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ON THE FOUNDATIONS OF POETICS

*Methodological Prolegomena to a Generative Grammar of Literary Texts**

1. INTRODUCTION

1.1 Recent developments in the field of literary scholarship suggest the possible elaboration of a generative grammar of literary texts. Such an explicit theory of a specific type of linguistic objects demands a thorough examination of its methodological and epistemological presuppositions.

Furthermore, other problems about the FOUNDATIONS of the theory of literature ('poetics') have to be considered, such as

— the relations between a formal theory, or grammar, of (literary) texts and a more empirical theory of literary 'context' or 'performance', i.e. the systematic study of the psycho-social conditions and functions of texts;

— the relations between model-, concept-, hypothesis-, and theory-formation in such related disciplines as linguistics and poetics on the one hand and the other (social) sciences on the other hand.

1.2 This paper will only pay attention to some aspects of these problems, especially with respect to metatheoretical and methodological issues of recent discussions in generative grammar and psycholinguistics. It will only very briefly touch upon the current philosophical (epistemological) debate about the presuppositions, aims and tasks of the social sciences in general (*Methodenstreit*). It will not try to give a solution to the problems mentioned, but only a satisfactory reformulation of those considered as most basic. Furthermore, a preliminary sketch of the theoretical framework will be given, in which a fruitful discussion about them can be established.

• This paper is a slightly revised version of a paper contributed to the symposium "Zur wissenschaftstheoretischen Fundierung der Literaturwissenschaft", Karlsruhe (Western Germany), October 24-25, 1970, of which the proceedings have been published in Schmidt, ed. (1972). For a more adequate account of some issues treated here, see van Dijk (1972a).

The main principles of both the philosophy of science and generative grammar are supposed to be rather well-known by now in modern literary scholarship, and should need no further introduction here (cf. Nagel, 1961; and Ruwet, 1968).

2. TEXTS AND GENERATIVE GRAMMARS

2.1 Before I discuss some problems concerning the foundations of poetics, a short sketch should be given of the theoretical framework in which a grammar of literary texts can be developed.

2.2 A literary text may intuitively and very briefly be defined as a 'specific' linguistic (i.e. lingual) object having some 'specific' psycho-social functions. The task of a theory of literature can be described in that perspective as the explicit and systematic account of these 'specific' aspects of the type of communication or semiotic process we conventionally call literary'. This task implies that we have to formulate the conditions, the rules and the functions that delimit the set of literary texts against other types of texts and the underlying system of literary behavior' against other manifestations of linguistic, esthetic, etc., i.e. psycho-social behavior.

2.3 In order to accomplish this task, two fundamental } different but mutually dependent and complementary aims have to be formulated:

- (a) the construction of an explicit theory of the FORMAL structures of literary texts, i.e. of the underlying system ABS TRACTLY determining the generation of literary texts;
- (b) the construction of a more empirical theory of the RELATIONS between
 - (i) this abstract system and its concrete manifestations in processes of communication
 - (ii) texts and their psycho-social environment or context, i.e. the set of their conditions and functions.

The first theory will be called a GRAMMAR OF LITERARY TEXTS and is defined by a syntactic, semantic and phono- (or grapho-)logical component. The second theory is the THEORY OF LITERARY CONTEXT OR PERFORMANCE, and belongs to the pragmatic component of the whole theory of literature.¹

¹ The status of logical and linguistic pragmatics is not yet wholly clear. Some

This distinction, of course, derives from a similar approach in linguistics: a theory of competence (*langue, énoncé*) vs. a theory of performance (*parole, énonciation*).

I will assume that an explicit grammar of literary texts, which has to explain the ability of each native speaker to produce (interpret) an infinite number of new literary texts, is included in the theory of literary performance (see below).

