

COMMUNICATIVE PRAGMATIC ASPECTS OF DEIXIS IN ENGLISH AND UZBEK SCIENTIFIC TEXTS ON NATURAL SCIENCES

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Abstract

One of the emerging views in linguistics is the study of linguistics in connection with the human factor and changes in the natural sciences, with a slight departure from traditional formal linguistics. In natural-scientific texts, the text ensures the integrity of deictic units, as well as the identity of the person, space and time. They also serve a communicative purpose. The article investigates the scientific texts in natural science about the application of deictic tools as the means of communication and the pragmatic features of deixis. All the examples are taken from English and Uzbek natural- scientific texts and analyzed. The use of deixis in scientific style are shown with examples.

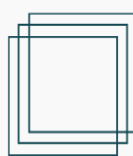
Keywords: communicative aspect, pragmatic aspect, deixis, scientific style, natural science, deictic tool.

People differ to some extent in the choice and use of lexical, phraseological, grammatical and phonetic means in the language in the process of communication in all conditions and in all spheres of activity. Each of the speech styles forms a separate unique system. The formation of a system of interrelated elements of speech style stems from the social nature of language, which is a tool of communication. It is true that the phonetic structure, grammatical structure and vocabulary of the language each form a separate system, and the language itself as a whole. Functional styles of language are formed due to the organization of all the means inherent in these lexical, grammatical and phonetic systems for a specific communicative purpose [10, 35].

The function of the scientific method is to clearly describe and explain the phenomena of nature and social life, the logical proof of this or that idea. The logical nature of the scientific method is reflected in its lexical-phraseological and grammatical features. In this style, the majority of words and phrases of a terminological nature, which clearly define things and events and are used in the correct sense [10, 48].

Any linguistic structure is created for a specific purpose. Scientific texts also try to convey the facts to the reader in an understandable and fluent way. Thus, in speech activity there is always a need to connect the linguistic form with reality and to express a personal opinion about it [8, 13]. This function is performed by deixis. It is also a phenomenon that requires the use of deictic tools for scientific texts.

The grammatical structure of the scientific method requires logical connection, consistency, syntactic accuracy. All types of deictic expressions express the meaning of a sign, a sign, and because the speaker is at the center of the display area, the starting point of the sign is also a piece of reality in front of his eyes [8,9].



One of the types of deixis, deixis of person is also an integral part of the scientific text. The composition of a person deixis in relation to the role he plays in the process of verbal communication is determined. The first person is a linguistic expression of "self-expression, reminder" instead of the speaker, the second person is a linguistic designation of the listener or recipient and the third person is a person who is not a direct participant in the conversation. This system, which differs in its contribution to the migration of communication, is reflected in the group of rhymes [6, 162].

The use of first-person pronouns for the description of the scientific style is not very specific. However, in some cases we can see that they are expressed through first-person pronouns:

In the field of science, scientists often avoid calling themselves first-person pronouns, so it is not uncommon to designate the author of a text as an explicit. This feature is common not only in scientific texts in English, but also in scientific texts in Uzbek. When a fact is unknown or incomprehensible to the author, or if the author wants to limit himself to the study of the issue only from the point of view of personal approach, the pronouns "I" and "we" can usually be used in parallel [9, 55].

We did not observe a link between leukocyte counts and platelet activation. (EHP, Feb, 2010. – P.587).

I think you have to tell people there may be a problem here (Science, 2009, vol 307 – P 1183).

The pronoun "I" is almost not used in scientific texts in the Uzbek language. Its function is performed by the pronoun "we". However, in this case we are referring to the author of the person in the singular, not the plural.

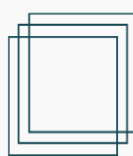
Biz mazkur ishimizda otlar o`rtasida ko`p tarqalgan oyoqlarning distal bo`g`imlaridagi surukali aseptik yallig`lanishlarni davolash va oldini olish chora va tadbirlarini ishlab chiqishni maqsad qilib oldik(Immunologiya, 2006, №6 (26). B.45).

