Scientific prose style and its specifics

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Abstract
Generally, style is a distinctive manner of expression, both in writing and speech. Therefore, the article firstly focuses on the notion of style and its perception within the Czech and English schools of stylistics. Secondly, the scientific prose style/register is explored. This is done by looking at the features which distinguish this style from the others, such as its function whose aim is to prove a hypothesis, to create new concepts, to disclose the internal laws of existence, development, or relations between different phenomena. This feature in fact conditions and covers the distribution and arrangements of all other language means, e.g. the use of special (matter-of-fact) terminology or the logical sequence of utterances with clear indication of their interrelations and interdependence. Thirdly, the genres of the scientific prose style are outlined.
Keywords: *scientific prose, style, register, characteristics;*

I.   Introduction

In the English-speaking world the heterogeneity or variety of the language system has been extensively researched by British specialists in stylistics, such as Crystal and Davy (1969), together with other British linguists (Quirk et al. 1985 or Carol and Gregory 1978). They present five basic dimensions of the context on the basis of which discourse might differ: *time, region, field, mode* and *tenor*. Within the frameworks of the above mentioned five dimensions they distinguish eight other dimensions which they rank into three major groups (according to the position of a speaker/ writer; relations between a speaker and a hearer/ writer and a reader; the purpose of the subject matter of a speaker or a writer):

1.   individuality, dialect, time;
2.   discourse; medium: speech/ writing, participation: monologue/ dialogue;
3.   province, status, modality, singularity.

A similar approach to the analysis of the language system as language variation is represented by another British group of linguists: Halliday, McIntosh and Strevens (1964). They distinguish language variation according to *user* (relatively permanent) and to *use*. The first type is called *dialect*, the second *register*. Registers usually vary according to the context and purpose of the language used and the relation the language user has with an audience. It is defined by three dimensions: field of discourse (relation between the form and the context), mode of discourse (spoken versus written language) and style of discourse/ tenor of discourse (the social relations between the participants in language activity/ distinction between formality and informality of discourse)*.*

The notion of *register* was also researched by Biberetal. (1999). They distinguish four main registers, varieties relating to different circumstances and purposes:

- conversation; fiction; news;
- academic prose.
- In the Czech linguistic environment, the term register is commonly presented under the heading style. It was Havranek (1942) who distinguished four functions of the standard Czech language:

1.   communication;
2.   workday technical;
3.   theoretical technical;
4.   aesthetic.

He correlated these functions with four functional dialects: 1. conversational, 2. workday, 3. scientific and 4. poetic language. His theory was later further elaborated by Becka (1948; 1992), Jedlicka (1963; 1970), Hausenblas (1972), Cechova et al. (1996; 2008) and Jelinek (1996). Thus, workday and scientific functional dialects were combined into one category i.e. professional functional dialect/style.

The purpose of this study is the scientific prose style, which is, according to the above mentioned

characteristics, part of the professional functional style together with workday technical style, popular scientific style, teaching style and essayist style.

II. Scientific prose style and its characteristics

The main function of the scientific prose style is to provide factual and precise information, which must be clear, concise, unambiguous and explicit. There is no space for any redundant, repetitive and unimportant information. The target audience is a relatively small group of professionals who are well acquainted with the issue in question.

The tone of the scientific text should be formal, impersonal and objective. Only standard variety of language is used. The whole text is predominantly written in the third person. The only place where the author can be heard and s/he can express her/his opinion is the conclusion. In order to follow the logical structure, the text usually consists of introduction/background, argument, conclusion and bibliography. To make the text credible, all the important statements in the text should be supported by references. The hierarchy of the whole text is also given by its organization into chapters, sections and subsections. In addition, the information is provided not only verbally but also with the help of illustrations, tables or graphs. Nowadays, more and more different media and modes are employed in the text in order to construct the meaning of the text, but also to make it more comprehensible and attractive to its recipient. Therefore, scientific texts become hybrid in their nature because they do not consist only of one type of style and discourse. An example might be some of the scientific articles presented in Wikipedia.

