

PAPERS ON POETICS AND SEMIOTICS

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ASPECTS OF STRUCTURALISM IN SOVIET PHILOLOGY

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Introduction

Some five years ago writing a survey of structuralism in the Soviet Union was a much simpler task than today: the number of works written in what may be described as a structural approach was smaller, their interrelationship provided a more uniform and atomized picture, and the point of view of an inside observer would probably not have collided with those of other members of the school. However, the structural scene in the USSR as viewed today may be studied in more general and complex terms. One begins to discern conscious attempts at presenting the ideas of semiotics and structuralism in extra-linguistic domains within a coherent system [58]. The efforts of various scholars seem to point in one direction. This enables a reviewer to look for certain basic underlying ideas and patterns of ideas even in those works which were written at the very dawn of semiotics in the USSR.

Several years have passed since the writing of the Meletinskij-Segal review of Soviet Structuralism and semiotics [37]. That review was intended mainly as a source of bibliographical information for readers who could not follow the original publications. While the intervening years have seen the publication of several important books and articles (perhaps many more than during the entire period covered by the previous review), and therefore it was necessary to bring the bibliographical aspect up to date, it was also felt that these new contributions bridge a gap between certain ideas expressed

by the founders of Soviet semiotics as early as 1958 and their practical implementation and further theoretical development. Thus, one can now view the whole field of structuralism and semiotics in the Soviet Union as more fully developed than before and at the same time pregnant with important new insights.

As one of the authors of the previous review, I intend to undertake the task of updating it and trying to bring to light some of the underlying patterns in the development of Soviet semiotics and structuralism. I realize only too well the enormity of my aim, which is further complicated by the essential heterogeneity and freedom of scholarly approach that are so characteristic of the "Soviet school." The picture will necessarily reflect my own personal experience as someone who has been for the past fifteen years closely involved in the activities of the school. It cannot be taken as a collective self-description.

Beginnings of Soviet Structuralism

The reader may have noticed that I am using the terms "structuralism" and "semiotics" almost interchangeably. This reflects a particular approach developed by a group of linguists and semioticians working at the section of Structural Typology at the Institute of Slavic and Balkan Studies in Moscow (Vjacheslav Vsevolodovich Ivanov, Vladimir Nikolaevich Toporov, Isaak Iosifovich Revzin, Tatjana Vladimirovna Civjan, Tatjana Mixajlovna Nikolaeva and others). While at first there were occasional attempts to resist any identification of structuralism (especially structural linguistics) with semiotics [61,48e], gradually a more general view was accepted even by those scholars who tended to prescribe narrow limits

either for structuralism or semiotics. Now the importance of a semiotic perspective for structural linguistics is being realized by an ever wider circle of scholars ¹⁾ while the adherents of semiotics have always placed paramount importance on the search for exact methods of structural analysis of the universe of semiotics.

The structural-semiotic approach developed by the scholars of the Section of Structural Typology goes back, of course, to the famous Saussurean tenet of linguistics as part of semiotics, a more general science of signs. At the same time, the circumstances under which structuralism as a coherent trend appeared in Soviet linguistics left their imprint on both the subject and methods. As in other schools of structuralism, the seminal development began in phonology. It was the pioneering work of Prof. Sebastjan Konstantinovich Shaumjan that first introduced into Soviet scholarly usage the term "Structural linguistics" and "structuralism." Shaumjan's conception of phoneme as a basic constructive element of language, his rigorous distinction between "the level of observation" (parole) and "the level of constructs" (langue), his emphasis on systemic nature of language and relational character of this system were formulated as early as 1951-1952 in his Candidate of Sciences dissertation at the Institute of Slavic Studies in Moscow. This scholar directly referred to the tradition of Western structuralism, quoting such names as Trubetzkoy, Jakobson and Hjelmslev in support of his own phonological theory. The initial reception of Shaumjan's ideas was far from enthusiastic, and his theory was subjected to a somewhat incompetent criticism during the phonological discussion in the pages of *Voprosy*

¹⁾ Cf., among others, [48f]; for a glossematic view of semiotics as one of the components for the construction of fundamentals of linguistics see also [23].

jazykoznanija in 1954.²⁾ However, the emergence of structural linguistics as a distinctive school vindicated Shaumjan's approach, and already in 1957 he was able to proclaim and defend his ideas publicly during the discussion on the relationship between synchronic analysis and historic study of languages organized by the Institute of Linguistics of the Soviet Academy of Sciences. This discussion was to become a milestone in the development of Soviet structural linguistics (see also below). Shaumjan's phonological theory was far from being a mere re-statement of traditional structural phonology. Thus, his treatment of distinctive features as purely logical functions is a continuation on a new level of Hjelmslev's ideas. It seems to predict the evolution of Jakobsonian distinctive features in the works of Chomsky, Halle and later followers of generative phonology (in the sixties Shaumjan incorporates generative phonology based on a logical treatment of distinctive features into his applicative generative model).

While Shaumjan's introduction of structural methods and terminology into Soviet linguistics was important as a pioneering attempt, it was also significant that his theory evolved as immanent and purely linguistic. Shaumjan always emphasized complete independence of his model from any extra-linguistic factors. He also attaches great importance to inner consistency and formalizability of descriptive methods (here he leans heavily on symbolic logical calculus). In exploring the completely immanent character of his theory, Shaumjan is, perhaps, the only Soviet theoretician who attempts to construct a meta-theory of structural linguistics [48e].

²⁾ For a more complete formulation of Shaumjan's phonological ideas see [48] (a published version of Shaumjan's dissertation), [48a],[48b],[48c]; a synthesis of his phonological ideas is to be found in [48d].

Unlike Shaumjan's work, early efforts of other founders of Soviet structuralism were closely related to what was then regarded as practical application of linguistic research. In 1956, several young linguists decided to cooperate with mathematicians in order to study possibilities of applying linguistic research to machine translation and automatic data processing. This decision was taken in the wake of the official recognition of cybernetics as one of the important tools of scientific and technological progress. A seminar on mathematical linguistics was organized at the Moscow University and was attended by the linguists Vjach.Vs.Ivanov, I.I. Revzin, Tatiana Nikolaevna Moloshnaja, T.M. Nikolaeva, Igor'/ Aleksandrovich Mel'/chuk, Andrej Anatoljevich Zaliznjak, Peter Savvich Kuznecov (one of the founders of the Moscow phonological school and a representative of the pre-war structuralist tendencies in Russian linguistics) and the mathematicians Andrej Nikolaevich Kolmogorov (who was not a regular member), Andrej Andreevich Ljapunov, Olga Sergeevna Kulagina, Roland Lvovich Dobrushin and Vladimir Andreevich Uspenskij (who is not to be confused with his younger brother Boris Andreevich Uspenskij, then an undergraduate of the Moscow University and later a prominent linguist and semiotician). The group was engaged in extensive discussions of the role of linguistic theory in automatic language-processing. It immediately became clear that a formal description of linguistic facts is necessary for a computer (or any other automatic device) to be able to analyze and identify linguistic phenomena. Recourse to meaning, which was common practice at all levels of linguistic description in the "traditional" approach, had to be ruled out. Naturally the procedure of descriptive linguistics attracted the attention of the scholars. Early works of Z.S. Harris were at the center of discussion, as was Y. Bar-Hillel's formal descriptions of

syntactic relations. Mathematicians saw a very useful tool in set theory whose apparatus provided convenient formalization for the description of linguistic distribution both on the paradigmatic and syntagmatic level. The study of relational properties of language without recourse to extralinguistic argument became, for the time being, the main occupation of Soviet structuralists. Significantly, the earliest published works were concerned with finding a formal definition of such important instruments of linguistic description as notions of grammar [21],[7],[57],[57a]. The authors used the notions of set, sub-set, string, inclusion, substitution, mapping, equivalency and family to describe the formal distribution of segment sequences, their grouping into paradigms, the distributional affinity vs. polarity between paradigms and the grouping of paradigms into classes. Dobrushin in his article on elementary grammatical categories suggested an apparatus the modification of which was later used in all Soviet works on the modelling of morphology (cf. the works of Revzin and Zaliznjak). Dobrushin introduces the notion of arbitrary sub-division, from which he elicits a certain class whose substitutional properties are such that it cannot be substituted for by any other class that is not itself. This class is defined as initial. Initial class is then put into correspondence with initial family. A series generated by an initial family is defined as an elementary grammatical category. The importance of this procedure is that it enables us to delimit formally significant linguistic strings that form the basis of morphological description.

Also important was V. Uspenskij's model of case as determined by a class of contexts. These early works served as a starting point for the development of the theory of linguistic models (later works by Revzin, Shaumjan,

B. Uspenskij and A.V. Gladkij; many of the original ideas of set-theoretical modelling found in early Soviet works were developed by the Rumanian mathematical linguist Prof. Solomon Markus). At the same time it must be remembered that machine translation brought about not only a re-thinking of theoretical foundations of linguistic description. Many practical descriptions of various fragments of language (mainly morphology) with the aim of formal analysis were being undertaken at various research institutions.³⁾ These descriptions made extensive use of algorithmic languages, theory of graphs, computer block-diagram programming techniques and other formal technical devices. They introduced new standards of exactness and exhaustiveness of linguistic description being, as a rule, based on closed samples. It was assumed that eventually numerous "inductive" descriptions of this kind would build up an exhaustive formal description of language (Russian or English, as machine translation projects usually dealt with these two languages). Especially productive was T. Moloshnaja's notion of "Syntactic configuration", a modification of the immediate constituents idea, which was introduced in her automatic analysis of English. Such problems as resolution of homonymy, morphological segmentation and the optimal form of ascribing

³⁾ One typical example of these publications is [31]. Most of the papers were written as early as 1957-1958. The volume includes the first publications on formal semantic analysis in machine translations (Zholkovskij, Leontjeva, Martemjanov) as well as many examples of formal morphological and syntactic analysis and synthesis (Moloshnaja, Nikolaeva, Belokrinickaja, Mel'chuk).

formal features of grammatical information to the word were treated, and many interesting solutions were proposed. However, some problems (especially resolution of homonymy and the choice of the optimal linguistic code) proved to be difficult without recourse to either lexical semantic features or wider information about the relationship between semantics and syntax (cf. the role of word order in Russian). These problems became the focal point of study at later stages of automatic language processing research in the Soviet Union. It is here that closer contact was established with the then nascent school of transformational linguistics in the West. It is also these difficulties that made scholars aware that the "down-to-earth" approach characteristic of earlier attempts at machine translation formalization should give way to a wider theoretical framework.

It was mentioned earlier that Shaumjan's phonological theory was the first source of structural ideas in Soviet linguistics. At the same time his approach was somewhat abstract (and at that time confined only to phonology) to serve as theoretical background for numerous practical studies of language processing. It was the work of V. Ivanov that opened up theoretical opportunities for what was at first purely practical research. While the mathematicians who participated in the seminar on mathematical linguistics provided tentative instruments of formal language modelling, Ivanov introduced into Soviet linguistics the entire conceptional universe of modern linguistics, both Western and Russian. Ivanov was the first to bring the wealth of Russian linguistic tradition back into the mainstream of scholarly life in the Soviet Union. He was one of the editors of a collective volume published by the Institute of Slavic Studies to mark the centennial anniversary of

J. Baudoin de Courtenay [18h], he was the first to introduce to the younger generation the linguistic concepts of the late Soviet linguist Evgenij Polivanov [18a], and he closely cooperated with R.S. Kuznecov in helping young scholars establish contact with the ideas of the Moscow phonological school.

Ivanov brought the budding Soviet structural linguistics his wide erudition in the field of comparative -- historic analysis, his acquaintance with the concepts of modern information theory, and his knowledge of current trends in other sciences. Starting from his experience in the study of internal stratification of verb stems in Hittite ⁴⁾, Ivanov was the first in Soviet structural linguistics to recognize the complex nature of linguistic structure and its multi-systemic character. This point was repeatedly emphasized in Ivanov's early publications on theory of linguistics and machine translations even as the general practice of research still followed "one-dimensional" paths. Ivanov realized that mathematical linguistics ought to outgrow the practice of employing mathematical terms for a simple re-naming of traditional linguistic concepts used in technical procedures of machine translation analysis. He viewed mathematics not as a mere source of technical terms but as a model of science, a meta-science, as it were, for linguistics [18b]. He also showed that fundamental problems of linguistic description are, in the last analysis, reduced to the same complementarity between richness of a logical system and the possibility of its being completely described by its own proper means that was demonstrated by Goedel [18g].

⁴⁾ See Ivanov's summary of his Candidate of Philology thesis [18].

Ivanov's early works present the picture of structural linguistics not as an abstract deductive science, but as a complex structure of models which strive to represent the inherent complexity of language as system of systems. This view of structural linguistics became accepted by many linguists, especially by specialists in comparative linguistics and structural typology. It also served as a cornerstone for the development of structuralism as a scientific method for humanities. The view of structuralism as a complex scientific trend which draws its methods and arguments both from deductive and inductive approaches and which strives to elicit the structures inherent in the data became decisive in the forming of the ideas of Soviet semiotics.

Ivanov used mathematical concepts to formulate his idea of language as system of systems. In one of his early publications [18c] he presents a theory of language as n -- dimensional space, the dimensions being the corresponding logico-analytical features elicited in linguistic analysis (i.e. phonological distinctive features). This prepared the ground for wide-ranging applications of matrix representations in linguistic description, e.g. in structural typology ⁵⁾. Ivanov was one of the first Soviet linguists to introduce also the dichotomy "code-message" into Soviet scholarly usage [18d].

At the same time, Ivanov strove to bridge the gap between the structural linguistics (especially in its formalized version which became so popular among young linguists) and comparative -- historical and descriptive studies

⁵⁾ Cf., for example, one of the first attempts at quantitative typology based on matrix representations: [26].

which still operated in the "traditional" (i.e. pre-phonological and pre-morphonological) manner. He published several papers which sought to establish affinity between certain concepts of structural linguistics (e.g. the notions of synchronic level, linguistic system -- "code" in Ivanov's terms, system of correspondences, etc.) on the one hand and the practice of comparative -- historical reconstruction on the other hand [18e], [18j], [18f].

It is significant that the main postulates of a structural approach to comparative historical-reconstruction were formulated by Ivanov in 1957 and were rigorously applied in his numerous later studies. I think that it is in this sphere that Soviet linguistic structuralism began to transcend its original boundaries set by a purely applied character machine translation research. It was realized that structural linguistics should be the theoretical basis of applied linguistics ⁶⁾, but at the same time came the awareness that structuralism cannot be limited to purely technical aspects of synchronic linguistic procedures.

Ivanov insisted that comparative - historical studies cannot and should not remain on the level of "atomistic" comparison. The process of historic reconstruction of the proto-stage is viewed as a series of consecutive steps, each involving internal reconstruction of the chronologically earlier state by using internal evidence. At any given stage the linguistic system is heterogeneous ("a system of systems"), and the degree of balance between statistically insignificant archaisms and current norm serves to reconstruct

⁶⁾ See, for example, Chapter IV "Machine Translation and Linguistics" (by I.A. Mel'chuk) in [1].

patterns from what at present appears as a relic. Taking into consideration marginal phenomena, peripheral facts, etc. it is possible to elicit by purely internal means an earlier linguistic state. The process of internal reconstruction is then brought into correspondence with the similar reconstructions in cognate languages: "The results of internal reconstruction of the proto-language from the data of only one language may be considered definitive only after the relationship is clear between this reconstruction and prehistoric state of other cognate dialects" ⁷⁾. Ivanov emphasizes the importance of external comparison for any final decision about the validity of internal reconstruction. Ivanov insists that reconstructed phenomena should form a system (or micro-system) and should be regarded as such. Thus a phonemic reconstruction, for Indo-European, should take into consideration the structure of the consonantal series, and morphemic reconstruction should describe neutralization, alternations, etc. One of the problems arising in such systemic reconstruction should be juxtaposition of reconstructed fragments of system with what may be regarded as typological universals. The problem of Indo-European "voiced aspirates" (in the absence of the corresponding voiceless phonemes) poses a question of validity of their phonemic identity. Ivanov's early ideas of typological universals and "quasi-universal" implications in phonology, morphology and syntax and their use as one of the criteria of reconstruction seems very fruitful in the light of subsequent interest of linguists in the problem of linguistic universals.

Ivanov's conception of comparative linguistics shows that he was trying to apply to reconstruction procedures his ideas of linguistic study as establishment

⁷⁾ [18j], p. 134 (translation mine D.S.).

of correspondences between systems and sub-systems. Incidentally, the idea of historical analysis by means of eliciting successive synchronic layers was first realized in Soviet structural linguistics by Shaumjan in his book on the history of the system of distinctive features in Polish. Naturally, practical historical-comparative study of successive synchronic layers proved to be more difficult for proto-language where absolute chronology (available for languages with documented history) has to be substituted for by relative chronology

Mention should also be made of Ivanov's inclusion of semantics into the field of structural reconstruction. In this he followed the ideas of Benveniste, Thieme and other Indo-Europeanists. In his lecture on the methods of the study of the history of Indo-European (Moscow, 1957), Ivanov gives an example of a reconstruction of the semantic situation "to perform a ritual ceremony", "to perform ritual ablution" and "to kill a sacrificial animal" (the meaning of the Hittite verb *shpant-*) which is analogous to the corresponding semantic situation in *The Iliad* (the Greek verb *Spéndō*). Research into diachronic semantics and the reconstruction of the underlying situations (mythologemes and ritual complexes) is believed to be the integral part of the structural analysis of language ⁸⁾.

Here we come to one of the most important features not only of early Soviet structuralism, but, to an even greater degree, of modern structuralist thought in the Soviet Union. Greatly influenced by Ivanov's work, Soviet structuralists realized the importance of structural analysis of the "extra-linguistic"

⁸⁾ [18j], pp. 141-142,

field almost at the same time as Claude Lévi-Strauss published his *Structural Anthropology*. That was one of the reasons for the subsequent fruitful application of the ideas of the French scholar by Soviet structuralists.

This extension of the Structuralist method should be seen not only in the light of the contemporary developments in the European and American science (where two of the most popular sources of "extra-linguistic" structuralism deserving mention are: *Style in Language*, especially R. Jakobson's article on Linguistics and poetics, and *Language in Culture*; edited by Harry Hoijer), but also as a continuation of certain trends in Russian philological science. I will return to the question of tradition and continuity in Soviet structuralism later; let me mention here only the role of the Moscow Linguistic Circle and its outgrowth -- the Prague Linguistic Circle. The need for a broad theoretical framework sought by Soviet structuralists and exemplified in the linguistic tradition by such names as Trubetzkoy and Jakobson (both Russian scholars and therefore enjoying special status among the Russian scientific audience) was echoed in the theoretical quests of the mathematicians who participated in the development of Soviet structuralism (theory of proof and derivation and pragmatics of mathematical deduction developed by Alexander Esenin-Vol'pin, theory of mathematics for linguists worked out by Juri Shixanovich, theory of grammars by Gladkij). I should also mention the personal role of Roman Jakobson, whose visit to Moscow in the summer of 1958 played a crucial role in giving Soviet structuralism broad perspective.

The concept of linguistic structure as system of systems and the corresponding view of linguistics as science establishing correspondences between linguistic systems seemed to be a natural corollary of transformational procedures which caught the attention of Soviet structuralists immediately upon the publication of Chomsky's *Syntactic Structures*.

Originally, the establishment of correspondences between different language systems was the basis of I. Mel'chuk's conception of "intermediary language" ("inter-language" or "meta-language") in machine translation. Ivanov wrote in 1959: "The establishment of one-to-one correspondences between languages may be regarded as a preliminary step towards setting up a universal inventory of linguistic meanings. I.A. Mel'chuk's method of constructing intermediary language as a system of correspondences between languages proved similar to methods elaborated in other fields of linguistics where the establishment of systems of correspondences between n linguistic systems is used to build a new $(n + 1)$ -th system which is not identical with the original systems but which can be used for their description. Thus, the theory of intermediary language may be regarded as part of a more general theory of correspondences and relations between linguistic systems" ⁹⁾. Ivanov postulates a hierarchy of operations: comparison of systems should be preceded by a stratification of each system into sub-systems or fragments. The task of linguistic analysis is to establish relation among these fragments. This, in Ivanov's words, is the essence of transformational method ¹⁰⁾. The introduction of transformational method makes it possible for structural methodology to speak about meaning: "Meaning is defined for both intra-language ("internal translation") and inter-language

⁹⁾ [18k], p. 55.

¹⁰⁾ [18k], p. 56.

(translation from one language into another) transformational analysis as an invariant under given transformations (in other words the translation does not introduce any changes into a relationship between a given sign or sign sequence and a certain set of extra-linguistic events)" ¹¹⁾.

Of course at that time it was a step forward from the behaviorism of machine translation procedures to speak about meaning as related to "extra-linguistic" events. However, the realization of the inherent difficulties of such a definition of meaning did not come until several years later. A detailed analysis of the structure of the invariant of transformations (something which was so manifestly lacking in earlier writings of the "generative" school) was attempted in some of the later works of Shaumjan and Revzin ¹²⁾.

In the above-quoted passage, Ivanov postulates the necessity of the structural study of semiotic systems other than language. If what remains immutable in transformations is the sign's relation to extra-linguistic "events" then it follows that these "events" should be, at least, representable as a coherent and ordered set rather than a formless conglomerate. Ivanov writes: "The description of linguistic system cannot be complete if it does not take into account the relationship between this system and other semiotic system(s). The sign in linguistic system is by definition bi-lateral, i.e. - it is necessarily related to, at least, a single sign of another system" ¹³⁾.

¹¹⁾ [18k], pp. 56-57.

¹²⁾ [48e], part II, Chapter I "Semiotic and Linguistic Foundations of the Theory of Generative Grammars and Phonology"; [45], par. 18, 19.

¹³⁾ [18k], p. 57.

We thus see how the logic of machine translation research led Soviet structuralists to an understanding of the overwhelming role played in linguistic structure by semantics, i.e. that part of the linguistic edifice which is based on relationships with other semiotic systems.

I want to emphasize here that this trend of development in Soviet structuralism is not limited to the works of Ivanov and his followers. True, in structural typology of languages and some trends in comparative linguistics, recourse to structural analysis of extra-linguistic data became an important instrument for obtaining purely linguistic knowledge (cf., for instance, such diverse efforts as Ivanov's and Toparov's analysis of old Slavic and Proto-Indo-European mythology with etymological purposes and even for the establishment of the meaning of certain syntactic constructions ¹⁴⁾, or T.V. Civjan's analysis of cultural features of the Balkan area in support of her theory of the Balkan linguistic union [5]. At the same time one finds interesting extrapolations of the glossematic theory in the semiotic works of Jurij Konstantinovich Lekeomcev, and serious attempts to apply semantic procedures of machine translation synthesis for the construction of structural poetics in the works of such followers and colleagues of Mel'chuk as Zholkovskij and Shcheglov. Even in Shaumjan's immanent theory of structural linguistics the semiotic aspect of language, namely its relation to other semiotic systems, has finally found its place ¹⁵⁾.

However, just as was the case with introducing structuralism into comparative-

¹⁴⁾ See, among others, two of the latest papers: [18p] and [55g].

¹⁵⁾ See [48e) and later studies by Shaumjan.

historical linguistics, the structural study of language in relation to other semiotic systems was first initiated by Ivanov. Here too his theory of linguistic structure as system of systems played a very important role. It should also be mentioned that while Ivanov's work on introducing structural methods into comparative linguistics was facilitated by a significant tradition of structural comparative research in Western linguistics (Householder, Benveniste, Kurylowicz), his effort towards widening the field of application of these methods beyond pure linguistics should be regarded as pioneering. True, Jakobson's writings ("On the Russian Verse...", "Aphasia, Kindersprache and allgemeine Lautgesetze" etc.) did contain some of the seminal ideas of Ivanov's approach to structuralism and semiotics, but the main structure of Ivanov's thought in this field is completely original, and it is mainly due to his works that we may now speak of structural approach in the humanities in the Soviet Union.

As I have already said, the two main events that helped launch structuralism as a coherent trend in Soviet philology were the discussion on the relationship between synchrony and diachrony held in Moscow in 1957 and the Ist All-Union Conference on Machine Translation which took place also in Moscow in 1958. Ivanov read his paper (quoted above) on the methods of study of the Indo-European proto-language in the Discussion. The paper was met with keen interest, although many speakers were reluctant to admit the validity of new methods. Answering them, V. Toporov spoke about the current state of Soviet linguistics. According to him the discovery of structural methods was long overdue:

The topic of the present discussion is very urgent, although this conference could hardly be called timely; it could just as well have taken place thirty years ago.

