

REVIEWS

Bibliography of general linguistics. By A. K. Wawrzyszko. Pp. XII, 120. Hamden: The Shoe String Press, Archen Books, 1971.
Reviewed by Mirosław Nowakowski, Adam Mickiewicz University, Poznań.

One tends to have a dove-like attitude towards all bibliographers and their works. For isn't it better to have any bibliography than no bibliography at all? And, in fact, there are very few bibliographies on *English and American general linguistics*. "This bibliography aims at all linguists and students of linguistics, particularly those beyond the introductory university level. It embraces basic publications in the field to date, focusing on works of the mid- and late 1960's" (Wawrzyszko 1971: XI).

It is, of course, regrettable that the work appeared in 1971 since between the late 1960's and 1971 a number of important books were published which added new dimensions to what is known as general linguistics¹. On the other hand, as soon as it is in print any bibliography becomes outdated. This is especially true of all fields undergoing a process of revolution where the most important publications appear in periodicals or are circulated privately. And linguistics is one of those fields.

Yet, the book under consideration may definitely undermine the air of tolerance with which one accepts bibliographies. For this one pretends to be a "bibliography of everything" and, as one can easily predict, turns out to be a "non-bibliography of anything in particular". The word "general" refers in the title to "fundamentals of all topics comprising the science of linguistics (...and) also various theories of language created by different schools of thought (Geneva, Prague, London, MIT)". All this and "a special attention devoted to a fairly comprehensive presentation of standard information sources in linguistic research: bibliographies, dictionaries, glossaries, directories, abstracting and indexing services" call for 344 items which seems to be ridiculously insufficient even if "certain areas of interest such as dialectology (*though Labov's dissertation has been included* M. N.) or language laboratory materials have been generally omitted".

And even if one is ready to forgive the author for her greed, her omissions seem unforgivable. For how may one explain the fact that she includes Bach and Harms (eds., 1968) in the section on "Theory and philosophy of language and methodology of linguistics" (67 items!!) together with e.g. Carnap (1934) and Cassirer (1923) (also: Sapir 1921; Bloomfield 1933; Dixon 1963; and Katz 1966), but puts Chomsky's *Topics* and *Cartesian linguistics* in "Grammars" his *Language and mind* in "Psycholinguistics" and his *Aspects* in still another section called "Syntax"? The late sixties was a period during which semantics be

¹ Thus, as a result, McCawley, Fillmore, the Lakoffs, Weinreich and Ross among others do not appear in the *Author Index* (pp. 116 - 118) which definitely distorts the picture of American general linguistics in any sense of the term. Had the author utilized a minimum of research tools, the names would have been included since the notes to particular readers (e.g.: Bach and Harms 1968; Reibel and Schane 1969) often do mention authors of most of the articles included there.

came the issue, but neither Vendler 1967; Roichenbach 1948; Ryle 1949; Strawson ed., 1967, 1952; nor J. L. Austin, Wittgenstein and Russell seem to be known to Wawrzyszko. My guess is that these would have been first names mentioned by any average undergraduate student in linguistics during these years. Many popular collections of readings are missing as well (e.g.: Hook, ed. 1969; Olshovsky 1969; Parkinson 1968; Caton 1963). Such gaps are not limited to any particular section, but rather spread evenly throughout the book. Thus the reader would not find the well-known French and German bibliographies of TGG, Klein's etymological dictionary, Jespersen's *Analytic syntax*, Postal's *Constituent structure*, Campbell's *OF grammar* or H. B. Allen's 1965 TESOL collection to mention just a few examples of "works published in the mid- and late 1960's".

Consequently, the bibliography if unannotated would be of little use to "linguists and students..., particularly those beyond the introductory university level". The fact that it is annotated makes it a dangerous instrument in the hands of those uninitiated and completely worthless to those who after four or five years will have to know all the items almost by heart. To prove our point we may quote item 225:

Chomsky, Noam, *Aspects of the theory of syntax*. Cambridge, MIT Press (1965), (p. 251).

