation and the competition between a prefixal term and its native analytic synonym.

Keywords: Terminology, term formation, prefixation, Uzbek language, international formative, terminological system, standardisation, orthographic norm, opposition, calque.

Introduction

Terminology imposes requirements on its units that ordinary vocabulary does not. A term is expected to be unambiguous within its domain, to be systematically related to the other terms of the same field, to be as short as its precision permits, and, in the modern scientific community, to be recognisable across languages [1]. These requirements select among the word-formation techniques available in a language: a technique that produces regular, transparent and internationally shared units will be favoured in terminology even if it is peripheral in the general lexicon. Prefixation in Uzbek is precisely such a technique. In the general vocabulary of an agglutinative and suffixing language it remains a marginal means of word formation, but in the terminological subsystems its share is far higher, and it continues to grow.

The reason for this disproportion is that the international formatives of Greek and Latin origin entered Uzbek together with the terminological systems in which they function, and they carry

with them the systematic oppositions of those systems. A speaker who has learned the medical terms gipertoniya and gipotoniya has learned not two isolated words but an opposition between excess and deficiency that can be applied to any further base within the domain; a speaker who has learned makroiqtisodiyot and mikroiqtisodiyot has learned an opposition of scale that can likewise be extended. Terminological prefixation is therefore not merely a way of forming individual terms but a way of structuring a terminological field, and this is what distinguishes it from prefixation in ordinary vocabulary [2].

The aim of the article is to establish the degree and the character of the activity of prefixal units in the terminological system of modern Uzbek. The tasks are to describe the distribution of the formatives across the principal terminological domains, to determine the term-forming advantages that account for their productivity, to examine the competition between prefixal terms and their native analytic equivalents, and to identify the normative problems that require resolution. The material consists of terms from medical, technical, information-technology, economic and legal vocabulary of the Uzbek language; the methods are the analysis of derivational structure, the analysis of terminological fields and the comparison of competing designations.

MAIN BODY

Medical terminology is the domain in which prefixal formatives are most densely represented in Uzbek, and this is a direct reflection of the structure of international medical nomenclature. The formatives giper- and gipo- form a regular opposition of excess and deficiency, as in gipertoniya against gipotoniya and giperglikemiya against gipoglikemiya; anti- forms terms denoting agents that act against a condition or an organism, as in antibiotik, antiseptik and antitana; dis- denotes disorder, as in disfunktsiya and displaziya; dez- denotes removal, as in dezinfektsiya. What makes these formatives active rather than merely present is that they are used to form new terms within Uzbek and not only to transmit borrowed ones, and that their meaning is stable enough for a specialist to interpret an unfamiliar formation correctly on first encounter. This predictability is the principal reason why medical terminology across languages retains its prefixal structure rather than translating it.

Technical and information-technology terminology forms the second and currently the fastest-growing domain. The older technical layer is built on avto-, elektro-, radio-, tele-, foto-, giro- and termo-, as in avtomatlashtirish, elektromagnit, teleko'rsatuv and termoregulyator, and these formatives entered Uzbek through Russian in the twentieth century together with the industrial vocabulary. The recent layer is built on kiber-, veb-, nano-, mikro-, multi-, super- and the abbreviated e-, and it has entered directly from English over the last two decades, producing kiberxavfsizlik, kiberhujum, kibermakon, veb-sahifa, veb-manzil, nanotexnologiya, mikrokontroller, multimedia, superkompyuter and e-hukumat. The distinguishing property of the recent layer is that its formatives attach freely to native Uzbek stems, which is the clearest evidence that they have been integrated into the derivational system rather than remaining features of borrowed vocabulary [3].

Economic terminology employs a narrower but highly systematic set of formatives, dominated by the opposition of scale expressed by makro- and mikro-. The pair makroiqtisodiyot and mikroiqtisodiyot is the anchor of a series that includes makroko'rsatkich, mikroqarz, mikrofirma, mikrokredit and mikroto'lov, and the productivity of the series rests on the fact that the semantic contribution of the formative is identical in every member. Beside this opposition the domain employs anti- in antimonopol and antiinflyatsion, de- in devalvatsiya and demonopolizatsiya, re- in restrukturizatsiya and reinvestitsiya, and super- in supersubsiya and similar occasional formations. Economic terminology is also the domain in which the hybrid model is most visible, since formatives of international origin combine with stems of Arabic and Persian origin already assimilated in Uzbek, as in mikroqarz, where the base qarz belongs to the oldest borrowed layer of the language.