As far as the language is concerned, the most striking and visible style marker is in the use of professional expressions and the so-called terms-of-art, which are typical features of this style. The word term is understood as the word with clearly defined fixed meaning and can be easily identified without any context. Generally, the terminology has a tendency to internationalisms, for instance, *chat, e-mail* or *manager*. Besides the fixed terms, the scientific prose style uses half-terms or the subject-neutral vocabulary that is shared by all sciences, such as *process, effect* or *feature*. Another set of words characteristic of this style is bookish/archaic words, e.g. *negligible* or *propagate*.

The first 100 most frequent words of this style comprises the following units:

a)   prepositions: of, to, in, for, with, on, at, by, from, out, about, down;
b)   prepositional phrases: in terms of; in view of, in spite of, in common with, on behalf of, as a result of; by means of, on the ground of, in case of;
c)   conjunctional phrases: in order that, in case that, in spite of the fact that, on the ground that, for fear that;
d)   pronouns: one, it, we, they;
e)   notional words: people, time, two, like, man, made, years.

A huge amount of connectors shows that the main purpose of the scientific prose texts is the logical sequence of utterances with clear indication of their interrelations and interdependence.

Moreover, in lexicology there is a tendency to stereotypical repetition of words in order to present information as precise and exact as possible. Sometimes, to be objective the tentative language is used. This is expressed by verbs, such as *seem, appear* and by modal verbs *may, might*. Also other modal verbs (*should, must, can*) play an important role in the scientific prose style.

The scientific texts are highly nominal in their character. That means that among the most frequent word categories are nouns, adjectives and prepositions. The verbs are not so much frequent as in other styles but there is a higher number of pronouns. The most common tense is present tense which expresses timeless validity of the proposition.

As far as the sentence structure is concerned, mostly declarative sentences are used. As Cechova (2008) states, on average, there are 19.97 words in a sentence and the clause usually has 9.3 words, which is clearly more than in any other style. The simple sentence is longer than the main clause and the subordinate clause is the shortest one. It is also typical that the sentence consists of 4 clauses and more. This is connected with the development of ideas, arguments and explanations in scientific texts. The ideas develop according to t h e traditional theme-theme classification. That means that the theme comes at the end of an utterance and becomes the theme for the following utterance. The theme is thus marked by indefinite article or null article with plural, abstracts, or uncountable nouns. The theme is then marked by define article, pronounce, anaphoric reference by such similar or one the. This is particularly true for the written scientific texts. In the spoken ones the classification might slightly change in dependence on the situation.

The sentences are mostly bound by sentence condensers, such as participles, infinitives and gerunds, which make information more dense, cumulative and economical. Typical are also relative clauses. Other constructions used in the scientific texts are as follows:
-impersonal passive constructions ('it should be pointed out that……; it has been found out that….; it has previously been shown that……')

-causative constructions (this makes problem easy; this readers the metal hard; safety valves allow the metal to cool slowly')

-formula('it is possible, necessary, essential to do sth; it is likely, evident, obvious that; it is/has been/can be/will be/should be provided/shown realized')

-connectors ('thus however therefore furthermore, nevertheless, consequently…….;   in fact, in short, in general, in this way, in other words

-subordinating conjunctions, referential pronouns, demonstrative pronouns /hierarchy/. The scientific prose style contains both written and spoken utterances:

- **primarily written**: essays, articles, textbooks, scientific studies;
- **spoken**: presentations, discussions, conferences;
- **monologue**: no feedback, no situational context, no paralinguistic features.

A more recent view of the dichotomy between spoken and written language is given by Hoffmannova (1997). She claims that differences between the spoken and written norm of language are determined by the whole complex of conditions in which a piece of communication takes place. She gives twelve different characteristics of spoken and written discourses. She arrives at the conclusion that the dichotomy between spoken and written language gives priority to the dichotomy between public and private (intimate) speech; rather there is a need of functional differentiation between public and private speech (either written or spoken).

III.   Conclusion

Writers of good scientific articles might follow Orwell's (1946) six rules for plain but true writing:

1. Never use a metaphor, simile, or other figure of speech which you are used to seeing in print.
2. Never use a long word where a short one will do.
3. If it is possible to cut a word out, always cut it out.
4. Never use the passive where you can use the active.
5. Never use a foreign phrase, a scientific word, or a jargon word if you can think of an everyday English equivalent.
6. Break any of these rules sooner than say anything outright barbarous.

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