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Contrastive Analysis of Serbo-Croatian and English*

Theory and Practice

0. Introduction

0.1 The necessity of establishing a really satisfactory method for the complete analysis of a given language was designated by the organizers of the First International Congress of Linguists¹ as one of the fundamental problems of modern linguistics. Discussing this question Vilém Mathesius points out that a "systematic analysis of any language can be achieved only on a strictly synchronic basis and with the aid of analytical comparison, i. e. comparison of languages of different types without any regard to their genetic relations".²

0.2. A complete and systematic analysis of a given language, either the foreign language (FL) or the native language (NL), can be well made by using a contrastive analysis of two languages, the NL and the FL, and describing the former on the basis of the latter, and the latter on the basis of the former. By contrasting two systems in this way several features emerge that otherwise would not attract our attention as typical or worth considering when we examine the system of the given language.

0.3. It is generally accepted that a foreigner is sometimes more likely to write a good grammar, a systematic and complete analysis of a given language, than a native speaker. The reason

* This paper contains preliminary theoretical and methodological considerations for the design of a project on contrastive analysis of English and Serbo-Croatian involving a team of Yugoslav and American scholars.

¹ It took place at The Hague in April 1928. Cf.: *Actes du Premier Congrès International de Linguistes à La Haye* (1928).

² "On Some Problems of the Systematic Analysis of Grammar". *Travaux du Cercle Linguistique de Prague*, VI, pp. 95—107. Also in *A Prague School Reader in Linguistics*, Bloomington, 1964, pp. 306—319.

is that such an analyst looks at the system of a given language from different (the more different the better) points of view which are based on the system of his native tongue.

0.4. The same idea lies behind V. Mathesius's criticism of Jespersen's *Grammar*.³ Mathesius objects to Jespersen's not having made an extensive use of two methodological helps in his *Essentials of English Grammar* although he (Jespersen) had several times shown such a fine understanding of the functional point of view, and had always known very well how to make profitable use of foreign comparative material (— comparative is used in the modern sense of the word). It is this second point emphasized by Mathesius that we want to link with the above mentioned idea: foreign comparative material may be of great use in the analysis of the NL, while native comparative material can be of equal value in describing and analysing a foreign language.

0.5. When I was dealing with English phonetics⁴ and phonology and with English syntax⁵ I always tried to approach every feature of English under examination from the point of view of my NL. This was not done systematically enough and that is why I never carried it on to the end. My feeling has always been, however, that a complete and systematic analysis of a FL as well as of a NL can be carried out much better and more successfully if we have a contrastive approach, i. e. if any grammatical feature of one language can be contrasted with a feature of another language. My contrastive material has always been the NL as I have analysed English as a FL.

0.6. My failure to achieve some final results was due to the fact that I did not organize the analysis of the system of the FL systematically and did not base it completely on the system of the NL. Some years ago with the first appearance of contrastive studies I began to develop my old idea in a new direction.

0.7. My first objective was not, however, the theoretical approach to the FL and the NL with the intention of making a new, more complete and more systematic analysis and description of the FL and the NL. My efforts to improve foreign language teaching in general and the teaching of English in Yugoslavia in particular, made me interested in the new ap-

³ O. c., pp. 307—309.

⁴ Rudolf Filipović; *Engleski izgovor* (English Pronunciation), Zagreb, 1954.

⁵ R. Filipović, *Deskriptivna gramatika engleskog jezika*, I, 1—3 *Sintaksa*. Zagreb, 1960—1963; R. Filipović; *An Outline of English Grammar*. Zagreb, 1954.

proach to a language that is being taught as a FL by contrasting it with the NL.

0.8. The new contrastive trend in applied linguistics (which is called contrastive studies) has stimulated a great number of linguists to try to provide a more up-to-date method by means of which more modern instructional materials can be built up and through them better results in foreign language teaching achieved. The work done mainly on two levels: phonological and syntactic, has been successful and the new approach — a contrastive one — has been established.

0.9. The approach that had already been formulated in the thirties by a linguist — V. Mathesius — as one of the essential elements of a “really satisfactory method for the complete analysis of a given language”⁶ has also been acknowledged by a pedagogue — W. F. Mackey — as an invaluable background to a foreign language teaching method. “Differential description /Mackey’s equivalent to the contrastive description/ is of particular interest to language teaching because many of the difficulties in learning a second language are due to the fact that it differs from the first. So that if we subtract the characteristics of the first language from those of the second, what presumably remains is a list of the learner’s difficulties”.⁷ This process involves not only the analysis of the two languages, but a comparison of the differences in separate items and of the way they work together. It covers all levels and the relations between them — (1) Phonetics, (2) Grammar, (3) Lexicology, and (4) Stylistic usage.

0.10. In this introductory chapter I have pointed out briefly (and I hope also convincingly enough) two facts: (1) For a really complete and systematic analysis and description of a given language, great — if not indispensable — help is required from what may be called either “the aid of analytical comparison” or “profitable use of foreign comparative material”. This means that any new approach or method that would rely on a similar principle, can be considered as a contribution to linguistic theory and, if and when applied, its results represent a new contribution to the linguistic investigation of a given language. (2) New and better instructional materials, by means of which we expect to achieve improved pedagogical results in language teaching, must be built up on the results of the differential description of the NL and the FL. In other words, a contrastive analysis of the NL and the FL must be carried out in order to get the principles on which teaching material and language teaching methods should be based.

⁶ O. c., p. 306.

⁷ W. F. Mackey; *Language Teaching Analysis*. London, 1965, p. 80.

1. *The Problem and the Objectives*

1.1. When I was preparing a project on the contrastive analysis of English and Serbo-Croatian I was asked two questions in a discussion with a linguist: "Is there any need for a contrastive analysis of Serbo-Croatian and English?" and "What do you expect to get from the contrastive analysis of Serbo-Croatian and English?" In order to answer these questions I will outline here the main problem and objectives, the plan of research and methodology for the project.

1.2. The teaching of English⁸ to Serbo-Croatian speakers in Yugoslavia and the teaching of Serbo-Croatian⁹ to English speaking people have recently made great progress. The main reason for this progress can be found in the fact that new methods used in teaching are based on linguistic research and on the structural principles originally enunciated by Ferdinand de Saussure and since developed by schools of structuralism in Europe and America.

