

The Meeting of East and West: Confrontation and Convergence in
Contemporary Linguistics
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The meeting of East and West:
confrontation and convergence in contemporary linguistics *

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1. Sometimes the history and current state of a discipline can be better clarified by schematizing than by close documentation of trends and individual stances. This paper reduces the variety of theoretical orientations in twentieth-century linguistics to two polar opposites. In spite of radical differences, recent years give evidence of coincidence in issues of major concern and, more striking, spontaneous convergence in theoretical claims.

To recent historiography of linguistics, the question of first interest would be whether the two schools are paradigms in the sense of Kuhn 1962. I will argue that they are not, although they may well be exemplars in the sense of Kuhn 1970. The more interesting issue, however, is the ongoing convergence. The similarities have greater implications for the history of linguistics than the differences do. The patterning of similarities can provide evidence bearing on the motive forces and evolutive tendencies of modern linguistics. The frankly speculative final section of this paper explores two such tendencies.

2. The two opposed schools are the mainstream trends known as generative and structuralist. My use of these terms will depart in two respects from standard usage. First, I will extend them beyond their usual referents, to identify trends, individuals, and traits to which the terms would not ordinarily be applied. Second, they are used below to refer to prototypical representatives which are nowhere attested. The prototypical representatives will be sketched out on the basis of selected examples, but the illustration will be necessarily schematic. 1) The thesis of this paper is that certain recent developments can be explained as convergence between the generative and structuralist schools, which in their prototypical forms are polar opposites. Since the relevant trends are identifiable only in retrospect, several of the issues taken up here may appear somewhat dated.

The generative school is represented by the development from Chomsky to post-Chomskyan generative semantics to relational grammar and beyond. This list subsumes X syntax, interpretive semantics, and formal variation theory in sociolinguistics (e.g. the works of Labov). Of the various incipient and non-mainstream trends this paper investigates only role and reference grammar (Foley & Van Valin MS, Van Valin & Foley 1979).

The Russian grammatical tradition provides the most suitable example of a structuralist school, since it is the only structuralist tradition to have given rise to a fully explicit formal system which in its scope and content bears comparison with the generative school. In this paper, then, the structuralist school is represented by the development from traditional Russian grammar, on the

one hand, and European interwar structuralism, on the other, to what may be called Soviet 'establishment' grammar, represented in the Academy grammars of 1960 and 1970, to meaning-text grammar (Mel'čuk 1974). 2)

While there has been only one generative tradition, structuralism is obviously not limited to the Russian tradition. Saussure, American descriptivism, the Prague school, the London school, tagmemics, glossematics, Jakobson, and Kuryłowicz, among others, are structuralist.

The generative and structuralist schools as presented below both lie wholly within formal grammar. Most work on language in context falls under neither rubric. I assume the opposition of formal grammar to language in context is a higher-order one, and the generative-structuralist opposition applies only to formal grammar.

The defining property of structuralism is what Lyons (1968:50) calls the structural approach: '...each language is regarded as a system of relations (more precisely, a set of interrelated systems), the elements of which...have no validity independently of the relations of equivalence and contrast which hold between them' (emphasis in original). A major goal of structuralist research is to determine whether phenomena are elements in the same system, and if so whether they contrast. In its extreme development, therefore, structuralism is taxonomic. In all of its forms it sees grammar as an inventory of elements.

The defining property of generativism is its use of derivations.

Where structuralism is occupied with classifying linguistic phenomena, generativism is concerned with characterizing the notion 'sentence' (or 'utterance' or whatever). Formal characterization of utterances lends itself naturally to generation in the mathematical sense: grammatical description is replaced by rule-based specification of an infinite set of sentences, i.e. of a corpus.

These opposed orientations stand out in the phonological literature of the 1960's. Structuralist phonology was concerned with determining whether segments belonged to phonetic, phonemic, or morphophonemic systems; and with determining the membership of each system by demonstrating contrast or non-contrast between segments at a given level. Generative phonology was concerned with formalizing rules which predicted the surface forms of morphemes, words, and phrases. In retrospect, the polemics of the early generative literature (Halle 1959, Chomsky & Halle 1968, Postal 1968) reflect cross purposes between the two approaches rather than competing solutions to a single problem. To the structuralist, it is of crucial importance that discrete systems (phonetic, phonemic, morphophonemic) be so defined, and that elements be compared only within systems; otherwise the central analytic concepts of contrast and equivalence will be defined on categorically disparate elements. To the generativist, these operations are simply not part of grammar or of linguistic analysis, and therefore cannot be assumed as a priori conditions on analyses.

3. This section enumerates several respects in which the two schools differ conspicuously. Some are corollaries of the defining

principles cited in §2; some are frequent, but not necessary, consequences of those principles; and some reflect historical accident.

Wherever Russian and American linguists have discussed the same phenomena we have minimal pairs — analyses which differ only in the generative vs. structuralist orientation. The examples below include several such minimal pairs.

3.1. Corollary: Technical abstractions. In a generative system, abstractions are typically trans-derivational: they span the history of a single derivation, from deep to surface. An indication of the extent to which abstractions are assumed to be trans-derivational is the fact that the term global, ordinarily 'comprehensive', etc., in generative writings means only 'trans-derivational' (e.g. Lakoff 1970).

Obvious examples are the various trans-derivational and global definitions of syntactic phenomena. In fact, virtually every element of generative syntax can be said to be defined by its derivational history. For instance, the relations of subject and object are not defined on surface structures alone; they are the result of subject-selecting and object-creating rules, promotion, etc. (Before Fillmore 1968, however, they were defined configurationally, at a single level: Chomsky 1965:71.) Babby (1974) describes the morphological parts of speech of Russian as the product of derivational history. Throughout the generative tradition passivization is a process, and the passive construction is the result of application of this process. In Chomskyan and early post-Chomskyan syntax the basic syntactic units (NP, V, S, etc.) were gradually refined only in terms of the rules they underwent or triggered in the course of a derivation; and it was precisely on the evidence of rules undergone or triggered that, e.g., auxiliaries could be asserted to be main verbs (Ross 1969a), adjectives classed as NP's (Ross 1969b), or nouns claimed to be underlying predicates (Bach 1968). Relational grammar culminates this trend by extending trans-derivational perspective to syntactic transcription: a single tree diagram, with its numbered strata and arcs, records derivational history at a glance. 3)

In contrast to these examples, the abstractions of a structuralist grammar are all what may be called cross-derivational: they span, not derivational history, but a number of discrete sentences. (They are paradigmatic in the Saussurean sense, and in this respect Pettit's term paradigmatic for the structuralist school is most felicitous.) Typically, a structuralist definition is a generalization over a class. For instance, in the Russian grammatical tradition voice is never analyzed as the result of a process of passivization; it is a grammatical category defined notionally, by generalizing over its members. (Voice is usually defined as a category involving the relation of the verb to its subject and/or object. The history of the question is reviewed in Korolev 1969, Isačenko 1960:345ff. Typically, the substance of that relation is said to be that the passive construction portrays the subject as receiving, or undergoing, the characteristic denoted by the verb.) Russian

grammar defines parts of speech in the same cross-derivational manner; contrast Babby 1974, mentioned above, where they are defined trans-derivationally. An extreme example of cross-derivational abstractions is the syntax of the 1970 Academy grammar and the papers by Švedova (1967, 1969) on which it is based. The theoretical framework consists entirely of degrees of abstraction. It is a classification of sentence types, viewed as morphosyntactic structures, into more and more general groupings. The most general is the structural scheme, an abstract template capturing a basic sentence type. Structural schemes subsume a number of regular realizations, less abstract classes of sentences. Problems as diverse as valence and mood categories are captured in the system of sentence types.

Another minimal opposition is the treatment of Russian reflexive verbs in the two traditions. The Russian grammarians take the distinctive morphological class of reflexives as given, and generalize over its content. Most view reflexives as a set of subtypes (Korolev 1968, Isačenko 1960:376ff., 1970 Academy grammar:353ff.). Occasionally a single invariant characterization is applied to all reflexive verbs, usually when reflexive has been identified with voice (Fortunatov 1899; also, outside of mainstream Russian grammar, Jakobson 1957). American linguists see reflexivization as a process: the verb becomes reflexive when its object is made subject (Channon 1968) or is otherwise moved or deleted (Babby 1975a); or when its agent is not made surface subject or is not selected in deep structure (Babby & Brecht 1975).

The literature on reflexives reveals another property of descriptions in the two schools. Since the Russian grammarians' approach is cross-derivational, they can take the class of reflexives as given and need not predict further reflexives. They need not ask why some non-reflexive verb is not reflexive, or vice versa. Their generalizations over the class of reflexives are characterizations rather than tight definitions which would generate all and only reflexives. The American linguists must ensure that their statements generate only reflexives. But since their approach is trans-derivational they typically consider a fairly narrow range of data. Each of the American studies mentioned handles only a subset of the classes of reflexives considered in the Russian grammars. Ordinarily this difference would be considered one of analytic vs. synthetic grammar. This paragraph is intended to show that it can also be ascribed to the respectively cross-derivational and trans-derivational abstractions.

3.2. Corollary: Non-unique status. Generative description requires any given element of grammar to be simultaneously more than one thing. Both the deep and the surface status, as well as intermediate statuses, are true of that element. A surface subject, for instance, is also a deep object and a semantic patient, or a deep subject and a semantic experiencer, and so on.

A prototypically structuralist approach cannot permit simultaneous non-unique status. Since structuralism relies on the notions of contrast and class membership, it is in principle limited to consideration of one level of description at a time, if it is not to

compare categorically unlike phenomena. If a structuralist theory does recognize both deep and surface grammar, it is forced to see them as autonomous levels of description, as meaning-text grammar does (and stratificational grammar before it: Lamb 1962).

3.3. Corollary: Theoretical standing. In a generative system, an element has theoretical standing if and only if it enters into the formal statement of some rule, or can be shown to be crucially affected by some rule. In a structuralist system, an element has theoretical standing if and only if it can be shown to be in contrast with some other element of the same system.

3.4. Grammar and metagrammar. What is grammar to the structuralist is metagrammar to the generativist; and vice versa. By grammar is meant basic, first-order description: a model, or partial model, of language (or whatever is being modeled). Metagrammar is observation on the grammar.

At least in the Russian tradition, the object of structuralist analysis is language — sentence structure, morphological categories, etc. In contrast, the object of generative analysis is not language but what to the structuralist is the grammar itself — the rules, their formal statement, the elements that enter into them. To the structuralist, statements about the form and content of rules are second-order observations that could be drawn from a survey of grammatical descriptions. To the generativist, statements of class membership and contrast are secondary observations that could be derived by scanning rules and derivations. (In practice, the classic generativist feels either that the classic structuralist analysis is not derivable in its accepted form from his rules; or that to make it so derivable would complicate his grammar. This is the thrust of Halle's argument, 1959:19-24, and this stance becomes standard in subsequent works.)

Discussions of verbal valence in the two traditions form an extended minimal pair. Generative linguists are most concerned with describing the rules, the semantic relations, and the surface-syntactic relations involved in valence. The primary goal of analysis is to formalize rules of promotion, demotion, passivization, case assignment, and the like. To meaning-text grammar these are secondary issues. The primary object of research is to account for all the valence patterns of any (and ideally each) verb of the language.

Consequently, meaning-text grammar has produced a dictionary (Apresjan et al. MS) which describes exhaustively the various valence patterns of Russian predicates. American linguistics has produced nothing comparable. On the other hand, American linguistics has produced a wealth of discussion on voice, subjects, object creation, case marking, and the like. While meaning-text grammar can discuss these topics (cf. e.g. Mel'čuk & Xolodovič 1970, Mel'čuk 1979b), it does so only secondarily. The meaning-text literature includes a number of publications (e.g. Apresjan et al. 1970a, 1972, 1973; Birjulin & Iordanskaja 1975) which are simply statements of lexical entries. Such publications are rare in the generative literature (Fillmore 1971a is an example — and by other criteria given below it is a structuralist work). Lexical entries are given in

e.g. Chomsky 1965:107, 164ff.; Fillmore 1968:passim, 1971b; but they are only illustrations of syntactic or semantic principles being argued. In most of the literature on valence, no lexical entries are given.

To the generative grammarian a complete statement of the patterns of any given verb would be an observation derivable from formal rules plus semantic input, hence metagrammar. To the meaning-text grammarian, generalizations about the patterns of verbs, and/or their prediction by rule, would be secondary observations derivable from scanning lexical entries. The literature of each school includes some metagrammatical investigations, but these follow substantial grammatical research.

Another minimal pair is the analyses of comparative constructions given by Bresnan (1977 and references therein) and Mel'čuk (1979c). Both examine constructions of the type more...than, as...as. Bresnan asks what formal elements appear in rules, and captures generalizations about syntactic categories. Mel'čuk asks whether comparative constructions represent one surface-syntactic relation or several, and presents principles for determining contrast and non-contrast in surface relations.

Another example is Babby's use (1978) of lexical functions. Lexical functions, a contribution of meaning-text grammar (see Apresjan et al. 1970b), represent a form of componential analysis of lexemes and phrases. They include recurrent semantic parameters and recurrent conversion types. To meaning-text grammar, lexical functions are an object of analysis. A major goal of Apresjan et al. MS is to describe the valence patterns of Russian predicates as lexical functions. To Babby, lexical functions are not a goal of analysis but a means to an end. They are the crucial element in the solution of a problem: they predict the application of a particular syntactic rule of Russian.

Even abstract pronouncements about the goal of linguistics reflect grammar and metagrammar. To the Russian tradition, the purpose of linguistics is to formalize our intuitions about language, i.e. to formalize the speaker's knowledge of the correspondence of meaning to text (Apresjan 1973:9-10, 25; Mel'čuk 1974:15). A variant statement is: Truth is what's in the head of a good linguist (Mel'čuk 1976). Such statements claim that the task of linguistics is to describe language (whose structures are intuitively accessible). The generative tradition, in contrast, has produced Chomsky's claim (1965:15-16) that the goal of linguistics is to account for the speaker's ability to produce and interpret an infinite corpus of new sentences, or the more recent claim (Perlmutter & Postal 1977:404, Morgan 1977) that the goal is to establish how languages are alike and how they differ. Both claims in effect assert that the goal of linguistics is to explain or otherwise generalize on the descriptions of particular languages.

3.5. Formal vs. substantive. The importance of contrast in determining theoretical standing in structuralist systems leads to the extreme, formalist view in which substantive properties are denied theoretical standing and only contrast is recognized (Saussure, Hjelmslev). As mentioned in fn. 1, structuralist systems need not

be entirely formalist. The Russian tradition recognizes positive properties, although it gives them less emphasis than it gives to contrast. The generative school takes the opposed, substantive stance: positive properties are all-important, and the issue of contrast is almost never raised.

An example is the history of semantic roles in the two traditions. In American linguistics, the precise number of such roles is debated to this day. The grounds for positing a new role, splitting or lumping old ones, are intuition about semantics, simplification of grammars, and cross-linguistic morphological treatment (Fillmore 1968, 1977; Stockwell et al. 1973:8ff.; Foley & Van Valin MS). In meaning-text grammar the inventory of semantic roles has been fairly constant from the beginning, largely because contrast was used as a criterion for deciding independent status. Positive semantic content is not a primary criterion for classification, and is given less importance in description. Thus separate roles of agent and experiencer are not posited, since these two do not contrast; there is only a single role of (semantic) subject. (For semantic roles in meaning-text grammar see Apresjan 1974:119ff.)

It is interesting that the American tradition has recognized a criterion for determining contrast and non-contrast from the first study of semantic roles (Fillmore 1968:22: only non-contrasting roles can be coordinated, and only contrasting roles may cooccur uncoordinated in a single clause). Yet this criterion is not ordinarily invoked in settling difficult cases.

Another example is the development of the basic syntactic concepts NP, V, S in the generative literature of the 1960's. The inventory of basic elements was established not by contrast but by intuition and consideration of behavior with respect to rules (see §§3.1, 3.3). A representative paper is Bach 1968. Many of the issues are summarized in Stockwell et al. 1973.

Predictably, only the generative tradition has produced an explicit theory of prototypes (Lakoff 1972, Fillmore 1975).

3.6. The structure of scientific discourse. Throughout the generative tradition, the favored mode of presentation in academic writing has been argument (a classic example is Lakoff 1968). Structuralist writing proceeds by definition and illustration rather than argument (an example is Mel'čuk, this volume). Argumentation may, but need not, place data before generalizations, recapitulating the discovery process. In any event it assumes the burden of proof and shows that the generalization made is a necessary one. Illustration, in contrast, attempts only to show that the generalization is sufficient. Documentation which is merely illustrative does not ordinarily include starred examples. (Meaning-text grammar, however, does use ungrammatical examples, following a precedent set for the Russian tradition by Ščerba 1928.) Argument usually entails a more intensive documentation of any given generalization than does illustration. (This statement does not rank the total proportions of data used in generative and structuralist writings. While illustration uses less intensive documentation, it may have a broader range of data, as mentioned in §3.1.)

Each school regards the other's presentation as beside the point (e.g. Apresjan 1974:22 on Lakoff 1968), uninteresting, naive, and/or opaque. (This statement is based on personal communications from several sources, and my own initial reaction to the Russian works.)

Minimal pairs include Bresnan 1977 (argument) and Mel'čuk 1979c (illustration), on comparative constructions; Heath MS or Jake 1978 (argument) and Mel'čuk 1979b (illustration), on Dyrbal ergativity; Babby 1975b (argument) and the Russian sources he cites (illustration), on Russian gerunds.

3.7. Syntactic relations. The Russian structuralist tradition uses dependency grammar for its basic analysis of syntactic relations (for dependency grammar see Mel'čuk 1979a; also Hays 1964, Tesnière 1966). The American tradition uses immediate-constituent grammar (for a review of postwar IC theories see Postal 1964). Both cases reflect historical accident. The Russian grammatical tradition has used IC grammar since Fortunatov (1904); the American tradition has used IC grammar since Bloomfield. The choice of dependency grammar for the Russian tradition may well have been facilitated by the free word order and obvious case government of Russian; the use of IC grammar in the American tradition may well have been facilitated by the fixed word order and absence of morphological signaling of most grammatical relations in English. In any event the type of syntactic theory is not determined by the structuralist or generative approach: American interwar structuralism used IC grammar, and the American literature on machine translation, which was to some extent generative, used dependency grammar.

3.8. The differences mentioned above concern the form, organization, and goals of linguistic analysis — what may be called world view. They are differences of some consequence, and may render publications mutually unintelligible; but they are not differences in actual content, or in the primary linguistic data considered. In fact, it is striking that popular issues have tended to coincide. In recent years both schools have witnessed flurries of interest in causatives (e.g. Xolodovič ed. 1969; Shibatani ed. 1976); ergativity, subjects, and voice (e.g. Xolodovič ed. 1974; Li & Thompson eds. 1976); valence (see §3.4); semantic roles (see §3.5); and a growing emphasis on lexical semantics (works of Apresjan; Fillmore). In each instance the parallel developments appear to have been spontaneous: there is little evidence of mutual influence (the major Russian publications coincide with the American ones or precede them by a few years; yet the American bibliographies rarely include the Russian publications). If all issues overlapped, of course, the coincidences would be automatic and hence uninteresting. But the overlap is not total. The Soviet literature does not indicate fads for word order as a typological feature, formal logic akin to Montague grammar, relative clauses; the American literature indicates no widespread interest in parts of speech, sign theory, or predicativity.

4. While the generative and structuralist schools in many respects, and in particular in their extreme developments (Chomskyan

syntax; the Academy grammars), represent polar opposites, the most recent descendents of each school display striking convergences in world view. Convergence ranges from fairly trivial coincidences in formal notation to major claims about the structure of language. Like the overlap in popular issues, convergence appears to have been spontaneous. In most instances it involves incorporation of structuralist traits into generative systems; changes in the opposite direction are rare.

Convergence in formal notation is evident in the tree diagrams of relational grammar, which approximate the dependency trees of meaning-text grammar. Both use labeled arcs ending in arrowheads. Both use numbered, rather than labeled, terminals. Both lack nodes (except for the highest, clausal node of relational grammar — perhaps its only overt concession to IC grammar).

An instance — apparently the single instance — of incorporation of a generative trait into a structuralist theory is the introduction of deep and surface levels of description into meaning-text grammar. However, as mentioned in §3.2, this trait receives a structuralist cast in meaning-text grammar. Each level is an autonomous inventory of elements; and even transitions between levels are not ordered rules but inventories of possible changes in trees.

Structuralist elements in the generative tradition are numerous. Relational grammar, like meaning-text grammar, has discrete levels of derivation. Relational grammar is structuralist in its approach to grammatical relations: it treats them as an inventory of elements, and one of its legitimate research goals is to determine the precise membership of that inventory.

Some structuralist traits arose early. Deep syntax, since McCawley 1968, has been an inventory of tree types rather than the output of generative phrase-structure rules. Lexical semantics is inherently structuralist: it deals with a set of objects having obviously recurrent formal and semantic components (cf. Pettit 1976: 25ff.).

Both schools now view subjects as just one clausal NP relation among others. To dependency grammar the subject, like objects and circumstantials, is a dependent of the verb. To most generative linguists there is no longer a VP node, so subjects, like objects and obliques, are immediately dominated by S.

The topic of this year's CLS parassession, 'The elements', promises a look at grammar as a series of inventories of elements, and the call for papers invites explicit debate over the membership of classes.

Role and reference grammar has progressed furthest toward viewing grammar as an inventory of elements rather than the output of derivations. There are no derivations; there are not even ordered levels of analysis, but simply kinds of analysis. (The term level is used, but it implies no progression from deep to surface: there is sentence-level analysis, clause-level, phrase-level, etc.)

These areas of convergence, taken together with the coincidences in areas of interest mentioned in §3.8, yield considerable similarity but are still far short of producing complete convergence. The differences that remain — trans-derivational vs.

cross-derivational abstractions, theoretical standing, the role of contrast, grammar vs. metagrammar, argument vs. illustration — still constitute major obstacles to mutual understanding.

5. The two schools having been described in some detail, it can now be asked just what they are. It is fairly clear that they are not paradigms in the sense of Kuhn 1962 (and thus not disciplinary matrices in the more precise terms of Kuhn 1970). Neither school, as they have been defined here, represents the achievement of a single genius (although early generative syntax was Chomsky's singlehanded achievement). Each subsumes a variety of theories, often contradictory. Neither represents the best of competing theories; and the two schools themselves do not compete, but rather converge. (Some of these points are argued in Hymes 1974, Percival 1976.)

Furthermore, in several respects modern linguistics recalls Kuhn's description (1962:10ff.) of a pre-paradigmatic field. Linguists write books. Books, and even papers, often start from the very foundations of linguistic theory and build up a whole theoretical system (e.g. Chomsky 1965, Chafe 1970, Mel'čuk 1974). We do not have excellent, standard textbooks; the beginning teacher of general linguistics is faced with difficult questions of what to teach. Current linguistic research is not normal science: it is not directed at puzzles which articulate paradigms (in Kuhn's terms). In fact, the canonical publication in linguistics for both schools ends on an open note, frequently referring to uncanny phenomena (a familiar example is Chomsky & Halle 1968:Ch. 9). There are many competing theories. There is no uniform assent as to what is to be modeled: various theories model language, speech, description, the corpus (Apresjan 1973:111ff., 119).

While not paradigms, generativism and structuralism may well be exemplars in the sense of Kuhn 1970. An exemplar is an abstract, implicit solution type. Clearly structuralism implies a solution type in which the linguist establishes contrast in order to define an inventory of elements. Generativism implies a solution type in which he models a corpus and determines the formal apparatus needed for his model, without establishing contrast or equivalence.

That we are dealing with solution types rather than paradigms is supported by the fact that almost nowhere is either school found in pure form (see fn. 3). Evidence that the solution types are only implicit is the recurrent tendency to see conflicts between the schools simply as alternative solutions to particular problems. Thus Halle (1959:19-24) attacks structuralist phonemics on the grounds that inclusion of an autonomous phonemic level necessitates stating certain phonological rules twice (one produces phonemes, one allophones). His implicit solution type is the generative model (in this case, of the notion 'possible phonological string in Russian'). Since the solution type is not the subject of explicit discussion, he attributes the same goals to the structuralist literature and judges it by its failure to meet them. But to the structuralist, of course, generation of strings is not the goal of grammar; the structuralist solution type is determination of

phonemic status for Russian phones, and this goal would similarly be complicated by accommodation of generative concerns.

In similar fashion, Postal (1964) uses generative capacity as his sole criterion for comparison of different grammatical theories. Even radical differences in grammatical type emerge as differences in strong generative capacity (Chomsky 1965:60-62). In such cases, an implicit solution type has been attributed to a different school just because it is implicit. Such interpretations would never have occurred had solution types been made explicit. One goal of this paper has been to show that the solution types can be made explicit without imposing value judgments and without assuming a third theoretical stance.

6. Consideration of the differences between the generative and structuralist schools can make positive contributions to the issue of paradigms in the history of linguistics, and may eventually bridge some of the misunderstandings between the two schools; but it tells us rather little about linguistics itself. In fact the similarities tell us more about the character of contemporary linguistics and some possible future developments than the differences do. Two of the issues mentioned above appear to have some predictive value.

The convergent analysis of subjects in the two schools seems simply to be the result of correct analysis. The early structuralist literature debates whether the subject is the head of the sentence. The early generative literature uses the VP node to separate the subject from the other NP's in the clause. Both of these analyses are due to failure to distinguish syntactic from pragmatic and/or discourse phenomena. Syntactically, the subject is just one of several ad-verbal NP's. Only in pragmatic and discourse organization is it in any sense the 'head' of the sentence.

This example shows that convergence can result from progress in linguistics. Specifically, in this instance, progress means awareness that there are different kinds of facts. Separation of syntactic from pragmatic and/or discourse facts produced the single correct analysis of subjects.

A second diagnostic issue concerns the interpretation of technical abstractions, primarily those bearing on non-unique status. Both generative and structuralist analyses may be divided into strong vs. weak subtypes. A weak generative analysis simply posits deep and surface levels and grammatical rules. Chomsky is weak; the relational grammar of Perlmutter & Postal 1977, Perlmutter 1978, this volume, is weak; the major figures throughout the generative tradition are weak. A strong generative analysis not only posits these grammatical elements; it furthermore ascribes psychological or other reality to the trans-derivational process itself. Derwing 1973 is representative of works which see derivations as real-time models (St. Clair 1975) of linguistic performance. Halle 1962, Kiparsky 1968 seem to present generative rules as historically real.

A weak structuralist analysis simply points out cross-derivational facts, levels, contrast, etc. All the structuralist contributions mentioned above are weak. A strong structuralist analysis further interprets these facts as diachronically or otherwise

real. For example, there is a tendency in the Soviet literature to interpret the descriptive and typological problems of ergativity as diachronic issues (Klimov 1973, 1977; Čikobava 1967).

The weak analyses give the phenomenon a minimal interpretation in terms of the structuralist or generative solution type; the strong analyses impose a further specific interpretation on the solution. Both are capable of noting the obvious facts which any theory must describe, but the strong analyses make additional claims.

It is my impression that strong analyses are typical of the early stages of a given theory (although they have their advocates in all stages); specifically, they are typical of the years before the theory arrives at its most delicate classification of types of facts. The diachronic interpretations of ergativity arose before structuralists could speak of different levels of derivation (Klimov postdates meaning-text grammar but does not use it). Strong generative views are typically held by proponents of some variant of a standard theory, in which semantics and pragmatics are only interpretive. As more different types of facts are gradually recognized as such, strong claims disappear.

The increase of weak analyses, then, may be another instance of convergence. Like the convergent analysis of subjects, it is due to progress in linguistics. Taken together, these two trends suggest that the more advanced theory is one which makes minimal claims; and minimal claims are facilitated by recognition of more types of facts. 4)

7. Conclusions. The popularity of Kuhn's work, and the uncritical attitude of linguists toward his notion of paradigm, have fostered a view of contemporary linguistics as a series of confrontations between mutually incompatible theories of language, a view held even by proponents of a non-paradigmatic linguistics. This paper has taken an unorthodox stance in selecting candidates for the status of paradigm, and can therefore motivate what might otherwise be seen as random developments. Comparison of exactly the above schools, as prototypes, allows us to recognize ongoing convergence and suggest its possible implications.

Footnotes

* Earlier versions of this paper were given at the University of California, Berkeley (April 1977, June 1978), University of Nevada-Reno (Linguistics Group, February 1978), and University of California, Davis (Linguistics Colloquium, April 1978).

1 A similar polarizing approach is taken in Pettit 1976, where Saussure and Chomsky are compared as respectively paradigmatic and syntagmatic. Pettit uses structuralist as a generic term for a group of disciplines including linguistics (the standard usage among non-linguists). Apart from these differences in terminology and scope of inquiry, Pettit's dichotomy differs from mine in that he does not distinguish the corollary of formal vs. substantive orientation (§3.5 below) from the defining properties of the two schools. That formal vs. substantive and generative vs. structuralist (in my terms) are distinct issues is clearly shown in Harris's review (1941)

of Trubetzkoy's Grundzüge. Both Harris and Trubetzkoy are solidly structuralist; but Harris isolates, and criticizes, Trubetzkoy's substantive approach against the background of his own formalist orientation. Finally, Pettit describes attested theories rather than ideal prototypes.

2 The term meaning-text is written 'Meaning⟷text' by its own practitioners (in Russian, 'Smysl⟷tekst'). (The double-headed double arrow symbolizes the transformative character of meaning-text grammar.) The capitalization, quotes, and special symbol are all due to the fact that Russian cannot form compound attributive modifiers like meaning-text. I use the latter as a neutral English equivalent.

3 Several of these issues support my claim, above, that the generative school is a prototype nowhere attested. Chomsky, the most strongly generative linguist in the school, uses a basically structuralist definition of syntactic relations. Fillmore, whose perspective on the lexicon is fairly structuralist, nonetheless made the trans-derivational view of syntactic relations standard. Relational grammar, the most structuralist of the mainstream generative trends (see §4), is the only one to use trans-derivational tree diagrams.

4 The terms weak and strong are used, mutatis mutandis, in the sense in which Chomsky uses them of generative power (1965:60ff.). (The mutanda are considerable, however, because theory types are plainly not generative rules.) Outside of the Chomskyan system the connotations of the words weak and strong become inappropriate: while the terms were effective rhetorical devices when strong generative capacity was valued, they do not lend rhetorical support to the claim that weak analyses represent progress.

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