Legal and administrative terminology employs prefixal formatives less densely but in functionally important positions. The most active formatives are anti-, as in antikorrupsion and antimonopol; de-, as in detsentralizatsiya and deregulyatsiya; trans-, as in transmilliy and transchegaraviy; sub-, as in subyekt and subsidiar; and the Iranian no- in calqued negative terms such as nohuquqiy, nonnormativ and nostandart. The domain is of particular interest because it is here that the competition between a prefixal term and a native analytic equivalent is sharpest: alongside transchegaraviy savdo the analytic chegaralararo savdo and the descriptive chegara osha savdo are both attested, and the choice among them is not settled by norm. The competition is described further below, since it is the principal normative problem raised by terminological prefixation [4].

The term-forming advantages of prefixation account for its disproportionate share in terminology and are of three kinds. The first is the capacity to build regular oppositional pairs. Terminology requires that related concepts be designated by formally related terms, and a prefixal opposition satisfies this requirement automatically: giper- against gipo-, makro- against mikro-, pre- against post-, inter- against intra-. A native analytic designation cannot produce oppositions of comparable regularity, because the modifiers it uses are not organised into closed sets. The second advantage is compactness: a prefixal term of two morphemes replaces an analytic description of three or four words, which matters in a domain where terms enter into further compounds and into extended nominal phrases. The third is international recognisability, which allows a specialist to identify a term in a foreign text and which supports the translation of specialised literature [5].

Against these advantages stand two systematic drawbacks. The first is opacity for the non-specialist: a prefixal term built on Greek or Latin material is uninterpretable to a speaker who has not learned the formative, whereas a native analytic designation is transparent to any speaker of the language. This is an argument regularly advanced in Uzbek terminological discussions in favour of native equivalents, and it has genuine force in domains addressed to the general public, such as school textbooks and public health information. The second drawback is the risk of duplication, in which the same concept receives both a prefixal and a native designation and the two coexist without a division of labour, which violates the requirement that a term be unambiguous within its domain [6].

The competition between prefixal terms and native analytic equivalents is the central normative issue in this area, and Uzbek terminological practice has produced three different outcomes for it. In the first, the prefixal term is retained and the native equivalent does not establish itself, which is the usual outcome in medicine and in the exact sciences, where international recognisability outweighs transparency. In the second, the native equivalent displaces the prefixal term, which has occurred in a number of administrative and educational designations. In the third, both survive with a division of function, the prefixal term being used in specialised writing and the native equivalent in texts addressed to a wider audience. The third outcome is the most frequent and, in practice, the most workable, but it requires that the relation between the two designations be recorded in normative dictionaries, which is not consistently done at present.

Orthography is the second normative problem, and it affects the recent formatives most. The same term is attested in solid, hyphenated and separated spelling: *veb-sahifa* and *veb sahifa*, *ekoturizm* and *eko-turizm*, *mikro qarz* and *mikroqarz*. The variation is partly a function of the age of the formative, since long-established elements such as *avto-* and *elektro-* are written solid without hesitation, and partly a function of the origin of the base, since a native base attracts the hyphen more readily than a borrowed one. Terminological standardisation requires a single rule, and the criterion that best matches the linguistic facts is that of affixhood: a bound recurrent formative with a stable meaning is written solid with the base, while an element that also occurs as a free word is written separately or hyphenated according to the general rules for compounds [7].

A final observation concerns the direction of development. The prefixal component of Uzbek terminology has grown throughout the past century, but the source of growth has changed. Until the end of the twentieth century new formatives arrived predominantly through Russian, which acted as the intermediary for Greco-Latin material, and the resulting terms preserved the phonetic shape they had in Russian. Since the beginning of the present century the dominant channel has been direct borrowing from English, and this has two consequences: the phonetic shape of the formatives now follows English rather than Russian, producing variants such as *sayber-* beside the established *kiber-*, and the formatives attach to native stems from the first attestations rather than after a period of circulation in borrowed vocabulary. Terminological standardisation should record the preferred variant explicitly, since parallel phonetic shapes of the same formative are more disruptive to a terminological system than parallel designations of the same concept [8].