Deals with transformational grammar, stating the author's theory of syntax and that of other linguists. Stress is put on the development of an aspect of generative grammar aiming to simplify the rules of transformation. Includes bibliography, index, and detailed notes to each of the four chapters.

Use: For those with advanced knowledge of syntax.

In conclusion, we think that bibliographies such as the one under review should not be tolerated, if only to fend off the loss of all prospective students of general linguistics.

Stratificational grammar: A definition and an example. By Geoffrey Sampson. Pp. 68. The Hague, Paris: Mouton, 1970.

Reviewed by Andrzej Kaznowski, University of Warsaw.

Stratificational works are not numerous to date. On the contrary, their scarcity is noticeable when confronted with the multitude of publications in various other present-day formalized approaches to linguistic analysis, notably transformational. Therefore, it was hoped that the book under review would bridge the gap between what is being technologically practised in the certain centres of computer linguistics in the U.S.A. and what is currently known about this highly sophisticated theory by the linguistic general public. This expectation of the present reviewer has only partially been fulfilled. Those who look forward to an elaborate and clear introduction into the model will certainly find the book inappropriate for this purpose. Those, however, who are already familiar with the essentials of stratificational grammar (SG) will be rather disappointed for the following reasons.

The book is written in Lamb's style of his *Outline*, where brevity is favored at the cost of explicitness of information. The discussion of the relatively recent changes in the stratificational apparatus is purely technical and notoriously devoid of linguistic exemplification. Finally, the stratificational description of the numeral system of English employed in the book is definitely a very limited example of the workings of the grammar.

Sampson's choice of this system to serve the exemplification purpose has been motivated by the fact that the system "forms a relatively small and therefore manageable subsystem within the entire structure of the language" and because "it is of particular

interest to the stratificational grammar because it is not only a small and self-contained system, but also one where it is usually easy to isolate and describe the relationships of the linguistic forms to their meanings" (35). Being aware of its linguistic uniqueness Sampson says that this fact is not relevant because his main aim is "to make as explicit as possible and exemplify stratificational theory as it stands rather than to develop it further" (35). Does this then mean that at the present moment stratificational theory can attempt an analysis of only such a system which is self-contained and well defined semantically in a textbook of algebra? We believe not. To write a grammar of numerals is in itself a justified enterprise, but that kind of a grammar, despite its impressive framework, cannot serve the purpose of bringing in linguistic explicitness above the level of morphology, unless it deals with natural systems of language.

Stratificational grammar in the form presented so far cannot be seen as a realistic challenge to any other formalized approach since it does not go beyond the very problem of its over-all mechanism and does not show its revealing ways in coping with the classical linguistic problems of today.

The above statement has been made a propos of the continual debate between stratificationalists and transformationalists concerning the scientific status of their respective models. In the opinion of this reviewer the debate, which is also contained in Sampson's book (Introduction and elsewhere), is not very illuminating. One can reasonably compare some two TG grammars of nominalizations or two SGs of numerals, but there is little to be gained from rough comparisons of SG to TG, which have little in common and abound in contrasts. The only conceivable line of comparison is that of a grammar's reflection of competence, but in this respect the two models are still a long way from being well defined.

The chief advantage, recognized by Sampson and other stratificationalists, over the TG model rests upon the communicational character of SG in which encoding and decoding are basically viewed as two parallel, though reverse, processings of linguistic material in a single model. This a priori principle, fundamental as it is to SG, raises some doubts of a general nature. As Rohde rightly observes, the two processes do not seem to be as parallel as the grammar would like them to be. He says, "Das Decodieren durch Menschen beginnt z.B. nicht einfach 'unten' bei den Phonemen; außerdem sollte die Wahrscheinlichkeitsstruktur der Sprache doch berücksichtigt werden. Und Beobachtungen legen nahe, daß Decodieren leichter ist als Encodieren, so daß schon von daher zu erwarten steht, daß eine kommunikative Grammatik beides nicht (symmetrisch) einfach als Umkehrungen voneinander behandeln kann" (Rohde 1972: 94). The process of encoding contains a greater number of options (diversifications), whereas the process of decoding contains a greater number of neutralizations. Sampson says that the difference between the two processes will be the ratio of the number of such nodes and the greater complexity of the decoding process may be due to "the large number of neutralizations represented by almost every morphon" (34). It seems that this difference is sufficient to call into question the communicational symmetry of the said processes.