The problems that interest the authors of many papers have not arisen in the last decade and the proposed solutions are far from new. In certain cases the lack of acquaintance with modern literature and the modern methods of scholarly research is glaring. If one adds to this that the papers do not touch upon many problems related to synchrony -- diachrony which are especially interesting in view of the recent successes of theoretical linguistics it will become quite clear that there was something deeply provincial about this discussion. ¹⁶⁾

I remember very well the feeling of electric shock that went through the audience that listened to these words.

No less significant was V. Ivanov's report on linguistic problems of poetic translation [18i] presented at the Conference on Machine Translation in 1958. Here Ivanov presents a coherent theory of poetic language as part of the semiotic aspect of language and envisages a program of structural research of poetry at all levels (prosody, sound structure, grammar, semantics). The basic concept of Ivanov's theory is poetic model: "The poetic model of a text is its poetic meaning which cannot be reduced to the meaning of the interlinear translation, because the poetic model includes not only the immediate content of the poem which may, to some extent, be rendered in prose, but the model of the structure of the poem. Poetic model of a text is thus a phenomenon of literature rather than the poet's or reader's psychology" ¹⁷⁾. Ivanov points out that the notion of

¹⁶⁾ [55a], p. 83.

¹⁷⁾ [18i], p. 370.

an objective "poetic model" (an analogue of the notion of linguistic unit) was, in fact, prompted by the Old Indian theory of poetic meaning (dhvani) in which significative poetic elements were treated as linguistic units (sphota). The conscious application of certain concepts of Old Indian philology is a distinctive trait of early Soviet structuralism. Thus, certain ideas of transformational method were seen by Toporov as directly related to the grammatical theories of Panini [55]. Ivanov regards poetry as a special semiotic system which does not coincide with the semiotic system of language. The actual poetic text is a result of interrelationship between the semiotic system of poetry and the semiotic system of language. The text may be viewed as either a transformed poetic model, (if a "Platonic" view of poetry as archetypal ideational structure is assumed), or a transformed utterance of ordinary language. While the first conception of the poetic text may prove operational for creators who strove to express what seemed inexpressible (cf. Holderlin's description of language as "der GÜter GefKhrlichstes"), the second approach which takes ordinary language as the point of departure is applicable to the main body of poetic creation.

Thus, according to Ivanov, the actual semiotic system of the poetic text is an analogue of creolized linguistic systems and may be studied in terms of the degree of departure from the statistical norms of the ordinary utterances. It is not merely the divergence from the norms dictated by statistical structure of ordinary texts that determines the "poeticity" of the text. It is rather a complex interplay between the statistical expectations generated by an entire structure of textual systems (which include systems of "poetic school", "literature of the period",

"literature of the given epoch", preceding literary systems as well as systems of functional style within the ordinary non-poetic language at a given synchronic stage, etc.) and the structure of fulfillment Vs. non-fulfillment of these expectations. Clearly the "poeticity", "artistic value", etc. cannot be measured simply in terms of Shannon's information content, but should rather be evaluated by a complex function which would take into account the Markov chain nature of the "scanning" procedure and the hierarchical structure of the text.

Following Jakobson's ideas, Ivanov stresses the role of the phonological system of the language in determining the range of phonological means employed by the poetic system (the role of accentual system in setting up the possibilities of metric realizations, the system of distinctive features and the rhyming, etc.). The semantization of free phonological sequences and endowment of grammatical elements with new meanings (as well as "grammaticalization" of lexical morphemes and even arbitrary segment strings) open up new possibilities for poetic construction and interpretation. In general, the transformation of the semantic structure as given in the ordinary texts is one of the specifically poetic media and should be regarded as an important instrument for introducing changes into the existing system.

According to Ivanov, it is sometimes more convenient to study poetic semantics in order to understand more deeply the limits inherent in the semantics of the language as a whole. This approach is similar to the use of aphasia and child language by Jakobson (as well as Ivanov himself, who published several extensive studies based on his own work on

aphasia [18k] to determine the rules of phonology and morphology. The importance of the study of poetic language for structural linguistics and semiotics is repeatedly emphasized by Ivanov. He introduces the concept of the whole poetic text as the basic unit of linguistic discourse on the poetic level. This is true not only of the semantic aspect of the text where the meaning of the traditional unit ("word") cannot be grasped without the knowledge of the entire context of the poem, but of the syntactical, morphological and phonological aspects as well, because the enhanced semantization may introduce new poetic regularities which are not inherent in the linguistic structure as such (cf. for instance, the use by the Polish poet Julian Tuwim of the Russian syntagmatic rules of phoneme combinability in his poems written in Polish in order to represent the semantics of the "Slavic" world view). The inclusion of text into the realm of linguistic notions became one of the accepted norms of structural research only in the sixties. Ivanov's early recognition of the structural nature of text is an important contribution to the theory of structuralism in the Soviet Union.

We have thus surveyed the main trends of Soviet structuralism at the early stage of its development. It should be clear that, while certain scholars stressed the immanent nature of structural theory or its applied purposes, the basic development was towards discovering new, extra-linguistic areas of structuralism by stressing the role of comparative-historical studies and the analysis of poetic language. The complex nature of linguistic structure was emphasized even in the earliest writings on structural approach to the study of semiotic systems.

Thus, the beginnings of structuralism in the Soviet Union contained as in a germ almost all its later trends, and interest in the study of poetics, literature, plastic arts, and other "secondary modelling systems", which is so distinctive of the Soviet structuralism nowadays was prominent even in the fifties. Another significant feature of Soviet structuralism which we mentioned only in passing was constant attention to the work of the Russian and Soviet linguists, literary scholars and folklorists who were active in the second and third decades of the 20th century.

Ivanov stressed the role of the Moscow Linguistic Circle in preparing the ground for the new methods of linguistic research (N. Trubetzkoy, R. Jakobson, N. Durnovo, D. Ushakov). He also was the first to bring back into the Soviet scholarly tradition the ideas of the Russian formalist school of literary criticism (V. Shklovskij, B. Ejxenbaum, B. Tomashevskij, R. Jakobson, O. Brik, Ju. Tynjanov). At the Conference on Structural Linguistics in the autumn of 1960 (Chernovitz, the Ukraine), Ivanov read a special paper devoted to the scientific heritage of the OPOJAZ (the Russian formalist schools) and its role in the growth of structural linguistics. Ivanov singled out especially the functional aspect of text and its elements studied by the members of the OPOJAZ as being especially fruitful not only for literary studies, but for the general theory of structural linguistics as well. At the same time Ivanov stressed the importance of the structural study of the content of semiotic formations, something which the formalists were not given the possibility to do (Ju. Tynjanov's important insight into poetic semantics in his "Problem of Poetic Language" was to remain unnoticed by contemporaries). In this connection, he mentioned the film director Ejzenshtejn as one of the forerunners of the structural description of meaning in semiotic systems.

All later development of structuralism in the Soviet Union went parallel with the discovery and re-discovery of the rich philological tradition of the semiotic and structuralist school that existed before the 1940's.

Ivanov's role in bringing this tradition back into scientific life is inestimable: he helped edit and publish *Psychology of Art*, an important posthumous work of the great psychologist Vygotsky to which he wrote commentaries stressing the structural and semiotic parallels to Vygotsky's observations; he was one of the first scholars to discover the true significance of Baxtin's works on Dostoevsky and Rabelais; he participated in the publication of posthumous works of P. Florenskij, a philosopher and scholar of rare talent and vision. Ivanov saw great possibilities for scientific synthesis of natural sciences and sciences of man in the theories of V. Vernadskij on no-sphere. The publication of all these materials helped, as it were, create a scientific and cultural ambiance in which the research of the structuralist school could be seen in proper perspective as a continuation of the rich tradition. The ideas and thoughts of the predecessors of the modern structural and semiotic approach were fruitfully used by the Soviet scholars.

ASPECTS OF THE THEORY OF STRUCTURAL LINGUISTICS IN THE SOVIET UNION

This part of the present review will, by necessity, be short, as it is hardly possible to describe all that has been done in Soviet structural linguistics during the fifteen years of its existence. Moreover, since structural methods became generally accepted by Soviet linguists, it would mean giving a detailed account of almost every paper published in the USSR during these years. Therefore I decided to limit myself to theoretical questions only, as it is this aspect of structural linguistics that contributed to the general development of structuralism as a scientific method which influenced other fields of knowledge as well.

Theoretical questions of structural linguistics were discussed in the works of Revzin, Shaumjan and Mel'chuk. Certain theoretical implications may be drawn from the work of Zaliznjak. Structural typology was developed by Uspenskij and the scholars of the Section of Structural Typology of the Institute of Slavic and Balkan studies. These works will be briefly reviewed in the present chapter.

The distinctive feature of Soviet structuralism is that it never developed a special theory of structuralism and never indulged in para-theoretical speculations. Structuralism is being regarded by those who practice it as a scientific method par excellence, the main attention being paid to obtaining positive results rather than perfecting structural theory per se. This peculiarity is accounted for by the fact that, in contrast to such countries as France or Italy, the development of structuralism in the Soviet Union in the fifties and sixties was the work of professional linguists rather than philosophers, anthropologists, or specialists in social sciences. While this approach entails certain apparent disadvantages (especially as far as the validation of the methods is concerned, the lack of a clear-cut theory of cognition, epistemology and logical foundations is clearly felt), it also possesses inherent attraction.

Structuralism in the works of the Soviet scholars did not betray its original purpose as scientific methodology; it did not turn into sterile quasi-philosophical ideologizations as is, unfortunately, often the case in the West. The tool has not turned into the aim in itself, the aim being a widest possible knowledge of the facts and their most plausible interpretation. Of course, the absence of a grand structural theory in the Soviet Union is also due to somewhat peculiar conditions of scholarly debate in that country. However, I am at present not sure whether such a theory would really have improved the quality of structural research in Russia.

The only author who can rightfully aspire to be a pure theoretician of structural linguistics in the Soviet Union is Shaumjan. The only field of knowledge in which structuralism has succeeded in producing an immanent theory is linguistics. We have already described the early days of Shaumjan's work. His influence on a broad spectrum of Soviet linguists, both in the capital and in the republics, was enormous. The students were attracted by a purely linguistic perspective of Shaumjan's work based on solid logical foundations.

The development of Shaumjan's theory followed, to a certain extent, the general trend of linguistic theory not only in the Soviet Union, but in the West as well; he started from postulating phonology as the main locus of theoretical considerations and then, attracted by Chomsky's transformational method and generative grammar, developed some of the latter's ideas and in 1963-1964 emerged with his own original theory of generative grammars, which he termed the applicative generative model.

Shaumjan's theory of phonology was based on rigorous dichotomy between what he termed the level of constructs and the level of observation (or the level of the abstract and the level of the concrete). His initial impulse was to distinguish between linguistic units as objects of description and the corresponding units as terms of description. He followed Hjelmslev's dichotomy of form and substance, but tried to preserve the unity of elements at both levels. Thus, distinctive features would be split into differentors (idealized logical distinctive features) and differentoids (acoustic substratum of a distinctive feature); phonemes would be split into phonemes and phonemoids, etc. Later Shaumjan developed a system for passing from one level to the other without introducing theoretically unacceptable confusion between them which occurred so often in the works of descriptive linguists.

In his book *Structural Linguistics*, phonological theory is incorporated into a wider framework of a semiotic theory of structural linguistics. The dichotomy between differentors and differentoids remains, but it is given a completely different treatment and new dichotomies are added: the dichotomy semiotic vs. physical, abstract vs. concrete, and relational vs. physical. Thus, differentors and phonemoids also become abstract and concrete, and even on the level of purely physical elements one distinguishes between concrete and abstract quality and concrete and abstract sound.

This theory of phonology is part of a new theory of structural linguistics which is based on two precepts: the idea of the basic unity of scientific method which is rooted in the unity of logical and hypothetic procedures (Shaumjan describes this method as hypothetico-deductive), and the idea

of a special nature of the object of structural linguistics. Shaumjan brought Chomsky's idea of linguistic transformations into a new theoretical framework. He suggests that statics and dynamics should correspond not exclusively to the dichotomy synchrony vs. diachrony, but should be sought in synchrony itself:

Synchronic statics and dynamics are, as it were, two levels of language: statics covers the network of the taxonomic relations in language (taxonomic relations are relations between language elements which may be studied by taxonomic, i.e. classificational methods), while dynamics includes the network of deep linguistic relations organized according to the generative rules which generate language elements of all levels from the simplest primitive linguistic units ¹⁸⁾.

This re-definition of the static and dynamic aspects of language enabled Saumjan to re-define linguistic structure: "I will call the structure of language the network of linguistic relations which characterize the dynamics of synchrony, while quasi-structure will be defined as the network of linguistic relations which characterize the statics of synchrony" ¹⁹⁾. A new definition of structural linguistics is given: "The subject of structural linguistics is the dynamic aspect of the linguistic synchrony. Structural linguistics is the science of the dynamic aspect of the synchrony of language" ²⁰⁾. Structural linguistics is opposed to taxonomic (static, or descriptive) linguistics which treats

¹⁸⁾ [48e], p.15.

¹⁹⁾ [48e], P.16.

²⁰⁾ [48e], p.16.

of the static aspect of the synchrony. In order to study the dynamic aspect of the synchrony it is necessary, according to Shaumjan, to represent the grammar as a hypothetical generative device. In order to describe the static aspect, it is necessary to construct a taxonomic, classificatory system. "Therefore structural linguistics studies generative grammars, while taxonomic linguistics deals with classificatory systems" ²¹⁾. Three components are to be distinguished, according to Shaumjan, in each generative device:

1. The set of simple grammatical objects from which complex grammatical objects are generated.
2. The set of operations the application of which to simple grammatical objects serves to generate complex grammatical objects.
3. The set of structural characteristics ascribed to each complex grammatical object generated (thus a hierarchy of the generation of complex grammatical objects is established).

Unlike Chomsky, who refers transformational models to "traditional grammar," Shaumjan prefers to include these models in structural linguistics. At this stage of Shaumjan's theory he strives to establish meaningful contacts between his model of structural linguistics and such linguistic disciplines as typology of languages (he insists that the models of comparison should be regarded as hypothetical constructs and suggests that generative grammars should serve in this role), diachronical linguistics, theory of machine translation.

Shaumjan's model of generative grammar is an original development based on

²¹⁾ [48e], p.17.

applying certain basic concepts of symbolic logic. The idea was to represent "word-forms" and phrases as linear sequences of abstract terms "applied" (hence "application") to the symbol denoting the root. The model is known as applicative generative model. Shaumjan has been working on his model for many years, gradually introducing new levels and new blocks. The original distinction of Shaumjan's model was that, unlike Chomsky's model, it allowed for generating not only phrases, but words as well. This was very important for Russian, where the derivational system may be regarded as isomorphic to the syntactic system. The modelling of word composition was the first practical application of this model. Then the model was expanded to include a block which generates abstract significative sequences written in a symbolic semiotic language. This block, called the abstract generator (or the genotypic block) operates with abstract semiotic units of two kinds. At the lower level of abstraction, one distinguishes semions and bundles of semions; at the higher level the block includes episemions. Episemions are abstract objects represented by semions and bundles of semions. Episemions and semions are semiotic units which are abstract analogues of grammatical categories. They are in no way identical with grammatical categories, but are their abstract representations; they may also be interpreted as distinctive features in phonology. An example of semions and episemions their generation and interpretation would be (episemions are represented by Greek letters, while semions are the same letters in inverted commas):

Episemions and semions	Interpretations
<hr/>	
1. Zero rank	
a	Nominal phrase
'a'	The substantive in the nominative
.	
2. First rank	
a a	The attribute of the NP
'aa'	The adjective which qualifies the noun or suffixes which derive nouns from simple nouns.
.	
3. Second rank	
a a . a a	The attribute of the attribute of NP
'aa . aa'	The adverb used with the adjective

The abstract generator also includes typical generative patterns of bundles of semions: iteration, reduction, switching and connection. Thus with the help of this abstract language it is possible to obtain syntactic sequences of semions and their bundles which may later be interpreted as either words or phrases or sentences.

The generator of words which is the next block in Shaumjan's model receives as its input correctly generated sequences of semions and episemions. In the generator of words the formal representation used for semions

(a a, 'a a' ...) is replaced by a more reduced formal system, e.g. 'x.a f ' is replaced by R_1 which is interpreted as a verbal affix, 'x a' is replaced by R_2 interpreted as a substantival affix etc.

Words are generated from the zero semion O (root) and word relators R_1, \dots, R_5 according to the rules of application: elementary words $R_1 O, \dots, R_5 O$ are words, if X is a word, $R_1 X, \dots, R_5 X$ are words. Shaumjan distinguishes the degree of derivation. At the first stage of generation five words of the first degree of derivation are produced: $R_1 O, \dots, R_5 O$. At the second stage 25 words of the type $R_1 R_1 O, R_2 R_1 O, \dots, R_5 R_5 O$ are produced etc. The model may be represented by graphs in which the node represents the stage of generation, and the five arrows (with the determined direction) represent the five classes of R.

The generator of phrases uses the same five types of R interpreted here as word classes. The generator model uses brackets for syntactic representation, and the order of representation is hierarchical. The types of generation introduced for semions and episemions are used here (connection, etc.).

Finally there is a generator of transformational fields which establishes relations between the symbolic sequences (words or phrases).

We see that Shaumjan's model is a highly abstract symbolic apparatus which should be interpreted in linguistic terms. The advantage of the model in its present form is that it is based, even at the most abstract level, on certain notions of linguistic categorization which makes it possible for the purely symbolic formulas of the abstract generator to serve as input for more concrete levels. The highly formalized representation of the linguistic "dynamics" gives an idea of a possible manner of cooperation

between symbolic logic, theory of formal grammars and other fields of mathematics and linguistics where the work of the logician would be to provide a flexible and rich system which would, take into account linguistic categorization, and the linguist would then interpret the formulas and test the transformational rules.

At the same time Shaumjan's work should be regarded as a challenge for linguists, because not all possibilities of his calculus have been exhausted and certain aspects of language still await their formalization by the applicative model.

It is significant that Shaumjan found it necessary to include what he termed as "abstract semiotic level" into his model. It shows the importance of semiotic approach in Soviet structuralism.

A different approach both to the definition of structural linguistics and its

ect is found in the numerous studies of I.I. Revzin. While Shaumjan strives to work out a theory of structural linguistics that would be self-contained, closed, a theory that would, in effect, be a working description of language (in this case Russian), Revzin represents the line of research which may be termed "inductive modelling" (versus Shaumjan's emphasis on the deductive aspect). On the one hand, Revzin continues the set-theoretical approach initiated in the fifties by Kulagina, Dobrushin, V. Uspenskij and other mathematicians. On the other hand, he regards linguistics not as a purely abstract theory (theory being understood as a formal system) but as a sum total of actual research. For Revzin structural linguistics is not a construct but an actual fact, a phenomenon with a history and tradition rooted in pre-structuralist past. In this he follows Ivanov's basic tenet

of the unity of linguistics, structuralism being considered a method which grows from the internal needs of practical research. Revzin proceeds from the thesis that language is one of the entire set of semiotic systems. In his book on the method of modelling and the typology of the Slavic languages which contains the summary of his scientific position Revzin writes: "In modern structural linguistics two diametrically opposite (but, as we will see later, mutually complementary) methods of describing semiotic systems may be discerned. One method may be called *descriptive* or *analytical*. It is based on a given universe of texts, i.e. sign sequences and the sphere to which the designates of the signs belong. The aim is to obtain the set of syntagmatic and paradigmatic relations in the system. The second method is *constructive* or *synthetic*. Here we proceed from a certain set of syntagmatic and paradigmatic relations which are interpreted as the rules of the generation of the entire universe of texts in a given language" ²²⁾. Revzin concludes that both methods are fruitful, each for solving certain specific problems of linguistic and semiotic description. According to Revzin, Saumjan's definition of structural linguistics as a theory of generative grammars may be accepted in principle; this definition, however, is in direct contradiction with the terminology accepted in linguistics and leads to serious difficulties because it excludes from structural linguistics such important contributions as the theory of descriptive models. Revzin prefers to include into structural linguistics all linguistic theories that aspired to develop structural methodology: "It seems that it is more in keeping with the accepted usage to define structural linguistics as the trend which consciously strives to describe explicitly the semiotic aspects of the sign

²²⁾ [45], p. 14.

(as abstracted from its material aspect), its relations to other signs in the system and in speech, i.e. the structure of languages, the trend which strives to use the ideas and methods of linguistic modelling" ²³⁾. Thus for Revzin structural linguistics is not a new science which is yet to be created but an existing school with its own tradition into which he includes such names as Fortunatov, Baudoin, Durnovo, Peshkovskij, Peterson, Shcherba, Jakobson, Karcevskij. The aim of research in structural linguistics is not to create a completely new apparatus for describing already known facts, but both to improve the formal technique and find new facts for such formal description. He insists that the formal system of description may be perfected only if it is supplied with new material.

According to Revzin, linguistic models are scientific constructs which give a schematic description of the operation of linguistic system. Revzin distinguishes three types of models: models of synthesis, which receive at the input a description of an extra-linguistic event, i.e. a set of designates and the general meaning of the utterance and produce a certain phrase (word sequence) at the output (n such models would give a finite set of phrases; however models of this type do not give an infinitive set of phrases because this would require the ability to describe the infinite number of extra-linguistic events); generative models which produce an infinite number of phrases from a finite input (this is achieved by abstracting from the actual sense of the utterance and taking into account only general grammatical and semantic categories); models of the third type produce not phrases but descriptions of linguistic facts: they receive

²³⁾ [45], p.18.

words and their meanings and phrases and their meanings and produce categories of morphology and syntax. The models of the third type are considered in Revzin's book. His purpose is to formalize the linguist's intuition which he regards as the starting point for any linguistic description.

In other words, while Shaumjan seeks to construct a linguistic theory that would do away with all the accepted instruments of linguistic description leaving them for the domain of interpretation, Revzin wants to formalize precisely those traditional notions. The formal apparatus used is that of the set theory.

The basic non-definable terms in Revzin's system are *word* (a given grammatical form of the lexical word), *paradigm* (lexical word) and *grammatical category* (a set of words sharing a common formal feature). The basic data from which the relations are elicited are represented as syntagmatic sequences -- strings. Revzin pays much attention to the problem of correct vs. incorrect strings (Shaumjan's treatment of this aspect of the theory leans heavily on Revzin's analysis). Revzin pinpoints this problem as being a weak spot in Chomsky's theory: it appears that there is no general consensus as to what phrases are to be considered incorrect. Chomsky's tenet that a generative grammar operates with a set of all permissible strings is questioned by Revzin, because it is impossible a priori to define such a set. On the other hand Revzin considers it essential that the grammar should take into account a set of prohibited strings so that these should not be generated. The rigid dichotomy correct vs. incorrect strings is rejected by Revzin who suggests (after Parker-Rhodes) that 4 classes of

strings should be distinguished:

1. Strings which are definitely perceived as correct by any speaker, e.g. The boy loves the girl
2. Strings which are definitely perceived as incorrect by any speaker but can be easily corrected, e.g. *The boys loves the girl which should be corrected into The boys love the girl.
3. Strings which are definitely perceived as incorrect but which cannot be easily corrected, e.g. *three the the going little chapter but and the.
4. Strings about which the majority of the speakers cannot say whether they are correct or incorrect because they do not know all the words which make up those strings, cf certain lines from Ezra Pound's poems.

Only strings which can be easily corrected should be introduced into the model as definitely prohibited. Thus, Revzin's model operates with the set of actual phrases (each word entering at least one real phrase) and with the set of prohibited strings. It also includes the relations: "the meaning of phrase f includes the meaning of phrase g." Using these preliminary concepts and the operations of the set theory Revzin describes the entire universe of linguistics theory, A formal definition of grammar is given: $G = (V, V_1, \text{Sentence}, S)$, where G is grammar; V is the set "main dictionary" (words in Revzin's sense); V_1 is the set "auxiliary dictionary" (grammatical categories put into correspondence with separate words - morphological categories and groups of words -- syntactic categories) in which the special element "Sentence" is distinguished and S is a set of rules of the type $A \rightarrow B$ (string A may be replaced by string B). This definition of grammar is, in principle, similar to what Shaumjan calls a theory.