The activity of prefixal formatives in terminology can be assessed by three measurable properties, and the three do not always coincide. The first is type frequency, the number of distinct terms in which a formative occurs; by this measure *anti-*, *mikro-* and *avto-* are the most active formatives of Uzbek terminology. The second is the proportion of native bases among the formations, which measures integration rather than mere presence; by this measure *kiber-*, *eko-* and *mikro-* rank highest, since they combine with Uzbek stems such as *xavfsizlik*, *mahsulot* and *qarz*, whereas *psevdo-* and *kvazi-* combine almost exclusively with borrowed ones. The third is series openness, the readiness with which a formative admits new members;

by this measure the recent digital formatives are the most active, because their domains are themselves expanding. A formative may score highly on the first measure and poorly on the second, as *avto-* does: it occurs in many terms, but almost all of them were borrowed as wholes and few were formed within Uzbek [9].

These measures have a practical application in terminological planning. A formative that is frequent but not integrated does not require normative intervention, since it produces no new formations and its existing terms are stable. A formative that is integrated and open, by contrast, will generate new terms whether or not the norm anticipates them, and it is for these formatives that orthographic rules, preferred phonetic shapes and the relation to native equivalents should be fixed in advance rather than after the variation has become established. The current situation in Uzbek is the reverse: the long-settled formatives are described in detail in the existing normative literature, while the formatives that are actually generating new terminology are the least regulated. Redirecting normative attention towards the productive end of the inventory would prevent much of the variation that terminological dictionaries now have to record after the fact [10].

The relation between prefixal term formation and the two scripts in which Uzbek is written adds a further layer of variation that is specific to the language and has no counterpart in the terminological systems from which the formatives are drawn. A formative borrowed through Russian was first written in Cyrillic and acquired a stable Cyrillic shape, and its Latin form was subsequently produced by transliteration rather than by direct borrowing from the source language. A formative borrowed directly from English in the last two decades was first written in Latin, and its Cyrillic form, where it exists, is a back-transliteration. The two paths do not always converge on the same result, and a term may therefore have shapes in the two scripts that are not transliterational equivalents of one another. For terminological work this means that a bilingual or bigraphic terminological database cannot be generated mechanically from one script version, and that both forms must be recorded explicitly for every prefixal term whose formative belongs to the recent layer.

Finally, the treatment of prefixal terms in educational materials deserves separate consideration, because it is here that the tension between international recognisability and transparency is most consequential. A student meeting *gipertoniya* for the first time gains nothing from the formative unless the opposition with *gipotoniya* is presented alongside it; presented as a pair, the two terms teach not only two concepts but a schema that applies to the rest of the domain. The same holds for *makroiqtisodiyot* and *mikroiqtisodiyot*, and for *import* and *eksport* in a related pattern. The practical recommendation that follows is that terminological prefixes be taught systematically rather than incidentally, as a small closed inventory with stable meanings, since the return on learning a formative is proportional to the size of the series it opens. This is the pedagogical counterpart of the term-forming advantage described above: what makes prefixation efficient for the coining of terms also makes it efficient for their acquisition.

CONCLUSION

Prefixal units are considerably more active in the terminological subsystems of Uzbek than in its general lexicon, and the disproportion has a functional explanation. Terminology requires systematicity, compactness and international recognisability, and prefixation supplies all three: it builds regular oppositional pairs such as giper- against gipo- and makro- against mikro-, it replaces analytic descriptions with two-morpheme units, and it produces designations that a specialist can identify across languages. The formatives entered Uzbek together with the terminological systems in which they function, and they carry the internal oppositions of those systems with them.

Each domain is associated with a characteristic set of formatives. Medicine employs giper-, gipo-, anti-, dis- and dez-, and is the most densely prefixed domain. Technology and information technology employ an older layer of avto-, elektro-, tele- and termo- alongside a rapidly growing recent layer of kiber-, veb-, nano- and e-, whose distinguishing property is that it attaches freely to native Uzbek stems. Economics is dominated by the scale opposition of makro- and mikro- and supplies the clearest instances of the hybrid model, as in mikroqarz. Law and administration employ anti-, de-, trans- and the calqued no-, and it is here that the competition with native analytic equivalents is sharpest.

Two normative problems require attention. The first is the coexistence of prefixal terms with native analytic equivalents, which has produced three different outcomes in practice; the most workable is a division of function between specialised and general registers, but this division must be recorded in normative dictionaries rather than left to usage. The second is orthographic variation between solid, hyphenated and separated spelling, for which the criterion of affixhood offers a consistent solution applicable to all the formatives. A further and more recent difficulty is the appearance of parallel phonetic shapes of the same formative as the source of borrowing shifts from Russian to English; terminological standardisation should record the preferred variant explicitly, since competing shapes of one formative disrupt a terminological system more seriously than competing designations of one concept.

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