The book contains a good deal of sound criticism of Chomsky's 65 model in which syntax, as is known, is a central component. Chomsky's process of generating an ambiguous structure involves one application of PS rules and two independent semantic interpretations, which causes a case of a semantic split as contrasted with a semantic merger yielding one semantic reading to two or more syntactic derivations. In a semantically based model, however, the former case will consist of two semantic derivations being syntactically merged into one surface structure, which corresponds to the concept of neutralization, whereas the latter will be the case of a facultative syntactic split of one semantic derivative process, which in turn corresponds to the concept of diversification.

Hence, the recent theoretical shift towards generative semantics renders the TG model(s) as closer to that of stratification.

In decoding, however, the said operations are stratificationally reversed, the former containing diversification and the latter containing neutralization. In view of what has been said about the greater formal complexity of decoding it seems that in the case of ambiguity this complexity above the stratum of morphology is increased due to semantic diversification of the frequent, inherent polysemy of lexical items. There is still a more interesting argument.

Johnson-Laird (1970 : 262) puts forth the observation that "the perceptual mechanism is more preoccupied with grammatical analysis than with monitoring the incoming sounds ... Parsing, therefore, seems to consist of an active search for intrinsic structure rather than the passive registration of extrinsic structure ... Since we do not have to wait for the end of a sentence before we begin to understand it, structure and meaning must be analysed together". This psycholinguistic suggestion supports the reviewer's belief that the two processes should not be treated alike, except, perhaps, for very crude methodological reasons, for which one can even set up a separate stratum like that for artificial morphophonemes in the Item and Arrangement approach of SG (cf. Matthews 1970: 96 - 114).

On p. 11 Sampson touches on the problem of anomaly in SG. We understand anomaly is conceived of as initial/final states both on the content and expression levels. Little mention has been made of anomaly resulting from the misapplication of the rule or, should we say, random selection of a realizational line. It is assumed, however, that this case will be ruled out from the grammar of competence and included into a performance model. We also learn that work on computer simulation of such a model is under way at Yale.

There is another point with which Sampson develops his line of argumentative comparison. It concerns the general requirement of TG that utterances are provided with their structural descriptions, which are dispensed with by stratificationalists. "Stratificationalists do not make this assumption; it is hard to see why they should, as there is at present disagreement between transformational grammarians about structural descriptions" (8). Apart from the unusual character of this statement it is, moreover, contradicted on p. 11, where the author says: "Any description of language must assign structure to the collections of semantic and phonetic units which will occur in the semantic and phonetic representations of utterances". This developed in a footnote explaining that structure is assigned to utterances in the course of their derivations. It is really hard to see then why deep structural descriptions are attacked at all, if it were not probably for the reason that their one way character is what Sampson mainly objects to.

Following Sampson's line of juxtaposing the competing theories, in spite of his claim for their peaceful co-existence, one can safely say that the stratificational literature so far presented does not reveal the "explanatory power" of its theory, directing attention, almost exclusively, to the problems of generative, though mechanistic, derivations of utterances. Transformational endeavours, on the other hand, seek, first of all, linguistic motivation for the rules such as, e.g. rules of pronominalization, where N.B. one obviously takes into account relationships crossing sentence boundaries, however, not to the extent that would satisfy Sampson's requirements.

In the chapter on the present state of stratificational theory Sampson enumerates the changes that have been adopted into the framework of the grammar since the appearance of Lamb's *Outline*. There are five of them. Change 1 has to do with the knot pattern in which diamond nodes are used for Lamb's original upward ands (cf. Bennett 1968). The change has been dictated by the assumption that there may arise a need for the use

of four terminals, upward and downward in the tactics as well as upward and downward in the realization. Though no general use has been found for this node Sampson suggests (28) that it is needed for the present participle, the ordering of which at a high level, following Chomsky, is *-ing* plus verbal base to be reversed in the downward realization.