When formalized, the grammar of literary texts can be seen as the properly **DEDUCTIVE** part of literary theory, of which the other parts are still mainly empirical and inductive. This does not mean that the grammar should not be tested on empirical grounds. Neither does it mean that in future the more empirical performance-component could not be formulated in one or more psychological or sociological theories having a deductive character.

2.4 In the first sections of this paper I will mainly discuss some problems concerning the formal grammar of literary texts. In that perspective it might be clear from the outset that such a grammar logically presupposes a **GRAMMAR OF TEXTS** in general, of which a grammar of literary texts would be either a (proper) subset or a derived set defined by a certain number of complementary rules (cf. van Dijk, 1971a, 1972a). However, such a theory of texts does not yet exist, and only very recently some attempts have been made to discover its possible regularities.

Chomsky's generative-transformational grammar, as is well-known, has extended the scope of a theory of language beyond the boundaries of the morpheme and the phrase, and has propounded an algorithm for the description of **SENTENCE STRUCTURE**, mainly at the level of syntax (Chomsky, 1957, 1965). Some structuralists (Harris, 1952, 1963, 1968; Hartmann, 1968, 1970; Harweg, 1968; Koch, 1966, 1970) and philosophers (Schmidt, 1969, 1970a, 1970b) have made important contributions to our systematic knowledge of **TEXTUAL STRUCTURES**, and recently also some transformationalists (Bever and Ross, n.d.; Karttunen, 1969; Bellert, 1970; Heidolph, 1966; Hendricks, 1967; Isenberg, 1970, 1971), have argued that an adequate theory of language (or competence) has

recent discussions make a distinction between pragmatics as a formal theory of language use on the one hand and a psycho-sociolinguistic theory of performance. A formal pragmatics, then, would formulate rules and general conditions determining the appropriateness of utterances in 'speech events', and therefore possibly defines what has been called a 'communicative competence', i.e. the idealized knowledge of native speakers to relate utterances with functional elements of the communicative situation. Cf. Wunderlich, 1970; van Dijk, 1972a : Ch. 9; Schmidt, 1971b; Hymes, 1968.

to account also for regular structures in texts ('connected discourse', or 'connected speech' as Harris called it).² More traditional methods (e.g. Glinz, 1965) in this field have even been subject to severe criticism on methodological grounds (cf. Bierwisch, 1970).

I will not — here — go into the numerous motivations that have led to the different attempts to construct a theory of texts. It is sufficient to underline the fact that a solution of numerous important linguistic problems can only be awaited in such a framework (cf. Sanders, 1969; Petöfi, 1971; Isenberg, 1970, 1971; Van Dijk, 1971f, 1972a). Furthermore, a theory of texts has a strong empirical ground — which constitutes a necessary transition to a theory of performance —: speakers of a language do not produce (a virtually infinite number of) sentences but (of) texts. CONTENT ANALYSIS has made important contributions to our knowledge about these psycho-social aspects of texts (cf. Holsti, 1969).

2.5 Attempts accounting for textual structures by defining them (like Katz and Fodor, 1963) as 'long sentences' must surely be rejected as inadequate. Similar ideas have been put forward in literary theory by Barthes (1966: 3) and Kristeva (1969: 228sqq.). We have to note however that there is a difference between taking the theory of the sentence as a MODEL or as a BASIS from which a theory of texts can be derived. The necessary restrictions upon the relations between embedded sentences, necessary in such a hypothesis, have hardly been formulated in such approaches (cf. however Karttunen, 1969; Heidolph, 1966; and recent work on pronominalization).³

These 'linear' approaches are a necessary but far from sufficient component in a theory of texts, because they do not make explicit MACROSTRUCTURAL RELATIONS AND DEPENDENCIES in texts, which in

² It is impossible to cite here all relevant work done in the field of textual linguistics in general and in generative text grammar in particular. Since this paper was written a number of important studies appeared; for full bibliographical reference see Ihwe (1972), van Dijk (1972a). Surveys have been provided also by Petöfi (1971) and Dressler (1970). For a linguistic account of textual structures based on generative semantics and modal logic, cf. Kummer (1971a,b,c).