Pronoun in plural form does not always correspond directly to a pronoun in singular. In particular, "we" does not mean that there are many speakers in any context. Therefore, in some cases, when the pronoun "we" is used, it is up to the listener to determine the content of the transmitted information and in what sense the plural occurs [6, 168]. We can illustrate this with the following example in English:

What I can tell you is that for every strategic row material we have not less than three qualified sources up to our standard quality (New AG international, June, 2007.-P.26).

In the scientific style, second-person dexterity is not used in practice. Those who claim to be the author of a scientific text belong to a third person as a reader.

We know that the first and second person are direct participants in communication, and the pronouns in the "I": "you" groups represent "communicative persons". Third-person pronouns, on the other hand, do not have this feature, their reference is "non-communicative person" who is not a direct participant in the dialogue [4, 176]. While speaking of the means of expressing the person deixis, it should be in mind that in the



language system the third person pronoun is also divided into a separate group. It has already been noted that the rhymes in this group are radically different from the others in terms of semantic and communicative nature. We know that the first and second persons are direct participants in communication, and the pronouns in the "I": "you" groups represent "communicative persons". According to G.G Pochepsov, inactive participant and observer, "he" is the opposite of "I" and "you". In addition, this person is "here" in the dialogue of "I" and "you", and thus has a direct impact on the speech activity of communicators "[5,35].

Third-person deixis is one of the most effective tools for scientific research. Typically, in scientific texts, the following singular and plural forms of the 3rd person pronoun occur: he, his, they, them.

Ho says he and his co- workers hope to publish their findings rapidly online, and they will present data from case at a large U.S. AIDS meeting in Boston this week. (Science, 2009, vol 307 – P 1193)

A noun that comes as a group of nouns can be the antecedent of a third person pronoun [8, 12]:

Among his many other accomplishments, professor Zhang has served as project leader for two large Sino – German research projects in the North China- Plain concerned with sustainable resource use in intensified crop production. (New AG international, June, 2007.-P.10).

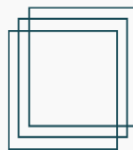
In Uzbek, the third person pronoun is given in the form as u, ular, uni, uning, ularni ularning (he, they, him, his, them) :

Dalton atomistik ta'limotga tayanib, kimyoning asosiy qonunlarini izohlab berdi. U kimyoviy element tushinchasiga aniq ta'rif berdi (Genetika asoslari, 2005, №3. B.25.)

References to the third person as a source of information are related to the requirements for accuracy and objectivity of the information interpreted in the article. It is impossible not to mention in this case who the author was in the course of this or that research. The participation of the person represented by the 3rd person in the text of the dialogue is determined in relation to the 1st person, or the speaker, because "he" is mainly the object of speech activity, the protagonist of the story. Therefore, the verbal naming of the 3rd person can take two forms: stereotypical (traditional) and non-stereotypical (subjective) [9, 14].

We would like to offer a different opinion on the ideas presented in the article by Keshava and Caldwell (2006). The authors indicated that their article summarized scientific literature published since an earlier U.S. Environmental Protection Agency (EPA) risk assessment of trichloroethylene (TCE) with an emphasis on the possible role of proliferators- activated receptor α (PPAR α) agonism relevant to TCE risk assessment (EHP, Jan, 2007. – P.587).

Like many other classes of insecticides, the pyrethroid insecticides are acute neurotoxicants and although dissimilar in structure and environmental and biological



persistence to P, P'- dichlorodiphenyltrichloroethane (DDT). Their modes of action are strikingly similar. (EHP, June, 2010. - P. 862)

Senninger Irrigation introduces their new End spray (New AG International, June, 2010. - P.54).

Nisbiy molekulyar massa son jihatdan modda molekulasi tarkibiga kiradigan barcha atomlar nisbiy atom massalarining yig'indisiga teng. Uni moddaning formulasidan oson hisoblab topish mumkin (Genetika asoslari, 2005, №3. B. 23).

