

English as a “Shared Code” for International Scientific Communication

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In recent years the role of English has become crucial in the ongoing process of globalization worldwide. Today the public recognition of the global position of English is already a fact, and, presumably, there is nothing to stop the spread of English as a global lingua franca in the foreseeable future.

As a consequence of globalization, a range of language situations, either physically or virtually (e.g. through Internet communication), have emerged. As far as the present research work is concerned, the physical contact situations are frequently observed at conferences, debates, discussions, lectures, round tables, etc..., when the participants have to make presentations, ask/answer questions, when they do not only have to introduce their new ideas or express their own viewpoints on this or that professional problem/issue, but also understand and share thoughts with each other. Actually, it is the lack of necessary professional language skills that makes it difficult for a scientist-speaker/listener or scientist-writer/reader to send and receive information on a particular subject for professional/specific purposes. In this connection it is indisputable that due to today's requirements of the English language acquisition, some new approaches and strategies of language teaching/learning are needed.

H.G. Widdowson (1978) states that even though language itself is a complex system, it may display certain peculiarities of usage as a means of communication in certain professional spheres. Such peculiarities are closely connected with the characteristics of this or that profession. In this respect various perspective paths for teaching/learning English for specific purposes should be paved.

It goes without saying that teaching Scientific English (SE) plays an indispensable role in the sphere of International Scientific Communication (ISC), as the learning process of the latter can be implemented on the basis of SE. SE, which is, in fact, a language for specific purposes, is important for every scholar to master not only because it is a key to understand and be understood in scientific communication environment, but also because it is necessary for a scientist to be aware of the process of the development of international scientific thought.

In terms of functional styles the language of science serves to perform an informative function, and that is a top priority for this style of language. As it is assumed, the language of science is used to convey scientific information and facts. However, it is also well known that either the sender or the receiver of information (those involved in scientific communication) are human beings, therefore, the language they use for specific purposes cannot be devoid of emotions at all (Bragina, Dodrokhotova 1988; Budagov 1976). In other words, though in scientific discourse the stylistic function proper is that of informative, in some situations the function of impact also works. In this respect the function of impact is used to express not only the exquisiteness of the author's (scientist-

speaker's/writer's) personal style (as it generally occurs in fiction), but also to make the so-called dry, complicated style of scientific language more attractive and achievable, as well as, to introduce the scientific information as clearly, concisely and vividly as possible.

Thus, on the one hand the language of science contains linguistic elements with the help of which the *informative* function is realized, on the other hand there are words and word-combinations which are used to implement the function of impact. However, in this respect it should be pointed out that the function of impact works differently in the styles of scientific language and fiction (or verbal art). This fact is quite grounded, since the aim of communication in different functional styles (genres, registers) is different.

It is generally an acknowledged fact that the function of impact is characteristic of verbal art. It is mainly used to meet the aesthetic purposes of the reader/listener, as well as to express the beauty, originality or uniqueness of the author's personal style of writing, the level of flight of his/her imagination and objective reality in general. In contrast, the function of impact in the language of science is aimed at making the information and facts of scientific discourse more impressive and comprehensive as well as demonstrating the author's diversity of knowledge, the properties of his/her personal style.

Before passing to *our* target issue, which may be one of the key strategies of international scientific communication, it is worth shedding light upon some approaches to LSP.

Some linguists, such as P. Strevens, P. Robinson, T. Hutchinson & A. Waters etc, hold that LSP deals with language teaching methods rather than with language system. The linguists state that LSP has to work out special methods and principles which will meet the learners' educational needs.

The learners' needs have necessarily to be taken into account in the process of teaching. However, we should assume that no method can work unless the learner of LSP has the basic knowledge of General English. No one would probably deny the fact that it is impossible to construct anything if one does not have the necessary building materials, even if the most modern tools are available for that purpose. The same phenomenon is observed in language teaching sphere. Consequently, it should be taken into account that a certain level of language knowledge (speaking/writing skills) is required for the implementation of verbal communication in general and in scientific environment in particular. In this respect we side with the standpoint of such linguists as O. Akhmanova, R. Idzelis, Z. Bareikite, V.G. Kostomarov, O.D. Mitrofanova, L. Hoffman etc., who state that LSP is a variety of language whose mastering requires a certain level of language medium necessary for communication on professional matters.