1.3. No matter how successful these new methods are, the question is whether the same instructional material arranged in one way can be used for a target language whatever the first language of the learner may be. Courses of a target language written for learners of various first languages very often have the same instructional material without taking into consideration the structure of the first language.

1.4. Theoretical linguistics has helped us improve the methods of teaching foreign languages: the principles of modern linguistics — Saussurian and structural — have been applied in forming the new audio-visual method with its main principles that can be further developed and used in compiling courses of various languages. We believe that in the same way the achievements of recent linguistic research can be applied in contrastive analysis and help us achieve the best results both in the theoretical approach and its practical application.

1.5. Linguistic research in language teaching has proved that one of the major problems in the learning of a second language is the interference caused by the structural differences between the native language of the learner and the target (i. e. second) language. This problem has been largely neglected in the teaching of English in Yugoslavia and of Serbo-Croatian to English-speaking people.

1.6. A careful contrastive analysis of Serbo-Croatian — as the first language of the learner — and English — as the target language — will supply a sound basis on which instructional

⁸ R. Filipović; "Audio-Visual Languages at the University of Zagreb: Principles and Method". *IRAL*, II, 1, pp. 53—62.

⁹ R. Filipović; "New Methods in Teaching Non-World Languages. A—V Course of Serbo-Croatian". *Contact*, 9 (Wien 1966), pp. 27—34.

materials can be built. Descriptive linguistics supplies a wealth of information on the two languages under consideration. Contrastive analysis is designed to indicate those elements and structures of the English language which require detailed treatment in the instructional materials designed for students whose mother-tongue is Serbo-Croatian, and those which merit little if any mention.

1.7. The major objective of the project is to establish areas of similarity and dissimilarity between Serbo-Croatian and English at all linguistic levels. Our analysis has not only the practical aim of improving the instructional materials but will represent, we hope, a contribution to linguistic theory and practice. This work is expected to produce a new description of Serbo-Croatian, while the existing description of English can thus be supplemented. The new and supplemented descriptions of the two languages will serve the needs of those conducting further linguistic research into English and Serbo-Croatian.

1.8 The contrastive studies of other languages as target languages, and English as the first language of the learner, indicate that an analysis of this kind will have a favourable effect on foreign language teaching and on further scientific study of both the target language and the first language of the learner. We shall be able to use the results of earlier studies only to a limited extent in view of the following two facts: (a) in our analysis English is the target language, (b) the completely different structure and other features of the Serbo-Croatian language.

2. *Contrastive Structure Series*

2.1. It has often been stated that linguistic theory has so far had small influence (if any) on actual language instruction. Several reasons have been suggested for this failure; one of the most obvious ones is the ignorance and indifference of foreign language teachers towards linguistic theory and the very small contact between linguists interested in linguistic theory and practical teachers of foreign languages. A praiseworthy attempt to establish such a necessary contact is the *Contrastive Structure Series*, edited by Charles A. Ferguson, sponsored by the Center for Applied Linguistics in Washington and printed by the *University of Chicago Press*.

2.2. The series will consist of books on the contrastive analysis between English and each of the the five foreign languages most commonly taught in the United States: French, German, Italian, Russian, and Spanish. The aim of each study is to describe the similarities and differences between English as the native language of the learner and each of the five languages as the second language.

Each foreign language is represented by two volumes — one on the sound systems, and the other on the grammatical systems of English and the language in question. Each study as a whole is intended, as the editor says,¹⁰ to make available to the language teacher, textbook writer, or other interested reader, a body of information which descriptive linguists have derived from their contrastive analyses of English and the other languages.

2.3. In this series an attempt has been made to establish that necessary contact between specialists in linguistics, who show enough interest in the application of linguistics to practical problems of language teaching, and textbook writers together with other language teachers. The value of contrastive analysis, which has been recognized for some time, has been proved by this series to be much greater than it was thought when the project got under way in the summer of 1959. The series represents an important step in the application of linguistic procedures towards the solution of language problems. Its influence on foreign language teaching not only in the United States but also in other parts of the world, as well as its impact on further contrastive analysis of other languages, will contribute to the wider recognition and deeper appreciation of the principles of contrastive analysis.

2.4. The already published books¹¹ of the series show that several approaches to the analysis are possible and that there is not, as yet, one special method that can be used for the contrastive analysis of two languages. Quite the opposite: various other studies, whether already published or only available in mimeographed, or even manuscript form, prove that various methods and linguistic approaches can be adequate for contrastive analysis.

3. *Transformational Generative Approach in Contrastive Analysis*

3.1. The brief survey of the problem that one meets with when one starts the contrastive analysis of two languages clearly shows at least two points that we are concerned with: (1) if we want to improve the teaching of the second language

¹⁰ *General Introduction to the Series*, p. V.

¹¹ William G. Moulton, *The Sounds of English and German*. Chicago—London, 1962; Herbert L. Kufner, *The Grammatical Structures of English and German*. Chicago—London, 1962. R. P. Stockwell — J. D. Bowen, *The Sounds of English and Spanish*. Chicago—London, 1965. R. P. Stockwell — J. D. Bowen — J. W. Martin, *The Grammatical Structures of English and Spanish*. Chicago—London, 1965. F. B. Agard — R. J. Di Pietro; *The Sounds of English and Italian*. Chicago—London, 1965. F. B. Agard — R. J. Di Pietro; *The Grammatical Structures of English and Italian*. Chicago—London, 1965.

the contrastive analysis of the mother-tongue (or the first language) of the learner and the second language (or the target language) is most desirable and useful; (2) no special method has, as yet, been specially designed for such an analysis and it is still left to us to choose one out of the various approaches ranging from the "classical", "Bloomfieldian", to the transformational generative one.¹²

3.1.1. There are some preferences and justifications for each of the approaches. If we decide to approach the corpus on the level of words then the "Bloomfieldian" model will be adequate. R. L. Allen¹³ has shown, however, that three sentences can appear identical syntactically when examined one word at a time. "Only a grammar that recognizes layers of structure will reveal the fact that all three sentences differ ... in their composition". The differences between the three sentences consist really in the fact that words appear not individually but in phrases and that the analysis should start with phrases or units.¹⁴ The tagmemic approach of R. L. Allen seems to be more applicable if analysis is carried out on the level of clauses.

3.1.2. Theses¹⁵ written in the English Department, Teachers College, Columbia University, New York, have proved that the

¹² Cf.: N. A. Gleason, Jr., "The Organization of Language: A Stratificational View". *Monograph Series on Languages and Linguistics*, No. 17. Edited by C. I. J. M. Stuart (1964), pp. 75—95.

¹³ *A Summary of the Structure of the English Sentence*. New York, 1964, pp. 23—67.

¹⁴ *Ib.*, pp. 23—24.

¹⁵ Duong Thanh Binh's unpublished thesis *A Tagmemic Comparison of the Structure of English and Vietnamese Sentences* (New York, 1965) is an attempt: 1) at classifying the units which occur on different syntactical levels in Vietnamese, 2) at stating the order in which they normally occur, and 3) at contrasting the arrangements and functions of corresponding units in English. This study, the author says, presents a systematic contrastive analysis of the two languages. It is hoped: 1) that from the results of this study a teacher may be able to predict those areas or details of English structure which will cause the most difficulty for Vietnamese students; 2) that the description of Vietnamese presented in this study — and the comparison of the structure of Vietnamese sentences with that of English sentences — will be helpful not only to English teachers in Vietnam in their preparation of teaching materials and in their classroom teaching, but also to advanced Vietnamese students who are studying English, and even, perhaps to non-speakers of Vietnamese who are trying to learn Vietnamese. Dao Thi Hoi in the unpublished thesis *Representation of Time and Time-Relationship in English and in Vietnamese* (New York, 1965) describes the ways in which time and time-relationship are represented in English and in Vietnamese to show that there exist a number of differences between English and Vietnamese in the expression of time and time-relationship. These differences are the cause of many of the difficulties that a Vietnamese student meets in the process of learning English and in trying to master the English verb system. The findings of this study suggest that the most important dif-

tagmemic approach is adequate for use in the contrastive analysis of two languages for teaching purposes.¹⁶

3.2. If we want to analyse the corpus on the sentence level then there are two possibilities, we can use: (1) transformational generative model, and (2) stratificational model. According to Gleason¹⁷ they are equally powerful on the level of the sentence; although he feels that transformational generative one may have greater application. With units larger than sentences, in a chain of sentences, in a conversation or paragraph, however, Gleason believes that the transformational generative model would only be applicable to a certain degree while the stratificational approach could be entirely applied.

The English-Spanish study¹⁸ in the *Contrastive Structure Series* and several other theoretical discussions, on the other hand, show that the transformational generative model can be used very successfully for the contrastive analysis of two languages on any level.

3.3. R. P. Stockwell states that the "ideal basis" for the preparation of a set of second language teaching materials would be complete transformational grammars of each of the languages involved. Through the comparison of the phrase structure and transformational components of each grammar, drills could be constructed "to help the student internalize each kernel type and each transformational rule that was not already familiar to him from his own language".¹⁹

ference between the English and the Vietnamese verb systems is the presence of time orientation in English as opposed to its absence in Vietnamese. As an exploratory attempt at analysing and describing the differences and similarities between the verb system of English and the verb system of Vietnamese, this study shows, the author hopes, how a contrastive analysis of a particular area in the grammar of two different languages may be of help to a teacher teaching one of the two languages to native speakers of the other.

Yehia Ali El-Ezabi in his unpublished thesis *A Sector Analysis of Modern Written Arabic with Implications for Teaching English to Arab Students* (New York, 1967) hopes that "the description of Arabic presented in this study — and the comparison of some of the important features of Arabic and English syntax — will be helpful to teachers of English to Arab students in their preparation of teaching materials and in their classroom teaching".

¹⁶ Allen's theory on which all the above theses were based has been, however, criticized for being merely a framework for analysing sentences known to be grammatically correct, and therefore it cannot be called "a complete theory of grammar".

¹⁷ In a course of lectures on Stratificational Grammar delivered at the Linguistic Institute of the Linguistic Society of America in Ann Arbor, Michigan, summer 1967.

¹⁸ Stockwell-Bowen-Martin, o. c. in note 11.

¹⁹ R. P. Stockwell, "Contrastive Analysis of English and Tagalog" (Unpublished manuscript). Quoted from: W. O. Dingwall, "Transformational Generative Grammar and Contrastive Analysis". *Language Learning*, XIV, 3—4 (1964), pp. 147—160.

3.3.1. Stockwell's statement really implies that one of the aims of a careful contrastive analysis of two languages, the first language of the learner and the target language, is the preparation of instructional material, which can be built up exactly on what Stockwell calls the comparison of the phrase structure and transformational components of each grammar. Stockwell's ideal basis could be also taken as one of the approaches to the contrastive analysis of Serbo-Croatian and English.

3.3.2. Stockwell did not carry out his plan for a contrastive analysis based on transformational grammar in his thesis for Tagalog or in any other studies of his before the English-Spanish study had appeared. In the latter, however, he made a step further but had not yet converted his ideal basis into a reality.

We did not expect Stockwell and his co-authors of these two books to go further than they did: the editor²⁰ states explicitly that the studies published in this series will be written for the language teacher and textbook writer. For the former to get more theoretical and practical knowledge of the language he teaches, for the latter to base his instructional material for the textbook on the results achieved in a thorough analysis of the first language of the learner and of the target language. Drills and other teaching material that Stockwell speaks about can be based on the patterns produced by the contrastive analysis: they can best be made by a practical teacher.

3.4. The study of grammatical structures of English and Spanish is based on the analysis of what is called a model or theory of a language which "may be constructed by establishing a set of phrase structure rules for the formation of kernel sentences, plus a set of transformational rules to combine the kernel sentences into the various other, more complex sentences exhibited by the language".²¹ Then a set of phonetic rules is added to convert all strings into pronounceable sequences.

3.4.1. In order to explain this approach the notion of optional and obligatory choices is introduced. The former are choices that can be made freely, and the latter are the inevitable consequences of the former. "A grammar of a language really consists in describing two things: the optional choices that are available to the speaker of the language, and the obligatory consequences of each optional choice . . . The structure of a language may be regarded as the set of rules which specify what the optional choices are, what their obligatory consequences are, and what the restrictions are that each choice imposes on all subsequent choices . . . In a strict sense, these optional and obligatory choices and the restrictions which govern them are unique to each lan-

²⁰ Charles A. Ferguson in *General Introduction to the Series*, p. V.

²¹ Stockwell-Bowen-Martin, o. c. in note 11, p. 15.

guage, but probably no two languages are so completely different that some choices and restrictions are not alike, or at least similar, in them".²²

3.4.2. The authors of the English-Spanish study warn us that even "if there were some convenient way to assemble all the optional choices of Spanish, along with the restrictions upon them and the consequences of them, alongside all the optional choices of English and their restrictions and consequences, comparison of the two would be a relatively simple matter of matching the one set against the other, and a complete list of the choices of both languages, is nearly impossible to achieve at this date in the development of linguistic studies".²³

3.4.3 If this is so, then only a fragmentary list which will include the most productive features of choice can be supplied. Following this principle, the authors of the English-Spanish study have organized their comparison of Spanish and English in the following way: (1) They begin with the typical sentence patterns of the two languages, covering sentences containing only a single finite verb. This provides a convenient limit to the number of patterns which must be included. (2) They give a survey of the categories of word formation that typify the morphology of each language, the kinds of affixes they utilize and the various grammatical functions they involve. (3) Then they turn to the structure of noun phrases in the two languages. (4) From noun phrases they move to verb phrases. Verb phrases are of many more classes than noun phrases, just as verbal forms are more numerous than nominal forms. (5) They examine the transformational rules that are the most productive rules of a grammar. Here again they do not list all of them but suggest the kinds that are highly productive in the two languages. (6) They give an introduction to the most extensive area of comparison between any two languages — the lexicon. (7) Then they pass on to the application: they list the principal differences and try to align them by the degree of difficulty they cause to the beginning student, in order to suggest the varying degrees of emphasis and drill needed at each point.²⁴

3.4.4. The hierarchy of difficulty is, in a sense, say the authors of the English-Spanish study, the purpose of a contrastive analysis.²⁵ Transfer from one language to another becomes more difficult as the correspondences weaken. So, a proper contrastive analysis should show the textbook writer and the teacher which features to start with as less difficult, and which to delay as more difficult.

²² *The Sounds of English and Spanish*, pp. 1—2.

²³ Stockwell-Bowen-Martin, o. c. in note 11, p. 16.

²⁴ *Ib.*, p. 17.

²⁵ *Ib.*, p. 292.

3.4.5. This approach seems to us quite acceptable and it agrees with what we have planned to do ourselves. This may lead us to the so-called three-stage development suggested by some authors: the first stage is the grammar of the target language (in our case English); the second stage is the grammar of the first language of the learner (the mother-tongue: Serbo-Croatian); the third stage would then consist in a comparison of the two. This method may be regarded as good and reliable but some linguists consider it rather complicated and cumbersome. The authors of the English-Italian study (*Grammatical Structures of English and Italian*) avoid this method and accept what they call a single treatment that is organized on the basis of Italian, with digressions at appropriate points for statements about English and for relevant comparisons.²⁶

3.4.6. In the *Appendix*²⁷ of the English-Spanish study the authors give what they call the pedagogical implications of contrastive analysis. Here they discuss the order in which items are to be presented in language courses and textbooks. This is not our immediate aim, but we hope that our analysis of Serbo-Croatian and English will give enough material for such purpose and for new textbooks of English for Serbo-Croatian speakers, which can be considered as one of the ultimate aims of our contrastive analysis.

3.4.7. Moreover we are convinced that there will be several by-products of our study. The first and probably the most important one will be, we hope, the transformational-generative grammar of Serbo-Croatian which does not exist as yet. This will be the first attempt at a complete grammar of this type. But we may have to face several problems. One of the attempts to use transformational methodology to "a particularly refractory problem" — Reflexives in Serbo-Croatian²⁸ — seems to have failed. Another example proves to be more successful in using transformational method to analyse Serbo-Croatian enclitic forms.²⁹ The author of the former article expresses his doubts in the transformational methodology: "The extent to which I may have failed, may be due either to my being insufficiently adept at transformational methodology or to some inherent vice in the method itself".³⁰ The author of the latter article empha-

²⁶ *The Grammatical Structures of English and Italian*, p. 2.

²⁷ Pp. 292—309.

²⁸ Charles E. Bidwell, "The Reflexive Construction in Serbo-Croatian". *Studies in Linguistics*, 18, 1—4 (1964—1966), pp. 37—47.

²⁹ E. Wayles Browne: *On the Problem of Enclitic Placement in Serbo-Croatian*. (Unpublished manuscript); E. W. Browne: *Srpskohrvatske enklitike i teorija transformacione gramatike*. *Zbornik za filologiju i lingvistiku*, XI (Novi Sad 1968), pp. 25—29.

³⁰ Charles E. Bidwell, *o. c.*, p. 47.

sizes that one of his aims is to show how some features of Serbo-Croatian syntax can contribute to the solution of some problems of transformational grammar.³¹

3.5. In his article on T-G grammar and contrastive analysis W. O. Dingwall³² considers a proposal outlined by Borkowski and Micklesen,³³ who state that a contrastive generative grammar would have two types of rules: (1) those common to the two or more languages involved, and (2) those peculiar to but one of the languages.³⁴ If we accepted this method our instructional materials would be concentrated on the latter rules which constitute the "problems" to be mastered by the second language learner and would, I believe, have to be organized so that in passing from the former to the latter it would be evident that the former is there only as a starting point.

3.6. Dingwall³⁵ further discusses Paul Schachter's proposal³⁶ which utilizes both T-grammar and transfer grammar (Harris). Schachter does not claim that the results of his approach can be employed immediately in the preparation of pedagogical materials. Schachter's proposal starts with the phrase structure of each language and "aligns various steps in the derivation on the basis of translational equivalents". To explain Schachter's proposal Dingwall presents a table with four columns in which he has substituted German for Pangasian to make it more understandable to an average reader.

3.6.1. The first column which is marked *G Unit*, represents "an ordered presentation of the left-hand sides of the German phrase structure rules (*PRs*). In the second column we find their respective rewritings (*G Re-writing*). In the third column they are paired by translation with their English equivalents (*E Equivalent*), and followed by their sources (phrase structural or transformational) in the fourth column (headed *E Source*).

3.6.2. Dingwall quotes various transfer formulae of the general shape, which can be further checked by translating: the re-writings in the third column can translate the majority

³¹ E. W. Browne; *Srpskohrvatske enklitike i teorija transformacione gramatike*, p. 25 ("Ovaj članak ima za cilj da ukratko rezimira neke novije tekovine u razvitku teorije transformacione gramatike i da pokaže kako pojave iz sintakse srpskohrvatskog jezika mogu doprineti rešavanju spornih problema te teorije").

³² W. O. Dingwall, "Transformational Generative Grammar and Contrastive Analysis". *Language Learning*, XIV, 3-4 (1964), pp. 147-160.

³³ G. Borkowski — L. Micklesen, "A Contrastive Study of the Impersonal Sentences of Polish and Russian". Paper presented at the Annual Meeting of the Linguistic Society of America. Chicago, Dec. 28-30, 1963.

³⁴ W. O. Dingwall; o. c. in note 32, pp. 147-148.

³⁵ *Ib.*, pp. 148-151.

³⁶ P. Schachter, "A Contrastive Study of English and Pangasian". Unpublished Ph. D. dissertation. Berkeley: University of California, 1959.

of the re-writings in the second column. Following a set of rules of this type, we could, says Dingwall, convert the entire English P-component into its German translational equivalent.

3.6.3. Passing from the P- to the T-components of the two grammars involved, Dingwall established an order of transform equivalences from which conversion tables and/or formulae can be derived. The table that Dingwall presents here has again four columns representing (1) the German transformation rules (GTRs), (2) the strings which the T-rules generate, (3) the translational equivalents of these strings, (4) their sources (phrase structural or transformational). Dingwall concludes that Schachter's approach can be summarised either by conversion tables or transfer formulae.

3.7. In his article "Relatedness between grammatical systems"³⁷ E. S. Klima parallels Schachter, says Dingwall,³⁸ in using transfer or extension rules in his approach. Klima defines his approach in the following way: The relationship between systems as well as the nature of their differences can be approached so that the syntactic structure of each system is considered revealed by the set of rules which most economically generate the sentences of the system. That set of rules can be designated as its grammar (G). The relationship between one style (L_1) and another (L_2) is thought of in terms of the rules (E_{1-2}) that it is necessary to add as an extension to the grammar (G_1) of L_1 in order to account for the sentences of L_2 . A convention is adopted regarding the place where extension rules may be added to the grammar. They may not be added just anywhere, but must come at the end of certain sets of rules; e. g. extension rules dealing with the case forms of pronouns must come after the set of grammar rules for the case in the previous system. By this convention, extension rules are prevented from superceding previous rules. Fundamental structural differences varying in nature and degree are considered to exist between systems L_1 and L_2 when the set of rules G_2 for most economically generating the sentences of L_2 is not equivalent to G_1 + the extension E_{1-2} .³⁹

3.8. The greatest value of Dingwall's article "Transformational Generative Grammar and Contrastive Analysis" is in his "new proposal".⁴⁰ His point of view is that it is not enough to have a "set of rules S_{A-B} or S_{B-A} which represents the difference between L_A and L_B ". What we need in order to get useful practical results of contrastive analysis of two languages is "a

³⁷ *Language*, 40, 1 (1964), pp. 1—22.

³⁸ O. c. in note 32, p. 151.

³⁹ Edward S. Klima, o. c.: 2. *The Approach*, p. 2.

⁴⁰ O. c. in note 32, pp. 151—159.

set of transfer or extension rules which can serve as the basis for the construction of second language teaching materials".⁴¹

3.8.1. To achieve the primary aim of our project — a sound foundation on which instructional materials can be built — we must find the way in which a set of transfer and extension rules can be used. In his "new proposal" Dingwall offers the way in which the T-G approach can be employed in contrastive analysis. That is why his proposal is worth considering in building up the method to be used in contrastive analysis.

3.8.2. His proposal consists of an explicit set of assumptions (A) and an explicit set of directives (D) flowing from these assumptions. We agree with Dingwall that his set of directives in conjunction with T-G grammars of the NL and FL constructed in such a manner as to optimally facilitate their comparison will produce an ordered output which should constitute a fully adequate and sound basis for the preparation of instructional materials.

3.9. We have already accepted a part of the method used by the authors of the English-Spanish study: the seven points which show how the comparison of two languages can be organized are applicable for some areas of our research too. We want, however, to complement these seven points by Dingwall's proposal which, apart from the theoretical approach, supplies also the necessary foundation for the construction of second language teaching materials. As our aim is twofold: 1) a theoretical contribution to the problem of contrastive analysis, and 2) the practical results of this analysis, i. e. instructional materials, we shall use Dingwall's elements in completing parts of our method. The more so as we agree with all assumptions with which Dingwall operates in his employment of transformational generative grammar in contrastive analysis.

3.9.1. The basic assumption on which Dingwall builds up his approach and seven other assumptions of his, is an old well-known principle defined by Fries⁴² and followed by many other linguists. In our work we shall apply seven other assumptions formulated by Dingwall. The first has already been used as one of our main principles used in teaching English to Serbo-Croatian speakers, that "learning should commence at the sentence level".⁴³

⁴¹ *Ib.*, p. 151.

⁴² "... The most efficient materials /for second language learning/ are those based upon a scientific description of the language to be learned, carefully compared with a parallel description of the native language of the learner"; C. C. Fries, *Teaching and Learning English as a Foreign Language*. Ann Arbor, 1945, p. 9.

⁴³ R. Filipović; o. c. in note 8, pp. 55—56.

When discussing the English-Spanish study⁴⁴ we accepted the principle equal to the second assumption of Dingwall's, that the material to be learned should be graded in some consistent manner. The third assumption — pattern practice represents the most effective means . . . of mastering "problems" presented by the FL — is well illustrated by a table in which six types are shown: 1) simple repetition; 2) expansion; 3) substitution; 4) transformation (negation and WH-question); 5) conjunction (simple, zeroing, zeroing and promorpheme); 6) question/answer. Each type of pattern practice is based on the set(s) of rules: phrase structure rules (1, 2, 3,); transformation rules (1, 2, 3, 4, 5, 6); lexical rules (3).⁴⁵

3.9.2. Operating with this set of explicit assumptions Dingwall has formulated a set of directives⁴⁶ which are based on the ordering of rules found in Chomsky's "Transformational Approach to Syntax"⁴⁷ There are altogether twelve directives that Dingwall suggests as an approach to contrastive analysis based on transformational generative grammar. In our analysis we shall test them all and see how far they can be applied in the contrastive analysis of Serbo-Croatian and English and in preparing instructional materials. Some of them appear to be so obvious and acceptable that very little testing is required.

3.9.2.1. According to *Directive One* the strings underlying the kernel of the FL are generated up to the point where lexical rules would be applied.

3.9.2.2. *Directives Two* and *Three* tell us to generate first the strings resulting solely from obligatory selections beginning with those yielding the smallest number of terminal symbols and then to generate those strings of the kernel involving optional selections following the order suggested in D_2 . Dingwall provides a table⁴⁸ which gives in an abbreviated form the results of applying D_1 , D_2 , D_3 to a T-grammar of the FL.

3.9.2.3. By *Directive Four* strings generated by the above three directives are to be paired, on the basis of optional structural-translational equivalents, with strings of the NL.

3.9.2.4. In *Directive Five* we are told to re-order, on the basis of functional load and structural divergence, within sets of strings displaying the same number of terminal symbols in the FL.

⁴⁴ See pp. 13—15.

⁴⁵ W. D. Dingwall, o. c. in note 32, p. 153.

⁴⁶ *Ib.*, pp. 154—159.

⁴⁷ *Texas Conference on Problems of Linguistic Analysis in English*, Austin, 1962, vol. 3., pp. 124—186.

⁴⁸ O. c. in note 32, p. 155.

3.9.2.5. *Directive Six* requires, following the above gradation, the formulation of pattern practices of three types: repetition, substitution, and expansion.

3.9.2.6. Before proceeding to further directives Dingwall makes two more assumptions: *Assumption Eight*, which says that unary transforms of the most highly valued grammar are more basic to the language than binary transforms, and *Assumption Nine*, which stipulates that TRs should be ordered on the basis of generality of application. He then goes on to formulate six more directives based on all nine assumptions together.

3.9.2.7. *Directive Seven* tells us to order the unary transforms (UTRs) of the FL on the basis of generality of application starting with those that apply to the greatest number of P-terminal strings plus their P-markers and concluding with those that apply to the fewest. (This means that *Interrogative*, which is a UTR, is far more general in its application than *Passive*).

3.9.2.8. In *Directive Eight* we are told to pair the strings of terminal symbols generated by the UTRs of the FL, where possible, with strings of the NL.

3.9.2.9. *Directive Nine* says that within sets of equally general TRs in the FL, those which are least structurally divergent from the NL should be taught first.

3.9.2.10. *Directive Ten* tells us to formulate pattern practices of the transformational type applying to those kernel tokens drilled under D_6 .

3.9.2.11. *Directive Eleven* requires D_7 — D_{10} to be applied to the binary transforms (BTRs) of the FL.

3.9.2.12. *Directive Twelve* allows us to formulate any additional pattern practices required, either of the intra-component type (substitution, expansion, etc.), or of the inter-component type (transformation, question-answer, etc.).

4. *Relationship between theoretical and empirical methods*

4.1. There is a considerable amount of interdependence of theory and practice in a project of this kind. Our method will represent the relationship of theoretical and empirical methods of investigation. That is why our project is expected to be a theoretical and practical contribution to contrastive studies. Some empirical evidence has led us to conclude that there are areas where no existing linguistic theory is successful (or at least offering as yet no definite solution), and where additional effort may be needed. Some experiments in this direction have already been made. The two articles following this one, printed in this volume, one by L. Spalatin⁴⁹ and the other by Z. Bujas,⁵⁰ are to prove this point.

⁴⁹ See pp. 29—48.

⁵⁰ See pp. 49—61.

The work on Serbo-Croatian—English concordances that Ž. Bujas is preparing in the Linguistics Research Center (University of Texas, Austin) and the translational method,⁵¹ described in L. Spalatin's article (tested on *this-that* and their equivalents in Serbo-Croatian and discussed at our second seminar in Novi Sad) represent empirical work the results of which will be valuable for the project.

4.2. There are areas in our field of research where the transformational approach cannot be applied and where one of the empirical methods will be of great use (e.g. the comparison of the uses of *say, speak, talk, tell*, with those of *reći, kazati, govoriti*). This is the reason why from the very beginning of our work we have been attempting to evolve a system which will permit us to proceed parallelly on the study of texts by means of the descriptive-translational method and concordances, and on the development of the grammatical theory based on the transformational generative approach. The relationship between theoretical and empirical methods will be decided in the course of work.

4.3. G. Nickel believes that N. Chomsky's theory of generative transformational grammar, laid out in his book *Syntactic Structures* (1957), and its recent developments "may lead to novel and important insights into problems of language acquisition and may help to provide a sounder basis for solving problems of language teaching".⁵² Nickel says that "there have already been attempts to apply the findings of generative transformational grammar to practical language teaching" and that "these efforts have yielded very interesting results". Nickel adds, however, that "there is still much to be done in this stimulating field of research".^{52a} We agree much more with the latter than with the former: the transformational model can be (and will be in our work) used as the basis for the analysis of both source and target languages. Moreover, we believe that the practical value and applicability of the T-G model for practical language teaching is to be found indirectly in its use in contrastive analysis of the NL and the FL.

4.4. The already published works from this field (the *Contrastive Structure Series*)⁵³ show that the contrastive analysis

⁵¹ Spalatin calls the method he discusses in his article "the backtranslation method". Translation method is the subject of two other articles: H. W. Kirkwood, "Translation as a Basis for Contrastive Linguistic Analysis". *IRAL*, IV, 3, 175—182; E. A. Levenston, "The Translation-Paradigm. A Technique for Contrastive Syntax". *IRAL*, III, 3, 1965, 221—225 (See also note 58).

⁵² Gerhard Nickel, "Applied Linguistics — An Additional Comment". *IRAL*, V, 2—3, 1967, p. 1.

^{52a} *Ib.*

⁵³ Chicago University Press, 1962—1965.

based on a transformational model⁵⁴ exhibits great advantages over the other two⁵⁵ in which other methods were used. A thorough analysis of three contrastive studies (English-German, English-Italian, and English-Spanish) and a systematic comparison of their results and the degree of their applicability to language teaching undoubtedly prove that the one carried out on the basis of the transformational model is much more applicable in fulfilling the primary aim of contrastive analysis: building up new and more modern instructional materials.

4.5. It has not yet been theoretically determined whether an exclusively transformational generative approach is possible in contrasting two languages. Our work on the project is expected to shed light on this problem too. We will base our method, primarily on the T-G approach. In building up our method, however, other approaches will be used as supplementary whenever warranted. The place of T-G grammar in our project can be best defined as a necessary theoretical support to the discussion (NL and FL). This will become even more evident when our work reaches the areas where the T-G approach cannot be applied.⁵⁶ In such cases it is best to consider the relationship of theoretical and empirical methods of investigation and decide which to use when.

5. Translation-Paradigms

5.1. E. A. Levenston⁵⁷ calls his "technique for contrastive syntax", by means of which syntactic differences between languages can be presented, a "translation-paradigm". It is a translational method⁵⁸ in which a grammatical category from language A is listed opposite all the categories in language B by which it may be translated. Grammatical and contextual criteria governing the choice are given in notes. He follows Halliday's categories of the theory of grammar and gives three examples from three different units: clause, group, and word.

5.1.1. In *Example 1* (the clause — dependent or independent) an English transitive clause is contrasted with four variants

⁵⁴ Stockwell-Bowen-Martin, o. c. in note 11.

⁵⁵ H. L. Kufner; o. c. in note 11; F. B. Agard — R. J. Di Pietro; o. c. in note 11.

⁵⁶ Such as semantic fields. See also 4. 2 (p. 21).

⁵⁷ E. A. Levenston; "The Translation-Paradigm. A Technique for Contrastive Syntax". *IRAL*, III, 3, 1965, pp. 221—225.

⁵⁸ Cf.: L. Spalatin's article "Contrastive Methods", pp. 29—48 in which the backtranslation method is reviewed, discussed and illustrated by the use of possessive adjectives in English through their translation equivalents in Serbo-Croatian, and H. W. Kirkwood's article "Translation as a Basis for Contrastive Linguistic Analysis" (*IRAL*, IV, 1966, 3. pp. 175—182). in which the author proves that "contrastive syntactic and semantic study through translation constitutes a solid empirical basis on which to build cognitive control over the structure of a language".

in Hebrew.⁵⁹ In *Example 2* (the verbal group) the English past perfect is contrasted with three verbal groups in Hebrew.⁶⁰ In *Example 3* (the possessive adjective — *my*, etc.) a nominal group — *my* + any noun — is contrasted with three variants in Hebrew.⁶¹

5.1.2. These three examples contain: 1) formal (grammatical) criteria governing choice of translation; 2) textual criteria; 3) a combination of formal (grammatical) and contextual criteria. "Sometimes", says Levenston, "it is impossible to state any grammatical or contextual reasons why a particular structure is used as translation for certain lexical items".⁶² This is shown in *Example 4* (attributive adjectives) where an English nominal group (adjective + noun) is contrasted with several variants in Hebrew.⁶³

5.1.3. Levenston states an important fact that all the equivalences he has shown in English-Hebrew paradigms are one-way, and not necessarily reversible. "It is often useful for teaching purposes", Levenston goes on, "to give the Hebrew-English paradigm also, especially when an English structure has only one Hebrew equivalent, but the converse does not hold. An example is the English clause where a verb is followed by another verb in the infinitive with *to*".⁶⁴ *Examples 5* and *5a* (phase intransitive clauses) show that the English clause with verb + *to* + infinitive corresponds to only one Hebrew equivalent (clause with verb + infinitive) while a Hebrew clause with verb + infinitive is contrasted to five English variants.⁶⁵

5.1.4. "The statement of contrastive syntax in this form", Levenston concludes, "may be derived from either (a) a bilingual's use of himself as his own informant for both languages, or (b) clause comparison of a specific text with its translation. The first alternative" — Levenston comments — "may appear more comprehensive, but it cannot be guaranteed to cover all possibilities and cannot give any information as to frequency of occurrence. The second method has its advantage that the validity of every term in the paradigm can be fully established with details of frequency of occurrence, for the text under consideration".⁶⁶

5.1.5. Levenston worked on transcriptions of recorded Hebrew conversation and their translation into English; he has

⁵⁹ E. A. Levenston: o. c., p. 222.

⁶⁰ *Ib.*, p. 223.

⁶¹ *Ib.*, p. 223.

⁶² *Ib.*, p. 224.

⁶³ *Ib.*, p. 224.

⁶⁴ *Ib.*, p. 224.

⁶⁵ *Ib.*, p. 224.

⁶⁶ *Ib.*, p. 225.

also given Hebrew translation-paradigms for particular categories in English; his opinion is that once the texts are available for study it is irrelevant which was originally target and which was source. His analysis has proved that both directions are relevant: *Examples 5* and *5a* seem to support this opinion.

We shall be working in both directions in our analysis. Preliminary pilot studies have shown that this may be a safer, more reliable and useful method. One more reason to do so is that in our case the two languages English and Serbo-Croatian will be analysed as both NL and FL and contrasted with each other once as a NL and then as a FL.

5.2. If our aim was only to build up instructional material for English as a FL then we would agree with Levenston that this is a matter for pedagogues.⁶⁷ Having decided to aim at various other objectives and by-products, (e. g. enhancing the scientific study of English, and especially of Serbo-Croatian which still lacks a new, modern description based on the most recent linguistic theories) we believe that this attempt of ours — a detailed contrastive analysis of both languages — will represent a contribution to linguistic theory too: by trying to produce a new description of Serbo-Croatian based on contrastive analysis and most modern models, and contrasting it with the existing description of English we hope to be able to supplement the latter.

Levenston has only one objective: to throw more light on the probable difficulties of the Israeli learning to use those English categories. We agree that the translation-paradigm can assist the teacher to identify the source of error. We hope, however, to be able to apply Levenston's translation-paradigms or perhaps the whole system he has used much further and with much more important results. A systematic analysis of the structures of both languages based on the translation-paradigm system may be useful in areas where other theories fail to help us.⁶⁸

5.2.1. We will try to make what Levenston calls "a complete set of translation-paradigms, from sentence to morpheme" and get a grammar based on contrastive analysis for each of the two languages. Whether this process can be paralleled with what a bilingual dictionary does for the vocabularies of two languages we are not yet sure; we shall be able to make some statement after we have completed our analysis. What we can and want to state now is that Levenston's system of translation-paradigms seems to be usable not only for two pedagogical purposes mentioned by him: (1) for prediction of difficulties,

⁶⁷ *Ib.*, p. 225.

⁶⁸ Cf. paragraphs 4.2, 4.5 and notes 52 and 58.

(2) as a basis for the selection, presentation, and ordering of the materials in a meaningful sequence, but also for a linguistic purpose: (3) for getting a contrastive list of grammatical categories of two languages which cannot be obtained through other methods, and which can contribute to a better and more complete description of any of the two languages that are contrasted.

6. *Methodology — Outline Plan of Research*

6.0. After having established the first aim and the basic principle of our study we come now to the second and no less important problem. This is: how can we best achieve the above mentioned aim and find and formulate other principles we are going to follow in the contrastive analysis of English as a target language and Serbo-Croatian as the first language of the learner? In other words, we have to define the method or methods we are going to use and the model or view of grammar we shall use as the principal basis of our comparison of English and Serbo-Croatian patterns.

6.1. Our study will be made at four linguistic levels: (a) phonology, (b) syntax, (c) morphology including word formation, (d) lexis. The analysis has been provisionally planned to cover several topics in each. In phonology the following topics will be analysed: stress, rhythm, intonation, the vowel system, the system of consonants and the morpho-phonemics of English and Serbo-Croatian. In syntax (with the sentence as the point of departure in analysis) the analysis will be focussed on simple sentence (nominal group, verbal group, adverbials, word order, enclitics, questions, negation, etc.), compound and complex sentences (all clauses, comparative constructions, etc.), parts of speech (nouns: number, gender, cases, nominalisation, articles, pronouns, adjectives, etc.), the verb (aspect, voice, modal verbs, imperative and its periphrases, formal expression of present, etc., time). In morphology main features will be discussed (declension of nouns, etc., conjugation, comparison), while word formation will cover both methods of forming words: composition and derivation. In lexis we shall try to establish contrastive patterning in semantically corresponding clusters, in synonymy groupings, in Latin-root words, in frequency correspondences, etc.

6.2. An attempt will be made from the very beginning of our work to evolve a system which will permit us to proceed parallelly with the study of texts by means of the descriptive-translational method and the development of the grammatical theory based on the transformational approach. The transformational approach will be the main one, but it will be supplemented, whenever warranted, by other approaches. This is important in view of the fact that one of the basic objectives

of this project is the transformational description of Serbo-Croatian. To what extent descriptive or generative models are to be favoured in specific areas will be decided in the course of work.

6.3. Elements and categories in the two languages that belong to completely different phenomena (e. g. Serbo-Croatian accent) will only be reviewed for reference. The Serbo-Croatian corpus will be described with reference to the accepted grammatical norm. Deviations from the norm will only be considered when the material points to an obviously fictitious prescriptive stipulation.

The English language material will be described from the point of view of both the American and the British variants.

6.4. The following principles will determine the selection of material for the corpus: (1) Both American and British authors will be selected. (2) The selection will cover fiction and non-fiction. (3) Translations into Serbo-Croatian made in all centres from which participants for the project are drawn will be included, so that both the eastern and western variants of Serbo-Croatian will be equally represented. (4) Criteria (1), (2), (3) apply also to the selection of Serbo-Croatian originals and their translations into (British and American) English.

6.4.1. The size of the material from which the corpus is to be drawn will be determined by the need to collect a sufficiently large number of contrasting elements and patterns to permit statistically valid conclusions. Two kinds of sample are contemplated: (1) General sample — large enough for the majority of contrasted elements, (2) Supplementary sample — for cases in which the general sample fails to produce a reliable distribution picture.

6.4.2. The general sample is estimated at 100.000 English sentences with the same number of Serbo-Croatian translation equivalents. A number of frequency counts have shown that a general corpus of this size will produce sufficient material for syntactic distribution analyses, and they can easily be added to — if the need is felt — by using a supplementary sample.

6.5. The work is planned to proceed in the following four steps: (a) preliminary (pilot) studies; (b) collection of material; (c) processing and analysis; (d) synthesis and monograph preparation.

During the preliminary stage an exhaustive bibliography of the field will be compiled: (a) works on generative grammar in Yugoslavia; (b) works on generative grammar of Slavic languages; (c) materials on contrastive English Serbo-Croat problems; (d) transformational method as applied in textbooks of English; (e) works on structural description of Serbo-Croatian and English.

6.6 For the team that is working on this project two seminars were held at which fundamental theoretical questions and certain practical considerations regarding the work on this project were discussed.

The team consists of three kinds of members: (1) extractors, (2) analysts, (3) synthesists. In addition, specialists in different fields will be engaged at different points in the realization of the project (statisticians, mathematicians, etc.). Analysts will check the work of extractors and analyse the material collected, classifying it by topics included in the project. Synthesists will act as the analysts' supervisors. They will also be entrusted with the writing of the contrastive analysis of Serbo-Croatian and English.

7. *Conclusion*

The monograph which is expected to be the first outcome of the project will contain linguistic material useful for the writing of textbooks in both languages, theoretical and practical grammars, as well as the material for further studies into different aspect of each of the two languages. In addition to the monograph the work will produce materials useful for technical descriptions of significance for linguistic theory.