³ The recent interest in such linguistic issues as pronominalization, definitivization, relative clause formation, presupposition, topic and comment, etc. can be considered to be characteristic for the 'transition' from sentence grammars to text grammars. Most relevant conditions determining these processes depend on relations between sentences, i.e. their underlying semantic representations, in coherent sequences of a text. Only few linguists however have hitherto been willing to account for the implications of such an hypothesis. For reference to current work on these topics within sentence grammar see van Dijk, 1972a; Ch. 2.

surface structure can be discontinuous. Moreover, the form of derived (complex) sentence cannot be predicted from the set of preceding sentences $Z_1, Z_2 \dots Z_{i-1}$ ALONE (as is argued by Bellert, 1970), but can on its semantic level also be determined by the following sentences $Z_{i+1}, \dots Z_n$ of the text. A linear (e.g. Markovian) model for a theory of texts is just as insufficient as it turned out to be for a theory of sentence structures like Chomsky's grammar (cf. Chomsky, 1963). Right-hand branching rules which embed — by conjunction — an indefinite number of sentences are therefore only one — linear, superficial — aspect of a possible solution. Rules like $T \rightarrow (S)$ " (Isenberg, 1971) or $S \# \& S$, are therefore inadequate as possible initial formulas of a derivation of TEXTUAL DEEP STRUCTURES (cf. Van Dijk, 1972a).

2.6 Even when a text cannot formally be described as a 'long sentence' I shall depart from the working hypothesis that the theory of sentence structures can serve as a MODEL for the explication of text-structures. A grammar of texts has to formulate in that case the rules generating what I call: TEXTUAL DEEP STRUCTURES. These can only have a (logico-) semantic character (cf. Bellert, 1970, 1971), syntactic categories being defined within sentences only.

The theory of the sentence in recent generative semantics (McCawley, 1968; Lakoff, 1971; Fillmore, 1969; etc. see: Abraham and Binnick, 1969; and Van Dijk, 1970a, 1970b) also bases itself on semantic deep structures: the model we use is therefore such as is formulated in their theory, whatever its present weaknesses still may be (cf. Chomsky, 1971; Katz, 1970).⁴

Models for BOTH sentential and textual deep structures have been searched for in predicate calculus, where the atomical expression $f(x)$ or $g(x, y)$ can be compared with elementary subject-predicate and subject-predicate-object constructions (cf. Brekle, 1969; Rohrer, 1971; Van Dijk, 1971f).

Furthermore, we can find theoretical confirmation for text grammars in psycholinguistics, where TOTE-units or PLANS have been postulated

⁴ The discussion between generative and interpretive semantics is a central issue in current linguistics, but cannot be treated here. It may be conceded that generative semantics until recently (cf. Rohrer, 1971) did not yet formulate explicit rules mapping underlying semantic representations on syntactic surface structures, but it is obvious at the same time that it has raised a number of very interesting problems and that it tackled issues which received little interest in the syntax based interpretive semantical theory. Especially the Glose relationship established with modern logical systems are mainly due to the work of generative semanticists (cf. e.g. Lakoff, 1970).

to account for complex (e.g. linguistic) behaviour. Such plans can be characterized as formal reconstructions of internal intentional schema's. In the production of texts such plans must — in a theory of performance — be made explicit, for they account for the fact that a speaker is able to produce a COHERENT text and postpone some elements for later realization (cf. Miller, Galanter and Pribram, 1960; and Miller and Chomsky, 1963). Textual *deep* structures can therefore intuitively be characterized as formal 'abstracts' of a text, a 'program' (like that of a computer) guiding its further *surface* derivation (sentence-structures, lexemes, etc.). Similar ideas have been put forward in literary theory as well (cf. Hendricks, forthcoming; Van Dijk, 1971a, 1971e). Categories in textual deep structure are — as I said — semantic and/or logical, and can be provisionally set up with the help of existing 'syntactic' categories (*NP*, *VP*, *Adj*, etc.) by giving them a SEMANTIC interpretation (Argument, Predicate, Modifier, etc.). Furthermore, explicit indications are required to state the RELATIONS between these categories. Their abstract character excludes a LINEARLY ORDERED (syntactical) conception of them, but they can be defined by semantic RELATIONS as 'Agent', 'Patient', 'Object', 'Action', Predication / Attribution, 'Time', 'Place', etc., as defined in case-grammars like those of Fillmore (1968) and Greimas (1966).

