NATIONAL MODELS OF THE QUANTITATIVE NUMERICAL CATEGORY OF THE NOUN

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Abstract

In this article, the categories of quantity in Uzbek, English and Russian languages are nationally modeled. In this process, the models of quantitative categories in different languages are analyzed linguistically. It is argued that the grammatical category of noun is preserved in the minds of members of society as universality, invariance, essence, possibility, and the grammatical forms characteristic of them are reflected in reality as various speech options and events. Also, grammatical categories are recognized as paradigms, in turn, on the example of affix models, it is explained that the grammatical forms included in this paradigm are preserved in the minds of native speakers as universality.

Keywords: modeling, national model, universal model, abstraction, international model, affix model, categorical model, grammatical category, numerical category, grammatical form, affix, quantitative plurality.

It is known that the modeling process requires an approach to language as a system, learning the language based on the laws of the system. Language, its units and events are interpreted on the basis of systemic laws. Grammatical categories, which in linguistics are recognized as linguistic units, are also preserved in the minds of members of society as universality, invariance, essence and possibility, and grammatical forms characteristic of them are reflected in reality as various speech options and events.

Grammatical categories are a new unity consisting of a series of stable relations of a certain type of form[1], their classification is based on the semantic, morphological, syntactic nature of the grammatical form that unites them. It can be said that the use of 11 categories when defining grammatical categories for Uzbek language morphoanalyzer provides accurate results of the automatic morphoanalysis process[2].

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[1] Modern Uzbek language. Morphology. (Responsible editor: R.R. Saifullaeva). - Tashkent: Mumtoz soz, 2008. – 522 б. – P. 86.

[2] Ҳамроева Ш. Ўзбек тили морфологик анализаторларининг лингвистик таъминоти. Филология фанлари

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This article discusses the national models of pure quantitative numerical category of noun.

In Uzbek language, there are two different forms of the quantitative numerical category. The international model in English for singular nouns that do not take a plural suffix has a form [**N**]; the national model in Uzbek language – [**Ot**]. Thus, when dividing nouns into numerical categories, the noun class model includes singular nouns, the singular form of the noun does not have a special form. The most important sign in pure quantitative numerical category of noun is the presence of the affix **[-lar]**.

The plural form of noun is formed morphologically by adding the plural suffix – **[-lar]** to singular noun, like: uy – uylar, bola – bolalar, gul – gullar, kitob – kitoblar. The plural form of noun in English is made by adding the suffix **[-s]**, **[-es]**, like: pen – pens, table – tables, class – classes, box – boxes.

Due to the fact that the numerical categories of noun have several ways, when modeling plural nouns formed with the morphological method, it is appropriate to use affix models. An affix model is the transformation of an affix (addition), which performs the function of connecting one word with another in the morphology of Uzbek language, into an unchangeable form and moving it to a model in computer linguistics. Affixes are moved into the model in their position, and the categorical model is specified if necessary.

[-lar] in Uzbek language, **[-s]**, **[-es]** in English language are affix-models, they are reflected in the coefficient of noun model in singular form. As a result, the international model of the plural form of noun formed with the morphological method has a form [N_{-s}], [N_{-es}]**,** the national model – [Ot_{-lar}]. For instance: Navbahor, ochildi **gullar,** sabza bo'ldi **bog'lar** (Muqumiy). In a sentence, plural nouns have the following models:

Categorical model: $\left[F \leftarrow Ot^{sk} \right]$ – like, ochildi gullar, sabza bo'ldi bog'lar, sayradi qushlar, yayradi bolalar, kulishdi qizlar.

Affix-model: $\left[F \leftarrow Ot_{-lar} \right]$ – like, ochildi gullar, sabza bo'ldi bog'lar, sayradi qushlar, yayradi bolalar, kulishdi qizlar.

The categorical model includes all plural nouns formed with morphological, lexical-semantic and mixed methods, and the affixal model includes only plural nouns formed with the morphological method. Thus, in Uzbek language, plural nouns formed with the morphological method are combined into one national model.

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Unlike Uzbek, the plural form of nouns in English has different forms depending on the last letter of the word. This gives rise to a quantitative abundance of affix models. We review these models below:

If nouns end with consonant + y, the letter **y** is changed into **i** and then the affix [**-es**] is added: city – cities, puppy – puppies. Nouns like these are represented with the international model $[\ N_{y/i-es}\ ]$.

If nouns end with vowel + y, in order to form the plural form it is enough to add the affix [**-s**]: key – keys, boy – boys. For nouns like these, the international model $[\ N_{-s}\ ]$ is recommended.

If a noun ends with the letter **o**, the plural noun is formed by adding the affix [**-es**]: potato – potatoes, tomato – tomatoes. It is appropriate to model them in the form $[\ N_{o-es}\ ]$.