Then Revzin proceeds to define formally IC-grammar, within which he distinguishes context-free and context-bound grammars; within the class of context-free grammars finite-state grammars are defined. These are all models by means of which certain fragments of language are later described.

Among other notions introduced by Revzin mention should be made of context, substitution, family, context class, correct fragment, language, and sublanguage. All these notions are used by Revzin to construct set-theoretical models of such traditional categories of grammatical description as part of speech, case, person, and gender.

The modelling of syntactic relations occupies an important place in Revzin's theory. It is significant that he shows high modelling possibilities of finite-state grammars, especially in certain closed fragments of syntactic structure. He suggests set-theoretical models of agreement, government and juxtaposition.

It is impossible to give a detailed formal exposition of Revzin's model in the present review, because this would mean repeating his detailed exposition. The importance of his approach was in trying to formalize the linguist's intuition thus presenting a complex set of overlapping models based on different principles rather than a single system, completely closed and formalized: different fragments of the language system are modelled by different grammars.

An important contribution to the theory of structural linguistics was made by Mel'chuk. His approach may paradoxically be compared to that of Shaumjan in that both scholars tried to create, each in his own way, a uniform model

of language which would be based on one formal system and embrace all linguistic levels (true, it must be said that Shaumjan's interest in semantics is quite recent and Mel'chuk was never interested in phonology). Another common feature is that both scholars are trying to apply the basic principles of Chomsky's transformational method in their research. However, Mel'chuk's work has always been closely associated with the practice of machine translation, and analysis of actual linguistic material always takes precedence in his approach over the construction of a formal system. What Shaumjan refers to the sphere of interpretation Mel'chuk considers to be the center of the linguist's work. In this respect Mel'chuk is close to Revzin; however he pays most of his attention not to the modelling of linguistic categories, but to the actual description of language (in his case, Russian). This adds substance to his theoretical considerations, but, at the same time, detracts from their intended universality.

The two basic ideas of Mel'chuk's linguistic theory which were formulated already in his early publications are the notion of meaning as invariant in transformations and the notion of stability ("ustojchivost") [34, 34a, 34b]. Mel'chuk's concept of linguistic meaning and his definition of the "grammatical" in language exerted considerable influence over the evolution of structuralism in Soviet linguistics. Here we deal with a purely theoretical discourse based on a deep understanding of the formal aspect of language, but expressed in the terms of non-formalized scientific discourse.

It is interesting to follow the line of Mel'chuk's thought. At first, in 1960-61, his attention is centered on what is the most invariant and

stable in language. He starts his analysis of linguistic meanings with establishing the firm dichotomy between lexical and syntactic meanings. The former are (for the time being)²⁴⁾ not subject to a detailed analysis. He gives a definition of syntactic meanings as based on relations among linguistic elements (such as morphemes, words and sentences), i.e. some linguistic elements serving as symbols of relations among linguistic elements (such as morphemes, words, and sentences), i.e. some linguistic elements serving as symbols of relations among other linguistic elements. Then an opposition between "grammatical" and "non-grammatical" linguistic meanings is introduced: "The concrete meanings necessarily expressed in a given language can be called the grammatical meanings of that language. Meanings not necessarily or individually expressed in a given language may be called the non-grammatical meanings of that language"²⁵⁾. Mel'chuk explains that the obligatory presence of a meaning determines the treatment of formal features. Thus in English, where the lexical meaning in the noun is always combined with the obligatorily expressed grammatical meaning of number expressed by certain formal features, the absence of such indicators carries a definite grammatical significance, because it expresses the

²⁴⁾ Significantly Mel'chuk writes: "We shall note further that the name "lexical" is temporary for all nonsyntactic meanings, it will suffice until we can find a better term. One could call nonsyntactic meanings referential, and then further distinguish lexical and some other types of meanings among them. But this is a matter for further study". [34b], p.37.

²⁵⁾ [34b], p.37.

singular, while in Chinese, where number is not a grammatical meaning, the absence of a formal indicator does not denote anything with respect to grammatical number,

According to Mel'chuk, grammatical meanings can be both lexical and syntactic. For example, the meaning of number in the substantives in Russian is lexical (because the distinction of nouns by number is caused by extra-linguistic distinction) and grammatical (since number must necessarily be expressed in Russian substantives). The meaning of number in the Russian adjective is grammatical but syntactic because it is not related to any extra-linguistic distinctions, but merely reflects the syntactic bonds of the adjective. Mel'chuk then introduces another opposition of linguistic meanings which characterizes the plane of expression:

1. Morphological, i.e. means for the expression of any necessary linguistic meanings within the word. Affixation, alternation, reduplication and incorporation are identified as morphological means.

2. Non-morphological, i.e. means for the expression of meanings outside the word: the use of auxiliary words, word order, etc.

Thus eight groups of meanings are obtained:

1) Morphological expression of grammatical lexical meanings, e.g. formants of number in the substantive (French, English, Russian).

2) Morphological expression of grammatical syntactic meanings, i.e. formants of gender, number and case in Russian adjectives.

3) Morphological expression of non-grammatical lexical meanings: incorporation of lexemes in polysynthetic languages, word-composition (German, Hungarian), some cases of word derivation

in Indo-European, Finno-Ugric, Semitic, cf. also suffixed pronouns in Arabic and Hebrew.

4) Morphological expression of non-grammatical syntactic meanings, i.e. merger of prepositions with the noun in Arabic and Hebrew.

5) Non-morphological expression of grammatical lexical meanings, e.g. articles and compound tenses in French, English and German.

6) Non-morphological expression of grammatical syntactic meanings: the particle *to* before an infinitive in English.

7) Non-morphological expression of non-grammatical lexical meanings. This is the most common case: lexical meanings are expressed by separate words. Mel'chuk regards separate lexemes ("lexical morphemes") as a non-morphological way of expressing meanings, because, in contrast to "pure morphology", the addition of another lexical meaning to the given lexical meaning gives here two words (unlike in word composition, see item 3).

8) Non-morphological expression of non-grammatical syntactic meanings - conjunctions, prepositions, copulas.

Mel'chuk never gave up the study of meaning, although some of his works in the early sixties were devoted to the working out of formal rules of syntactic analysis: the central part of this research was establishing a finite set of "syntactic relations" (basically semantic in nature).

Mel'chuk's interest in the structural study of linguistic meaning acquired a new dimension when he started to collaborate with the group of researchers who studied linguistic semantics by formal methods (Aleksandr Konstantinovich Zholkovskij, Nina Nikolaevna Leontjeva, Jurij Sergeevic

Martemjanov, Jurij Derenikovich Apresjan). Their work is closely connected with two practical projects: the construction of working machine translation system and the compilation of a new Explanatory Combinatorial Dictionary of the Russian language. I will not describe the practical side of their work or its procedural aspect. Let me present some of Mel'chuk's ideas on the study of lexical meanings as expressed in one of his later articles [34c].

Linguistic semantics is postulated as a structure, almost as strict as the structure of other linguistic levels. Mel'chuk examines regular synonymic paraphrases of certain expressions and discovers that definite relations exist between separate words which are almost as regular as the relations between grammatical categories [cf. "to love" is in the same relation to "to charm" as "to include" is to "to enter" because the relationship of CONV (conversive) is postulated in both pairs; or ("A communicated something to B" -- "B knows something") = ("A gave something to E" -- "B has something") etc.]. Evidently such regular relations must form a kind of system.

Mel'chuk sees a clear analogy between the existence of such relations in the sphere of lexical semantics and the existence of phonological relations on the sound level. Just as the examination of phonemic pairs led to the discovery of phonological destructive features whose nature is, in fact, purely relational (here Shaumjan's views on the relational nature of the phonological system present a clear analogy to Mel'chuk's view of semantics), the examination of semantic relations should yield "semantic distinctive features", or, as Mel'chuk prefers to call them, "the atoms

of meaning" ²⁶⁾. According to Mel'chuk, the atoms of meaning are postulated rather than observed entities. They are introduced in order to explain the observed phenomena, i.e. transformations in which the invariant of meaning is preserved. Thus, "the experimental basis for eliciting the atoms of meaning is synonymic paraphrase: the researcher should look for the greatest possible number of various expressions which, in his view, have identical meaning, he then introduces such atoms of meanings that the similarities and differences between parts of these expressions, as well as transitions from the one to the other, be described in the most simple and natural way" ²⁷⁾.

An important point in Mel'chuk's semantic theory is his postulate of the hierarchical, systemic nature of the set of semantic "atoms." The organization of this structure of "atoms" follows definite *syntactic* rules which are Mel'chuk's equivalent of Chomsky's deep structure. Semantic "atoms" (at least some of them) are represented as predicates with several places, therefore syntactic relations are ordered. If the order of relations is changed, i.e. if only the syntax (the orientation of the graph which represents the relations is changed without changing "the substance," the overall meaning of the phrase would be changed. Mel'chuk writes:

²⁶⁾ Incidentally, Mel'chuk insists on differences between the two notions, stating that phonologically distinctive features do not form a system. This view shows a certain disregard of the theoretical research in phonology which, as I have already stated, insists on the relational nature of distinctive features (Hjelmscev, Shaumjan) and postulates an hierarchy within the set of features (Halle).

²⁷⁾ [34c], p.206 (translation mine. D.S.)

"The meaning of phrases, words in particular, should be represented by 'structural formulas,' graphs whose nodes are atoms of meaning" ²⁸⁾. The elaboration of the deep structure syntax which is, in fact, a version of logical syntax is one of the major tasks of semantic study. Here one is reminded of Shaumjan's universal semiotic language of the abstract generator which is a modification of the same basic idea.

Mel'chuk insists that the meaning of many words (namely, predicates, quantifiers, and copulas) may be described only within more complex expressions. This postulate throws an interesting light on the dependence, be it implicit, of Mel'chuk's theory on his basic concept of grammaticality which we described above. Indeed, many semantic relations established by Mel'chuk for such words appear as grammatical relations in other languages: in Semitic, the semantic function of the causative discovered by Mel'chuk in Russian, is a regularly expressed grammatical category, and the same is true of his semantic relation Magn ("the elative" or "the intensive").

Finally, Mel'chuk introduces hierarchy among "atoms of meaning" themselves. He proposes to distinguish quantifiers, logical operators (negation, conjunction), the names of predicates and the names of "things" or "substances."

This highly interesting system is only now being elaborated. There exist several semantic descriptions based on these principles; however, the amount of purely linguistic, descriptive work needed for this system to become operational may only be compared with the amount of work needed

²⁸⁾ [34c], p.210.

to compile complete linguistic descriptions of a dozen completely unknown languages. Therefore, many of the "atoms" proposed are of a tentative nature, and others are applicable only for a small group of words.

Two problems seem to be outstanding: the original semantic grouping of expressions (why, for instance, are "all the words with the meaning of desire" grouped together rather than distributed over several groups?), and the treatment of "concrete" vocabulary which is much more numerous than the abstract words (to which the main attention is being paid now) and which displays much less semantic regularity. Also the problem of initial semantic description would appear to bother many adherents of structuralism because here the authors of the theory choose to remain deliberately non-structural: "We do not suppose that there should exist any rigorous formal procedures that would lead to the discovery of the internal structure of the signifié; each time such a description depends on the intuition and competence of the researcher, i.e. this description is arbitrary" ²⁹⁾. The only verification procedure is provided by inter-language paraphrase. However, the establishment of semantic identity vs. difference remains (and is, probably, destined to remain) the decision of the researcher.

Many linguistic descriptions were published in the Soviet Union which to a greater or lesser degree incorporated certain principles of linguistic structuralism. It is physically impossible even to list all these works, let alone review them. One book, however, stands apart, because it is, in my opinion, the only existing complete structural description of a significant

²⁹⁾ [34c], p.214.

fragment of a linguistic system. This is Zaliznjak's book "*Russian Nominal Inflection*" [60]. The monograph presents a definitive structural classification and description of the paradigms of more than fifty thousand Russian nouns. The very amount of material and the rigorous exactness of description which leaves no room for "exceptions" or "etc." make this book a milestone in the history of Russian linguistics. It is already widely known among linguists who consider it a classic of morphological description, and therefore there is no need for me to dwell on Zaliznjak's achievements in the field of the study of the Russian language. I will limit myself only to showing the impact of structural methods on Zaliznjak's linguistics.

This is one of the first grammatical descriptions in Russian linguistics where the author took the pains to give exact definitions to the descriptive concepts he was going to use. These definitions show that Zaliznjak benefited from the theoretical work carried out by such scholars as Mel'chuk and Revzin (both of whom, incidentally, stress their own indebtedness to Zaliznjak for many theoretical insights). Thus we see in Zaliznjak's book the same dichotomy between word-form and paradigmatic word that we find in Revzin's theory (the latter refers to paradigmatic word as paradigm). Zaliznjak shows very succinctly the practical significance of the division between the concrete and abstract unit ("token-type") that we find theoretically elaborated in Shaumjan.

Meaning is analyzed similarly to Mel'chuk's treatment of lexical vs. syntactic and grammatical vs. non-grammatical described earlier. Along with the requirement of *obligatoriness* Zaliznjak postulates *regularity* as a

necessary condition for a lexical (in Zaliznjak's terms, nominative) meaning to be grammatical: "A series of homogeneous nominative elements of meaning is considered regular for a certain class of word-forms, if all the word-forms (or, at least, the overall majority) of this class may be sub-divided into such groups that each group includes only as many word-forms as there are nominative elements in the given series, and the internal aspect of these word-forms is distinguished only by the nominative elements of the given series" ³⁰⁾. Thus, for the class of all Russian substantival word-forms the nominative element "plurality" is regular, because any Russian word-form may be put into correspondence with the word-form of the opposite number. At the same time "animateness" is not a regular element, because not all the word-forms have corresponding pairs.

Zaliznjak introduces the notions of grammeme and grammatical category. He notices that two elements of meaning may be closely connected so that in any word-form they are either present together or absent together. Such elements are called conjoint. A grammeme is any separate grammatical element of meaning for which there is no conjoint element, or any pair of conjoint grammatical elements. The totality of all homogeneous grammemes is a grammatical category. Thus, the masculine gender is a grammeme, while gender is a grammatical category. Two types of grammatical categories are distinguished by Zaliznjak: "*word-changing*" (or inflectional)- if no less than two different grammemes of such a category are attested in the grammatical meanings of a given paradigm, and *classificatory* -- if only one grammeme of such a category is attested among the grammatical meanings of a given paradigm. That part of the grammatical meaning of

³⁰⁾ [60], p.26.

the word-form which consists only of grammemes of word-changing grammatical categories is called the word-changing grammatical meaning of a word-form. The set of such meanings in a paradigm is a paradigm pattern of a word. The set of all the words with the identical paradigm pattern is a grammatical division.

Zaliznjak's purpose is to establish formally paradigm patterns and grammatical divisions of the Russian nouns both from the point of view of word-changing grammatical meanings and their expression. He gives formal procedures based on the use of diagnostic contexts (i.e. syntactic constructions) for the determination of the set of grammatical categories of the Russian noun. His procedure for the definition of the category of case is a new version of the formal procedure proposed in 1957 by V. Uspenskij. A table is compiled in which the horizontal rows represent word-forms of all the Russian substantives which may be fitted into a certain context, while the columns represent those contexts and certain semantic states which correspond to each context. The intersection of rows and columns gives word-forms corresponding to each lexeme, i.e. paradigms. The following formal operations are then performed: all identical rows are merged into one (or, similarly, all identical rows but one are struck out), every incomplete row (i.e. every row in which at least one intersection is empty) which coincides with some other row in the table in its non-empty part is struck out, every row x for which other rows y, z, \dots, w may be found such that every intersection from the row x is a set-theoretical sum of the contents of the intersections of the same column from the rows y, z, \dots, w is also struck out. The remaining rows give all the case grammemes of the Russian language.

This procedure leads to the establishment of the six accepted Russian cases plus two cases which are distinguished by many grammarians (the second prepositional, i.e. locative and the second genitive) plus a special "counting form" used in conjunction with the words dva, dve ("two"), oba, obe ("both"), poltora, poltory ("one and a half"), tri ("three") and chetyre ("four"). Zaliznjak's innovation is the establishment of a special grammatical category of "agreement class" based on the analysis of the syntactic relations between the substantives and the attributive words. This category combines the classificatory categories of the Russian substantive. Seven classificatory classes are established: masculine inanimate, masculine animate, feminine inanimate, feminine animate, neuter inanimate, neuter animate and pluralia tantum.

This analysis of the grammatical categories is the first successful attempt to apply strict structural procedures for a practical description of Russian. Zaliznjak's work has become a source of grammatical information for dictionaries and text-books. His experience also shows that attempts at formalizing the notions of existing linguistic descriptions (cf. the work of Revzin) play an important practical role, because they bridge the gap between purely "scientific" and "applied" linguistic descriptions, introducing new perspectives into such fields as lexicography and language teaching.

A new trend in Soviet structural linguistics appeared after 1960. It is structural typology of languages. It is significant that many linguists who are active in this field (e.g. Toporov, Civjan, Lekomceva, Nikolaeva) are also interested in applying structural methods to the analysis of

extra-linguistic objects. The reason may be in a broad interpretation of the aims and methods of structural typology given in 1961 [25]. Structural typology was understood as comparison of systems rather than separate features of languages. A new notion of linguistic type was suggested whereby type was to be understood as a topological model defined over a dimensional linguistic space rather than a "real" language. Set-theoretical methods of evaluating the localization in linguistic space were elaborated (based, among others, on the work of Harray and Paper)³¹⁾. At the same time structural typology was applied to the comparison of languages united by territorial contiguity ("linguistic unions") which brought the problematics of structural dialectology, comparative structural semantics and mythology into the domain of typology (cf, the works of Ivanov and Toporov on the reconstruction of the Slavic mythology). The analysis of phonemic typology led to a deeper understanding of the system of universal distinctive features as a typological space. The notions of set-theoretical sum and intersection provided a useful tool for the construction of such a space.

B.A. Uspenskij's theoretical analysis of models in structural typology as well as linguistic universals [56] was the first attempt to construct a formal theory of structural typology. His idea of "standard languages" of various morphological types provided a useful bridge between structural typology and traditional morphological typology. Revzin suggested in his book on the method of modelling and typology of Slavic languages several useful set-theoretical models that could serve as standards for structural

³¹⁾ See, among others, [26], [59], [55a], [55b], [5], [9], [46], [52].

comparison. Idealized amorphous language is the one in which every paradigm consists of one word alone.

No existing language is ideally amorphous. However in natural languages, even in inflexional ones like Russian, there are amorphous fragments (cf. non-declinable substantives in Russian). Another idealized notion is a fully grammaticalized word (the one whose family consists of only one word). Evidently, there can be no fully grammaticalized languages if they are to perform referential functions. Certain conjunctions and auxiliary words may be close to fully grammaticalized words. Basing on this on other fundamental notions Revzin comes to such models as "simple language," "formally homogeneous language," "language with T-determined paradigm" and "language with full transformation." Existing morphological typology may be described in set-theoretical terms: amorphous languages are formally but not completely homogeneous, agglutinative languages are completely homogeneous, and inflexional languages are limited, homogeneous, and simple. We thus see how certain structural features are shared by languages which were traditionally considered belonging to completely different types.

This review of trends in Soviet structural linguistics shows considerable range of approaches. One tendency is clear: all approaches, irrespective of theoretical emphasis, are united by their interest in semantics and semiotics.

* * *

TRENDS IN MODERN SOVIET SEMIOTICS

At this point, I would like to refer the reader to the Meletinskij - Segal review which gives a concise history of semiotics and structuralism in Soviet literary studies and folklore until 1969. Since 1969, what was a budding trend has become a full-fledged science with quite a number of important books, monographs and collections of articles to its credit, and this in spite of considerable difficulties of external nature (some of the attitudes toward structuralism were described in the above-mentioned review). Now one may speak of trends within semiotics, even if one limits this school, as I do, to the works of the scholars grouped around the Section of Structural Typology of the Institute of Slavic and Balkan Studies and the Tartu Summer Schools. These trends are not fixed and may best be explained by reference to the subject of research. There is considerable interest among Soviet semioticians in some basic problems of language as a semiotic system and in special semiotic use of language (scholars who displayed the keenest interest in the linguistic aspect of semiotics are, naturally, involved in theoretical study and description of language: I. Revzin, O. Revzina, A. Zaliznjak, E. Paducheva). Much importance is placed on the structural study of text, as a special semiotic unit of language (Yu. I. Levin, B.M. Gasparov, T. Nikolaeva). Other semiotic (secondary modelling) systems also attract the attention of the scholars. The study of these systems has contributed much to the development of structural methods in general. Especially extensive were studies of poetics (Toporov, Ivanov, Uspenskij, Civjan, Levin, Lotman, Minc, Segal), mythology (Ivanov, Toporov, Elizarenkova, Ogibenin,

Meletinskij), folklore (Meletinskij, Nekljudov, Segal, Permjakov, Novik, Toporov). A new phenomenon characteristic of the early nineteen-seventies is the development of the semiotics of culture (Toporov, Ivanov, Lotman, Uspenskij, Segal, Pjatigorskij). Certain semioticians (Revzin, Lekomcev, Pjatigorskij) published interesting papers on general problems of sign. Finally, a separate school of Indianists is working on the semiotic aspects of the Old Indian culture (Pjatigorskij, Toporov, Mäsl, Ogibenin). The semiotic systems of non-verbal arts were studied by Bogatyrev, Uspenskij, Ivanov, Lekomceva, Toporov and Segal.

We see that many scholars are working on different problems, which opens up possibilities for interpenetration of methods and material. As I have pointed out at the beginning of this survey, the notions of structuralism and semiotics are inseparable in the approach practiced by this school. This is due partly to the linguistic background of many scholars for whom structural methods seem to be a natural tool not only in linguistics but in other fields of humanities as well, and partly to a special conception of semiotics worked out in the Soviet Union after 1960 according to which language is the basis of all other sign systems (even in plastic arts the main attention was paid to "formalized", speechlike, as it were, systems like icon-painting and Buddhist art). V. Ivanov wrote in 1962: "Different modelling semiotic systems form complex hierarchical structures of levels where the lower level system (i.e. natural language) serves to code signs which form the higher level systems (i.e. semiotic systems of art and science)" ³².

³²) [18m], p.6.

This is not to say that the basic dichotomy between verbal and non-verbal is not perceived by Soviet semioticians; however, the emphasis on the linguistic foundations of all semiotic systems has been very strong, this accounts for the important role of the notion of "text" in some attempts of the semiotics of culture.

The linguistic roots of Soviet semiotics dictate the choice of the methods of study where traditional structural notions of "level," "opposition," "distinctive feature," "distribution" are widely used. Some scholars attempt to use the methods of mathematical set theory, symbolic logic, and mathematical statistics which proved to be useful in linguistics. This, however, does not limit the field of semiotic research, and, as I have already noted, the study of the semantics of culture and history is becoming ever more important.

One should point out that, in contrast to the recent semiotic studies of text in the West (Van Dijk, Petöfi), formalized generative grammars are, on the whole, not popular among the Soviet scholars (mainly due to their high degree of abstraction from the material). Another feature which distinguishes Soviet semiotics is a healthy interest in the material being investigated rather than emphasis on self-centered ideological expansion of structuralism. This last peculiarity stems, in my view, from the philological tradition in which Soviet semiotics is rooted and which it is constantly re-discovering (OPJAZ, Tynjanov, Baxtin, Frejdenberg). The present state of Soviet semiotics is determined by two factors: the development of the original program expostulated in the early works of Ivanov and Toporov and the parallel re-discovery of the semiotic tradition in Russian science.

Semiotic Aspects of Language

As I have already pointed out in the chapter on linguistic structuralism, semiotic aspects of language have been investigated in order to construct a coherent structural theory of language. The relationship of "ordinary" linguistic usage (and the corresponding language system) with the semiotic systems based on language (in which the "ordinary" language system undergoes transformations) provides interesting insights into regularities of linguistic structure and the rules of the overlying secondary modelling system. One of the basic problems of Chomsky's generative theory was the problem of "correctness." The study of poetic language is a source of knowledge of the limits which the language system possesses and the strains it may endure without losing its communicative function. Thus, Soviet semioticians devoted several papers to the problem of grammatical "correctness" and poetic "mistakes" [56a], [56b], [45a], [14], [46a].