Change 2 concerns the representation of optional elements. To use Sampson's explanation (19) ... "instead of using unordered ors with zero to indicate optionality, we now use an arrowhead notation...; where a line on the plural side of an and has an arrowhead, the occurrence of the line in question does not depend on the occurrence of the other line(s) on the plural side of the node". Algebraically, $a / \langle b \rangle c$ is translated as $a \rightarrow b$ or $a \rightarrow bc$, unlike in TG terms where we would expect $a \rightarrow c$ or $a \rightarrow bc$. Sampson admits that, though introduced, certain combinations of arrowheaded and non-headed lines have not been justified by the facts of language, yet, the reader is not even told what those facts are that justify the other specified combinations.

Change 3 is another technical innovation consisting in the substitution of a zero-element at the beginning of the initial line of a tactics for a square.

Change 4 results from certain restrictions imposed by performance requirements. No upward ands are allowed in the realization portion, portmanteaus being now emic units in the form of diamonds. Secondly, ordered ors are excluded from the alternation pattern, their work being done by ordered ands in the tactics. Nothing is known about the linguistic motivation for the adoption of those changes. Strangely enough Sampson keeps silent about the lower alternation pattern supposedly introduced into the grammar in its earlier version (cf. Bennett 1968) to cover the unconditioned alternation of elements.

Change 5 is the revision of the simplicity criterion, which does not consist now in the original line count in favor of the proposed node count. The fewer nodes, the better grammar. The next chapter in the book contains a formal definition of stratificational theory. The author provides definitions of such concepts as essential connection, higher than, content units, expression units, all kinds of nodes, equivalence between realizational strings and traces, derivation, grammar, etc. Since the presentation is purely technical we will confine ourselves to quoting part of his lengthy definition of a grammar as an illustration.

"...a GRAMMAR, G, shall consist of an array of lines and nodes, such that each line connects to one upward terminal of a node and/or one downward terminal of a node; each node being one of the types shown in Fig. 1" (22).

There is an omission of symbol *a* in the algebraic formula for node 12 on p. 25. It should read $b_n - b_{n-1} + \dots + b_0/a$ ($n \geq 1$).

The main contribution of the book is Chapter Three in which the numeral system is described in detail. It contains four graphs illustrating the realizational portions of sememic, lexemic and morphemic strata as well as their respective tactic patterns. The graphs are supplemented by algebraic notation. The description does not cover the topmost and bottommost strata. Sampson says that the hypersememic stratum is composed of the speaker's knowledge of the world, thus being extralinguistic (45). The grammar of English numerals covers cardinal integers from one to ten as well as ordinals and fraction denominators. For example, the downward morphemes of a hypersemion 2 are: *twen, two, second, bi, twelve* and *half*. There are also such sememic diamonds as *sum-of, times, power-of*, which have no downward realization. This basic description is followed by three other explanatory chapters dealing with the numerals in those basic strata. At the end of the book there is an illustration of the derivation of the numeral '11,000,000,040,001st'.

The over-all description of the system is certainly well done and as such escapes serious criticism. It is also relatively simple for the reader familiar with stratificational

ways, but nonetheless the present reviewer is of the opinion that a comprehensive piece of work on stratificational grammar for general use still remains to be written. When such a book is available the reader will certainly have better grounds for the appraisal of this very interesting theory.

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Building English words. By T. McArthur. Pp. 47. London and Glasgow: Collins. 1972.
 Reviewed by Bogdan Krakowian, University of Łódź.

The booklet is very carefully edited, and is the first out of four in the series of "Patterns of English" by the same author. The titles of the other three are as follows: (2) *Using English prefixes and suffixes*, (3) *Using compound words*, (4) *Using phrasal verbs*. As the titles suggest "Patterns of English" is an attempt to fill in a gap in a very important area of teaching English to foreign learners, namely the area of word-formation.

Building English words is intended for intermediate learners whose active vocabulary is between one and two thousand items as well as for those advanced students who want to review and confirm their knowledge of word-building. The booklet can be used in a classroom or privately (but with occasional help of an English-speaking person). It is not intended for learners of any particular age-group.

The book consists of eight units, two of which test and revise (unit 4 and 8) the material presented earlier. The remaining six units are as follows: (1) "Doing things (simple forms)", (2) "Doing things (compound forms)", (3) "Describing and naming things (-ING)", (5) "Describing and naming things (-ED)", (6) "Using -ISH and other suffixes", (7) "Using -ABLE and other elements". The six units are presented in a very clear and purposeful way. As the author himself states (3), "the exercises in each unit provide:

1. simple information and instructions about the pattern,
2. an example, giving the most likely paraphrase and then a sentence containing the pattern,
3. a statement of stress (by means of bold-face type),
4. guided exercise sentences or comparable lists,
5. a range of vocabulary items to stimulate thought about how the pattern is used."

The booklet also contains "Some spelling rules" on the back of the cover page. After having used this book with various learners of English, the author of the present review considers it to be an excellent teaching tool having many important merits. First, it allows what might be termed as "guided creativity" in the area of word-building. By very simple means the learner may generate a larger number of new words. The rules

set out in the book are especially useful in the so called "passive" uses of the language: in reading and comprehending speech.

Second, the material in the book is well planned and graded, the steps in which it is presented are small. This can best be seen on pages 18 and 19. The following pattern is presented:

1	The company makes glass	
2	It is a	company which makes glass
3		glass making company

The exercise which follows has three levels of difficulty. The first six examples are sentences similar to those in the table. The learner has to fill in blanks. The first three examples are easiest because they employ the verb make, just as in the table, and because the number of blanks is smallest. The blanks gradually increase in number until we come to the third part of the exercise where the learner has to form (3) (It is a glass making company) directly out of (1) (The company makes glass) without the mediating form of (2).

Third, the idea of introducing stress patterns is extremely valuable. The stress patterns, so difficult for foreign learners, enable them to see such subtle differences as "the dancing girl" and "the dancing girl".

Fourth, the introduction of the two test units together with the careful grading of the material makes the book, in a way, a programmed text.

Apart from these merits there are, however, a few things which, in the opinion of the present author, might be improved still further.

As regards the tests, it is the feeling of the present author that the book would only gain by the introduction of some more revision exercises. (There are only seven of them apart from the texts). The three texts with accompanying comprehension questions do not adequately check the learners' knowledge of the new words, some of which can be guessed from the context. It might also be useful to state whether the comprehension questions are to be answered with reference to the text or without it.

In Unit 7, on page 38, the compound element -ABLE, although brought together with "able" and "can", was not mentioned as having a different pronunciation from the adjective "able".

What has been stated above does not in any way detract from the usefulness of the book as a teaching tool. It can safely be recommended for intermediate and advanced learners, as it was intended by the author. For the advanced learners it can not only be a means for a systematic revision of their knowledge but it can also strengthen their vocabulary. This is especially true of Unit 7, p. 39, 40, where the author introduces some of the less frequently used words with roots of Latin origin.

Building English words makes an excellent beginning, and it only remains both for teachers and learners alike to wait for the appearance of the other three volumes.

Generative grammar versus the concept of innate ideas. By Adam Schaff. Pp. 114. Warszawa: KIW. 1972.

Reviewed by Tadeusz Zgółka, Adam Mickiewicz University, Poznań

As a whole Schaff's book is a polemic with certain philosophical views expressed in the works of N. Chomsky and his followers. The main problem centers around the conception of generative grammars (not "a generative grammar", as Schaff puts it), conception assuming within its framework, some assertions concerning the innate character of the mechanism of language use by man.

Chomsky's works have recently aroused considerable agitation in academic circles and initiated discussions not only among linguists to whom the conception of generative grammars have been chiefly addressed, but also among psychologists, neurophysiologists, biologists and philosophers. The reason for this is that Chomsky does not confine himself to constructing a purely linguistic theory but also considers assertions made by biologists, psychologists and philosophers. Chomsky does not always limit himself to assertions that already function within the framework of various scientific theories. Frequently his works contain research postulates and programmes for certain investigations that have not been undertaken so far, e.g. by psychologists. It is the development of the theory of generative grammars that is to inspire this type of research.

The links between Chomsky's theory and various domains of philosophical studies are of somewhat different nature. Here, use is made of assumptions long established in philosophy and — as it has seemed until recently — ultimately rejected. The problem concerns, of course, nativistic views on the development of a human being, especially the development of the mechanism of language use. Round these issues centers Schaff's book — a polemic with nativistic assumptions expressed by Chomsky and other scholars who share similar views.

The book falls into three fundamental parts:

- 1) A summary of Chomsky's views (also those held by J. J. Katz and E. Lenneberg) on the theory of generative grammars.
- 2) A review of the opinions of biologists (J. Monod, F. Jacob) on the possibility of justifying nativistic assumptions by means of assertions worked out by modern molecular biology.
- 3) A proper polemic with Chomsky's nativistic theory.

The dominating motif discernible in the first part of Schaff's book could be phrased as *nihil novi sub sole* (reference being made to Chomsky's views of course). Maybe the author of the book under discussion let himself be influenced by Chomsky's constant references to theories worked out by various recognized authorities in various fields of science. Besides, a contemporary reader is more or less familiar with most of them (to quote e.g., the linguistic theories of W. Humboldt or the grammar of Port Royal). Chomsky himself tries to show the relationship of his theory with the views commonly held in the past (often, hundreds of years ago). In the theory of generative grammars Schaff discovers also other affinities to which Chomsky would never consent. Thus, e.g., to Schaff, notions of surface and deep structure are an echo of the so-called theory of *double articulation* worked out by A. Martinet. The distinction between *competence* and *performance*, made within generative grammars, appears to be nothing but the Saussurean distinction between *langue* and *parole* or *code* and *message* in terms of cybernetics. Chomsky would certainly disagree with the existence of such a relationship, especially if one takes into consideration the consistency with which he isolates himself from various theories of the so-called structural linguistics initiated by F. de Saussure. Besides, suffice it to say, terms such as *competence* and *langue* occur in theories which are fundamentally different and have different theoretical assumptions, and so their comparability is highly limited. Once de Saussure's and Chomsky's assumptions are explicitly explained, it is easy to point out differences in the conception of individual terms used in both theories — differences resulting from the characteristics of the adopted assumptions. It may well turn out then that suggested similarity between Chomsky's theory and views held by de Saussure or Martinet is only apparent.

There is no room for a detailed reconstruction of all the assumptions that determine the specific character of Chomsky's theory when viewed against the theories which preceded it, especially the theory of so-called linguistic structuralism. However, it is

worth mentioning at least some of them. What should be emphasized is the objectives put forward by structuralists and those that Chomsky wants to achieve by means of the generative grammars' theory. One of Chomsky's earlier works bears the title *Explanatory models in linguistics*. This title is the more significant as it points to the aims of linguistics developed along the assumptions outlined in the theory of generative grammars. The problem is to construct linguistics in such a way that it will be possible not only to describe linguistic phenomena but also to explain them. Above all linguistics is to provide an answer to Humboldt's question asking how it is possible to make infinite use of finite language resources, e.g., it should help discover the mechanism of language use by man. Hitherto existing structural linguistics limited itself to making a more or less precise inventory of such resources, i.e. description of sound, grammatical and lexical resources of individual language. The so-called general linguistics tried to find out what type of mechanism enables man to use language, how to explain synchronic and historical phenomena occurring in various languages, etc. However, these considerations were of very slight importance, and secondly, they were inadequate in relation to the empirical data (according to Chomsky). The fact that they were of marginal significance indicates that it was conceivable to develop purely descriptive linguistics without recognizing the necessity to formulate assumptions which help explain linguistic facts. In the more extreme theoretical systems this view functioned even as a dogma (e.g. the so-called distributionalist American School). On the other hand, the inadequacy of assumptions and explanatory models worked out by structuralists (these were mostly implicit assumptions) consisted mainly in treating language as a system-mechanism, largely independent of the behaviour of individuals using this language; in any case, without the conscious knowledge (e.g. cultural) of the speakers.

The problem of providing an explanation for linguistic phenomena had already been very clearly raised before F. de Saussure (the beginning of structural linguistics dates from the publication of *The course in general linguistics*), when scientific linguistics meant historical studies of linguistic phenomena. The neogrammarians' theory of language is also unable to offer any answers to Chomsky's basic questions about the mechanism of using language by an individual. The reason for this is that "neogrammarians" constructed rules (often pseudo-rules) about the historical development of a language (or group of languages) thus explaining the various historical changes the language had undergone. Again, the role of individual speakers in the process of such historical changes in language was totally ignored, or given a very slight consideration.

Both neogrammarians and structuralists aimed at converting linguistics into a "science" by bringing it closer to the natural sciences which do not refer to conscious activities of man. Hence the great sympathy for the view of the language system as a mechanism which lies beyond the individual's awareness, and whose synchronic state and historical development depend only minimally on the conscious activities of an individual. Hence the reluctance towards subjective terms such as *knowledge of an individual, communicative purpose*, and frequently, even the *meaning of an utterance*. The latter notion was also troublesome for the linguists who deluded themselves that the theory of a language could be constructed without the use of subjective terms.

This lengthy historical introduction on the development of linguistics preceding the development of generative grammars was necessary to make it clear that not everything in Chomsky's theory may be traced back to the earlier theories.

In the first place, it should be emphasized that in contrast to the theory of structural descriptivists, Chomsky's theory has an explanatory character. Secondly, the theory explaining linguistic facts is based on the assumptions which refer to the speaker's consciousness (notions such as *competence* and *deep structure* have a clearly subjective character.

Thirdly, Chomsky's theory is not naive-realistic, since scientific assertions included in its framework are assumed to have an idealizational character. Description of linguistic competence is an ideal type of knowledge indispensable for a speaker to use a given language creatively.

At first glance the acceptance of Chomsky's innovatory ideas (at least in linguistics) seems to be of small importance for the problems of nativism included in his theory. However, if they are left unspecified, Schaff's words will lose ground, "(...) in its radical form ideas of Chomsky's theory appear to be neither new nor original, his whole theory though, I consider as valuable and innovatory" (p. 20). It would follow then, that old ideas can be compiled so as to result in a "valuable and innovatory" theory. It is clear that the accomplishment of this innovation demands the inclusion of old ideas to the system of assertions (innovatory ones) where old assertions will function in a completely different way than before. Presumably this is what happened with certain ideas that Chomsky took over from Humboldt or Carthosius and included into his original system of linguistic assertions called the theory of generative grammars.

Pointing out the explanatory character of Chomsky's theory is also essential for another reason — one more closely related to the main subject of Schaff's book. Namely, one can notice that it is impossible to leave out nativistic assumptions from Chomsky's theory (or replace them with other alternative assumptions) without violating the whole theory. It is important to realize that within the rationale of generative grammar, the concept of innate structures inherent in the *acquisition device* of language (...) is not accidental but is a necessary conception; without it one cannot justify the thesis on the universality of grammar (...), universality of deep structures and a specific understanding of linguistic competence, and ultimately, a specific conception of grammar and linguistic theory (p. 30).

Schaff does not, however, explain what justification he refers to in the quoted passage. The thesis of the universality of linguistic structures might be confirmed by checking (verifying or falsifying) and confronting it with observable sentences. However, what Chomsky (and probably Schaff) aims at is to find a justification by providing premises for the observables about the universality of certain linguistic structures. One can think of a linguistic theory which would accept assumptions about universality and which at the same time would not demand the acceptance of nativistic assumptions. Then, of course it would be impossible to construct an explanans for the assumption about the universality of linguistic structures; the assumption would remain unjustified in the sense that it would be unexplainable on the basis of a given theory. This is what "necessitates" the inclusion of a nativistic conception into the theory of generative grammars. Had he constructed his theory drawing on his predecessors e.g., American structuralists, he would have left the problem of universality without the explanans. To avoid issue in such a way is of course unthinkable in a theory which claims to be explanatory.