If nouns end with the letters **f** or **-fe**, these letters are changed into the letter **v** and **-es** is added: knife – knives, wolf – wolves. It is necessary to model the nouns like these in the form $[\ N_{f/v-es}\ ]$ and $[\ N_{fe/v-es}\ ]$.

If nouns end with the letters **s, ss, sh, ch, x** or **z**, in order to form the plural form, [**-es**] is added, like: bus – buses, boss – bosses, leash – leashes, church – churches, box – boxes, quizz – quizzes. The international models of the nouns like these are given in the forms $[\ N_{s-es}\ ]$, $[\ N_{ss-es}\ ]$, $[\ N_{sh-es}\ ]$, $[\ N_{ch-es}\ ]$, $[\ N_{x-es}\ ]$, $[\ N_{z-es}\ ]$. In this case, the letter which a word belonging to a group of nouns ends with is reflected in the coefficient of the main model, before the affix-model.

We should not forget that in linguistics there are exceptions, that is, words that do not correspond to the rules, that are outside them. When modeling exceptions in the formation of plurals in English, they are embedded in another morphologically compatible model. For example: the words roof – roofs, belief – beliefs, chef – chefs, chief – chiefs are included into the model $[\ N_{-s}\ ]$, instead of the model $[\ N_{f/v-es}\ ]$; the words photo – photos, piano – pianos are included into the model $[\ N_{-s}\ ]$, instead of the model $[\ N_{o-es}\ ]$. So, the modeling method negates the exceptions in the language and includes the words in another model according to their specific features.

In English, there are nouns with the same plural and singular forms, as well as irregular plurals, i.e. words with irregular plural forms. In computer linguistics, nouns with the same plural and singular forms are included into the model $[\ N\ ]$, if they are in singular form; and if they are in plural form – into the model $[\ N^{+}\ ]$, based on speech reality. For example: sheep – sheep, series – series, species – species, deer

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– deer. Nouns with irregular plural forms are unified in the model $[\mathbf{N^{+no}}]$. For example: child – children, goose – geese, man – men, woman – women, tooth – teeth, foot – feet, mouse – mice, person – people.

There is no irregular plural in Uzbek. According to A. Gulomov, "there are very few Arabic and Persian words that have come to us in the plural, because usually the words of one language are transmitted to another language as a singularity"[3]. The scientist was in favor of preserving the laws of Arabic and Persian languages when transferring plural words from those languages to Uzbek[4]. Based on the opinions of A. Gulomov, the plural forms of the words like hol-ahvol, faqir-fuqaro, valad-avlod, taraf-atrof, haq-huquq, xalq-xaloyiq, shayx-mashoyix, nabiy-anbiyo, she'r-ash'or, tolib-talaba, shoir-shuaro, kabir-akobir, xulq-axloq are included into the model $[\mathbf{Ot^{sk|no}}]$ as irregular plurals. However, they are used interchangeably in Uzbek language in the sense of singularity. For example, ahvol-ahvollar, fuqaro-fuqarolar, avlod-avlodlar, huquq-huquqlar, anbiyo-anbiyolar, talaba-talabalar, mashoyix-mashoyixlar, shuaro-shuarolar ash'or-ash'orlar. In this case, modeling is done in a synchronous plan, not a diachronic plan. Diachronic modeling of nouns requires a separate study[5].

As in English, in Russian, the plural form of nouns changes depending on the last letter of the words. Имя существительное, nouns in Russian language are modeled nationally in the form $[\,\text{Ис}\,]$. This model serves as the basic model for analytical models of numerical categories in Russian language. So, when modeling the paradigm of grammatical categories of nouns, each grammatical paradigm is studied by dividing it into parts, internal terms.

Case 1: plural forms of the nouns ending with the letter **е** are formed by adding the suffix **я**, i.e. the letter **я is written instead of the letter е**: здани**е** (building) – здани**я** (buildings), мор**е** (sea) – мор**я** (seas), пол**е** (field) – пол**я** (fields)**. They can be expressed in the model** $[\,\text{Ис}_{е/я}\,]$.

Case 2: plural forms of the nouns ending with the letter **я** are formed by adding the suffix **и**, i.e. the letter **и is written instead of the letter я**: тёт**я** (aunt) – тёт**и** (aunts). They are unified in the model $[\,\text{Ис}_{я/и}\,]$.

[3] Ғуломов А.Ғ. Ўзбек тилида кўплик категорияси. – Тошкент, 1944. – Б. 33.

[4] Ҳамидов З. Аюб Ғуломов кўплик категорияси хусусида. Айюб Ғуломов ва ўзбек тилшунослиги. – Тошкент, 2004. – Б. 67-69.

[5] Zarmasov Sh. Rahmonqulov B. O'zbek tilida soddalanish hodisasi va uning omillari. – Toshkent davlat pedagogika universiteti ilmiy axborotlari ilmiy-nazariy jurnali. 2020-yil, 2-son. – B. 201-207.

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Case 3: plural forms of the nouns ending with the letter **ь** are formed by adding the suffix **и**, i.e. the letter **и is written instead of the letter ь**: ноч**ь** (night) – ноч**и** (nights), миш**ь** (mouse) – миш**и** (mice). Their model is in the form $\left[\ \text{Ис}_{\text{ь/и}}\ \right]$. But exceptional words like **учитель** (teacher) **– учителя** (teachers) are included into the model $\left[\ \text{Ис}_{\text{ь/я}}\ \right]$.

Case 4: plural forms of the nouns ending with the letter **й** are formed by adding the suffix **и**, i.e. the letter **и is written instead of the letter й**: музе**й** – музе**и**, геро**й** – геро**и**. Their model is in the form $\left[\ \text{Ис}_{\text{й/и}}\ \right]$. But exceptional words like **край – края** are included into the model $\left[\ \text{Ис}_{\text{й/я}}\ \right]$.

Case 5: plural forms of the nouns ending with the letter **o** are formed by adding the suffix **a**, i.e. the letter **a is written instead of the letter -o**: мест**о** (place) – мест**а** (places), дел**о** (work) – дел**а** (works). The are unified in the model $\left[\ \text{Ис}_{\text{o/a}}\ \right]$. But exceptional words like **ухо** (ear) – **уши** (eras)**, дерево** (tree) – **деревья** (treesare included into the models $\left[\ \text{Ис}_{\text{о/и}}\ \right]$ and $\left[\ \text{Ис}_{\text{о/ья}}\ \right]$.

Case 6: if the nouns end with the consonants **г, к, х, ж, ч, ш, щ and a,** these are always followed by the letter **и**: карандаш (pen) – карандаш**и** (pens), стих (poem) – стих**и** (poems), урок (lesson) – урок**и** (lessons). According to the number of selected letters, 7 models are structured: $[\ \text{Ис}_{\text{г+и}}\ ]$, $[\ \text{Ис}_{\text{к+и}}\ ]$, $[\ \text{Ис}_{\text{х+и}}\ ]$, $[\ \text{Ис}_{\text{ж+и}}\ ]$, $[\ \text{Ис}_{\text{ч+и}}\ ]$, $[\ \text{Ис}_{\text{ш+и}}\ ]$, $[\ \text{Ис}_{\text{щ+и}}\ ]$.

Case 7: plural forms of the nouns ending in all consonants except letters **г, к, х, ж, ч, ш, щ are formed by adding the letter ы**: класс(class) – класс**ы**(classes), шкаф-шкаф**ы. For** them, the model $\left[\ \text{Ис}_{|\text{ы}}\ \right]$ is appropriate.

Case 8: if the conconants **г, к, х, ж, ч, ш, щ are followed by the letter a, the letter и is written instead of the letter a** in order to make the plural form: книг**а** – книг**и**, задач**а** (task) – задач**и** (tasks). In this situation, for each case the models $\left[\ \text{Ис}_{\text{г(а/и)}}\ \right]$, $\left[\ \text{Ис}_{\text{к(а/и)}}\ \right]$, $\left[\ \text{Ис}_{\text{х(а/и)}}\ \right]$, $\left[\ \text{Ис}_{\text{ж(а/и)}}\ \right]$, $\left[\ \text{Ис}_{\text{ч(а/и)}}\ \right]$, $\left[\ \text{Ис}_{\text{ш(а/и)}}\ \right]$, $\left[\ \text{Ис}_{\text{щ(а/и)}}\ \right]$ are recommended.

Case 9: **if all consonants except consonants г, к, х, ж, ч, ш, щ are followed by the letter a, the letter ы is written instead of the letter a** in order to make the plural form: парт**а** – парт**ы**, картина – картин**ы. For** these nouns, the model $\left[\ \text{Ис}_{|(\text{а/ы})}\ \right]$ is recommended. The line $\left[\ \vdots_|\ \right]$ in the coefficient of the models above indicates that the boundary is closed, the presence of a consonant sound.

In conclusion, we can say that the analytically created national models of numerical categories in Uzbek, English and Russian languages, at first, clearly show exceptions

and irregular forms of the plural in each language, secondly, determines the reasons for the increase in the number of analytical models in the paradigm of numerical categories of each language, thirdly, it shows the limits of the number of analytical models in each language category from linguo-statistical point of view. Namely, according to the results of linguo-statistical analysis in the process of national modeling, it was determined that there are plural forms with the morphological method according to: 1 analytical model in Uzbek language; 13 - in English; 25 - in Russian.

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