Thus, in connection with the concept of LSP, it should be concluded that the question "*What shall we teach?*" is of more importance than that of "*How shall we teach?*".

Research work has shown (Akhmanova, Idzelis 1978; Ter-Minasova 1986; Gasparyan 2000) that LSP is aimed at realizing an effective and purposeful scientific communication. The thorough linguostylistic analyses of linguistic texts, literary-critical texts, law-texts, etc. have brought us to the conclusion that the three basic levels of the vocabulary of scientific prose style (1. words of general language; 2. general scientific

vocabulary; 3. terms proper: terms and terminological words or word-combinations (Akhmanova, Idzelis 1978), in fact, build up the core of the vocabulary of international scientific communication.

How can these layers be revealed in the text? In this respect the method of linguostylistic analysis of a text can be helpful, as it includes the semantic and metasemiotic levels for the study of the vocabulary of a text as a whole.

On the semantic level, we treat the linguistic units (words, word-combinations, grammatical forms, patterns of major syntax) as such, as parts of the emic system of language. In other words, we concentrate on the general semantic content, or the so-called nominative (direct) meanings of these units. But all this is a preliminary linguistic investigation from which we necessarily have to pass to the metasemiotic, or stylistic analysis proper.

After having analysed the semantic level, we proceed to the analysis on the metasemiotic level. Now let us study the connotations which words acquire in oral or written speech. The linguostylistic study of the text would be incomplete without the analysis in terms of rhythm and timbre suprasyntactics. We must understand what the text actually sounds like, how emotional-expressive-evaluative overtones are expressed in the oral form of speech.

The two levels, though basically different, are in constant interaction, because the relationship between them is dialectical. The metasemiotic level is based on the semantic one and cannot exist without the latter. At the same time the semantic level as such is unable to reveal the refinements of textual analysis.

The method of linguostylistic analysis is universal in the sense that it can be applied to all kinds of texts, irrespective of register. Even intellectual texts, which by definition aim at disseminating information, may contain a certain amount of metasemiotic utterances. This method can be easily taught to undergraduate students and all learners in general. This simple, step-by-step methodology gives the learners an idea of how to work with the text so as to be able to reveal and take into consideration those properties which are superimposed on the semantic content proper (Akhmanova, Alexandrova 1989).

As the method of linguostylistic analysis is universally applicable to any kind of text (no matter what functional style it belongs to), we will attempt to use it for the study of the following extract from a literary critical text where the author expresses his own viewpoints on E. Hemingway's style of writing: "Hemingway's style of writing is striking. His sentences are short, his words simple, yet they are often filled with emotion. A careful reading can show us, furthermore, that he is a master of the pause. That is, if we look closely, we see how the action of his stories continues during the silences, during the times his characters say nothing. There are times when the most powerful effect comes from restraint. Such times occur often in Hemingway's fiction. He perfected the art of conveying emotion with words.

In contrast to the Romantic writer, who often emphasizes abundance and even excess, Hemingway is a Classicist in his restraint and understatement. He believes, with many other Classicists, that the strongest effect comes with an economy of means.

This is not to say that his work is either emotionless or dull. "In Another Country", the short story is filled with emotional overtones. Its dominant feeling is one of pity for

misfortunes that can never be remedied. A hand crippled is, and will always be, a hand crippled. A beloved wife lost through death is lost indeed. Perhaps we should be resigned to such misfortunes, but the Italian major in this story laments that he cannot be resigned. The tragedies of life cannot really be remedied" (Curry, 1995).

Our first step will be semantic analysis. We must make sure that we understand the general semantic content of all linguistic units.

The words of this text (as in any other intellectual text) fall into 3 groups: 1) words of general language; 2) general scientific vocabulary; 3) terms proper.

The first group of words - words of general language, comprises such examples as: *life, emotion, action, wife, master*, etc.

Words like *sentences, reading, writing, writer, means*, etc. can be referred to the second group that is to say, the units of general scientific vocabulary. The following terms and terminological combinations are referred to the third group: *style of writing, short story, fiction, Classicist, Romantic writer*, etc.