Finally, we come to basic objections Schaff raised against Chomsky's theory. All these critical remarks (the closing part of the book contains at least five of them) may be reduced to one which is essential and certainly fundamental from the methodological point of view. The point is that the explanation proposed by Chomsky in his works has an ad hoc character, due to the lack of empirical evidence for the nativistic assumptions he adopts as a premise in the explanans of this explanation. Schaff does not formulate his objections by speaking directly about the ad hoc error in explanation (in his criticism of Chomsky, Schaff speaks very little indeed about the explanation itself, though the types of linguistic explanation proposed by Chomsky are crucial to the whole conception). However, he imputes the *petitio principii* error to some of Chomsky's argumentations. It is worth realizing that:

- 1) this error is to be found in the argumentations that serve as explanations,
- 2) premises which occur in the explanans of these explanations are not wholly unjustified because they are confirmed at least by the facts which are being explained.

The fact that the explanans is confirmed by the facts which are being explained with its help, is an ad hoc error in explanation. Thus the charge of *petitio principii* may be reduced to an ad hoc error in explanation (accusation of using *petitio principii* may also be interpreted as a vicious circle, which I suppose, is not what Schaff wants to suggest).

It turns out that the help of biologists Jacques Monod and Francois Jacob have been sought in order to show that contemporary molecular biology dealing with the inheritance of the so-called chromosome code and with the problems of transmitting genetic information by means of this code, is unable to provide descriptions of the facts which would support the nativistic thesis adopted by Chomsky. The same applies to contemporary biologists whose investigations do not offer the basis for rejecting (providing false) the thesis. For this reason Schaff concludes that it is too early to accept or reject nativistic assumptions in their non-trivial form. One may reduce all the objections — as it has already been done — to one criticism, that it is this premise (nativistic assumption) that charges the whole, hierarchically built explanation with an ad hoc error.

It seems, however, that even if Chomsky himself was not aware of such a shortcoming in his theory, he at least suspected the possibility of being charged with an ad hoc error. The evidence for this may be found in his more theoretical works such as, e.g., *Language and mind* in which he postulates that investigations concerning certain biological mechanisms should be undertaken in other fields of science (psychology, neurophysiology). The purpose of this would be to find in these extralinguistic domains justifications of the nativistic thesis independent of linguistic facts. Until such independent evidence is provided, it will be impossible to refute the charge that the explanation adopted by Chomsky has an ad hoc character, due to the nativistic premise. However, the charge may be considerably weakened by pointing out that Chomsky's conception is free from an ad hoc error in the "potential" sense (i.e., when we assume that it is utterly impossible to confirm the hypothesis used as a premise in the explanans at any stage of the development of science). The charge of the ad hoc error in the "actual" sense (i.e., at this very moment, at the present stage of scientific research such an independent justification is unattainable) has been applied (and may be applied) to the majority of scientific theories at the very moment of their being formulated.

Not all of Schaff's charges, however, can be reduced to a problem of correct explanation and empirical evidence for the premises which occur in the explanans of this explanation. Some of the polemical remarks (whether less or more accurate) refer to consequences which might result from the acceptance of the nativistic assumptions proposed by Chomsky. Thus, according to Schaff, factors which determine language use would turn out to be unessential. This charge seems to be of small importance, especially when one considers the fact that neither Chomsky nor any of the scholars working along similar lines adopt the thesis which states that all the properties of the language used by an individual are biologically inherited by him. Identity of thinking and language is according to Schaff another consequence of Chomsky's thesis, which, in addition, is contradictory to the views on the non-identity of language and thinking expressed explicitly by Chomsky and Lenneberg.

It is worth considering one more of Schaff's arguments. Schaff proposes to perform an experiment which would enable the formulation of an *experimentum crucis*. The latter would evaluate whether the thesis about the existence of a universal grammar common to all languages is true or false. In this view, the proposed experiment would consist in programming a computer in such a way that it could "move" from the surface