B. Uspenskij suggests that the key to the solution of the problem of correctness of utterances like the famous sentence given by Chomsky as an example of incorrectness: Green ideas sleep furiously is in the process of metaphorization: the phrase which becomes meaningful when some of its words are put into quotation marks is grammatically correct, thus: Green "ideas" "sleep" furiously, etc. It is supposed that the quotation marks indicate that such a word is used in a *different* (metaphorical) sense than it usually has, but the metaphorical sense is not named. The word becomes a variable which may assume any meaning (within the limits of a given grammatical class) necessary for the phrase to remain meaningful. Uspenskij analyzes a certain class of such

"metaphoric" contexts in which the "enigmatic", "algebraic" meaning of a word which seems not to fit into its context is clarified by its phonemic proximity to another word which is generally believed to be part of this context (poetic usages of the Russian poets Tjutchev, Mandel'shtam).

Revzin takes up Uspenskij's argument, but goes further. He examines not only phraseological peculiarities of the poetic usage, but certain syntactic irregularities as well. It then becomes clear that metaphoricization is not an obligatory condition for understanding a sentence as correct, because other factors may be decisive. Thus, diffusion of semantic features, not necessarily of a metaphoric nature, may help understanding. Re-interpretation of syntactic relations and potential augmentation of ellipsis is a frequent way of ascribing meaning to seemingly "incorrect" poetic utterances. Phonetic similarity with another word is not a necessary condition. Revzin points out that modification of "weak government" is one of the frequent syntactic devices in Russian poetry. O. Revzina analyzes the poetic language of Aleksandr Blok and finds convincing examples which show how Blok modified accepted patterns of "weak government" in order to enhance poetic meaning.

B. Gasparov takes a broader view of the problem of correctness and, in my opinion, approaches its core. He shows that if an utterance is accepted into communicational context there are practically no limits beyond which it ceases to be "correct." On the other hand, even an utterance that most people would consider "correct" may be included into such contexts where it becomes "incorrect." Thus, one should distinguish strictly between the

notions of "possible vs. impossible" and "normal vs. abnormal." Possibility of occurrence cannot be considered a criterion of "normality" (and impossibility - a criterion of abnormality). Gasparov suggests that such a criterion should take into account communicational context of situation: there are utterances for the identification of which it is not necessary to invoke additional rationalizations, i.e. they are perceived as utterances irrespective of the context of situation. Such utterances are regarded as normal. On the other hand, abnormal utterances require additional interpretation of the situation; i.e. they are meaningful only in a very limited context of situation. For normal utterances to be regarded as meaningless, they should be placed into special situational context.

Boundaries of language and boundaries of linguistic communication seem to be specific objects of semiotic study which may help throw light on all aspects of sign: its syntactics, semantics and pragmatics. Thus, M. Langleben discusses the syntactic and semantic peculiarities of the incorporations of texts written in artificial languages of science into texts in natural languages [22]. She distinguishes three types of auxiliary semiotic systems of science: those unrelated to potential verbal manifestations (diagrams, illustrations, drawings), the systems with the possibility of such manifestation which, however, is hardly realized (owing to inherent difficulties): symbolic languages of mathematics and physics and systems dependent on verbal manifestation (chemical, biological, and medical nomenclatures). Langleben discerns specific syntactic constructions in the latter type of systems - non-linear patterns - which break the established linguistic rules. Likewise the structure of the

word may exhibit features of polysynthetism. Typologically the linguistic structure of such fragments may be quite different from the structure of the text of which they are part.

Possibilities of the semiotic analysis of certain "boundary texts" for the general theory of communication are demonstrated in the paper of I. Revzin and O. Revzina on E. Ionesco's play *La Cantatrice chauve* [47]. According to the authors, Ionesco created a unique semiotic experiment, the aim of which is "laying bare" the laws of the communication act. Ionesco's use of language clearly violates the conceptions of a "normal" act of communication. This is especially evident in the structure of units larger than sentence and in the dialogue. Ionesco's experiment consists in removing separate significant features from the structure of the object (communication) in order to determine their value for communication and establish the limits beyond which communication is destroyed. The Revzins show that Ionesco introduces implicitly the idea of "normal" communication and investigates its conditions. It turns out that for "normal" communication to take place it is not enough that contact should be established between the addressee and the addressant and that they should use one code. It is also necessary that certain common attitudes be shared about the context, i.e. reality reflected in communication, about the relationship between this reality and its perception by the parties of communication, etc. These axioms form the necessary background of any communicative act. The authors formulate them as follows:

1. The postulate of determinism. The reality is organized in such a way that certain phenomena have causes, i.e. not all events are equally probable (with "strong" determinism any event has a cause which can be established).
2. The postulate of common memory. The addressee and the addressant have a common model of the world, they have certain common memory, i.e. a sum of information about the past.
3. The postulate about the identical prediction of the future. The addressee and the addressant more or less similarly evaluate the future having a common model of the world.
4. The postulate of informativity. The addressant must convey some new information to the addressee.
5. The postulate of identity. The addressee and the addressant imply the same reality, i.e. the identity of an object should not change while it is being described.
6. The postulate of truth. There must be certain correlation between the text and the reality, i.e. the text must contain a true statement of reality.
7. The postulate of the reduction of description. The text should describe the reality with a certain degree of reduction, based on the common memory and the common ability to give a similar prediction of the future.
8. The postulate of the semantic connectivity of the text. The text should be structured in such a way that a meaningful relation might be established between the two adjoining utterances, as well as within the utterance and word combination.³³⁾

Certain specific problems of language use in secondary modelling systems were studied since 1969. They include historical semantics of Russian [29a] [24], the role of suprasegmental structures in the text [41], the

³³⁾ [47], p.243.

problem of semantic connectivity [42] etc. M. Lekomceva's analysis of the semantic structure of verba dicendi in Codex Marianus, one of the earliest monuments of Old Church Slavonic, is the first example of eliciting a fragment of semantic structure from a closed text. Hitherto all attempts of semantic analysis were based either on the intuition of native speakers or on the study of vocabulary. The author had to solve many specific problems since recourse to the informant, the usual source of establishing the invariant of semantic transformations was ruled out. Lekomceva adopted a formal criterion of establishing what verbs belong to the group under study: verba dicendi are such verbs which at the level of deep structure are predicates implying direct speech (or the first/second person of the subsequent subject of deep structure). In order to establish semantic features of the corresponding lexemes, the author resorts to the analysis of distributional contrast. At the same time, it was important to discover the combinability of semantic features in what the author calls the maximal semantically bound paradigm. Sometimes one feature may occupy several places in this paradigm; in other cases it occupies a different place. This paradigm is presented as a set of places for the predicate:

Some- one	Communi- cates (orally)	To some- one	From some- one	Some- thing	About some- thing (-body)	Some- how	In the pre- sence of some one
S ₁		S ₂	S ₃	S ₄	S ₅	S ₆	S ₇

The order of sequence of the variables is also taken into account. The analysis employed certain semantic features, some of which are already known from the studies of Zholkovskij and Mel'chuk (CAUS "causation", CONV "conversive", BON - "good", ANTI-BON "bad", VER "verity"), and others were introduced by Lekomceva for the specific purpose of describing the material of the Codex (SACR "sacral", CULP "to impute guilt"), 42 verbs were analyzed, and the rules of semantic correspondence were established. This attempt at constructing a closed semantic system shows that formal methods may contribute much to a better understanding of the meaning of a text which is no longer available to direct interpretation; one may conclude that such methods of semantic "exegesis" are indispensable for the study of any texts the meaning of which cannot be established directly. However, one again wonders about the criteria for grouping the lexemes under study together. It may not be impossible that other groupings might yield other semantic features. Perhaps, comparison of alternative groupings should be carried out in order to establish the optimal system of distinctive features.

Paducheva and Nikolaeva discuss text connectivity on two different levels: the level of the nomination of objects and the prosodic level. Their observations have a direct bearing on the extension of the basic linguistic unit from the sentence to the text. The comparison of the degree of obligatoriness of certain formal features on the sentence level vs. the text level provides criteria for deciding whether it is possible to speak of "text grammar" (especially in linguistic terms) to the same extent that we speak of "sentence grammar." Paducheva's conclusion seems to be that the semantic continuity of the nomination of objects is an

almost "grammatical" prerequisite of any normal text; any violation of this rule leads either to special stylistic effects or to disintegration of the text. Nikolaeva's material is different, and the degree of the "grammaticality" of suprasegmental features on the level of the text is lesser than in the sentence.

Semiotic Study of Folklore

Structural analysis of folklore has always been a favorite subject in Soviet and Russian philology. The famous works by Veselovskij and Propp as well as lesser known contributions of Volkov, Nikiforov and Skaftymov³⁴⁾ were the basis of all later studies in the structure of folklore. The name of the Leningrad professor Vladimir Jakoblevich Propp became one of the most quoted names in modern semiotics. He is rightly considered one of the founders of the theory of narrative. I will not attempt in this article to summarize the modern state of research in this field, all of it directly dependent on Propp's pioneering work *Morphology of the Folk Tale*, which has appeared in almost all European and many non-European languages. Several such summaries were published in recent years and I will refer the reader to them [35], [36], [4]. It is natural that Soviet scholars should devote much of their effort to developing Propp's ideas. In 1969, Meletinskij, Nekljudov, Novik and I published an extensive monograph dealing with some of the problems of structural description of the folk tale (see note 62). We suggested a development of Propp's formalization and introduced a new hierarchical level of narrative, a meta-sjuzhet which is a

³⁴⁾ For more details see [36b].

narrative re-interpretation of Propp's functions. The behavior of the hero was presented as a set of rules and a formal semantic scheme of the plot was proposed. We also tried to systematize the set of dramatis personae and the spacial pattern of the plot. As this work is shortly to appear in English, I will not go into further details here. In 1971, we published a continuation of this work [36a] in which certain aspects were developed further. Following Lévi-Strauss' analysis of mythic transformations in his *Mythologiques*, an attempt was made to present folk tale plot types as transformations in familial code. Each plot type was represented as a certain paradigmatic opposition expressed in terms of familial relations. It was assumed that such relations are the "armature" of semantic transformations in the folk-tale. In the folk tale where the story deals not with the welfare of the community (tribe etc.) but with the personal fate, the marriage "exchange" loses much of its universal communicative function and acquires a different significance in the framework of a "personal" story. In the folk-tale actual conflicts on the familial level which have replaced the fundamental mythic oppositions life/death are solved not by progressive mediation but by a change of social status through marriage.

A chain of transformations is examined. The starting point is the plot type AT 400, 425 (tales of miraculous spouses). Here the original opposition "own"/"alien" is supplemented by the opposition low/high which is treated in social rather than cosmological terms: miraculous zoomorphic spouse may be described not only as "alien" but also as "socially low" or "of low (ugly) appearance." At the end of the tale the "low" spouse or suitor is transformed and becomes beautiful and attractive, which is a

reward to the hero for his correct behavior. This pattern is regarded as a restatement of the traditional rules of exogamy. In this plot the conflict is the loss of the miraculous wife due to a breach of rules. The hero marries the heroine *twice*: before and after the loss.

In the numerous group of tales about the hero's fight with the dragon (AT 300 - 301) the armature is a transformation of the above described pattern. The heroine, as in AT 400, is a mediator between the two worlds but, in contrast to AT 400, she belongs to "our" world and not to the "alien" world. She is not the daughter of a totemic king or demon (as in AT 400), but the daughter of "our" King. Thus, the conflict is not the heroine's departure into her own "alien" world but her abduction from "our" world into a demonic kingdom where she is the victim of the dragon. The trial in the "alien" world is not a solution of difficult tasks put by the father-in-law (as in AT 400) but a fight with the heroine's abductor. The *double* marriage of the hero with the heroine corresponds to the heroine's *two* marriages (the "incorrect" one with the dragon and the "correct" one with the hero) . Here the "incorrect" marriage should be interpreted as a breach of endogamy (a "too-distant" marriage).

Plot patterns of other groups of tales are also examined and the corresponding transformations are elicited. Thus, to give only one example, the breach of exogamy and endogamy appears at the beginning of the plot in the famous group of tales about Cinderella. This group has two variants: (A) The evil mother-in-law persecutes the poor Cinderella and (B) The heroine's father (or brother) falls in love with her and she runs away from him to marry a prince at the end. In (B) the breach of exogamy is

evident: the heroine is threatened with incest (a "too-close" marriage), while in (A) the father's marriage to another woman after the death of Cinderella's mother may be interpreted in the light of typology as a "too-distant" marriage, a breach of endogamy.

The article also examines another level of semantic structure in the folk tale. Propp stated quite expressly in his book that only the functions and actors are permanent elements in the tale pattern. It was decided to examine the entire inventory of "realia" in the texts studied by Propp in order to try to establish certain semantic regularities in this field as well. It turned out that such regularities are indeed present. If the semantic vocabulary of the folk tale is examined several groups may be elicited. While there are no exact lexical correspondences between the texts of separate tales, the semantic groups are identical and certain sememes represented on the surface level by different words may be regarded as functional synonyms. The basic semantic groups are as follows: *actors* (this group includes all the various actors of the folk-tale: human beings, animals, supernatural beings, miraculous objects), *states* (this group includes all the sememes denoting the spiritual and physical status of all objects in the tale that may be described as being in a certain state, it also includes sememes denoting "information" and "control") and *loci* (this group includes all nomina loci and objects permanently ascribed to certain "places"). These basic groups are then subdivided, first, according to the feature external/internal and then according to more specific semantic features.

All actors may be classified as "capable of being in an internal state" vs. "incapable of being in an internal state". This division distinguishes miraculous objects (as incapable of being in an internal state) from all other actors (human beings, animals, supernatural beings, etc.). "Internal state" as opposed to "external state" distinguishes spiritual status (grief, joy, truth, lie, etc.) from physical status (whole, part, measure, size, etc.). The division between "inanimate objects" and "animate beings", according to internal state, is statistical: in the absolute majority of (but not in all) cases miraculous objects are represented as simply "performing" without expressing any feelings or attitudes. Of course, as in any classification of semantic phenomena, there are exceptions; sometimes objects that were made to serve the demon without their own agreement may express their gratitude to the kind heroine (i.e. when she oils the gates of Baba-Yaga's house) or may deceive the demon. Just as the category of internal state may be applied to objects, the category of external state is applied to animate objects, and here the relation is asymmetric: external state is much more important in animate beings than internal state in inanimate beings where it may be considered a neutralization in "speech" of a "linguistic" opposition. Animate beings are described in detail in terms of their physical state. The important opposition is between "wholeness" and "the state of being fragmented." The former feature is correlated with life (even if the actor is dead he may be restored to life if the body is not fragmented) while the latter denotes death (the "real" death occurs when the body is divided into such small fragments that they cannot be put together again). Apart from sememes denoting actual state, the category of state includes words denoting speech, verbal control,

as well as actions which are subject to special analysis in terms of their predicative function in the plot. The actors are classified as human/non-human, anthropomorphic/zoomorphic, natural/supernatural etc. Special features (social-familial code, sexual code, evaluative code, etc.) are suggested to classify human actors. As stated above, actors are classified according to the feature internal/external in terms of their belonging to "our" versus "alien" kingdom or locus.

The loci and the locatives are bound by certain constant relations. The original articulation of the folk tale world is into stable places which are related by the feature internal/external. This articulation is not absolute: something which may be internal on one level may become external on the other and vice versa. Thus, yard is an internal place with regard to the forest, while it is external with regard to the room, etc. All "places" are characterized by certain fixed locatives which are derivative from them: the gold and the silver are characteristic locatives of the box, the hearth and the bed are the characteristic locatives of the room, etc. This relationship is characteristic of the folk tale plot. In general, the sphere of actors articulates the narrative level of dramatic personale, the sphere of states articulates the narrative level of values, and the sphere of loci articulates the narrative level of the plot (Sjuzet). Thus, the plot evolves as a succession of expanding vs. narrowing fields of view (and vice versa): the plot space is a series of places inserted one into another. The semiotic role of road and border is very important. Significantly, "delocalized" objects are usually endowed with magical quality (cf. rings, kerchiefs, little boxes, etc. which may be found at

any point of the plot space), while "mislocalized" objects are clearly inimical to the hero. They are usually situated in the intermediary space (road, field), cf. a bed in the field instead of the room is intended to destroy the hero who would lie upon it. Thus, the feature of external/internal is the basic feature of the armature which determines the semantic paradigm and the movement of the plot. Its different representations in various semiotic codes define the dimensions of the basic conflict. Each folk tale may be characterized by a graph representing the semantic groups present in the text and the syntagmatic relationship between them. It appears that texts with identical graphs may be considered "textual variants," while texts with basically isomorphic graphs in which certain blocks are omitted or merged, but the basic patterns are preserved are "plot variants."

The semantic interpretation of the folk tale realia first suggested in the collective article by Meletinskij, Nekljudov, Novik, and myself was further elaborated by Civjan in her paper on semantics of the temporal and spatial elements in folklore [5b]. According to Civjan, the characteristic feature of spatial and temporal vocabulary is its abstract nature and a tendency towards a closed system (nomenclature). The elements almost completely shed their concrete lexical meaning and acquire new semantic connotations: *house* is not so much a description of a dwelling but the center of "our" world, a *well* is not a water reservoir but a boundary between the two worlds etc. Civjan asserts that not only on the semantic level, but also on the lexical level spatial and temporal elements in folklore are almost "pure" expression of the basic semiotic oppositions. They describe not only the universe of folklore, but that of everyday human life as well.

Thus, the spatial - temporal grid elicited from the folklore texts may be interpreted as an affirmation of a universal system of semiotic oppositions which is valid for any collective. This system is the result of man's classificatory activity the purpose of which is to define his place in the world. A regular repetition of this universal grid, its constant recapitulation is one of the basic conditions of human life. Civjan suggests that the information about this system is transmitted in human collectives by means of mythological texts. The rigid semantic classification inherent in folklore texts correlates with a system of constraints imposed on human activity in primitive and archaic societies. These constraints are necessary in order to enable humans to prepare successfully for crossing ritual thresholds which structure the course of human life, e.g. certain types of *work* (mainly feminine) are to be carried out only at *home*, i.e. in an *internal* closed space and only before *darkness*; *outdoor* work (e.g. agricultural activities) may be started only at an appropriate time, etc. Civjan arrives at the same conclusion as the authors of the collective article: "The main folklore opposition "own/alien" may be interpreted in terms of spatial oppositions (internal/external)" ³⁵⁾.

The problem of the temporal system in epic is discussed by S. Nekljudov [40b], whose previous works dealt with the analysis of space in folklore texts. Nekljudov examines Russian, Mongolian, Germanic and other forms of epic narratives and comes to the conclusion that the epic operates with a temporal system based on completely different principles than that of

³⁵⁾ [5b], p.15.

so-called "common sense." In the epic, time is perceived as a closed system, which is significantly correlated with the object contents of time. Time is not continuous, but discrete, moving in "leaps and bounds". The "movement of time" is experienced as related to the subjective value of events, and the common epic expectation was that time should be immovable, stable. Events were perceived as breaking the primeval stability.

Hence the common motif of the Golden Age, of the past grandeur with which the present is compared unfavorably. The past contains the ever valid lesson for the present, and the successful resolution of the epic conflict was to restore the past balance and harmony. A typically epic picture of perpetual harmony is the epic feast which is usually localized at the beginning of the narrative: if the original harmony is restored, the narrative ends also with the feast. As the general time system of the epic is interwoven with the specific time system of the events that make the plot, certain discontinuities may appear. They are especially evident in the treatment of the biography of the epic hero. Separate epic personages possess their own time scales. Thus, the hero is often conceived of as perpetually young (sometimes, like the Russian hero Ilja of Murom, he may be perpetually old), while other personages have their own constant age. The temporal speed of various personages is different: in one of the variants of the Mongol epic *Gesar*, the hero's age reaches that of his old uncle. Temporal cycles are often introduced into the hero's biography: he may occasionally revert to his childhood and then the biography starts again.

Nekljudov devoted two papers to problems of artistic description in folklore [40], [40a]. In his article on the expression of emotions by the bylina personage Nekljudov describes a system of psychological reactions characterized by certain deviations from the accepted "common sense" pattern. In this system, there is a certain asymmetry between positive and negative emotions. The positive emotion (joy, merriment) is expressed very seldom. It is opposed to the whole gamut of negative emotions which include displeasure and anguish, annoyance and grief, wrath and despair, martial frenzy and fear. Surprise is closely correlated with negative emotions, especially in their extreme form.

General characteristics of description in pre-literary narrative art are summarized by Nekljudov in his review of classical folkloristic works of Veselovskij, Middendorf, Zhirmunskij, and others. He sees certain parallels between the idealizing system of "archaic" plastic arts and the verbal imagery used in the narrative. In the folklore, verbal images lose their primary lexical meaning and tend to be transformed into names. Description is replaced by nomination. The name becomes the nexus of the relevant semantic features of a personage or object. The static world is named rather than described. At the same time there is a tendency to represent the static through the dynamic. The elements of static structures (personages, external features, material attributes) are realized through action. They are manifested through dynamic processes (making, building). Likewise, emotions and attitudes are expressed by means of external attributes. Therefore, the visual immediacy of the image is diminished, nomination becomes less concrete and turns into a sign of the idealized, general notion.

Certain attention was paid to folklore genres other than folk tales. Yu. Levin in his article about the semantic structure of the Russian riddle proposes a formal system for the description of riddles [27]. Levin's description is an instructive example of the structural approach to text semantics. His success was due to the consistency of the formal apparatus applied and a relative simplicity of the object. It is evident that mathematical methods are productive only when applied to objects of a proper order of complexity. The success of such an attempt leads to a further improvement in methods which can then be applied to more complex objects. Levin examines the semantic structure of the riddle at several levels. The first level is synthesis of the riddle. The author starts from the premise that the riddle is an incomplete and/or transformed description of the object. Therefore he assumes that an untransformed description is the starting point of the synthesis. He introduces a simple symbolic language for the description of objects which, among others, distinguishes among the object itself, its qualities (attributes, actions, states), its parts and relations into which it enters. The following basic transformations are postulated: identical transformation, annulment, substitution of an element of description by an arbitrary element, substitution by a similar element: genus - species substitution (concretization), species - genus substitution (generalization), the substitution of one species of a genus by another species of the same genus, and substitution of one meaning of the word by another. Synthetic description is supplemented by an analysis of the semantic structure of the riddle. Levin examined the corpus of Russian riddles compiled and published by Sadovnikov and found that one common feature of these riddles is a certain unexpectedness

of the solution, something which distinguishes riddles from ordinary utterances. This feature is called "semantic point". Levin distinguishes between "internal semantic point" based on formal features (antithesis, contrast, pun) or on inherent impossibility of the situation described by the text and "external semantic point" based on contrast between the most probable (usually erotic, obscene, etc.) and the actual solution.

G.L. Permjakov discusses the linguistic - semiotic aspect of folklore cliches (paremia in his terms) [44]. He regards paremia as a separate level of the vocabulary system. The lowest level is formed by lexemes, the intermediate level by phraseological units and the highest level is formed by the paremia. It consists of sayings, proverbs, aphorisms, riddles, popular beliefs expressed in clichés, etc. This level provides models for various existential, behavioral, and other situations; it contains formulas of various practical and psychological rules; it models future in the form of predictions, etc. The set of paremia is an ordered system for each language. The characteristic feature of this system is its openness. New sayings may be coined according to the existing models. However, this system is closed as far as the logical patterns are concerned. It is impossible to find such sayings and formulas the logico-semiotic structure of which would contradict the system.

A somewhat neglected field in Soviet semiotics is structural study of ritual and folk customs as they are preserved in the everyday life of modern communities. This is due to the lack of field work possibilities. However, certain aspects of the study of folklore customs were discussed by Petr Grigorievich Bogatyrev, the doyen of Soviet structuralism, who died

in 1972 and whose book *Problems of the Theory of Folk Art* [3a], which includes his earlier classic works ("Actes magique, rites et croyances") and later studies, was published in 1971 and made a great impact on Soviet scholars, and by G.A. Levinton, a young folklorist from Leningrad. P.G. Bogatyrev's short article [3] describes a concrete example of the modern village ceremonies, namely the Mardi Gras in Moravian Slovakia. The interesting feature of these ceremonies was extreme adherence to the rules of etiquette on the part of the village people. Bogatyrev writes that during the holiday older people showed great respect for the young, and the young people manifested their respect for the old; other village groups also took great pains to demonstrate their mutual respect: guests and hosts, the married and the single, the children and the adults, the musicians and the audience, the Catholics and the Evangelists. Elaborate rules of etiquette governed these manifestations of respect. Bogatyrev emphasizes that the aim of these ceremonies was to demonstrate the underlying unity of the village community, to cement the inter-group cooperation. The deliberate show of respect across the boundaries imposed by various classifications within society was intended to stress the temporary and artificial nature of these classifications. Bogatyrev's description shows that other ways of stressing the *communitas* (cf. V. Turner) are possible apart from a carnival reversal of roles and temporary removal of social barriers.

G. Levinton's study [28] is a semiotic description of the Russian wedding ritual (especially its verbal part). Levinton regards the ritual as a text generated by semantic system which is basically similar to one which generates the fairy-tale. The wedding, just like the fairy-tale, has a plot (*sjuzhet*).

Two common plot elements are evident in the two "genres": 1) the obligatory nature of marriage at the end of the fairy-tale (the wedding is reduced to a feast; this may be accounted for by the fact that other elements of the ritual became transformed into the plot pattern of the fairy-tale); 2) in many "masculine" tales the hero departs and returns, while "feminine" tales (those that end in marriage) do not include return.

The treatment of the bridegroom as an alien, hostile force in the Russian wedding songs may be related to the fact that he is treated as a representative of the "alien" world. Thus, every bridegroom may be regarded as "miraculous" in terms of the fairy-tale. Levinton examines the role of the space in the ritual in terms of "own" vs. "alien." Special attention is paid to intermediary zones.

Semiotic Study of Mythology

Mythological studies have always attracted the attention of Soviet semioticians, and several interesting works have appeared since 1969. Some of them will be treated at the end of this article in the section of typology of cultures, because problems raised in those works are not confined to mythology in the strictly narrative sense of the term.

E.M. Meletinskij who devoted considerable attention to the study of primitive mythology published a short resume of his research of the mythology of North-Eastern Paleo-Asians (the Koryaks and the Itelmens) [35a]. The subject of his paper is mythological narratives about the Raven. The Raven is the first ancestor, culture hero, and at the same time trickster whose function is universal mediation between life and

death, sky and earth, land and sea, dry and wet, salt and fresh, winter and summer, male and female etc.

Mythological narratives about marriage adventures of the Raven's children have a binary compositional structure. This syntagmatic binarity corresponds to binary semantic paradigms: endogamy vs. exogamy ("social" code), the sky vs. the earth or the nether world (cosmological code), utilitarian vs. non-utilitarian or even harmful natural objects (economic code). These natural objects become marriage partners, and the corresponding plot type represents the etiology of society and the "socialization" of natural forces.

Mythological anecdotes about the Raven are in complementary relation to narratives about marriage quest of his children (the Raven's attempts to find a marriage partner are socially destructive and serve the purposes of his search for food). The syntagmatic scheme of these anecdotes is as follows: 1) disjunction (famine, the family breaks apart), 2) attempts at obtaining food or the manufacture from "anti-materials" (excrements, refuse, etc.) of the food itself or of its "givers," 3) deceptive tricks (sometimes accompanied by transformations), 4) their fiasco and 5) conjunction (the family is re-united and the famine is followed by plenty due to the successful hunt of the Raven's children). The anti-social character of the Raven's activity is opposed to the "normal" social activity of his children. Paleo-Siberian myths present a very promising field for a study of semantic transformations. Meletinskij's first attempts show that such a study might provide a very useful corollary to Lévi-Strauss' analysis of the American Indian material.

Other contributions in this field are devoted to the mythology of Indo-European peoples. Semiotic analysis is supplemented by comparative linguistic analysis and historical reconstruction. V. Ivanov devoted two studies ³⁶⁾ to Vij, a mythological personage from a story by the 19th-century Russian master Nikolaj Gogol. This personage with clearly folklore roots appears to be a central figure in many traditions, and typological parallels throw light on the semantics of this figure.

Ivanov compares Vij with waejug, a personage from Iranian mythology. Apart from phonetic similarity, the two personages have certain semantic features in common: just like Vij, waejug is related to both death and iron, waejug and Vij share the motif of eye deformation (Vij cannot open his eyes and waejug is one-eyed). Parallels to this constellation of semantic

³⁶⁾ [18n],[18r] Vij appears in the last part of Gogol's story about an ill-fated love of the boisterous Ukranian theological student Xoma for the daughter of a mysterious country squire. The daughter was a witch. She transformed into an ugly old woman and made Xoma ride on her back all through the night. Xoma, unaware of the witch's real identity, mercilessly beat her up and in the morning it appeared, to his terror, that the beautiful girl had suffered at the hands of an unknown tormentor and died. Xoma was made to stand the mass for the dead girl during the next night in the church crowded with all sorts of demons who wanted to see the culprit but could not because he kept reading from the prayer book without looking to his sides. The dead witch asked for Vij to be brought in, and a strange dwarf appeared, his body covered with earth, his face and fingers made of iron and his eyes covered by enormously long eye-lids. The demons raised Vij's eye-lids and he looked up. Xoma's patience faltered, and he looked at Vij who, in turn, noticed him and pointed him to the Demons, who threw themselves on the helpless theologian.

features (death, deformations of the eyes or vision, relation to iron) are found in another Indo-European area: Old Welsh legends about Yspaddaden Penkawr mention that his eye-lids could be opened only by pitchforks, and another giant had his eye-lids raised by four men during the battle. Russian folk tales include motifs of an old man lying on an iron bed whose eye-lashes are raised by iron pitch-forks. The old man wants to take revenge on the hero of the tale (like Vij in Gogol's story). These motifs throw certain light on the role of the opposition "visible"/"invisible" in archaic cultures and ancient mythology. Gogol, with his keen feeling for the archaic, stresses the double role of vision in Xoma's story: the hero's death is caused not only by his "being seen" but also by his "seeing." In his article, Ivanov quotes an important passage from Propp's *Historical Roots of the Folk Tale*, which explains the semiotic role of this opposition in mythology (incidentally, Propp also refers to Gogol's story):

...the analysis of the notion of blindness could lead to the notion of invisibility. Man is not blind in general but only in relation to something. The notion of mutual invisibility may be discovered under "blindness." As far as the Yaga is concerned, this could lead to a transference of the relations obtaining in the world of the living into the world of the dead: the living do not see the dead just as the dead do not see the living. It could be objected that the hero should also be represented as blind. Indeed this should be the case, and it happens in reality. We shall see that the hero who comes to the Yaga loses his sight. (...) if it is true that the Yaga guards the tridesyatoe kingdom from the living and if the newcomer blinds her after having returned, it means that from her kingdom the Yaga cannot see a man who has been to the kingdom of the living and has returned from there. Similarly, in Gogol's Vij the demons do not see the cossack. The demons who can see the living are like shamans among the demons. They are similar to the living shamans who can see the dead whom the common mortals cannot see. The demons call for such a shaman. He is Vij³⁷⁾.

³⁷⁾ [18r], p.156

Ivanov examines numerous typological parallels from various traditions of the Old and New World and arrives at the following conclusions about the role of vision in archaic mythology: the living are associated with normal vision while the supernatural beings related to death are associated with deformed eyes or vision. Therefore in any situation when a normal person may come into contact with such a being he should avoid the gaze of the latter, preferably keep his eyes closed. Ivanov establishes the following relationship for the deep structure of the mythology and ritual:

- (1) mythological being - device for opening eye-lids
- (2) mythological man - device for keeping eye-lids closed.
- (3) opening the eyes - death (or sleep)
- (4) closing the eyes - life.

We have seen that Ivanov used Gogol's story as the starting point for a reconstruction of a mythological motif of great antiquity. The methodological value of using such a "secondary" source proved to be quite considerable due to Gogol's receptivity to the genuine archaic semantics. The use of secondary sources is an important research device, and another study by Ivanov and Toporov [19] demonstrates convincingly great potentialities inherent in such material. At the same time, Ivanov and Toporov show that recourse to secondary sources imposes certain procedural constraints, namely an ability to stratify the secondary text in order to determine the really archaic layers of meaning.

The authors' main argument is that such a stratification may be successfully achieved by using mythological evidence as a criterion of

verification. This, in a way, is a reversal of the traditional position of comparative mythology, according to which, linguistic correspondences were the final proof of archaism. The material analyzed by the authors is a late 18th century document known as "The Story of the Foundation of the Town of Yaroslavl/!". The first part of the article is devoted to a survey of all available etymological evidence for the reconstruction of the semantic field associated with Volos/Veles, "the god of cattle," one of the chief deities of ancient Slavs. It is suggested that Volos/Veles originally functioned as the antagonist of Perun, the thunder god. Ivanov and Toporov assume that Perun and Veles may be regarded as opposed because their functions belonged to contrasting semiotic fields which was reflected in their attributes, the respective order of the two gods in the sequence of the gods, etc. Perun and Veles were also distinguished as related to the prince's guard (Perun) vs. related to the rest of Russia (Veles). This may explain why the data about Perun come mainly from the larger administrative centres like Kiev, while Veles is mainly known in the northern periphery. Ivanov and Toporov suggest that the knowledge and even worship of Veles continued all over this territory long after the decline of paganism. They identify the cult of St. Vlasij, the protector of cattle, with the residual worship of Veles. The linguistic evidence from the Russian dialects as well as from the neighboring Baltic and Ugro-Finnic languages seems to confirm the existence of roots similar to the one attested in Volos/Veles with the meaning of "supernatural being," "witch," "hairy being," "hair'," "shaggy," "rule," "power," "territorial unit." All these meanings are in some way or other represented in the functions of Volos/Veles.

It appears that the text of "The Story of the Foundation of the Town of Yaroslavl" in spite of being written in the 1780's has preserved some very archaic features as far as Volos/Veles is concerned. "The Story," which relates how the old cult of Veles/Volos was replaced by a new cult of St. Vlasij at the foundation of Yaroslavl' contains many references to Volos'/ relation to cattle, to his being the god of the freemen ("Ijudii") before whom they swear oaths, etc. An interesting detail given only in "The Story" is Volos'/ relation to singing and playing musical instruments. This feature unites "The Story" with the famous "Slovo o Polku Igoreve." There are other important similarities between the two texts as far as the treatment of Veles is concerned. The significance of this shared mythological motif is enhanced by the fact that the two texts are associated with a common location: the Spasskij Monastery in Yaroslavl where biship Samuel found the original of the ancient manuscript used by him for the compilation of "The Story" and where ten years later a copy of "Slovo" was found. Ivanov and Toporov come to a conclusion that certain elements, not necessarily linguistic, are preserved in the text (either continuously transmitted, or subject to successive re-workings) for a very long time precisely due to loss of motivation of their meaning:

The method of reconstruction of the original elements of the text elaborated here on the material of the names of deities is based on a search for the most ancient features which are preserved in all re-codings (from identical, which preserves the text intact, to complete re-workings when new texts are compiled from earlier sources). Thus, typology of texts in various cultural and historical conditions is very instructive. Change

of historical circumstances determines the chance of interpretation and further direction of re-coding (sometimes towards archaization).³⁸⁾

The authors examine all the traditional arguments in favor of the antiquity of "Slovo." They come to the conclusion that while certain fragments of the proto-text are definitely represented in "Slovo" and in the texts of the Kulikovo Cycle (as well as in other monuments), some of the linguistic arguments in favor of the antiquity of "Slovo" should be re-examined in the light of new evidence (cf. S'a before the verb, the use of lexical archaisms and Turkisms - all these elements traditionally regarded as archaisms could have been deliberately introduced by later copyists). On the other hand, certain elements of the content are clearly archaic and, according to Ivanov and Toporov, could not have been later interpolations (the notions of shamanic world tree, the "first times," the distinction of three cosmic spheres, etc.). Such elements are attested not only on the level of semantics, but on phraseological level as well (*loci communes* similar to folklore tropes). The new approach to mythological evidence introduces new dimensions into semiotic reconstruction. At the same time new data are necessary on the relationship between "true" archaisms in semantics and archaic manifestations of panchronic character.

V. Toporov's article "Notes on Baltic mythology" [55h] attempts to introduce a hierarchical order into various lists of old Prussian and

³⁸⁾ [19], pp.61-62.

Old Lithuanian deities. The distribution and the functional relations of the deities are analyzed and a tentative order is established. Toporov uses certain common processes of religious evolution to explain the position of deities in the lists:

...in spite of a largely artificial character of the lists of old Prussian deities which were compiled when pagan beliefs among the Prussians were on the decline and the authors of the lists were under the influence of ancient mythology, these lists may give much important, hitherto unknown information. In order to discover an earlier state of the Prussian pantheon one has to bear in mind the following factors which worked to obscure this state: the arrangement of deities according to a cosmological or natural - economic pattern; the alternate use of the calendar or hierarchical principle; the splitting of one god into two or several deities with the preservation of the common (or cognate) roots and their differentiation by derivational elements or artificial semantization; common identification of some names due to sound similarity; the influence of the classical (mainly Roman) as well as Old German pattern on the composition and hierarchy of Old Prussian pantheon etc. ³⁹⁾.

A short article by Ivanov is devoted to typology of Ancient Near Eastern hymns to the sun [18q]. Ivanov's conclusion is that the worship of the sun was related to semiotization of the function of judgment in the semantic pattern of the sacral king. The Sun was worshipped both as the king and as the sun.

Another study by T. Elizarenkova and V. Toporov [9b] is a typology of a Vedic plot about the impending peril and subsequent salvation of the mythic risa Trita. Trita finds himself at the bottom of a deep well. He is fearful that with his death his clan will disappear for he has no

³⁹⁾ [55h], p.307.

child. He asks the gods for salvation and finally obtains it. The authors reconstruct an earlier pattern which lies behind the Vedic plot. In this older scheme, Trita is associated with water and sky, fire and earth. He is the youngest of three brothers related to water. He is betrayed by his brothers and saved by a bird associated with the World tree (cf. the Russian fairy-tale about Ivan the Third Son (Tretjak, cf. Trita), or Ivan Vodovich (lit. 'of water')). The authors see in this archaic pattern an archetypal plot, one of the variants of which is represented in the Biblical story of Joseph. This archetypal scheme is re-activated each time the historic situation seems to-confront the past, the present and the future.

Typology of Culture and Semiotic Study of History

The article by Elizarenkova and Toporov is devoted to the analysis of one mythologeme only.

At the same time, it is representative of a whole group of studies whose approach is typical of the Soviet semiotic school and which treat the problems of mythology in a broader context of typology of cultures. Mythology interests the authors not only as a highly semiotic system the structural study of which may provide significant insights into the process of semiosis in general, but as an important stage in the history of semiotic systems, as a universal stage in the development of human conscience, a typological layer which may always be activated again.

In fact, the study of narrative and paradigmatic mythology is only a preliminary step towards unveiling the mechanisms of universal symbolization. These mechanisms are at the root of all semantics. We refer this group of studies to semiotic typology of cultures because they seem to describe one of the major types of human culture. It must be understood that Soviet semiotics has so far not arrived at the necessity of studying the concept of culture theoretically. This may account for certain discrepancies between the notion of typology of culture in the Western science and the similarly described field in Soviet semiotics. The Western concept of culture is based on anthropological premises and is closely related to the actual territory of a community, its subsistence conditions, its ethnic composition and, first of all, the sum total of its behavior. That is why, incidentally, one speaks of typology of *cultures* in the Western tradition vs. typology of *culture* as adopted in the Soviet School. In the semiotic usage the term "culture" is understood by Soviet scholars as a semiotic ideational structure the function of which is to store and transmit collective information. That is why the emphasis is on the study of "cultural texts." Culture understood in this way transcends the boundaries of one community. This interpretation of culture is more in keeping with the continental (German and French) tradition than with the Anglo-Saxon anthropological approach.

I think that the most extensive and deepest study of the mythological (or "mythopoeic") type of culture was carried out by Toporov in his works on the symbolism of "the word tree." In Toporov's articles one finds the most successful, so far, application of semiotic and structural analysis to a very wide range of cultures, the analysis which omits none of the details of symbolic representation hidden behind various mythological motifs and speculations and at the same time always preserves the overall pattern. In the first chapter of this review I have written about the fundamental influence of Ivanov's ideas on the development of structuralism in the extra-linguistic field. Now that I have come to the main body of Toporov's research in semiotics of culture, I would like to stress his very important role in forming the basic conceptions of Soviet semiotics.

The fundamental notion of the modelling role of the sign was first formulated in the Soviet science by Toporov. This implies both the ability of the sign to

represent "external reality" and its role in programming social and individual behavior. Thus, the sign and semiotic systems in general are able to function as "models of the world." It is the models of the world that became the principal object of research in typology of culture. The notion of the model of the world implies a hierarchical structure and close relationship between cosmological, anthropologic, and social aspects of the model. The whole range of problems discussed in the works of Soviet semioticians in connection with culture, mythology, history, etc. are clearly derivative from the basic ideas of Toporov. It is also important to remember that Toporov's concept of semiotics as encompassing not only linguistics and related sciences (poetics, stylistics, theory of communication) but also history and some aspects of social sciences formed the foundation of the structural - typological approach developed at the Section of Structural Typology of the Institute of Slavic and Balkan Studies of which Toporov was the first head and which he helped to build. Apart from purely theoretical contributions Toporov introduced into Soviet science high standards of analysis; many of his discoveries in the field of typological linguistics (the description of the Balto-Slavic diachronic relations and the Balto-Slavic linguistic and cultural union), Slavic and Indo-European mythology have become widely accepted as important contributions to the corresponding fields.

Here we shall briefly discuss Toporov's conception of the "universal semiotic complex" of the world tree and its role in the mythopoeic model of the world ⁴⁰⁾.

According to Toporov, the universal semiotic complex is a special class of the models of the world which was characterized by the following features: universality of *symbolization* (all different aspects of the world, its morphology in all the spheres of existence, all the significant relationships were represented by a single image, expressive "model": the world tree - or its allo-elements; the world mountain, temple, pole, antropomorphous being; the world tree modelled all the spatial and temporal relations in the world, while

⁴⁰⁾ See, for instance, [55f], [55c], [55e], [55k], [55j].

its component parts, animals, birds, etc., served to symbolize the semantic relations), universality of *space* (this model was spread all over the oikumene), universality of *time* (at a certain period the model of the world tree characterized all cultures) and universality of *psychological topos* (the model served to meet the fundamental needs of the psyche and expressed the underlying unity of the world, the community and the man; it recurs whenever the corresponding psychological conditions are reproduced). Toporov starts his analysis with determining the inventory of elements from which the universal semiotic complex was gradually built. He finds the first attempts at the meaningful use of these elements already at the Paleolithic epoch. The task is to reconstruct certain texts and their internal structure which might include what was to become poetic symbols. Such texts must be characterized by certain features irrespective of the plan of expression. These are, first of all, a common semantic inventory and a set of rules governing the organization of the text. These rules are, in fact, generators of rhythm (ordered repetition of the elements). Toporov emphasizes the fact that the very ability to identify and reproduce ordered series of elements was a significant achievement of "mythopoeic conscience": "The reproduction of these structures and the iteration of the elements were used by the mythopoeic conscience in order to discover and emphasize the structure and its elements as a means of affirmation of the discrete (related to culture), its victory over the continuous (related to the chaotic aspect of nature)" ⁴¹⁾. According to Toporov, primitive syntax of the earliest semiotic "texts" was based only on juxtaposition and simple conjunction: the multi-figure compositions of "art pariétal" did not have any unity of plot or theme: each successive personage was simply added to already existing ones. These compositions were operating not with plots, but with symbolic stereotypes which represented a certain set of objects and basic relations among them which could later be conceived as a plot, a story. Taking up A. Lérois-Gourhan's theory of cave as "proto-temple" and paleolithic

⁴¹⁾ [55f], p. 78.

painting as "proto-religion," Toporov interprets statistical preponderance of certain animal images in definite areas of the cave as a prototype of the distribution of the animals depending on the sphere of the world tree they belong to. It is possible to elicit certain primitive semantic oppositions and distributional rules: "masculine" signs are opposed to "feminine" signs; sexual differentiation is expressed only in the ungulates, this class of animals is opposed to others by this distinctive feature; the fact that animal images are in absolute majority shows the beginnings of the differentiation between the "own" (which is not portrayed) and the "alien." The ungulates are opposed to the birds and the fish/snakes. This division of the animals into three groups seems to foretell the future differentiation of the animal world according to the three cosmic spheres.

Toporov postulates the existence of the "epoch of the world tree" following the Paleolithic period. In this epoch the relations between the three groups of animals which were still very vague in the Paleolithic period are organized into a clear-cut ternary system of vertically arranged classes: the birds (related to the upper part of the composition, the sky), the ungulates (related to the middle part of the system, the earth) and the fish/snakes (chthonic animals related to the bottom, the nether world). The world tree became the main symbol of the idea of verticality, therefore the birds are usually located on the branches of the world tree, the snakes, at its roots, and the ungulates, at the sides. According to Toporov, the ternary vertical division of the world tree is an ideal representation of any dynamic process which includes emergence, development and degradation. These three parts of the world tree were semantized in such a manner that the upper part was associated with the positive aspect, while the lower part was negative.

Toporov gives a detailed analysis of the structure of the texts that were associated with the conception of the world tree. The general pattern of these texts may be summarized as follows:

- 1) the text is structured as a series of questions and answers
- 2) the text describes a sequence of events making up the act of

creation of the world; the sequence corresponds to a temporal series in which the beginning is marked

3) successive organization of space is described (direction: from the outside to the inside)

4) one stage of creation leads to the next one through the operation of generation

5) gradual "descent" from the cosmological and the divine to the historical and the human

6) the identification of the last term of the cosmological series with the first term of the historical (or quasi-historical) series

7) the statement of the rules of social behavior (often marriage rules).

Stage 4 may be realized in one of the following four ways:

1) The enumeration of the elements in different order with enumeration or without it:

- a) 1 A & 2 B & 3 C 4 D
- b) A B C D
- c) D C B A ...

2) The indication of the location of an element with respect to another element (A is located on/in B, B is located on/in C etc.):

A c B g B e C C c D ...

3) The indication of the beginning (origination) and the end (annihilation) of an element with respect to another (A lives by the death of B, B lives by the death of C etc.):

[line to be completed]...

4) The indication of the "value" of an element with respect to another (A is more valuable than B, B is more valuable than C etc.):

A > B & B > C & C > D ...

And, finally the semantic structure of the universal semiotic complex of the world tree is governed by the following rules:

- 1) the world is described by a certain alphabet the elements of which are the main elements of the cosmos
- 2) the synchronic and diachronic aspects of description are closely correlated (the description of the hierarchic structure of the world is equivalent to the description of its creation)
- 3) macrocosm and microcosm are isomorphic (their descriptions are derivative from one another)
- 4) the elements of the alphabet of description are divisible into primitive semantic features, e.g. fire: red, light, bitter, hot... etc.
- 5) several marked sequences of elements exist depending on the main idea of description
- 6) the development of polysemy (even to homonymy) of each element: thus Sky, Earth, Fire, Water, Wind etc. may be personified characters of a cosmic drama (cf. Ouranos, Gea, Agni, Vayu, Varuna etc.); depersonified and desemantized abstract classifiers with the only function to differentiate; cosmic elements covering the entire Universe (both macro- and microcosm); spatial structures of the Universe; temporal structures of the Universe; parts of the human (or animal body); vegetable, animal, "cultural", color, taste, geometrical and other classifiers
- 7) the establishment of correlations between the units of different levels (e.g. fire - above - summer - south - red - bitter - wood - a plant - an animal - a culture hero etc.) which leads to a synonymy of description ⁴²⁾

⁴²⁾ [55e], p. 61

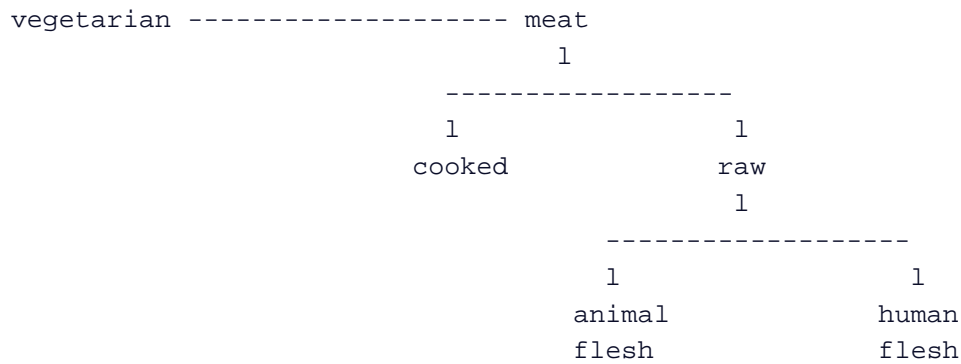
Toporov shows cosmological roots of early nature - philosophical speculations (origin of the four elements, the role of numbers, etc.) and historical descriptions (early historical treatises constructed as series of questions and answers) in the ancient world. He traces the origins of the principle of causality to the universal nature of relations between cosmological elements. He discovers certain remnants of the "mythopoeic" world view in numerous creations of later philosophy, art and literature (Dante, Rabelais, Cervantes, Dostoevsky, Rilke, etc.). Especially important are structural reflections of this model (question and answer system, correlations between the elements of different levels, etc.). Mythopoeic conscience is seen as one of the fundamental forms of human mind, the structural analysis of which promises to discover the basic laws of semiotics.

Other Soviet semioticians devoted their attention to certain aspects of the semantic system of the mythopoeic world view. Ivanov described the typology of the semantic feature, "left/right" in primitive and archaic cultures [180]. His analysis shows that the feature "left/right" had correspondences among similar binary features: "left" corresponded to "odd," "female," "negative," "ritually impure," while "right" corresponds to "even," "male," "positive," "ritually pure." At the same time "left" is often associated with "sacral."

E.S. Semeka's description of the symbolism in "quaternary" and "octonary" models of the world [51] is an application of the basic ideas of Toporov to cultures in which the basic spatial orientation was horizontal rather than vertical. She quotes numerous examples from Old India, Ancient China, Ancient Near East, Central America to illustrate the basic pattern of such models. In all the above-mentioned mythological systems, every part of the world (four or eight) is associated with special mythological beings (anthropomorphic deities or divine animals or combinations of both: gods in animals) who functioned as guardians of this part of the world. In many of these cultures the fifth (or ninth) element is very important: the center of the model which may be expressed by the world tree, lotus, stupa, mountain, stele, pole, post, god, king, the world animal, human being or animal on or under a tree. Each of the cosmic areas is associated with special color, social rank, element,

season, body part, geometrical figure, etc.

An interesting variation of the concept of the world tree is described by Elizarenkova and Toporov in their short article on mythological treatment of the mushroom [9a]. The authors divide all mythological traditions into two groups: those in which mushrooms are not included in the "official" system, but exist on its periphery, in proverbs, sayings, superstitions, obscenities, etc. and those in which the mushroom is sacralized. The authors assert that negative attitude towards mushrooms is attested in those cultures which are characterized by the right-hand branch of the famous culinary scheme of Lévi-Strauss:



in such cultures they are classified as vegetable, raw and putrid and referred to chthonic objects. The semantic classification of the mushrooms includes their division into female and male, their relation to social structure (where they are used to model the two moieties), warfare, etc. Mushrooms are also related to thunder, lightning, and to chthonic creatures: worms, lice, flies, toads, etc. In some traditions the mushroom may be represented as an allo-element of the world tree.

Certain aspects of cultural typology in primitive and archaic societies are treated in two articles of mine (one written together with Ju. Senokosov) [50], [49b]. Apart from the above-described semantic features, archaic cultures were characterized by a definite type of ritual. It was assumed that the model of the world described in Toporov's studies appears in its complete form only in societies that developed "ritual drama," while typologically simpler forms of ritual failed to produce total coherence between macro- and microcosm. Another important feature of archaic and

primitive models of the world is the "inconclusive" character of semantic classifications: no series is permanently associated with either positive or negative aspect.

Another approach to typology of cultures is being currently elaborated by Jurij Mixailovich Lotman and Boris Andreevich Uspenskij. Their culturology has much in common with the approach developed by Toporov and Ivanov, but there are certain differences as well: Lotman and Uspenskij are not interested in the analysis of archaic cultures, their approach is less descriptive and more abstract, at the same time they operate with a clearly defined semiotic notion of culture. The basic tenet of Lotman and Uspenskij [30] is that one may speak of "culture" only in the context of "communication" and "information" and not "behavior." Culture, according to Lotman and Uspenskij, is always conceived of as being in opposition to non-culture. Non-culture is non-participation in a certain type of knowledge, religion, life style.

Culture is a semiotic system. It is characterized by such features as "artificial" (vs. "natural"), "conventional" (vs. "spontaneous"), "traditional" (vs. "primordial"). The authors have elaborated a concept of culture as "structural stamping device", in which the language plays a role of driving mechanism or "structural generator": "It is, in fact, useful to oppose primary and secondary modelling systems (...), it is necessary, however, to emphasize that in reality culture and language are inseparable: it is impossible to conceive of a language (in a true sense of the term) which would not be immersed in the context of culture, as it is impossible to imagine a culture without a structure of the kind of natural language, in its core. (...) The main 'work' of culture as we will show, is the structural organisation of the surrounding world. Culture is a generator of 'structuredness' and it creates social sphere around man which, like biosphere, makes life possible (in this case social and not organic). But in order to fulfil this role culture must possess a structural 'stamping device'. This function is carried out by natural language. The language imparts an intuitive feeling of structure to all members of the community; by its evident systemic nature (at any rate

at lower levels), by its transformation of an "open" world of realia into a 'closed' world of names the language makes people treat as structures even such phenomena the structural nature of which is, at least, not self-evident" ⁴²⁾.

Lotman and Uspenskij define culture as "non-inherited memory of the collective." They discuss various attitudes of the culture to the past and the memory. The notion of the text is introduced which is defined as a normalized, standard matrix of culture, a sequence of signs which serves to inculcate cultural norms. Different cultures display different attitudes towards the texts - from hypostatizing to actively destroying them (cf. the destruction of Old Believers' books and icons in 18th century Russia). The dynamics of the relationship "text - non-text" is a characteristic feature of cultural type. Culture is able to express its relation to sign and "semioticity." According to Lotman and Uspenskij every culture produces such meta-semiotic statements. The typology of such statements is another criterion of cultural typology. Another such criterion is the attitude of culture to non-culture. The basic function of culture is memory, its basic feature is self-accumulation.

This general theory of culture as semiotic mechanism is expounded in other articles by Lotman and Uspenskij [29], [29e], [29c], [30a]. Theoretical models of communication within culture are examined (I - HE, I - D), and typologies of culture are proposed. Interesting observations about the type of texts associated with the "I - I" type (rough copies, intimate diaries, drawing, etc.) are made. A theory of mythological thinking is proposed according to which mythological is opposed to non-mythological as non-hierarchical, integral, and unique to hierarchical, discrete, and iterative. Names in mythological thinking correspond to signs in non-

⁴²⁾ [30], p. 146.

mythological thinking. Mythological thinking cannot be described from without; it is closed to outside observation.

The theory of cultural typology proposed by Lotman and Uspenskij promises many interesting insights into the semiotic workings of culture. Practical results are to be expected.

Several contributions were devoted to the actual semiotic analysis of various cultures and cultural types. They were mostly devoted to those systems in which "semioticity" was explicit and which paid great attention to preserving traditional values attached to signs. These studies were based on theoretical foundations, worked out by Ivanov, Toporov, Lotman and other semioticians but operated with a different material, and therefore the emphasis was somewhat different. The most fundamental of these studies was A. Gurevich's survey of the categories of medieval culture [17]. It is impossible to give even a short summary of this highly informative book here. I hope that it will be translated into West European languages, and the reader will have first-hand knowledge of this work whose vivid and incisive analysis and highly readable style make it comparable to the famous books of J. Huizinga. Gurevich approaches the whole pattern of medieval life as a coherent semiotic system. His original contribution was that being an historian he was quite willing to tackle the "staple" of historic writing: the social and economic relations of the societies he described. He appropriated Mauss' concept of "gift" to the description of feudal relations in medieval Europe and showed that what was traditionally regarded as purely economic and political activity was, in fact, a complex system of purely semiotic behavior in which material transactions were only the outer expression of symbolic content. "Honor," "glory," "duty," and other notions of feudal ethos organized the exchange of "gifts" and "services." Land tenure was also based on the notion of "gift." The author sees this system of exchange as fitting into the general pattern of medieval world view in which time and space were structured according to the concept of value. Things and events were endowed with value according to a predetermined divine hierarchy in which man held his place as one of its legitimate elements. One could, of course, point

out that, perhaps, the cohesion of medieval world view was somewhat less than postulated by the author, for the notion of irreversible history was something unique precisely for European civilization which appropriated it through Christianity from Judaism (cf., for example, archaic societies with their conceptions of cyclic time, etc.). Therefore events were endowed not only with eternal value, but also with purposefulness which could not but introduce an element of indeterminacy into an otherwise stable semiotic picture.

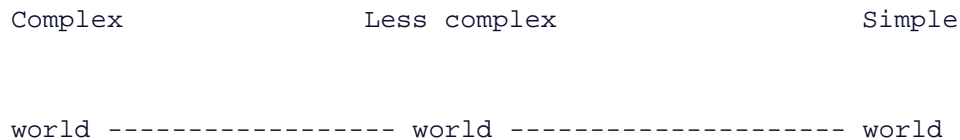
A study of a particular fragment of medieval culture was carried out by M. Mejlax [32]. The author analyzes the conceptual model underlying the poetry (and, wider, culture) of the troubadours. This model is understood as a generative system, and its elements are described. The basic semantic opposition is between "courtly (cortes)" and "non-courtly (vilans)." The feature "courtly" includes such elements as "faithfulness," "reason," "feudal generosity," "hospitality," etc. The number of such elements is practically infinite because this opposition characterizes the entire sphere of life. The highest experience of "courtliness" is Love for the Dame which is understood not as a subjective psychological feeling but as a complex and rigorous discipline that should be studied (hence, the requirement of Mezura "measure" as one of the basic courtly virtues). Mejlax constructs the system of allo-elements in which the basic oppositions are realized and shows how these elements could acquire anthropomorphic meaning and the entire universe could become a battle arena of opposing personalized qualities.

And, finally, semiotic study of cultures gave rise to several important works of Ivanov and Toporov which deal with the situation of culture in the twentieth century. In these works (which are not only very broad in the scope of material, but quite extensive) so many complex problems of scientific and existential nature are discussed that we will deal with them after we have reviewed papers of a more specific nature.

Semiotic study of literary texts

We shall now discuss some of the publications on the structural study of literary texts. The reason for having this chapter on the semiotics of culture is mainly diachronic: most of the literature discussed belongs to the 19th or 20th century; therefore the type of culture represented in these texts should be treated after the more archaic systems have been discussed. Since the meaning of signs in contemporary semiotic systems is believed to be given in immediate experience (unlike the meaning in archaic systems which has to be "reconstructed" by comparative methods), the structural study of modern literary texts is more oriented towards exactness and the use of formal models.

Implicit regularities of the lexical level are discovered by means of statistical methods [15], [94]. Statistical data on the structure of vocabulary are valuable instruments of discovering semantics of the poet's model of the world. Interesting observations on the relationship between the statistical structure of vocabulary (proportion of frequent and rare words vs. the number of different words used) and the compositional structure and semantics of two stories, one by Tolstoy and the other by Chekhov, are given in the article by Gasparov et al. It turns out that both stories are similar compositionally, lexico-statistically, and, even, thematically. However, the author's interpretation is diametrically different. Both stories are divided into three parts, each successive part being smaller and using less different words. This corresponds in both stories to a trichotomy:



In Tolstoy's story "Three Deaths," the movement is away from the complex world of falsehood and pretense to the simple world of nature (the direction is from the negative to the positive); in Chekhov's story "Ionych," the movement is away from the complex world of intellect and beauty

to the simple world of material interests and loss of human contacts (the direction is from the positive to the negative).

There are attempts at discovering the mechanics of the plot. In his short contribution, M.L. Gasparov summarizes very succinctly the essence of plot action in the short story (novella). He notes that most novellas are based on the hero's cunning, dexterity, etc. and include much joking, merriment, etc. According to Gasparov, all actions and thoughts in the novella are "classified" into "permitted" and "forbidden." The plot is activated when "forbidden" elements become "permitted." The relationship between the novella and the fable is as follows: the typical plot of the fable may be summarized as follows: "Someone wanted to violate the existing state of affairs in order to achieve some gains, but failed in the end," while the typical plot of the novella follows the same formula but with a different end: ".. and succeeded." The most convenient classification of the fable plots is according to the type of the hero's plan which fails, while the most convenient classification of novellistic plots is according to "action" (ploy, etc.).

A very interesting method of formal analysis of plots (sjuzhet) was suggested by O. Revzina and I. Revzin [47a] who had been working on this problem for a considerable time. The method described in the article makes use of some of the notions of the theory of graphs. The authors use the Proppian scheme of classes of personages and establish their own classification of personages for "mystery stories" and the drama. The plot is described in terms of coincidence / non-coincidence between semantic and fabular features of the personage and its identification in terms of classes.

The relations of co-occurrence of personages are formally determined in order to establish "independent" and "dependent" personages and describe them in terms of "mobility," "importance for the plot" and "power of mutual relations." These characteristics are determined on the basis of co-occurrence only and give a good approximation of the plot, Analysis of symmetry and asymmetry of the graphs describing relations between personages helps to

explain seemingly "irrational" turns of the plot.

These applications of formal analysis are only first attempts of "exact" literary science. It is important to mention in this article four monographs in which structural approach to literary texts was demonstrated with evident success. These are books by Ju. Lotman, B. Uspenskij and A. Chudakov. Again my task becomes more difficult, because to give a sufficient account of the contents of four voluminous books is a much harder task than to give a summary of an article. My task is, however, facilitated by the fact that the books by Lotman and Uspenskij are well known in the West.

The two books by Ju. Lotman [29b], [29d] are the most complete and comprehensive account of structuralism in literary studies. They cover the entire field of literary criticism, from semiotic analysis of the lower levels of the linguistic plane of expression in literary art to problems of the place of literature in life. Lotman takes up the most general, ontological problems of art and treats them from the point of view of semiotics: according to Lotman, society cannot exist without art, because art fulfils the function of a universal information processing device:

Man is, by necessity, involved in a very intense process: he is bombarded by information; life sends its signals to him. These signals will remain unheeded, the information will miss the recipient, and all-important chances in humanity's struggle for survival will not be utilized, if it does not meet the growing need to decode these signals and transform them into signs which may serve the purposes of communication in the human society. (...) Humanity cannot exist without a special mechanism, a generator of new "languages" which could be used as media of knowledge. (...) Art is a supremely organized generator of a special type of languages. They render an invaluable service to humanity in organizing one of the most complex spheres of human knowledge the mechanism of which is not at all clear ⁴³⁾.

⁴³⁾ [29b], p. 9.

From this premise which aptly prepares the ground for a semiotics of art (without pretending to account for all the complexity of the phenomenon), Lotman sets out to show the operation of the verbal art as special language. An hierarchy of languages is involved when a single text is examined. The system used by a writer is related to the prevailing artistic code (or codes) of his epoch (cf. such notions as "the poetics of baroque," etc.). Within the writer's specific "language," one may distinguish sub-systems characteristic of periods, genres, etc. Finally one comes down to the artistic system of a specific text. According to Lotman, the "language" of the artistic text is in its essence an artistic model of the world; in this sense all its structure belongs to the level of "content." The model of the world created by an artistic language as a whole is more general than the individual model created by a specific text. An artistic message creates an artistic model of a concrete event or phenomenon, while the artistic language models the universe in its most general categories. Lotman makes an interesting observation that, apart from modelling various categories of the world, the language of art also models the observer's point of view due to the existence in each artistic language of an hierarchy of styles. This observation seems to discover one of the most important qualities of art as language. I would even go as far as saying that the ability to present the observer's point of view is the source of the modelling ability of such a language, because every language of art knows differences in style, in "point of view," while only very specific languages possess extensive and detailed modelling ability. Pertinent semantic oppositions which construct the world of "romanticism" or "classicism" are few and general, whereas possibilities for expressing "point of view" are more elaborate. It is also important to remember that in many systems the model of the world is but an extension of a specific "point of view." An interesting example of the importance of the notion of "point of view" is given by Lotman in his analysis of "stylistic recoding" in Lermontov's novel *The Hero of Our Times*, where the character of the main hero, Pechorin, is given through the point of view of various personages (the narrator, Pechorin himself, the staff-captain, etc.). Lotman shows that this shift of points

of view is not limited to the description of the main hero, but is the main constructive principle of the novel in general. This device is repeated on various level: motifs, plot, verbal characteristics, etc. Lotman insists that such internal recoding is the main source of the formation of meaning in secondary modelling systems along with external recoding comparing the artistic world to the world outside the work of art. The book touches on other aspects of artistic structure as well: the relationship among various structures within the text, the borders of the text (the problem of "frame"), the principles of artistic arrangement. Lotman discusses in detail the structure of repetition at various levels (phonological, morphological, semantic) stressing the semantic role of this principle. The book is filled with many interesting examples. Lotman's second book, *Analysis of the Poetic Text*, is a practical application of the principles elaborated in the former study for the analysis of several poems by Russian authors. Each analysis emphasizes the semantic importance of a particular aspect of structure (the analysis of a poem by Batjushkov illustrates the importance of the sound structure; Lermontov's poem shows the artistic role of grammatical relations; Tjutchev's poem is analyzed in order to demonstrate the significance of dialogical structure, etc.).

B. Uspenskij's book is devoted to the problem of the "point of view" in the composition of the artistic text. All interpretations of "point of view" are examined: point of view understood as a value judgment, an ideological attitude, point of view as spatial localization of the speaker, narrator or personage etc., point of view as psychological attitude and, finally, as linguistic characterization. Uspenskij develops Baxtin's concept of polyphony in the work of art which he interprets as follows:

A. The presence of several independent points of view in the text. This does not call for any additional commentaries: the term (polyphony, i.e. "many voices") speaks for itself.

B. The points of view must belong to the direct participants of the narrated events. In other words, there is no abstract ideological position, no point of view independent of at least some

personage.

C. Points of view are expressed, first and foremost, in the sphere of evaluation, i.e. as ideological and axiological points of view ⁴⁴⁾

Point of view as phraseological characterization is closely related to the problems of "alien word" and "skaz," and Uspenskij shows convincingly that the stratification of points of view may serve as a useful instrument in defining the types of narration. According to Uspenskij, *skaz* appears in its pure form when a point of view expressed in the narrative does not belong to any participant of the action and, at the same time, cannot be ascribed to the author due to specific phraseology used. Uspenskij analyzes the problem of proper names and comes to the conclusion that this is one of the clearest instances of the expression of the point of view. Interesting examples from Tolstoy's *War and Peace* are given (various names of Napoleon), as well as from Russian appellative letters of the 16th - 17th centuries.

Uspenskij's treatment of the use of French in *War and Peace* as an indicator of the shift of point of view is highly original. The book makes wide use of the research on the expression of spatial and temporal relations ("points of view") in literature. The author cites famous examples of consecutive view, panoramic scope, kaleidoscopic montage in works of literature (Tolstoy's description of the dinner at the Rostovs in *War and Peace*, Gogol's landscapes in *Taras Bulba* and the battle scenes in Pushkin's *Poltava*). He gives a detailed analysis of the aspectual and temporal meanings of verbs as an instrument of expressing temporal point of view. "Psychological" point of view is described in terms of the opposition "internal/external." Uspenskij emphasizes that the problem of "point of view" is a meeting place between verbal and visual art; his cogent comparisons between literature and plastic arts reveal basic unity in modelling the world.

Chudakov's monograph on the poetics of Chekhov [6] attracted the immediate

⁴⁴⁾ [56c], p. 19.

attention of the public, because it was the first attempt by a professional historian of literature to apply the principles of structural analysis. Chudakov's aim was very ambitious -- to describe the poetics of such a difficult writer as Chekhov, whose manner seemed to be the embodiment of purely "realistic" approach, free from self-evident formal "devices." Chudakov insists that the notion of "structure" as applied to literature should be constructive, allowing for discrete scientific analysis, rather than a substitute for such "traditional" notions as "organic unity" or "living wholeness." It is necessary to establish the elements of the system under description and the relations between these elements. Chudakov proceeds from the basic theoretical tenets of such scholars as Shklovskij, Ejxenbaum and Tynjanov in distinguishing two aspects of the literary system: material (facts, events, and realia) and the form of its organization. The binary character of the system calls for a binary approach to its stratification. The first stage of stratification yields the following levels: the level of realia (or "objects"), the level of fabula and sjuzhet and the level of ideas. The second stage yields what the authors call "the narrative level" (the lexical organization of the text and the orientation of all the realia of the text with respect to the narrator).

Chudakov's analysis proceeds from the narrative level to the level of ideas. The description of the narrative level aims at discovering the type of the narrative with respect to the role of the narrator. All stories written by Chekhov in the first period of his career (1880-1887) were examined by a special dichotomic procedure: 1) the position of the narrator is expressed in extended statements, speculations, aphorisms, exclamations, etc. (yes -- no); 2) the position of the narrator and his emotions are expressed in separate words (yes -- no) and 3) the narrator intervenes in the course of the story, forestalls the events, discusses the events with the reader, asks him questions, explains his devices (yes -- no).

Statistical evaluation of the results shows that in his early stories Chekhov consistently employs subjective method of narration. At the end of the first period subjective narration is replaced by objective narration, the one in

which the subjectivity of the narrator is no longer present and the point of view of the hero is predominant. According to Chudakov, this narrative type was first introduced by Pushkin and developed by Gogol, Dostoevsky, and Tolstoy; however it was Chekhov who carried out its principles most consistently: he turned the expression of the point of view of his characters into the main constructive device of his prose. The narrator as a separate 'voice' disappears. During the third period of his creative activity, Chekhov again introduces a new type of narration in which the objective expression of the characters' points of view is supplemented by the 'voice' of the narrator. The narrative becomes multi-directional.

The next level of analysis introduces the world of realia. Chudakov notes that Chekhov is very fond of details and descriptions that are not directly related to the development of the plot or the character. He defines Chekhov's method of description as depicting not only essential features of the world, but accidental, irrelevant traits as well: "In Chekhov the world of things is not a background, periphery of the stage. It is equal to the characters, it is likewise lit by the author's attention"⁴⁵⁾. This basic Chekhovian principle of showing the world as a unity of the essential and the accidental is carried out in the description of people and events, the same conception lies behind the ideological pattern of his artistic world. The absence of any dogmatism, the insistence on the equal value of different attitudes and ideas, aversion towards any self-assertion and violence -- these were Chekhov's contributions to a vision of the world. Equally important were his artistic discoveries: literary structure became oriented not towards one center, but towards many equal constituent centers.

Thus, the semiotic approach to literature, as practiced by Soviet scholars, proved that it may be successfully applied to both simple structures and the most complex phenomena of literature. Chudakov's monograph seems to

⁴⁵⁾ [6], p. 152.

the work of artists and writers who explicitly announced their break with the tradition of European realism. In his recent monograph on the structure of Dostoevsky's novel *Crime and Punishment* [551] Toporov shows the importance of certain typologically archaic patterns for the understanding of the structure of artistic space in Dostoevsky's novel. His analysis proceeds from M. Baxtin's conception of Dostoevsky as a successor of archaic narrative forms (Socratic dialogue, Mennipaea), at the same time as Baxtin's ideas are developed further and put into the framework of Toporov's notion of the panchronic universal semiotic complex which tends to re-appear whenever the world view is concerned with the basic fundamentals of human existence interpreted in the cosmic sense. Toporov's work presents a new approach to semantics of the literary text which tries to combine structural analysis of contextual meanings with the general semiotic orientation provided by the general semantic model inherent in the text. Thus, concrete lexical observations go side by side with interpretations derived from the overall conceptual model. This is somewhat reminiscent of the method employed by Chudakov in his book with the important difference that Toporov operates at once at much lower and much higher levels of artistic structure. Toporov postulates the principle of multiplicity of meaning in the novel taken as a whole. The important methodological point is that the meaning of the whole is not given a priori; neither can it be summarized in a discrete discursive statement. It is built up gradually from the meanings of the separate elements of the text, the elements in question being phonemes, morphemes, words, syntactic constructions, phraseological units. The meaning of the whole is not additive in the sense of simple mechanical juxtaposition of separate semantic elements. On the contrary, it is "non-enumerable." At every stage of semantic integration, the meaning may be combined in a multitude of ways and the contribution of each linguistic level is not directly proportional to its place in linguistic structure, i.e. elements of the "lower" levels may sometimes contribute more to the meaning of the whole than those of the "higher" levels. This approach to the semantic analysis of prose is, indeed, new. Certain elements of this conception may be discerned in Andrej Belyj's work "The Artistic Craft of Gogol" ("Masterstvo Gogolja"), but there it seemed to be immanent, derived solely from the specific features of Gogol's style.

Tunjanov's concept of "closeness" of the verse line ("tesnota stixovogo rjada") seems to contribute to Toporov's methodology. Recently attempts were made to approach the poetry of Mandel'shtam from this point of view [49],[49a], but Toporov is the first to apply this type of semantic analysis to such complex work of prose as *Crime and Punishment*.

Toporov limits this analysis to words. The choice of a definite meaning in interpretation depends on the simplest choice of common semantic elements in the examined words. At the same time meanings do not exist as simple data. Some are actualized only with a change in time perspective. Toporov points out that in such complex texts the accidental appears as a simple conglomerate only at lower levels of analysis. For higher levels the accidental, the random forms a complex structure of relationships. This structure becomes apparent when other texts, apart from Dostoevsky's novel, are taken into consideration. Toporov writes:

Just as we read (= form) from the text of Dostoevsky's novel certain new texts (or sub-texts), the same task may be formulated for the entire set of texts of Russian literature. The texts formed in this way possess all the specific features of a text in general, and first of all, semantic continuity. The text as understood in this sense remains integral in spite of the fact that it is composed of many genres, is created over a considerable period of time, and belongs to many authors. The text is integral and continuous, although it was (and will be) written by many authors, because it emerged somewhere half-way between the object and all the authors who are characterized by certain common principles of selection and synthesis of the material (...). This is only the initial approach to the subject of "St. Petersburg text in Russian literature" which is completely different from what is commonly understood as "the theme of St. Petersburg in Russian literature" ⁴⁷⁾

⁴⁷⁾ [551], pp. 226-227.

Toporov's treatment of the mythopoeic thinking stresses its universality and typological applicability to most diverse human situations:

Universal mythopoeic patterns receive their most complete realization in archaic cosmological texts describing the solution of a certain principal task (super-task) which determines everything else. Such a solution becomes necessary in a crisis situation when the organized, predictable ("visible") cosmic principle is threatened with being transformed into a destructive, , unpredictable ("invisible"), chaotic state. The solution of such a task is realized as a trial-combat between the two opposing forces, as obtaining an answer to the main question of existence. The intensity of the struggle is such that every term of the binary oppositions which structure the universe becomes ambiguous, ambivalent; its final ("last") interpretation may be determined only according to the point of view which is accepted as final. The conflict attains the peak of dramatism, and the function is crystallized. It becomes self-sufficient and determinative. Everything that comes into its orbit loses its substantiality, its former value criteria and becomes restructured in order to correspond to the function. In these circumstances the borders become blurred between the terms of oppositions, between the hero and his antagonist, the *signans* and the *signatum*; a proper noun and a common noun. Continuity and homogeneity of the space and time disappear, and they become discrete, different segments acquiring different value. The task may be solved only in the sacral center of the space (it possesses the highest semioticity; "suddenly it became visible far away, towards all the corners of the world") which is opposed to the profanic space, and in the sacral temporal point, at the border between two different states when profanic continuity is dissolved and the time stands still. The same happens in the language. Words and statements appear which take the role of the final instance, which determine all the rest and subject it to itself. In these circumstances the word transcends the boundaries of the language and becomes one with the thought and deed, realizing its extra-linguistic potentialities ⁴⁸⁾.

⁴⁸⁾ [551], pp. 227-228.

Toporov shows how Dostoevsky utilized these characteristic features of the mythopoeic thinking in *Crime and Punishment*. It was necessary for the writer in order to represent in the most economical and effective manner the tremendous amount of new semantic information. In this, Dostoevsky acted as an innovator, he re-interpreted traditional "mythopoeic" patterns while, at the same time, creating new forms of the novel. Thus, in Dostoevsky the re-emergence of archaic forms answered a powerful innovative urge.

As in the mythopoeic model, the hero in *Crime and Punishment* is introduced at the peak of conflict when his semantic structure is highly imbalanced, the ambivalence of his position is at its peak, and he is constantly made to solve the super-task, is faced with imminent choice between the positive and the negative. At the same time, Dostoevsky is highly critical of such a posture for his hero, and (and this is his unique contribution to the archaic scheme), he constantly questions the hero's ability and right to be the subject of this choice. Dostoevsky made the structure of the novel completely independent of the hero, and increased the hero's field of choice and his combinatorial possibilities. This opened possibilities for mythopoeic structures and, at the same time, created completely new avenues of literary art. All this makes Dostoevsky a truly modern artist whose creation belongs more to the period which he did not live to see than to his own epoch.

Dostoevsky's hero, according to Toporov, is deliberately "unfinished." He cannot be derived from the plot; he is open to new possibilities and contains untapped potentialities of development. Dostoevsky's characters are always half-way between good and evil; their model of behavior is indeterministic, and at every turn of the plot one may expect completely unpredictable reactions. Toporov agrees with Baxtin that polyphony of Dostoevsky's novels makes the characters express separate, independent points of view. However, Toporov goes beyond this conclusion:

While in Tolstoy's novels the author is above his characters, he encompasses them with his final and omniscient will, in Dostoevsky's novels the author is within his characters in the sense that different heroes (positively,

negatively, or otherwise) solve the same task, they are all magnetized in one direction, they are considered in terms of the history of one soul; they are also pragmatically related to the author who is interiorized in the text ⁴⁹⁾.

Toporov insists that in *Crime and Punishment* the hero is, in fact, not confined to the figure of Raskolnikov. Doppelgänger is a typically Dostoevskian device. The heroes are localized in a certain Merkmalraum in such a way, that the two neighboring figures possess a number of common features; the principle of their localization depends on the function. Any two characters may receive a common description, if their functions in a given fragment of the system are identical. This, again, is a demonstration of the archaic pattern of the novel: "The splitting of das Selbst with the view of a subsequent synthesis in terms of moral regeneration is comparable to the general pattern of any sacrificial act with the same pragmatics. A psychotherapeutic aspect of this pattern is so evident that it partly explains why Dostoevsky's novels may be used as scenarios "enacted" by the reader wandering about the actual places where the events of the novels took place" ⁵⁰⁾.

Several conditions are necessary to bring the hero and the plot together, to activate the relationships between both. One is a special psycho-physical state of the hero who must possess the highest degree of freedom in order to move freely in the space of the novel. The hero's state justifies even the most improbable combinations of the plot. Dostoevsky's heroes are often described as sick people who lose memory and any capability of human contact. Toporov cites numerous examples where the characters behave like sick people, suffer anmesia, spells of dizziness, faint, fall into apathy. On the other hand, the hero may very quickly pass from utter despondency, sickness and fever to mental and physical vigorousness, alertness, joy, and elation.

Another condition of the extraordinary freedom of "orientation" so characteristic

⁴⁹⁾ [551], p. 230.

⁵⁰⁾ [551], p. 230, Note 8.

of Dostoevsky's heroes is a high degree of fragmentation, "compartmentalization" of the space in the novel, comparable to the fragmentation of the character's personality. The space of the novel is structured into small discrete fragments, and it is difficult to pass from one fragment to another. This refers to all the levels of the novel space: purely local, temporal, causal, axiological, the level of behavior. The difficulty is usually overcome, but this adds a dimension of unexpectedness into the world of the novel. The contrast between two "space" fragments is often perceived as striking, the more so because the time of passage is very short. This effect is achieved, on the linguistic level, by the constant use of such words as "suddenly," "at once," "unexpectedly," "in no time," "at that moment," "as a lightning," etc. which serve as pure operators of transition rather than significative elements. Especially frequent is the word *vdrug* ("suddenly") which becomes completely "grammaticalized" and may be compared to a formant of aspect. Similar functions are performed by the words *strannyj*, *stranno* ("strange," "strangely"). This word introduces an atmosphere of unexpectedness, unfulfilled expectation and indeterminacy. Like *vdrug*, *stranno* is often used several times in the same sentence, in spite of its seeming redundancy.

The temporal and spatial aspects of *Crime and Punishment* reveal many mythopoeic features. Certain points in the space-temporal continuum of the novel are described as significant. As in the mythopoeic tradition, time and space are not a mere background of the action. They are active; they influence the hero's behavior and may thus be equated to plot. A special place is occupied by the moment of the sunset (cf. the role of the sunset as a boundary between the order and the chaos in archaic traditions). In Dostoevsky's novel, the sunset is not only the symbol of fateful decisions; it is also an active force which influences the hero. Another source of constant indeterminacy is Dostoevsky's St. Petersburg where "everything is possible as in Russia and the Russian language in general" ⁵¹). The main feature of St. Petersburg is

⁵¹) [551], p. 241.

phantasmagory. The space in St. Petersburg is characterized by the opposition *middle* (internal) vs. *periphery* (external). These oppositions are activated by the hero's movement. The movement has a distinct semantic connotation of moral and ethical transformation: the feelings of hope and liberation accompany the hero's departure from home while the closed space of the apartment, home, brings the feelings of grief, anguish, and bondage. I may venture to add that this evaluation of the opposition *center* vs. *periphery* is in direct contrast to the prevailing pattern of the mythopoeic thought where center (internal space, home) carried positive connotations, whereas periphery (external space, alien realm) was conceived as hostile. I think that this inversion of axiological coordinates is yet another sign of Dostoevsky's modernity, of his innovative insight into the nature of man and society. Presumably some of the anguish which permeates his works may be related to his perception of radically changed values: home is no longer safe, family is not a haven of refuge but the focus of all evil, the "own" is the man's real enemy. Thus, the positive pole is shifted and begins to characterize such semantic units as "the outer space," "the strangers" (even outcasts), "solitude." At the same time the *middle* and the *periphery* are associated with such features which in mythopoeic thought characterized their opposites. The middle, formerly symbolic of the cosmic order, appears as the epitome of the chaotic elements in Dostoevsky, while the periphery which was the abode of the chthonic forces becomes the symbol of freedom, liberation and inner order.

Outside the house, the *middle* is associated with heat, dust, lack of fresh air, noise, and crowd. Especially sinister are the shamelessness and the gregariousness of the crowd with its vulgarity, sweat, and stink. The hero is repelled by all this and tries to avoid the crowd and the middle. The middle is the old business and trade center of St. Petersburg (such as Bassejnaja and Sennaja streets, Litejnyj prospekt), the periphery where the hero finds refuge from the sinister vulgarity and din of the city crowd includes the broad green squares, embankments of the Neva, and the suburban islands.

Inside the house the *middle* is the hero's narrow and dingy room, more like a coffin than a human lodging (cf. frequent comparisons of rooms with the coffin in *Crime and Punishment*). The predominant colour is dirty yellow. The main feature of the middle inside the house is narrowness, denseness. Linguistically, Dostoevsky establishes what may be called an intimate connection between *uzost'* (narrowness) and *uzhas* (despair, horror), and the writer often uses both words in similar contexts. The same is true of another pair, *tesnota* (closeness) and *toska* (anguish, despair). *Tesnota* is also associated with *toshnota* (nausea).

All these features remind the reader of the narrowness and chaos of death. Dostoevsky employs iconic linguistic means to describe the narrow and menacing world of the *middle*: the vocabulary becomes very limited, semantically close words are united syntagmatically, the borders between proper and common nouns are blurred, the meaning becomes dependent on the internal form of the word and its phonetic structure, *verba dicendi* become standardized. The language used for the description of the middle becomes narrow, the words are too closely knit together, new, unnatural associations appear, and linguistic elements tend to repeat.

The semantic associations of the *periphery* are exactly the opposite. Broad space, the feeling of freedom, warm breeze instead of freezing cold or sweltering heat, green vistas instead of dingy, yellowish wallpaper or grey stone blocks, in short, infinity instead of finiteness.

Infinity is closely associated with life, while finiteness is a feature of death (I will remark in parenthesis that this is yet another sign of Dostoevsky's modernity and, in the final analysis, abandonment of the basic mythopoeic world view). Infinity may be approached only through the *fullness of life*. The image of this fullness can be perceived through *memory* (anamnesis) which is the only rock of salvation for someone who, like Dostoevsky's heroes, is plunged into the depths of despair. Here the writer again resorts to one of the basic mythopoeic concepts.

Toporov's analysis is important not only as a new attempt at the interpretation of Dostoevsky, it provides a useful conceptual framework for understanding some of the basic features of the semiotics of modern culture.

The conception of the "St. Petersburg text" in Russian literature as a significant aspect of Russian culture is also developed in studies on the structure of the poetry of the early 20th century. This poetry accepted the semantic lessons of Dostoevsky, and the structure of its artistic language developed the corresponding features of his poetics. Bakhtin has discovered Dostoevsky's dependence on the patterns of the ancient Greek and Roman literature, as well as on "carnival culture," the archaic mode of collective expression in folk communities. Orientation towards cultural prototypes and the corresponding re-structuring of the semantic system is a specific feature of the poetry of the early 20th century. It operates with complex semantic elements the meaning of which is built up not only from the interaction of "vocabulary" units, but incorporates all the intermediate cultural "references."

Especially interesting in this respect is the poetry of Anna Axmatova and Osip Mandel'shtam. The "iconicity" of artistic language, so prominent in Dostoevsky, is even more pronounced in the "semantic" poetry of the Russian Acmeists. As in Dostoevsky's novels, certain fragments of the Acmeist world undergo semantic transformation: the hero is no longer consubstantial with the author or actual prototypes. The concept of "lyrical hero" which dominated Russian poetics disintegrated under the impact of new semantic influences. The "biographic" model of poetry which closely reflected the events of the poet's life but reinterpreted them to suit the literary and artistic conventions was discarded. At the same time, the Acmeist poetry provided far broader possibilities for interiorizing the author as a real living person into the space of the poem, This was achieved by a greater emphasis on "compressed semantics," ellipsis, references to extrapoetic facts, a wide use of colloquialisms, idiolectisms. The dichotomy between "poetry" and "life" became irrelevant. "Raw" fragments of actual reality were incorporated into the poem, though in a different manner than in the Futurist approach. The Futurists used actual

linguistic (and even extra-linguistic) material from the street in order to change the *texture* of poetry to approximate life as closely as possible, while the Acmeists sought to represent the *semantic* structures of reality in all their complexity. There is also a difference in the attitude towards society and individual. The Futurists are at the same time collectivistic and individualistic, while the Acmeist position may be described as personalist. Therefore for a Futurist the poem is a means of self-expression and/or propaganda, while for an Acmeist the poem is part of the person.

The new concept of hero in the Acmeist poetry also includes such phenomena as "composite" hero, overlapping of prototypes, as semantic shift of prototype, in short a "semantic" rather than "biographic" model of the hero. The same is true of the approach to the plot. Everything is dependent on the semantic function and is modified accordingly. Likewise, the word acquires additional nuances and cultural and poetic prototypes are often not disguised (although these may be reflected not directly but via "modifying" intermediaries). As in Dostoevsky's novels, the world is organized according to certain archetypal patterns, but the transformation of the archetypal structure is even more apparent (especially in Mandel'shtam).

Thus Acmeist poetics emerges as a unique semiotic cultural mechanism which interiorized many otherwise "unobservable" features of Russian culture in order to create a bridge between the archetypal and the modern and preserve some of the most valuable semantic paradigms.

Several studies are devoted to the semiotic mechanism of the poetry of Anna Akhmatova [53], [53a], [5a], [53b], [53c], [55d], [33]. All of them deal with the problem of semiotic structure of Akhmatova's highly important work "Poem Without a Hero." The "Poem"'s unique circumstances of creation and existence make it one of the most interesting literary monuments of our time in Russian culture. It is significant that the first to draw the attention of the scholarly public, as well as of wider audience, to this extraordinary poetic work were semioticians. "Poem" is intended not only to be read and enjoyed (and this is, by far, one of the best examples of Russian poetry,

and not only contemporary), but also understood and interpreted. Akhmatova deliberately made the problem of meaning the focus of this work. "Poem" is not only free from plot and heroes in the conventional sense of the terms, it is also full of literary, artistic, cultural, historic, and biographic allusions which are deliberately enciphered, and the reader's task is to reconstruct all additional "meanings." The task is not made simpler by the fact that Akhmatova often gave deliberately misleading keys, compressed several allusions into one, or, on the other hand, split one prototypical image into several new elements.

Toporov has also prepared an important monograph on the relationship between Akhmatova and Blok.

Timenchik, Toporov, and Civjan carried out extensive research into various "sources" of "Poem"'s imagery. They started from a purely lexical stratum of the text in which reminiscences, direct and veiled quotations from various poets of the beginning of the century were discovered. Timenchik was the first in Soviet literary science to draw attention to Mikhail Kuz'min, an outstanding Russian poet of the 1910-20's, as one of the principal "sources" of "Poem"(especially his cycle "Forel' razbivaet l'od" ("Trout Breaks the Ice") which is written in the same "continuous" tri-linear rhythm as "Poem"). Civjan studied the poetic structure of "Poem" and came to the conclusion that it is comprised of a complex network of auto-quotations superimposed on the plot constructed from quotations, reminiscences, and allusions from other poets (Kuz'min, Brjusov, Blok, Gumilev, as well as certain other poets from his circle: Vsevolod Knjazev, Vladimir Komarovskij, Nikolaj Nedobrovo, Vladimir Shilejko, there are important reminiscences from Maksimilian Voloshin; especially significant are references to the poetry of Akhmatova's teacher Innokentij Anneskij and her constant poetic companion Osip Mande'shtam). According to Civjan, "Poem" occupies the same functional place in the Russian poetry of the 20th century as Pushkin's "Eugene Onegin" occupied in the poetry of the 19th century. Like "Eugene Onegin," "Poem" is a literary encyclopedia. However, Akhmatova

sometimes enters into explicit polemics with Pushkin's approach in that she deliberately confuses certain literary sources trying to create an impression of mystery, "other-wordliness," a mixture of intimate psychological story and irrational phantasmagory, openness, and a queer esoteric impenetrability at the same time. This "play" had important cultural purposes and psychological foundations: Akhmatova faced a tremendous task of reconstructing an entire epoch in the history of Russian poetry, an epoch which was as brilliant and important as it was thoroughly and deliberately forgotten. And this was to be done from an intensely personal point of view, by someone who was left as "the only witness" but who also had direct and passionate involvement in the life of the "St. Petersburg period" of Russian poetry and who used poetic talent not only for direct testimony, but, more importantly, for prolonging the life of her contemporaries. By being represented with such personal involvement, Akhmatova's heroes obtained that freedom of deed and word which is found only among the living.

The problem of literary reminiscences is also treated by G. Levinton [28a], [28b], [28c] and Z. Minc [38]. Levinton analyzes several examples of literary reminiscences in the work of A.K. Tolstoy, O. Mandel'shtam and other poets. He introduces several distinctive features ("functional vs. non-functional," "conscious vs. unconscious") for the classification of extraneous literary elements in the text. Minc gives a theoretical analysis of the phenomenon of reminiscence in Blok's poetry. The main conclusion is that, in spite of fundamental differences between the poetic systems of Blok and the Acmeists, poetic quotation appears to be the one common element. Minc analyzes the corresponding material in Blok's poems in terms of the Voloshinov-Baxtin opposition "one's own word vs. alien word." She traces Blok's interest in "alien word" to three sources: the aesthetics of symbolism (especially, the philosopher Vladimir Solovjev) according to which everything is text and all events are "quotations" from a text; orientation towards culture inherited from the 19th century Russian poetry; and an atmosphere of Blok's home where speech was an object of special attention. Minc establishes the following functions of reminiscences in Blok's poetry:

1. the quoted passage is a sign of the work from which the quotation

is taken.

2. the quotation is a sign of the entire body of work of a given author

3. a quotation is a sign of a given culture

4. a quotation is a sign of a general orientation towards secondary sources, towards cultural background as a whole.

Another interesting feature of Blok's method is a "poly-genetic" character of quotations in his work: i.e. a given image may be traced back to several sources.

Thus, we see that semiotic "derivativity" is a very important feature of some of the best works of Russian 20th century literature. This is an interesting parameter of the cultural system as a whole: much of what is being done in Russian culture now (including semiotics and structuralism) is motivated by orientation at cultural (artistic, epistemological, etc.) patterns which are no longer observable.

As I have stated at the beginning of this review, much of what has been done in Soviet structuralism and semiotics was inspired by a continuous rediscovery of the heritage of the first half of the 20th century. In this sense, Soviet structuralism may be compared with Czech and Slovak structuralism which drew their inspiration from the pre-war culture of the Czech and Slovak avantgarde poets and critics, the traditions of J. Mukarhovsky, K. Teige, R. Jakobson, J. Seifert, "DAV" . The significant difference is that in Russia these traditions may be pushed perhaps one generation back, to the activity of the post-symbolist and early Formalist criticism of 1910-1918. If we now apply to Russian structuralist and semiotic writings the methodology of discovering "reminiscences" we encounter important cultural and scholarly forerunners of the present trends in philology whose ideas are being discussed and developed now.

In this connection mention should be made of regular publications of archival materials in the *Tartu Trudy pa znakovym sistemam*. Beginning with volume 3,

this series has published the works of such scholars and writers as Pavel Florenskij [11], [8], [11a], [11b], Boris Jarxo [20], [13], Boris Pasternak [43], Boris Tomashevskij [54], Olga Frejdenberg [12], and Sergei Bernshtejn [2]. Their concepts provoke active response in the scientific audience. Important publications of materials by Boris Pasternak [10] and early Futurists [10a], [10b] appeared in other Tartu series. I should especially mention the importance of archival studies conducted by the young literary scholars Gabriel Superfin and Lazar Flejshman who helped to introduce many hitherto unknown works into Soviet philology. Among the ideas which influenced the development of Soviet semiotics mention should be made of Florenskij's brilliant analysis of "Point of view" and visual symbols in connection with the problem of "inverse perspective" in medieval icon painting, his discussion of the symbolic role of numbers and the structure of visual perception, Pasternak's critique of the formalist method, and Jarxo's conception of literary criticism as an exact science. Materials by O. Frejdenberg which appeared in the newest, sixth volume of the series highlight the present interest in mythological semantics, the structure of mythopoeic thinking and the emergence of literary genres. Frejdenberg was close in many respects to Baxtin with his attention to folklore and archaic forms of literature. The same volume of the *Trudy* includes a very interesting article by S. Bernshtejn. It is an analysis of a poem by Alexander Blok at all linguistic and poetic levels. This study shows that recognition of artistic function of all poetic elements such as phonetic, morphological, syntactic has long been one of the dominant features of Russian structural poetics of which Bernshtejn was one of the founders.

No author can be compared with Mixail Mixajlovic Baxtin as far as influence on modern Soviet semiotics is concerned. In Western semiotic literature, it has become commonplace to credit Baxtin even with those "achievements" for which he himself would hardly agree to take credit. This is due not only to an insufficient knowledge of Baxtin's work, but, mainly, to other factors related to special circumstances of Baxtin's life and work and the West's acquaintance with his ideas. Much emphasis has been put on Baxtin's

early formulations about the relationship between the sign and ideology (with a typical shift of meanings observed by Baxtin himself); however Baxtin's poignant criticism of modern culture and his sometimes romantic admiration of archaic and folk models passed completely unnoticed. Those who wrote on Baxtin seemed to overlook the fact that Dostoevsky and Rabelais interested him not as convenient examples of the correctness of his analysis, but as epoch-making cultured phenomena endowed with value and significance of their own. Baxtin's work was perceived as a closed entity encapsulating, as it were, his early ideas developed still in the twenties, while, in reality, the scholar deepened his approach. Baxtin followed closely the scientific debates of the thirties and the forties, and the comparison of his early book on Dostoevsky with its second edition shows the measure of Baxtin's evolution. At the same time, Baxtin's modernity and the independence of his thought already in his earliest works were underestimated.

Therefore, Ivanov's recent detailed study [18t], of the importance of Baxtin's ideas for semiotics is especially valuable and timely. It helps to establish a proper perspective on Baxtin's own contribution to science and to distinguish what is his from what belongs to later interpretations.

Ivanov begins his analysis of Baxtin's ideas with a survey of the concepts of sign and semiotic system. Baxtin was the first to link the idea of sign with the notion of ideology. However, Baxtin's emphasis was not on the ideological determinacy of signs (as some of his present interpreters seem to think), but on the semiotic nature of "ideologies": "where there is no sign, there is no ideology," "there is semiotic significance in everything that relates to ideology" ⁵²⁾. I think it is also important to understand that for Baxtin the word "ideology" carried a completely different meaning than for most of those who commonly use this word. The closest correspondence to this term might be "semiotic system" which is clear from the following statement by Baxtin: "all products of ideological creation: works of art

⁵²⁾ V. Voloshinov. *Marksizm i filozofija jazyka*, pp. 15, 17
Quoted in [18t], p. 5 (translation mine D.S.).

and science, religious symbols and ceremonies, etc. are material objects . True, these are objects of a special kind, they are endowed with meaning, sense, intrinsic value. But all these meanings and values are given only in material objects and actions" ⁵³⁾. This emphasis on the material expression of meaning is a very specific feature of Baxtin's thinking. Baxtin insists on a special contribution of material expression to meaning. This aspect distinguished his theory from the semiotics of de Saussure which he studied thoroughly; Baxtin remarked critically that in de Saussure's theory "linguistic relations have nothing in common with ideological values" ⁵⁴⁾. Baxtin saw semiosis as a completely objectivized process: "every ideological product and all that is "ideationally valuable" in it does not dwell in the soul or the internal world, nor does it dwell in the reflected world of ideas and pure meanings, but in the objective and accessible ideological material - in a word, sound, gesture, combination of masses, lines, colors, living bodies..." ⁵⁵⁾. According to Baxtin, the world of material signs was directly accessible to objective study. The type of relations discovered as a result of scientific analysis is, by necessity, sociological, because values inhere in the signs, moreover, in their "material body," as Baxtin would say. This fundamental conclusion distinguishes Baxtin sharply from Husserl and his Russian follower Gustav Shpet. On the one hand, Baxtin's insistence on the semioticity and meaningfulness of material objects and events would make him close to Husserl with his "subjective objectivity" and intentionality of cognition. On the other hand, Baxtin's sociological emphasis and clear rejection of "pure conscience" point to the opposite direction than that followed by Husserl. At the same time, it must be borne in mind that Baxtin's sociological approach is equally directed against any psychologizing of semiotics; therefore all attempt to read from Baxtin's theory of dialogue an epistemology of "split personality" is pure misunderstanding. For Baxtin dialogue necessarily takes place between

⁵³⁾ [18t], p. 5

⁵⁴⁾ [18t], p. 6

⁵⁵⁾ [18], p. 7

objectivized, even sociologically relevant "voices," while "split personality" cannot be divested of heavy psychological connotations.

Ivanov draws on important theoretical conclusion from Baxtin's concept of the nature of sign: it is impossible to study the semantics of the work of art in isolation from purely formal aspects (linguistic in case of literature). He quotes the following passage from an early work by Baxtin: "... in art the meaning is absolutely inseparable from all the details of the material body wherein it dwells. The work of art is meaningful in its entirety. The very act of creation of the sign-body has paramount importance. Technical, subordinate and therefore substitutable elements are brought to a minimum" ⁵⁶⁾. Ivanov concludes that establishment of inter-level correlations in works of art must assume precedence over isolation of levels of analysis as was the practice of the Formalists. This is a very interesting point which, I think, could serve as a basis for a typology of art. Clearly, the measure of explicit semantization of "purely formal" aspects (prosody, sound structure, morphological, and syntactic patterns) differs from one literary tradition to another and it would be interesting to study the relationship between such semantization and the semantic import and function of the work of art.

Baxtin's determination to see meaning in the sign naturally led him to a conclusion that every field of ideological creativity "forms its specific signs and symbols which are not applicable in other spheres. The sign is created here by a special ideological function from which it is inseparable". ⁵⁷⁾. At the same time, Baxtin declared that although "specific ideological signs" are not mutually substitutable, they all are based on the word, accompanied

⁵⁶⁾ [18t], p. 7.

⁵⁷⁾ [18t], p. 8

by the word as singing is accompanied by music" ⁵⁸⁾. Here we are introduced to one of the fundamental concepts of Baxtin -- the word. The meaning of this term in Baxtin's writings is very synthetic. It incorporates both the meaning of the word as a lexical unit and a more general meaning of verbal activity, verbal aspect of human life. It may also mean the abstract Logos. Therefore we prefer to translate the Russian term 'slovo' by the English "word," even though it does not do justice to all the nuances of the Russian.

The acceptance of the word, the Logos as the primary factor in the development of ideological (semiotic) systems is the basis of all theoretical conclusions reached by Baxtin. Here Baxtin appears as the predecessor of all later semiotic thought. Apparently the Jakobsonian theory of the primacy of language in all sign systems grew from the early works of Baxtin who wrote: "... the word accompanies and comments on every ideological act . All manifestations of ideological creativity, all other, non-verbal signs are enveloped by the verbal element, are immersed in it and cannot be completely isolated or divested from it" ⁵⁹⁾. For Baxtin, the language of artistic images is the language of literature.

I think this categoric statement of the relationship between the verbal sphere and other semiotic systems can be accepted as long as one keeps in mind that the role of language in modelling "ideological activity", although crucial, has, nevertheless, its limits. True, Baxtin himself never equates the word (as he understood it) with language. By including into slovo all the gamut of secondary associations, contextual meanings and behavioral accompaniments, Baxtin broadened its function and sphere and made the word transcend its purely linguistic borders. We may agree that language serves as a primary model of "structuredness" (cf. the ideas of Lotman), that insofar

⁵⁸⁾ [18t], p. 9.

⁵⁹⁾ [18t], p. 9.

as human behavior results in "ideological events" it is based on linguistic conceptualization. However, it would not be too precipitous to assume that at least some of the contents of signs, the actual substance of semantic elements may be not so dependent upon the verbal aspect. Recent psychophysiological studies on the crucial role of the right cerebral hemisphere in controlling and organizing emotive activity and expressive audio-visual perception and response show that certain basic human abilities which play an important part in non-verbal semiotic systems (dance, music, plastic arts) are sufficiently independent from linguistic conceptualization. Of course, the structure of the corresponding socially accepted systems always reveals the primary modelling role of language (and more so in the so-called "primitive" and "archaic" cultures). One may hypothesize, however, that these structures are, in effect, rationalizations superimposed upon the material whose spontaneous activation does not involve the use of the word. This consideration may prove important in the evaluation of Baxtin's theory of carnival and dialogue which stresses the creative role of the word, but, at the same time, reveals such levels of human culture for which precisely these "non-linguistic" aspects may be important.

Let us return, however, to Ivanov's article. Having outlined Baxtin's contribution to understanding the nature of sign, Ivanov proceeds to discuss Baxtin's theory of "metalinguistics." This theory is an attempt at a critical examination and development of de Saussure's theory of semeiology. Baxtin starts from a diametrically different premise than de Saussure. For de Saussure a model of the semiotic act was the elementary verbal utterance, Structural linguistics has recognized in the sentence the highest unit of analysis. Baxtin's unique contribution was his deep understanding of the communicative aspect of semiosis: "We are accustomed to think of ideological creativity as an internal process of understanding, comprehension and awareness. We are not sufficiently aware that this process is entirely external: it is for the eye, the ear, the hands, it is not within us, but between us" ⁶⁰.

⁶⁰ [18t], p. 9.

Baxtin's discovery of the communicative aspect of semiosis was one of the most important of the predictions which are so abundant in his work. Recent psychological and anthropological studies reported at the International Congress of Ethnological and Anthropological Sciences in Chicago stress the ordered nature and semantic importance of all human behavior in "face-to-face interaction." Especially valuable are observations concerning the contribution of this significative behavior to the meaning of the verbal elements exchanged by the communicants. This seems to corroborate Baxtin's thesis that the meaning of the sign is revealed only in communication. On the other hand, some of these observations seem to indicate that the word may not play as predominant a role in structuring semantics during face-to-face communication as would appear from Baxtin's theory. However, Baxtin's insistence on the crucial place of the word may be vindicated, firstly, by a speech-like structure of the non-verbal communicative "stream" and, secondly, by the implicit verbal semantization even of non-verbal behavior (cf. below about "internal speech"). In any case, already in his early works Baxtin formulated one of the most important theses of the modern semiotic theory. Ivanov shows how Baxtin's ideas were "re-discovered" in the works of Emile Benveniste, one of the founders of modern semiotics. Baxtin's theory of linguistics was formulated almost in the same terms in the most recent writings of Benveniste. Both scholars come to the conclusion that a special semantic theory of the utterance should be created. This theory should not be limited to the sentence as its main object. Baxtin refers to this approach as "meta-linguistic," and Benveniste, as "meta-semantic." Baxtin did not limit himself to theoretical considerations only. His detailed analyses of the structure of the utterance, especially the classification of the patterns of relationship between various "voices" within a single discourse, remain unsurpassed. They have served as the basis for the modern "discourse analysis" "text linguistics," and "trans-linguistics." Ivanov points out that Baxtin's approach is broader than that of translinguistics, because the latter limits itself only to messages consisting of more than one sentence, whereas Baxtin, true to his complex view of the sign, regards all discourse events as legitimate objects of

study, even though they may consist of not more than a single word.

Ivanov points out that, according to Baxtin, the principal constitutive feature of *the word* is polysemy. Ivanov compares the statements by Baxtin and Benveniste and notes that both authors describe the same situation when the overall meaning of the whole (message, utterance, a group of utterances, etc.) is *continuous* and cannot be represented as a sum total of the discrete meanings that compose it. On the contrary, the meaning of the constitutive elements may be understood only after the overall meaning of the whole is clear. The meaning of the whole is distributed over separate elements. Both Baxtin and Benveniste have come to recognize the essential difference between the sign and the signal, the continuous meaning and the discrete meaning. They distinguish between recognition and cognition (understanding). Recognition is the identification of an isolated sign, recognition of its self-identity, whereas cognition (understanding) "is not recognition of 'the same', but understanding in the proper sense of the word, i.e. orientation in a given context and in a given situation, orientation in becoming, rather than 'orientation' in immovable being" ⁶¹). Ivanov points out that these ideas are based on differentiation between the point of view of the hearer (which was, according to Baxtin, the traditional linguistic point of view), and the point of view of the speaker. Here Baxtin formulated a fundamental theoretical thesis which later was developed by R. Jakobson and N. Chomsky.

Baxtin's conception of understanding was based on the idea of *dialogue*: "We respond to every word of the utterance that we understand with our own words . Every understanding is dialogical. Understanding is the counterpart of the utterance, just as remarks in the dialogue are counterparts" ⁶²).

Ivanov writes that the idea of dialogue is the center of Baxtin's entire

⁶¹) [18t], p. 17.

⁶²) [18t], p. 17.

theory. All the main themes, discoveries and achievements for which philology now gives credit to Baxtin are crystallized around this central notion. According to Baxtin, dialogical communication is "the sphere of the real life of the word," Dialogical relations are demonstrated in those forms of discourse where "the alien word" is incorporated into the verbal structure. The ability to discern and use "the alien word" is one of the basic prerequisites of successful ideological creativity. The real meaning of "the whole" is discovered only through the interaction between "the own word" and "the alien word."

Baxtin pays specific attention to the problem of quotation. He studied the role of quotation in the Ellinistic and medieval cultures and discovered that quotations (i.e. "alien word") may sometimes be so skillfully concealed that only special investigations will discover them. On the other hand, quotations are often quite conspicuous. In any case, they were intended to intertwine and interact with the "own word." Baxtin's classification of quotations remains the most complete and many-faceted even today. The role of quotation in culture was also discussed in the twenties by the Russian poet Osip Mandel'shtam; this, undoubtedly, reflects some of the basic features of modern culture (cf. above about "quotations" in Russian poetry). The film director Sergej Ejzenshtejn, who is in many respects close to Baxtin's position, also recognized the important cultural role of quotations. Ivanov also cites the opinion of Thomas Mann who gradually came to the conclusion that life itself should be regarded as a cultural object, like a mythic cliché.

A considerable attention is paid in Ivanov's article to Baxtin's relationship with Freudianism. Ivanov is certainly correct in pointing out that Baxtin not only knew and appropriated the ideas of Freud, but that he went much further from the starting point. Baxtin's anti-psychologism is seen not as a drawback caused by a lack of knowledge (as some of Baxtin's French commentators seem to think), but as a conscious position based on a reinterpretation of certain basic ideas of Freud. Baxtin adopted a consistently sociological

point of view in which no place was left for "individual drives" in the Freudian sense. Dialogue was understood as an entirely social phenomenon; the "voices" or "remarks" of the dialogue were interpreted as socially sanctified, and the only distinction was between the subdivisions of the social: official vs. unofficial. Baxtin's conception of the dialogue helps to understand how even the most intimate and "suppressed" drives are conceived of as social expressions. According to Baxtin, the Freudian unconscious does not exist per se, in "pure" drives or aversions, but only insofar as it is expressed verbally, in "internal speech." "Internal speech" even of a child is, according to Baxtin, an interiorized dialogue, but as we have seen the dialogue is social from the very beginning, so even the internal speech is, by necessity, social: "The word should at first be born and ripen in the process of the social communication of organisms in order to enter the organism and become the internal word" ⁶³). This idea of Baxtin is very close to the later discoveries of Vygotskij and Piaget.

Baxtin interpreted the Freudian conflict between the conscious and the subconscious as a conflict within the sphere of verbal behavior between the internal and the external speech or between different strata of the internal speech -- the official conscience and the unofficial conscience. Baxtin's insistence on the role of external signs for the structuring of internal emotions is close to Freud's view of the role of speech in the treatment of neuroses. At the same time, Baxtin's position is a polemical denial of Freud's insistence on the "non-observability" of the sub-conscious. Finally, Baxtin denies all "sub-conscious" character of this aspect of human existence and links it with sociology. I think that while the semiotic implications of Baxtin's dialogical view of verbal behavior and experience are indeed invaluable, his use of exclusively sociological interpretation of the conflict between the different layers of speech within the individual could be supplemented by semiotic considerations. Ivanov seems to agree

⁶³) [18t], p. 21.

with Baxtin on the sociological interpretation of the dialogue and "internal dialogism," while adding certain additional observations from the sphere of linguistics. Anthropological data point to the fact that dialogue and carnival are rooted in the antinomic nature of the sign in "primitive" societies. It is common knowledge that certain basic elements of the "primitive" semiotic systems are characterized by explicit ambiguity in terms of their semantic description. This ambiguity is so regular it is hardly possible to explain it by any reference to conscious "unofficial ideology." Partial explanation of this phenomenon lies in the much greater role of such signs in the actual life of the community than is the case in modern societies where ramified and stratified specialized systems have taken the place of such universal signs. The universality, irreplaceability, and uniqueness of such "primitive" symbols was combined with their extremely high modelling capacity (cf. above, Toporov's views on the structure of universal semiotic complexes). Such signs represented the entire scope of existence, in its macrocosmic, mesocosmic (social) and microcosmic aspects. Therefore it is difficult to accept the extrapolation of Baxtin's interpretation of the carnival and dialogue. The ridicule, protest against the official ideology, the reversal of the social "top" and "bottom," the deliberate equation of the social and bodily spatial coordinates -- all these features of the carnival belong to a specific stage (or typological niche) in culture. In tribal societies all these features are either not observed at all in the social context of the tribe, or are embedded into a completely different semantic structure. Among such societies as the Australian aborigines, the Andaman islanders, or the African Bushmen there is no division between the "official" and "unofficial" ideology. The "carnival" reversals are embedded into the structure of ordinary symbols and rituals; such reversals are not regarded as extraordinary, but as something inherent in the pattern of tribal world-view (which is not dichotomized into "socially superior" and "socially inferior"). The reversal of "social" (rather, ritual) roles is a normal procedure which may or may not be celebrated as a special occasion. Every ritual and social group (sub-phratry, phratry, moiety, etc.) is associated with "positive" and "negative" semantic characteristics. The bodily "bottom"

is not at all associated with "inferior" social and ritual groups, so that when the reversal occurs, it is not necessarily accompanied by the symbolism of the bodily "bottom." The structure of taboo is not geared to the anal-genital sphere which is allowed to be expressed quite freely. At the same time while explicit anal-genital symbolism is very much in evidence in these societies, it does not carry the "carnival" connotations of obscenity, ridicule and freedom. This is correlated with the important communicative role of "collective monologue" (cf. "shouting" rituals among the Bushmen). The analysis of the semantics of such trickster figures as the Raven among the Paleo-Siberians and North-West Coast Indians or the Coyote among the Plains Indians shows that, although the trickster possesses many carnival features (gluttony, prodigious sexual urge, association with excreta, etc.) he does not represent any social reversal. One may also add here that in many societies (such as the Zuni in North America) ritual manipulation with excrements was not at all a "comic," "carnival" feature, but a serious sacralized act.

Thus, one may say that the semantic substance of the carnival is found in many tribal societies, but the structure of the elements is quite different from the one described by Baxtin. These elements are organized in a specific manner, are interpreted as social symbols of temporary liberation at a different typological stage when they come into the sphere of polarized social relations and ideologies and repressed "collective monologue." It may also be added that Baxtin was somewhat too emphatic in stressing the antagonistic relationship between the carnival and the official culture, for the carnival liberation, although quasi-universal, was temporary and reinforced the psychological validity and truth of the official system.

Ivanov cites interesting parallels to Baxtin's theory of carnival from the written works and motion pictures by Ejzenshtejn who was fascinated by the problem of travesty and carnival treatment of death. Ejzenshtejn discerned carnival motifs in the history of the Russian tsar Ivan the Terrible, who often used reversal of social and sexual roles in his court life. Ivan, as it were, travestied the carnival itself because he used it to wield death

and terror, and not life and joy. On the other hand, ritual laughter at the cemeteries shown by Ejzenshtejn in his "; Que viva Mexico!" symbolizes the victory of life over death.

Baxtin's theory is one of the first coherent and successful attempts to construct an integral theory of all human culture in terms of communication. His deep insight into the nature of communication, verbal activity, his view of the novel as a polyphonic genre based on the interaction of several sign systems in the continuum of the present, his evaluation of the role of dialogue and theory of carnival, not to speak of his more specific contributions to the theory of semiotics or the poetics of Dostoevsky and Rabelais, make him one of the most significant cultural figures of the 20th century. Ivanov showed that his approach was not an isolated phenomenon. It was typical of 20th century science and culture with their relativism, anti-positivism, and rejection of authoritarian linear evolutionism. One should also bear in mind that Baxtin's romantic view and positive evaluation of the carnival is typical of another aspect of the modern culture, its disillusionment with the idea of limitless progress. This should caution all those who might try to use some of Baxtin's ideas out of the context of his ideas and life. It is instructive that another champion of dialogical approach to communication in the 20th century, Martin Buber, shared with Baxtin this attachment to tradition and history.

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We have thus traced some of the trends of structuralism and semiotics in the Soviet philology. This movement has been characterized to date by a peculiar blend of extremely liberal approach as far as methods are concerned and certain persistent themes which can hardly be called subjects of research, but rather aspects of interest. These specific thematic aspects of Soviet structuralism and semiotics are not a vogue or fad, as sometimes happens in this field, but deep spiritual commitments fostered by certain traditions

of Russian culture and humanities. They include a synthetic view of sign and semiotic system as embedded in the cultural and human context of communication, prevalence of semantic aspect in semiotic studies which is also typical of purely linguistic research, and a basically protective attitude towards traditional semiotic systems which are endowed not only with cultural value, but are also regarded as indispensable elements in the informational pattern of society. This latter position is in sharp contrast to some of the tenets of the Western philosophical structuralism which sees itself as an instrument of dislocation, disruption, and sometimes even destruction of existing semiotic systems. While both positions are originally rooted in completely different value systems, the discussion of the comparative merits of which would be much beyond the purpose of the present paper, it is instructive that the platform of the Soviet structuralist school seems somewhat more in agreement with the general concern for the global future of mankind as a species in the context of ecological catastrophe.

The last paper to be briefly mentioned here is V. Ivanov's monograph on the category of time in the art and culture of the 20th century [18s]. It raises far more general questions than semiotic approach to culture or art. Ivanov is deeply concerned about the future of human culture in our age, and he discerns certain symptomatic phenomena in various semiotic systems which try to expand the common Newtonian time perspective, thus making the signs more like organic living essences and striving to save semiotic systems from destruction, oblivion, misinterpretation or misuse. At the same time, the problem of the evolution of semiotic systems emerges in a different light in view of the perceived changes in the structure of time. Suddenly, time is perceived as bringing not only progress in knowledge and increase in information, but its pitfalls become obvious: an avalanche-like increase in quantity of information and the growing inability of human recipients to cope with it, interference with or suppression of cultural memory with the resulting social neuroses so similar to individual neuroses. Signs are perceived as changing their hitherto immutable meanings. They lose their independence from time, or rather, their commensurability with time. Thus,

new qualities of time were discovered, and the Kantian objectivized, immanent, homogeneous, and reversible flow was replaced by the Bergsonian *duree*, imbued with value, anthropocentric, heterogeneous, and irreversible. Ivanov analyses the relation to time and its perception of such 20th century figures as Reichenbach, who treated the complex problem of the connection of the direction of time with the increase in physical entropy, and Florenskij, who was among the first thinkers to perceive the antinomy between entropy and ectropy (or, in Winer's terms, negentropy) in terms of the eternal conflict between the Cosmos and Logos. Floresnkij clearly saw the relationship between the perception of the continuity and fullness of time and fullness of conscience. On the other hand, "incomplete," "deficient" conscience leads to reversals in time, e.g. in dreams. In the problem of the perception of history, again, a positivistic view of history as a step-by-step progress is countered by the modernistic view of history either as iterative, cyclic (Velimir Xlebnikov) or as cataclysmic (in the past: Teilhard, Vernadskij; in the future: Reichenbach, Andrej Belyj). Ivanov examines the syntactic aspect of the arts which express new concepts of time: polyphony, projectivity vs. non-projectivity of the fabula, collage, etc. He comes to the conclusion that the 20th century has introduced new dimensions into the perception of historic time: the beginning and the end. It is impossible to give a correct semantic description of the total system in its diachronic aspect without knowing both its beginning and its end. While the special semiotic role of the beginning was evident in archaic and tribal cultures, the end attracted the attention only of the eschatological thought. However, the 20th century has shown that it is impossible to interpret, to semantize sign systems without knowing their end, either actual or "hypothetical," at a given synchronic level. Post-diction gives a new order and structure to signs. Thus, it is impossible to understand the poet's role fully if the real meaning of his death remains unknown. The same is true of whole cultures and civilizations. Mandel'shtam wrote that death illuminates the preceding creation by a specific and very personal light.

Toporov in his already quoted article on cosmology and history has proposed

the construct of the end of history which would not be synonymous with the peril of civilization, but would inaugurate a new stage in semiotic modelling whereby the process of history with its emphasis on "important," "destiny-making" events would be terminated and a new type of consciousness, based on panchronic and simultaneous treatment of "cultural values" would prevail. This type of consciousness would not be needed to be "fired up" by contemporaneous events, for semiotic value would be restored to traditional signs, whereas the present would be taken up by the analysis of the rules of combination. This would add to history the much needed finality that attributes certain stable values to historic elements which continue as human events without making the system of history irretrievably complex.

The problem of semiotic description of history is believed to be solved by presenting history as a certain semantic field within which the relations are governed by semantic rather than causal laws, the hierarchy is established not along the temporal axis, but along the axis of combination.

Ivanov believes that the problem of the end is the crucial problem of modernity precisely because it is now possible to envisage the actual end of culture. He suggests that culture should be re-oriented in such a way as to be ready to absorb the meaning of this boundary situation. The solution is seen in perfecting the mechanism of cultural memory so that the fullest possible information should always be stored about any cultural subject or object because its existence may be terminated at any given moment.

Having come to these final questions of culture it is, indeed, very difficult to visualize the future of Soviet structuralism and semiotics. The very fact that they are openly tackling such problems shows that here one deals with a cultural phenomenon of outstanding scale.

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