Given that the communicative nature of the third person is sufficient, the pronoun "he" can be added to the list of linguistic means of expressing the deixis of the person. As for the "replacement" function of pronoun, mentioned by AA Ufimseva, this task is specific to all types of diamonds. Fulfillment of the substitution task requires the presence of a co-referential event in the speech act or text [7, 125]

It has been shown that chronic inflammation is involved in the development of atherosclerosis(EHP, Feb, 2010. – P. 684).

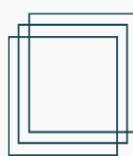
Specific resistances towards benzimidazoles, dicarboximides and fenhexamid have been detected. Half of these strains are multi resistant in some vineyards (New AG international, June, 2007.-P.20).

Indeed, scientific style description is different from artistic style imagery. In the scientific style, figurative names serve only as a nominative name, and in fiction, they serve to have an aesthetic effect on the reader. The category of imagery (emotionality) is manifested in the scientific style as "extinct, without light", and in fiction as a living thing. A scientific-technical statement differs to some extent from a scientific-natural statement or a strict scientific statement from a popular scientific statement. These differences stem from the narrative situation and the narrative "material". Therefore, since natural-scientific, scientific-popular and scientific-mathematical statements are manifestations of scientific style, they have general, holistic features characteristic of scientific style [10, 47].

The scope of the use of space dexterity in scientific texts differs from the artistic style or the process of communication. The reason for this is that it comes in the context of the text, not in the process of direct communication. Spatial indicators of the speaker-author are based only on the relationship of the components of the text.

The following Sh. Safarov's opinion can be a proof of our words and we see that in scientific texts the space deixis is used symbolically:

We will see the use of the first type of deictic unit in the example "I want you to put it there" . It is clear from the content of this sentence that the speaker is referring directly to space. Is the person talking on the phone Is Johnny there? Is John there? In his question, the reference to space is symbolic, and in it the deictic unit takes on the meaning "where you are." In such a description, the distance or proximity of the space can be determined not only in relation to the speaker, but also to the listener - the addressee. In addition, the direction of the movement also affects the use of deictic



expressions [2,168]. In English, the following words are used to describe space: this (way), that (direction), here, there

In English scientific texts, this / that here / there can be used as a spatial deixis:

In this context the procedures of integrated pest management which have long been known, are gaining in importance (Plant Research and Development, 1996.N^o56. - P.81).

Epidemiologic studies suggest that there may be an association between environmental exposure to persistent organic pollutants and diabetes (EHP, Jan, 2007. – P.879).

In the Uzbek language in scientific and natural texts the expression of space dexterity is used as follows:

Izotoplar kashf etilganidan keyin, yuqoridagi ta'rifni qayta ko'rib chiqishga to'g'ri keldi. Atom massalarini qayta qarab chiqish yuzasidan 1923 yilda tashkil etilgan xalqaro komissiya qaroriga muvofiq «kimyoviy element – bir xil yadro zaryadiga ega bo'lgan atomlar turi» deb ta'riflandi (X.Otaboyeva. O`simlikshunoslik, Toshkent- Mehnat 2000.B.115).

In this case, the word “yuqoridagi” is understood from the text, and the meaning of space is limited only by the scope of the text.

In general, the logical consistency of the expression, with a focus on logical learning, logical perception and logical ability, is one of the main features of the scientific method, which is often referred to the intellectual elements of expression for this purpose. For the scientific method it is important to have a strict logical sequence, the interdependence of the components of the text. The next sentence in a certain paragraph completes the idea expressed in the previous sentence. This ensures that the structure of the text is linear.

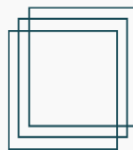
According to G. Yul, "deictic expressions, despite their limited number, are widely used, and they express more communicative content than each individual use" [3, 16].

The deixis of time is no exception, the pragmatic content of deictic characters of this type depends on the context and the communicative purpose of the speaker (writer), the intensity of communication [6, 178].

As mentioned earlier, a time deixis, like a space deixis, is also given on a text scale. The assignment of units of time as a deixis of time gives certain meanings within the text, and if they are transferred directly to the process of communication, or over time, these indicators of the given time will also change. In English, time deixis is expressed by words such as now, past recently:

At present there are no data on the national emissions of the indirectly acting greenhouse gases NO_x and CO through agriculture (Plant Research and Development, 1996.N^o56. - P.56).

Now comes the coup de grace synthesis of a room temperature stable electricide, a compound in which the counterion in an alkali- metal cryptand complex is a trapped electron (C & Gen, 2005 N^o45 – P.43).



Recently the *Candida albicans* genome sequence provides new insights into this important fungal pathogen (Science, 2009, vol 307 – P 1323).

In the Uzbek language, the deixis of time is given today, now, then, in the past with the help of the words:

Hozirgi vaqtda kimyo va kimyoviy ishlab chiqarish xalq xo'jaligida g'oyat muhim ahamiyat kasb etmoqda (O'zbekiston qishloq xo'jaligi, 2014, №2. B.12).

Hozirgi vaqtda genetika oldida turgan muhim vazifa – duragaylardagi getereozisni mustahkamlashdir (Genetika asoslari, 2005, №3. B. 15)..

Ilgari duragay urug'lari olinishi mumkin bo'lmagan ekinlarning ham getereozisli duragaylarini yetishtirish imkoniyatlari ochildi (Genetika asoslari, 2005, №3. B. 14).

The scientific style has both emotional and figurative color. It is not right to contrast the accuracy and clarity of this style with its imagery and emotionality. The role of figurative names in the Uzbek scientific style is very big. For example, oq tuproq, qora tuproq, qizil tuproq, sho`rtuproq [10, 68].

The novelty of the research carried out by the detailed description of the information transmitted in the scientific text can reveal its scientific and practical nature [8,9]:

In conclusion the present study confirms and extends previous observations of concave downward relationships between albumin adducts of biologically reactive benzene metabolites and benzene exposure (EHP, Jan, 2007. – P.628).

The word "present" in this example comes as a phrase, which helps the author to summarize the idea.

Another characteristic feature of scientific texts is the use of this discourse deixis. In English scientific texts, discourse deixis is given by various conjunctions, introductory words:

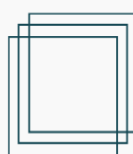
However, a single application of CRF with reduced application rate should be used during the rainy season in the tropics, in order to continuously supply the crops with highly available nutrients (New AG international, June, 2007.-P.65).

Although the validity of the data on deforestation in the tropics at least for 1989, remains somewhat uncertain, they allow the conclusion that, the rate of destruction increased markedly from 1980 to 1989 and that if this trend continues, some countries will soon lose the last of their intact forest areas (Plant Research and Development, 1996.№56. –P. 42).

Altogether, three molecules now command the market for nitrification inhibitors while the market for urease inhibitors is practically dominated by one molecule only. (New AG international, Dec, 2002. – P.23).

The words highlighted in the three examples help the author to express his thoughts as a discourse deixis, and at the same time draw the reader's attention to the topic.

In natural-scientific texts in the Uzbek language the discourse dexterity is considered productive:



Barcha elementlar odatda metallar bilan metallmaslarga bo'linadi. Lekin bunday bo'linish shartlidir (K.Rasulov Umumiy kimyo, 1998. B.31).

T.Morgan o`zining barcha genetik tajribalarini dzorofila (meva) pashshasi ustida o`tkazadi. Chunki bu pashsha kichik, hatto pobirkada ham arzon oziqa bilan ko`payib, qisqa muddatda (ikki haftada) bir necha yuzlab yangi nasl berishi mumkin (Genetika asoslari, 2005, №3. B. 11).

Deictic words are the factors that form the content of direct communication and allow the interlocutor or reader to have full information about the situation of this communication [9, 11].

In this regard, deictic words are also characteristic of the scientific text, and the use of deictic words in the scientific text affects the pragmatic nature of the text. Deictic tools also perform a communicative function in the scientific text, only such a task occurs between the author and the reader.

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