A considerable number of units with obvious expressive-emotional-evaluative connotations are found in the following extract: "*Hemingway's style of writing is striking, the most powerful effect, misfortunes that can never be remedied, lament, crippled, a master of pause, action continues during the silences ...*"

The sentence "*The tragedies of life cannot be really remedied*", used by the literary critic in his piece of critical writing, is a result of the influence of Hemingway's style itself, and the critic, actually, agrees with the author of the short story in expressing the opinion that 'the misfortunes of life are difficult to overcome and are impossible to forget.'

It goes without saying that the linguostylistic analysis of the text will be incomplete without the study of both syntactic and rhythmical structures of the passage. On the whole, this text is constituted with the help of short, concise and clear sentences which are characterized by a monotonous rhythm peculiar to the language of science.

However, the present extract (taken from a literary critical text) has some stylistic properties similar to those of fiction. Therefore, in the extract we come across not only sentences with serious, monotonous rhythm, but also those which require a specific prosodic coloring and sound categorical. For instance, let us see how the intonations of the following sentences differ from each other: 1. A careful reading can show us furthermore, that he is a master of pause. 2. His sentences are short, his words simple, yet they are often filled with emotion. In the first example the intonation should be serious. As far as the second example is concerned, the intonation there should sound with some prosodic coloring, as here we come across the succession of the following: "sentences are short, his words are simple, yet they are often filled with emotion".

Let's analyze another piece of the extract: "In contrast to Romantic writer, who often emphasizes abundance and even excess, Hemingway is a classicist in his restraint and understatement." In this passage the author expresses his critical, somewhat categorical attitude to the differences between the style of writing of a Romantic writer and that of a Classicist. On the whole, the extract serves to realize an informative function. Now let us compare this extract with the one brought below and try to reveal the stylistic differences

between them: “Curtis writes with a razor-sharp intelligence that grabs the reader by heart and never lets go. His utterly believable depiction of the self-reliant charm and courage of Bud, not Buddy, puts this highly recommended title at the top of the list of books to be read again and again” (Curtis, 2002).

The critic’s words about the author of the book “Bud, Not Buddy” include emotional-expressive-evaluative units such as: razor-sharp intelligence, grabs the reader by heart... etc, which serve to perform the function of impact. However, in this piece of writing the critic does not aim at expressing aesthetic values since on the whole, he actually intends to give information about Curtis’ style of writing.

Thus, we can state that the emotionally colored elements used in literary critical texts differ from those used in fiction in quality. It is just a matter of the author’s (critic’s) personal style of writing. In connection with the aim of the present article, it is important to mention that the connotative elements should be included into the vocabulary of international scientific communication. It is an acknowledged fact that the study of texts in terms of connotation shows that human speech can basically be divided into intellective and imaginative. Researches have been done to draw a distinct line between the informative function of speech and verbal art (based predominantly on the function of impact). It has always been assumed that in intellective communication the speaker or writer, whose basic aim is to send information, does not rely on the connotative values of words and utterances.

Thus, the research on how Scientific English can serve as a means of international scientific communication brings us to the following conclusion: all the 3 layers of the vocabulary of Scientific Prose can serve as a sort of “shared code” for scientists to communicate in this or that scientific environment. In fact, this refers to all the languages for specific purposes.

Consequently, it can be assumed that the core of the language of science, i.e. the three layers of the vocabulary of scientific prose, can serve as a “shared code” for all those who are involved either in oral or written communication in the sphere of science, otherwise stated, it can serve as a “shared code” for international scientific communication.

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Անգլերենը որպես միջազգային գիտական հաղորդակցման միջոց

Այսօր քաղաքական, տնտեսական, գիտական, մշակութային և այլ ոլորտներում բազմաբնույթ խնդիրների լուծմանն են նպաստում աշխարհի տարբեր երկրների միջև օրեցօր խորացող շփումները: Ակնհայտ է, որ այսպիսի իրավիճակում անգլերենին, մասնավորապես գիտական անգլերենին տիրապետելը հրատապ է դառնում: Այդ առումով սույն հոդվածում փորձ է արվում կատարված բազմաբովանդակ ուսումնասիրությունների հիման վրա որոշակիացնել ու վերհանել լեզվական ու ոճական այն միջոցները, որոնց տիրապետելը կնպաստի տարբեր ազգության գիտնականների միջազգային հաղորդակցմանը մասնակից դառնալուն: