

The Phenomenon of Specialized Language – Fundamental Issues and New Perspectives

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Gergana Boyanova. Ilina Amer. THE PHENOMENON OF SPECIALIZED LANGUAGE – FUNDAMENTAL ISSUES AND NEW PERSPECTIVES

Abstract. The paper delineates the conceptual framework of the notion “specialised language”. The authors present the approach chosen by them to delimit of a substantive academic discipline, which is to study the phenomenon of “specialised language” in all its aspects as well as the possible directions of its further development. The authors’ conception is set out as a theory of specialised language, trying to interconnect a multitude of viewpoints and approaches to the subject discussed. Based on some existing definitions, models and overall perceptions about the nature of specialised language, the paper presents traits and issues of the scientific field which studies and examines it. The key theses of this research are based on the notion that language and culture are interrelated. The process of emergence and development of the conception of “specialised language” is also traced in the context of diverse theories interwoven in its construction. Particular emphasis is placed on the interrelation between “specialised” and “foreign” language in the contemporary world. Starting from the fundamental approach, the paper also places a new focal point on the role this scientific field plays in modern linguistics in the light of the opportunities it presents for posing further linguistic issues for research. The paper contributes in this regard by both outlining arguments about the necessity of a dedicated and thorough cultivation of the discipline “specialised language linguistics”, and by giving an impetus to seeking ways, means and techniques in FLT for specific purposes in university education and vocational training in order to place it on a more pragmatic axis.

Keywords: Sociolinguistics — Specialised languages — Terminology — Language for specific purposes — Degrees of language specialisation

Гергана Боянова. Илина Амер. ФЕНОМЕНЪТ „СПЕЦИАЛИЗИРАН ЕЗИК“ – ФУНДАМЕНТАЛНИ ВЪПРОСИ И НОВИ ПЕРСПЕКТИВИ

Резюме. Изследването очертава концептуалната рамка на понятието „специализиран език“. Авторите представят избрания от тях подход за обособяване на самостоятелна академична дисциплина, която да изучава явлението „специализиран език“ във всички негови аспекти, както и възможните посоки за нейното бъдещо развитие. Концепцията им е представена като теория на специализирания език, която се стреми да свърже многобройни гледни точки и подходи към изследвания обект. Въз основа на някои съществуващи определения, модели и цялостни разбирания за същността на специализирания език се представят характеристиките и проблемите на научната област, която го изучава и изследва. Основните тези в изследването се базират на идеята за взаимовръзка между език и култура. Разглежда се процесът на възникване и развитие на концепцията за „специализиран език“ в контекста на преплетените в нейното изграждане разнопосочни теории. Специален акцент се поставя върху взаимовръзката между „специализиран“ и „чужд“ език в съвременния свят. Изхождайки от фундаменталния подход, изследването поставя нов фокус и върху ролята, която очертаната научна област играе за съвременната лингвистика от гледна точка на възможностите, които дава за повдигане на нови изследователски лингвистични въпроси. В тази връзка изследването допринася също с аргументи за необходимостта от целенасочено и задълбочено развиване на дисциплината „лингвистика на специализирания език“ и дава импулси в търсенето на начини, средства и похвати специализираното чуждозиково обучение в сферата на висшето и професионалното образование да се постави на по-прагматична ос.

Ключови думи: социолингвистика, специализирани езици, терминология, език за специфични цели, степени на езикова специализираност

Conceptual research/ Концептуално изследване

1. Introduction

At times of intensified economic, technical, political and cultural relationships between countries, companies and people, specialised languages are given great significance since they are exactly the media to serve as a precise instrument for cooperation and fluent communication in the context of multilingualism.

Research in the field of “language for specific purposes” refers and reverts to unresolved issues. Such problems start with the attempt to delimit the scientific field “specialised language”. It is hard to achieve consensus about the content as well as about the borders of the field. Such hardship arises firstly because of the rather different views and approaches of any of the scientific disciplines, economic enterprises and professional sectors which attempt to define the field: any of them has their own, and quite specific, point of contact with the subject of “specialised language”.

Some countries set a statutory standard for exactly what is a “specialised language”: The German Institute for Standardisation (DIN), for example, has set a

definition of their own, according to which: “Specialised language is a sphere of the language which is aimed at unambiguous and non-controversial communication in a certain field and whose function is strongly assisted by fixed terminology”¹.

Discussions, of course, often occur in the academic circles, but more often these cast doubt even on the fixedness of the compound expression: it is still not universally agreed which adjective is more appropriate in connection to the matter in question: „specialised“ or „special“. A number of suggestions are given for defining the phenomenon – by means of analogy to other languages, via calques – to be addressed as “language for specific purposes”, “the language of the profession/trade”, “professional language”, “language for the purposes of professional/specialised communication”, “language for vocational purposes”, “the language of the workplace”, “technical language”, “technolect”, “scientific language”, “academic language”, etc. – i.e. the discussions usually go around the term and not into the essence of the subject matter. In this paper, we prefer the term “specialised language” mainly because of its popularity among academics in university foreign language teaching in Bulgaria.

2. Issues

The studies of specialised language have had a surprisingly small influence on the public awareness of language development. Both in school language teaching and in the curriculum of linguistics, specialised and scientific languages are much less interesting than, for example, dialects, slang, youth jargon or advertising language. Hence, there are a whole series of much-used or newly introduced branches of linguistics in which even the index lacks the keyword of “specialized” or “scientific” language.

There is a discrepancy between the significance of the object and the intensity of its investigation, on the one hand, and its somewhat marginal treatment in representations of linguistics, on the other hand. It is all the more valid for translators today, probably due to the difficulty of getting this extremely complex field under systematic control.

It seems easy, at first glance, to define “specialised language” as “the language of the profession/speciality”. However, such an approach raises at least four questions:

1. **What defines a speciality, what is it related to?** Is it certain objects or phenomena and hence the notions and the terminology for them?

¹ „Bereich der Sprache, der auf eindeutige und widerspruchsfreie Kommunikation in einem Fachgebiet gerichtet ist und dessen Funktionieren durch eine festgelegte Terminologie entscheidend unterstützt wird“ [DIN 2342 (2011-08): Begriffe der Terminologielehre], the English translation made by the authors.

2. **How broad are the different specialities?** We can speak of the specialised language of natural sciences in general, but also we can speak of very definite branches of science – microbiology or nuclear physics, for example.
3. **How interconnected are the professional framework of the speciality and its language?**
4. We can use a specialised language or segments of it – mostly terms – in communicative situations outside the context of the speciality, e.g. we can speak about “radiation” or “viral infections” in everyday talk.
5. **What is the interrelation of a speciality with its usage by peers of the community of this specialised field?**

There is a difference from the viewpoint of the very specialised language itself, whether a professional or a non-professional speak or write about one and the same specialised topic. The difference would be evident when medical doctors and pharmaceuticals speak about the “contraindications of medicines” among themselves and, let us say, when they explain the topic to patients, in contrast to a situation when non-specialists discuss the topic in a specialist-like manner.

The formulated so far definitions of the notion “specialised language” differ from each other in some key essential points. This is so because there exist multiple approaches to conceptualizing of the phenomenon of “specialised language” on the one hand, and there is no clarity as for the range of any separate specialised language, on the other. Authors even speak of “pluralism” of the notion of “specialised language” itself (Becker&Hunt 1998: 119).

3. The genesis of the idea about specialised language

Even the first attempts for a scientific approach in studying “specialised languages” correspond to “mastering” of the multilingualism in science and in economic life. Studying this linguistic phenomenon is practically a clandestine research issue dating back from antiquity: antique rhetoric tried – among other important issues – to avoid “obscuritas”, i.e. the misunderstanding in language, and especially in specialised language (at that time – predominantly technical language), either due to semantic ambiguity or due to ignorance about the subject or the matter. Early Medieval science already faces the problem of the emerging numerous monolingual and multilingual lists of specialised terms – words and expressions as in the first printed specialised lexicon by Laurentius Fries, prepared for the needs of medicine and published in 1514 (Hahn 1983: 34).

Gottfried Wilhelm Leibnitz is probably the first to research purposefully and thoroughly on phenomena related to specialised language. He works on the topic of specialised languages both in theoretical and practical aspect in his attempt to formally organize the German for the sake of better understanding in different fields. Newly introduced terms in fields like mathematics, mechanics and physics he called

“artificial words/expressions” (*Kunstworte, Kunstausdrücke*) and contemplates on their opposition with words from the “language of the people” (*Volkssprache*) – that is to say, he redirected scientific interests to the much debated today opposition of “specialised language – general language”. Leibnitz also registered the fact that artisans and traders used terminology that was different from the general language for the same objects. His thesis, he himself being a renowned supporter of the idea for developing a “perfect language” on the basis of scientific knowledge, is that new concepts and terms should not be introduced in language, given that the general language contains a unit that clearly refers to an object or phenomenon. He actually calls for eliminating the unnecessary synonyms in the langue.

René Descartes, in France, at about the same time – the Enlightenment – developed the idea about the necessity of imposing the requirement for unambiguity of the langue (“impossible de se tromper”).

Building on a real scientific theory with respect to specialised language started and significantly developed at the beginning of 20th century. Research on the so-called “special languages” at that time is very popular around the world and especially in well-developed industrial Germany. “Special languages” then meant languages diverting from “standard language” of both the different trades and professions and of the different groups and classes of society, specified by their age, social class, religion, regional origins, etc. Research at the time is focused on the problem mainly in two aspects (Gross 1998: 171): overcoming discrimination of minority groups in society through the hidden functions of language and searching for group identity “within a certain group” among the various trades, professions, vocations, and representatives of scientific disciplines.

Fundamental work in the field of “specialised language”, besides linguistics and semiotics, became *Functional linguistics* of Willem Mathesius, founder and chairman of the Prague Linguistic Society. Generally, the whole activity of the Prague School (1926–1945), putting forward in their research the possible functions and usages of linguistic elements, gives a tremendous stimulus for the building of the theory of specialised language. A fundamental significance for further development of the field is attributed to the models of the Czech linguist Bohuslav Havránek, who claims that a characteristic feature of the literary language is its functionality. He defined four linguistic functions corresponding to four functional languages: the communicative function corresponding to everyday language; the practical special function corresponding to business professional language; the theoretical special function corresponding to scientific language; and the aesthetic function corresponding to the poetic language (Fig.1). Later Havránek united the second and the third functions into one: a special function corresponding to the specialised language.

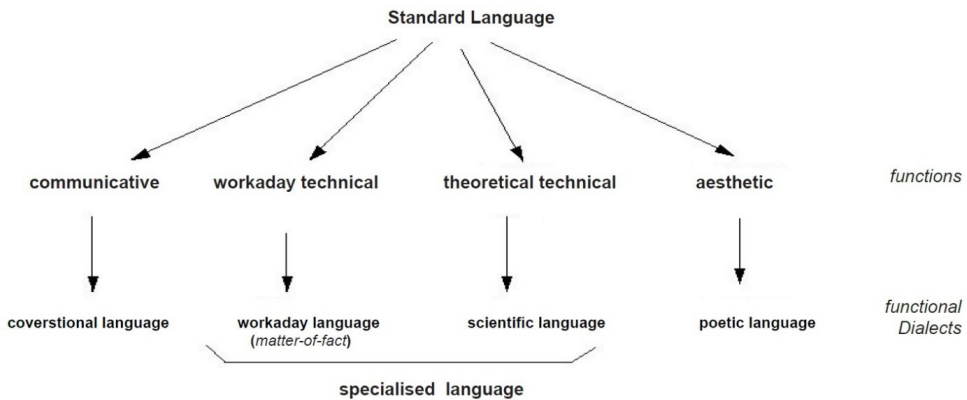


Figure 1: *Linguistic functions, according to Havránek*

In Havránek’s approach, “standard language” is subordinated to “national language” (the general language). In contrast to “vernacular”, it is characterised as follows: firstly, by much greater functionality and stylistic differentiation (stratification); secondly, by higher awareness of normativity and increased responsibility, both of which are connected to a marked tendency towards stability. The strata in literary language have resulted from the four (respectively three) different functions of linguistic messages. Functional languages corresponding to the respective functions are characterised by functional styles. According to Havránek, the means of expression of the specialised and respectively everyday language should not mix up in such a division. Terms are to bear uniform meaning (and also one word expression, if possible) and they should exist only in the specialised language – a thesis that is exactly the opposite to Leibnitz’s thesis.

4. Development of the contemporary conception of specialised language

In analysing the theoretical debate for the last 60-70 years about the phenomenon and the concept of “specialised language”, we see that all theories acknowledge one asserted fundamental conception. It all comes down to the introduced firstly by Lutz Mackensen (1959) principle of **vertical division** (Fig.2) of specialised languages that have been later adopted also by Heintz Ischreyt (1965).

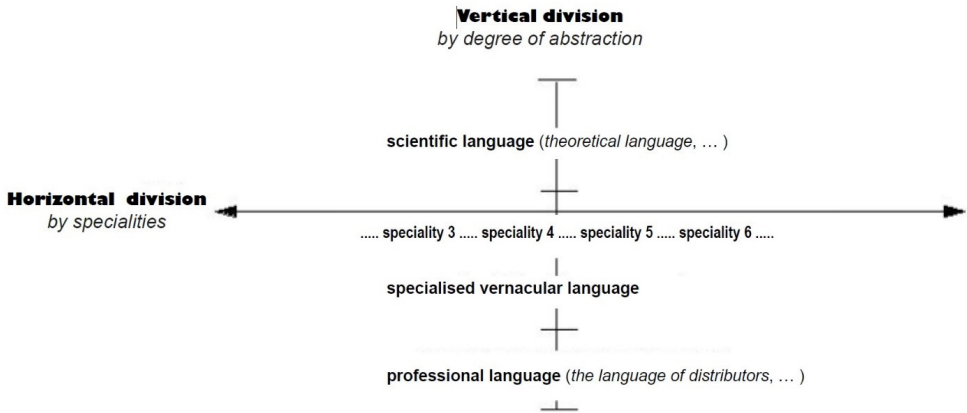


Figure 2: *Horizontal and vertical division of specialised languages*

What is specific about specialised languages, according to Ischreyt is expressed by the fact that the upper linguistic strata are dominated by “precise naming/term” while the lower strata, by contrast, are dominated by “live metaphor” (Ischreyt, 1965: 197–199). Ischreyt somehow underestimates the fact that a well-fixed specialised terminology could be expressed through linguistic metaphors – it is true that a precise naming/term would not be “precise” due to lack of metaphorical elements. Contemporary “computer language”, for example, is witnessing the existence of such metaphorical elements in specialised communication in such popular expressions as “windows”, “files” and many others.

Ischreyt’s models have been further developed by Lotthar Hoffmann in additionally segmenting the model to more divisions (1976). Hoffmann’s model is based on the assumption that specialised texts can be generally categorised in **five degrees of specialisation** (Table 1) and the criteria of *degree of abstraction, linguistic form, medium and participants in the communicative act* (Table 2) have the function of stratification (where the notion is generally the idea of division into strata), in order to delimit **five strata** of different specialities in the specialised language, and respectively five degrees of specialisation. In empirically applying Hoffmann’s stratification model, the relation of increase/decrease of the degree of abstraction at increase/decrease of the degree of specialization is a criterion of relevance, especially on the intratextual level (Hoffmann 1976: 186).

Table 1: Hoffmann's division. Degrees of abstraction.

DEGREE	Linguistic Form
A the highest	ARTIFICIAL SYMBOLS (for elements & for relations)
B very high	ARTIFICIAL SYMBOLS (for elements) NATURAL LANGUAGE (for relations)
C high	NATURAL LANGUAGE high frequency of use of specialised terminology strictly marked syntax
D low	NATURAL LANGUAGE high frequency of use of specialised terminology relatively loose syntax
E very low	NATURAL LANGUAGE isolated use of specialised terminology loose syntax

Behind this structure (Table 2), there is a frequently implemented hierarchy in company functioning and training courses, which could look similar to technical disciplines: *Scientist – Engineer – Technician – Consumer* (Hahn 1983: 66). The “real” specialised language – in the opinion of Hoffmann (1976: 31) – is always bound to the expert, because it requires full clarity on concepts and statements. Used by the “non-specialist”, the specialised language loses its direct link to professional technical thinking.

Table 2: Hoffmann's division. Milieu and Carriers of the Communicative Action

Milieu	Carriers of the Communicative Action
Fundamental sciences <i>The highest degree of abstraction</i>	Scientists ↔ Scientists
Experimental sciences <i>Very high degree of abstraction</i>	Scientists (Engineers) ↔ Scientists (Engineers) Scientists (Engineers) ↔ Scientific and Technical personnel
Applied sciences and technology <i>High degree of abstraction</i>	Scientists (Engineers) ↔ Head of production

Material production <i>Low degree of abstraction</i>	Head of production ↔ Craftsmen Craftsmen ↔ Specialised skilled workforce
Consumption <i>Very low degree of abstraction</i>	Workers in manufacturing ↔ Sales representatives Sales representatives ↔ Consumers

The problem of abstraction under Hoffmann’s approach (1976) can also be seen in the context of system-linguistic processes of textualisation. Such intratextual basis for developing the problem, as related to “specialisation”, can be seen not only at Hoffmann’s work, but is also a characteristic approach of much of the research of specialised language of the last quarter of the 20th century.

Meanwhile, in developing the theory of specialised languages (see publications of different authors in Hoffmann&Kalwerkemper&Wiegand, 1998) it is a more and more frequent approach to come out of the communicative pragmatic basis, i.e. to apply a reciprocal method of analysis in an up-down direction. The first attempt at such a view on the problem was actually given as early as Hoffmann in his definition of “specialised language” in 1976, where it is interpreted definitely as a communicative phenomenon but not exclusively as a “specialised lexicon”:

Fachsprache, das ist die Gesamtheit aller sprachlichen Mittel, die in einem fachlich begrenzten Kommunikationsbereich verwendet werden, um die Verständigung zwischen den in diesem Bereich tätigen Menschen zu gewährleisten“ (Hoffmann 1985: 53).

Specialised language is the total of all linguistic means used in a communicative sphere limited by the speciality in order to ensure understanding between professionals in this sphere.

5. The impact of scientific specialties on their specialized languages

It is not only the technology that is developing at a breath-taking pace. In almost every field of human activity, people more than ever work, conduct research and pile up information. In addition, new disciplines and sub-disciplines are constantly being created for increasingly specialised areas. This process has been going on for a long time.

When the focus of research, from a linguistic point of view, falls on the different professions, it would be more accurate to speak of “specialised languages” and not abstractly of “specialised language” as an opposition to language in general, that is to say we speak of the language of medicine, the language of law, the language of mathematics, the sub-technical language of the respective field etc. The

emergence of new specializations/professions (Dörr 2014) can be compared to cell division (Fig.3). Logical enough, of course, is also the assumption that, quite like biological cells, specializations/professions also die.

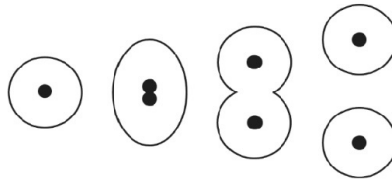


Figure 3: *Cell division in analogy of the process of emerging specialisations*

It is the task of linguists to find out and analyse how these processes affect specialised languages. It is scientifically interesting to study whether a new specialised language emerges with the emergence of a new specialization, and at what time rates. If this proves true, how would the synchrony in their development be realised? For, from the viewpoint of contemporary scientific thought, it is beyond doubt that all specializations need and do form their specialised language. Such a necessity is determined in several aspects:

- From the perspective of **terminology**, representatives of the profession, study, along with the subject matter, methods and interrelations of the specialization, the terminology and certain nomenclature (a typical example is students of medicine). Specialised language is vital for building up of a strictly delineated terminology in order to be able to make existent and newly found objects, features and relations *visible* and *comparable*. Terms are necessary at all stages of the specialised activity within the specialization, i.e. the processes of studying (Doykova, 2018), describing, explaining/reasoning, developing, distributing and using the knowledge. Moreover, at the process of expanding the terminology, it is necessitated by practice to follow certain fundamental principles.
- From the perspective of **professional communication** in the field of specialisation: professionals develop, for the sake of professional communication, their own optimized systems, methods and procedures. Apart from that, it is not rare for them to be trained in a typical verbal behaviour in communication, e.g. certain linguistic means for argumentation, establishing of text templates, particular pronunciation, etc.
- From the perspective of **ontology** of the specialisation: Ontology is the overall structural specification of a given speciality/subject matter. This approach suggests a formal declarative presentation of a topic, which includes a *dictionary* (a list of invariables for directing towards the subject matter

terminology) and *restrictors* over the terminology range (logical propositions that restrict both the interpretation of the terms' meaning and the options for their cross-reference). Gruber (Gruber, 1992, 1993) introduced the term “ontology” for the first time describing the field of informatics. Thus, a term that has its origin in philosophy (meaning the study of existence) received a new usage in the sense of presenting knowledge in the form of semi-structured conceptual models. The concept of ontology has been more precisely defined in the famous project *Ontolingua* of the Stanford University as an explicit specification of a particular topic.

6. Conclusions and Perspectives

As a logical consequence of the above said in respect to foreign language teaching at university level, comes the conclusion that language for specific purposes – and especially English (ESP) – is about to become one of the most important spheres in teaching English and German as a foreign language (ESL/EFL, DaF/DaZ). Such a worldwide trend is observed in the increasing number of courses for learning a language for specific purposes offered to university students and the existence in some universities of Master degree programs with incorporated specialisations in ESP, including Bulgaria. On the other hand, the latest publications speak of a focus of scientific interest not on didactic aspects of how to teach specialised language, but rather on specialised languages themselves and what are they in essence.

Some researchers (e.g. Mottos 2011) adhere to the new term *academic and professional language*, which is introduced by Alcaraz in his articles from 2000 to 2007. The same term, suggested by Alcaraz refers to language used by communities or groups of professionals with specific competences (e.g. medical doctors, physicists, biologists, chemists, lawyers, etc.) who share not only common institutions, but also common values and who use one and the same terminology in order to communicate (Alcaraz 2000).

Globalization in economics and the mobility in academic education call for professionals who, within specialised communication, have mastered both foreign languages and knowledge in their professional field, such as economics, engineering, diplomacy, healthcare, etc. Hence, there are reasons behind the relation between “specialised language” and “foreign language” in the modern world: such a relation is not simply evident, but objectively necessitated.

The descriptions of the higher levels of the Common European Framework of Reference for Languages (CEFR) (Council of Europe 2001) also refer to complex language skills that combine competences of the foreign language with relatively profound knowledge of specialised fields. The self-assessment grid of the framework (Council of Europe 2001: 26-27), for example describes the respective language competences as follows: “I can understand extended speech and lectures and

follow even complex lines of argument provided the topic is reasonably familiar.” (Level B2, Understanding, Listening); or “I can use language flexibly and effectively for social and professional purposes.” (level C1, Speaking, Spoken Interaction); or “I can write complex letters, reports or articles, which present a case with an effective logical structure, which helps the recipient to notice and remember significant points. I can write summaries and reviews of professional or literary works”. (Level C2, Writing)

The beginning of the new millennium is characterised by interdisciplinarity in science and education, and a marked tendency of specialisation. This acknowledged fact affects what we call “specialised language”, “language for specific purposes” or “academic and professional language”. These highlighted trends presuppose qualitative scientific research in order to make better both the quality of specialised communication and the transfer of knowledge, including the transfer of necessary criteria for this. Studies in the field of specialised language – native or foreign alike – as well as issues connected to all aspects of specialised communication should be represented and made public at (university) interdisciplinary forums for teachers, researchers and scientists who are interested in the field. Such forums raise awareness for the establishment of criteria of empirical research in this sphere.

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