2.7 Textual deep structures, of which no more can be said at the moment, have to be related with TEXTUAL SURFACE STRUCTURES. These are the abstract output of a set OF TEXTUAL TRANSFORMATION RULES and form in fact a 'shallow structure' (cf. Lakoff, 1971) of the text. Real surface structure of the text is the linear surface structure of its subsequent sentences, for which special restrictions must be formulated.

Transformations can add, delete, substitute and permutate parts of textual deep structure.

The great problem in this stage of textual derivation is the transition from textual to sentential structures: how are abstract, global structures 'particularized' into the more precise, concrete semantic representations of sentence deep structure? Here we probably have to deal with a process of 'specification' of the global semantic representation, which in that case can be seen as formed of abstract prelexical configurations of semantic features on which more precise sentential elements (lexemes) must be based. The selection procedure involved here is rather free and can therefore result in stylistically interpretable surface structures. Restrictions are merely 'global': only a number of ptedications/attribu-

tions have to be connected with 'agentive' elements. Further derivation of sentences is given in existing TG-grammars. Their pronominal (and otherwise referential), temporal, presuppositional (Fillmore, 1965; Kuroda, 1969; Morgan, 1969) relations can, I believe, be explained only at the basis of a more comprehensive underlying structure: textual deep and surface (shallow) structure. Stylistically different PARAPI-IRASES of texts can now be described as different manifestations of similar textual deep structures (for detail see van Dijk, 1972a).

It is clear that a great number of theoretical problems has still to be resolved before these proposals can stand any empirical proof. And my further argument, taking this grammar of texts as a basis, can therefore be no less speculative.

3. RULES GENERATING LITERARY TEXTS

3.1 Before I proceed to a discussion of the methodological difficulties of the sketched grammar of texts, we have to indicate briefly where the 'literary' comes in. This faces us immediately with the intricate problem of the relations between language and literature, between linguistics and poetics, which have so much preoccupied the discussion of the last decade: are literary operations (defined by literary rules) part of our 'competence' to generate (grammatical, well-formed) texts (Bierwisch, 1965), or are they to be considered as products of a DERIVED ability, only definable in performance, etc. (cf. Ihwe, 1970). And what is the status of a hypothetical 'system' underlying 'daily' conversations, newspaper language, etc., i.e. the so-called 'normal language'?

I will not follow the habitual linguistic practice and reject structures of literary texts to the study of performance by calling them *ad hoc* 'deviations' or 'ungrammatical constructions'. This position — which is even empirically inadequate because many literary texts, especially narrative ones, seldom have grammatical deviations — ignores the fact that the structures of literary texts can be no less 'regular' than those of non-literary texts, regularities that can be accounted for in a formal theory or grammar of general linguistic competence, Chomsky's sentential grammar of idealized 'normal' usage is only a subset of our general grammar which as a lower bound also has to account for the production of 'normal' (non-literary) texts. *G'* therefore must be seen as a very abstract grammar from which a set of specific so-called 'following' sub-grammars (cf. Bierwisch and Kiefer, 1969) $O_2, \dots G$ can

be derived for a (natural) language. The infinite sets of 'normal' sentences and 'normal', i.e. non-literary, texts (*LN*) are only parts of together with the set of literary texts (*LL'*). The grammars specifying them are *GN'* and *GL'* respectively. (I shall further omit the superior index *l*, indicating a particular natural language.)

As a hypothesis I will assume that all rules (and the whole lexicon) of *GN* are included in *GL*, for any literary text can at least be generated by the rules of 'normal' grammar, but mostly complementary rules are necessary to account for 'literary' operations. This inclusion relation can trivially be represented as follows:

(1) $(GN \supset GL) \subset G$

3.2 The 'actualization' of these different sub-grammars, *GN*, *GL*, *Gx...*, depends on contextual CONDITIONS (cf. Pécheux, 1969) which are formulated in a THEORY OF PERFORMANCE. For example, reading a newspaper makes say, *GN*, work, while a book of poems is read with a *GL* — or a sub-grammar of *GL*, e.g. *GLP*. These facts explain the well-known observations of information-theory about 'expectancy' (information/redundancy) in perceiving structures, and in interpreting the functions and conditions of 'stylistic elements' (Bense, 1969; cf. Van Dijk, 1971d).

I therefore emphasize the usefulness of a competence/performance distinction in literary theory as well. The (structures of) texts generated by the specific rules of literary grammar can only FORMALLY be called 'literary'. In practice such literary 'well-formed' texts might just as well be NON-ACCEPTABLE as texts of the literary language' *LL*, i.e. of the literature of a certain culture. The opposite also happens: texts in which no literary rule is respected (but only those of *GN*) can be accepted in concrete situations as 'literary'. The decision about the literary character of a text, its 'literariness' (cf. Éjkenbaum, 1965; Todorov, 1968: 102) is therefore a function of historical, ideological, esthetical, psycho-social factors of which the formal literary properties are only a part.

3.3 No extensive formulation or examples of literary rules will be given here. I will content myself with specifying schematically their abstract character.

Literary rules occur on each level of linguistic objects: the semantic, syntactic and morpho-phonological level and furthermore both in the textual and the sentential 'range' of the theory. It is not certain whether MACRO-STRUCTURAL FORMATION RULES exist: any textual deep structure

may formally underly a literary text only if it is semantically well-formed ('interpretable'). We use the well-known solution of semi-sentences theory (Chomsky, 1964; Katz, 1964) as a model and suppose that the interpretation of the different degrees of (textual) semantic ill-formedness is, by analogy, connected with the interpretation of well-formed structures. In performance such an interpretation may be established by context or situation, for example when ambiguous surface structures of texts have to be interpreted. Probably some restrictions exist for some types of literary texts. Textual formation rules for narrative texts seem e.g. to exclude the generation of non-human (or non-personified) 'agents' (Greimas, 1966, 1970; cf. *Communications* 8 [1966D]. Most literary rules however seem to be TRANSFORMATIONAL: non-literary deep structures can serve as input to literary transformation rules (textual additions, permutations, substitutions, deletions). Parts of narrative texts can be deleted, in order to create the well-known suspense-character of 'undecidedness' in detective stories. Chronological permutation is e.g. one of the most traditional transformations in narrative texts. It might be clear that these macro-operations like textual transformation mainly define narrative texts (cf. Van Dijk, 1970c, 1972e).

On the level of MICRO-STRUCTURAL OPERATIONS (i.e. within the sentence or group of subsequent sentences) most rules seem to define POETIC texts (cf. Van Dijk, 1972b). Specific syntactic rules (permutation, deletion of verbs or articles) semantic rules (metaphor, metonymy, etc., cf. Bloomfield, 1963; Bickerton, 1969; Van Dijk, 1970b) and the most superficial morpho-phonological rules (rhyme, metre, alliteration, etc., cf. Halle and Keyser, 1966; Valesio, 1971) are well known from classical 'rhetorical' figures and traditional literary theory (cf. Dubois *e.a.*, 1970). The knowledge of the components in existing transformational grammar can help us to find an explicit formulation of these rules. Some of them, like the syntactic and some semantic ones, can be viewed as transformations, others like the morpho-phonological seem to operate even before lexical insertion rules (lexematization) and should therefore be interpreted as specific types of selection rules.

3.4 No further specification of these literary' rules will now be given. This rapid, schematic treatment may suffice to get a rough idea about what a 'grammar of literary texts' would look like (for details and synthesis, cf. Ihwe, 1972; van Dijk, 1971d, 1971e, 1972a, 1972c).

I am now able to come to the main topic of my paper: the methodological foundations of the foregoing speculations.

4. METHODOLOGICAL PROBLEMS OF A GRAMMAR OF LITERARY TEXTS

4.1 A generative grammar of literary texts, just like grammars of natural languages and other systems derived from them, is only the abstract, ideal, final `text of a long process of research. It is the hypothetical result of observation and empirical induction and/or of speculative, hypothetico-deductive reasoning. Like for all empirical theories, its implications must be tested both on formal, internal criteria such as explicitness, coherence, consistency, completeness, simplicity, etc. and on empirical external criteria: adequate observation, description, prediction and explanation (cf. Hempel, 1966; Nagel, 1961).

Having adopted — in establishing the schema of a grammar — a generative standpoint, literary theory can be characterized as HYPOTHE-
TICO-DEDUCTIVE. Such a strategy however is not devoid of rather strong pretensions, for it implies the construction of an explicit axiomatizable theory which only in very few disciplines has been realized so *far*. In the actual stage of literary research we are far from being able to test our predictions, because they are too general and often too vague to permit the formulation of explicit rules. However I have taken such a (partially) formalized theory as a model, viz. generative-transformational grammar, and the `strength' of my pretensions in some way derives from it. We may formulate for example our fundamental aims analogically with those of TG-grammar and try to find out in what respect these aims can be said to be similar, and where the basically different aims of these two theories must be searched for.

4.2 One of the methodological gaps between traditional structuralist theories and generative grammars can be characterized as the opposition INDUCTIVE VS. DEDUCTIVE. Chomsky has demonstrated that a mechanical discovery procedure analyzing existing sentences (or rather: utterances) cannot be formulated such as to yield a grammar of the language (cf. Chomsky, 1965: 49sqq.; Ruwet, 1968: 66sqq.). Such a task is far beyond the possibilities of a general linguistic theory. Types of existing co-occurrence relations cannot be enumerated in a taxonomy which by `generalization' would automatically produce a theory of the language. In modern science it has become clear that no criteria, rules or analytic procedures can automatically provide interesting hypotheses. New ideas, as Popper (1968: 31-22, 280) remarked, are conceived by bold speculation and not by accumulation of empirical data. A corpus of actualized language in the form of some texts is only a very small arbitrary part of the infinite set of possible sentences and texts. No more than PROBA-

MIMES of occurrences can in this way be calculated, which only reflects language-use, i.e. performance. The so-called representativeness of the sample can only be decided by the theory.

A theory of a system like linguistic competence must have a mathematical character in order to account for the recursive enumeration and description of all and only sentences (and texts) of the language. We therefore need (or none) formulations of linguistic regularities in the shape of RULES.

Similarly, a grammar of literary texts is said to consist of such rules. In adopting this model of a generative grammar we have to ask some questions concerning the metatheoretical status of rules in general: what is their form, which types of rules can be distinguished, how can we test rules on their empirical adequacy? etc.

Rules in generative grammar can be considered as 'instructions' (cf. Black, 1962: 110) that permit the rewriting of a symbol as some other symbols in a derivation of all the well-formed formula, i.e. the grammatical sentences, of the language. They indicate explicitly the 'permitted steps' in which one formula may be substituted by another formula, thus giving a correct description of the functional components of the sentence or text to be derived. Chomsky's well-known distinction between FORMATION RULES and TRANSFORMATION RULES seems to reflect similar distinctions in mathematics and logic. However, no exact parallel does exist here: the grammar's base-component derives a (deep) structure (as a 'theorem') (cf. Gross and Lentin, 1967: 37, 80) from an initial symbol *S* (an 'axiom'), whereas formation-rules in logic (cf. Reichenbach, 1947: 16) only indicate which formula is well-formed (meaningful) in the particular logical language, transformation rules (derivation rules) being the deductive steps permitted to derive well-formed formula from other 'wff's. On the other hand, Chomsky uses the term 'derivation' or 'derive' also — like in logic to indicate the relation between 'derived' sentences as the output of grammatical transformations and their underlying 'well-formed' deep-structure(s) (or *earlier* — direct manifestation as 'kernel-sentences').

In GENERATIVE SEMANTICS this conception has changed. Here deep structure (formation) rules now make explicit the structure of well-formed semantic representations, and transformation rules assign syntactically and lexically different surface-forms to these representations (cf. Lakoff, 1971). Similarly, the rules in a grammar of (literary) texts specify which structures can be said to be 'interpretable', i.e. which structures can be assigned a well-formed semantic representation.

It is interesting to remark that the initial concepts from logic seem to be inverted in this theory: formation rules no longer seem to indicate the permitted 'syntactic' form of an expression independent of its 'meaning', but conversely have to specify which 'semantic' representation can receive a syntactic form that is grammatical or semi-grammatical in the language.

However, the difference is misleading while a semantic base-component is no less 'formal' than a syntactic theory: before their INTERPRETATIONS as meaning-of-natural-language, deep structure formula are also submitted purely formal conditions of well-formedness. We therefore have to keep in mind the difference of meaning between the terms 'syntax' and 'semantics' in grammar and logic (or semiotics) respectively.

The use of rules in a literary theory, as we noticed, not only serves the explicitness of the theory by giving mechanical descriptions of all possible text structures, but also has an economical motivation. The specific character of rules, i.e. the fact that they can be reapplied in specifying identical structures in different texts, and the existence of RECURSIVE RULES and RULE SCHEMATA enable us with the use of only a few rules (and a lexicon) to derive an infinite number of (different) texts. No taxonomy of (observed) structures will in this respect match the demand of describing all possible literary texts generatable by the simple combination of different rules. The specifically literary' structures — e.g. alliteration in poems and chronological permutation in narrative — are in the same way described by rules, thus accounting (formally) for the fact that — within a certain culture — these structures are considered as 'grammatical' elements of literary texts. The empirical phenomenon of recognizing a text as literary', i.e. belonging to *LL*, can only effectively be explained — at the level of the theory of the text — by the formulation of a theory of an underlying system consisting of productive rules.

These literary' rules, of course, have to be tested both internally with respect to their most explicit, economical formulation and externally with respect to their predictive, empirical power. We therefore will need rules that relate a formally generated literary text with a concretely existing literary text occurring in specific psycho-social environment. Such transition-rules enable our theory to have an empirical, predictive character. The rules of the literary grammar and the categories they manipulate are theoretical in nature and therefore demand — at least at some points — 'translation' into observable features as the specific reactions of readers to texts of the literary type.

In the methodology of generative grammar tests need not refer to

`oven behaviour' ; judgements based on internal intuitive criteria no less witness about the presence of an internalized (literary) system.

43 The process of verification or falsification of our predictions seems therefore to demand another component in a full-fledged literary theory, that is — **2S** we say — a **THEORY OF LITERARY PERFORMANCE** (cf. van Dijk, 1971c). The useful methodological distinction competence (system) vs. performance (use) cannot be dispensed with in an adequate literary theory, for it accounts for the important fact that texts that are formally literary' (LL-grammatical) are sometimes not **ACCEPTED** as such by a subject knowing *LL*.

This acceptance or rejection of the text as belonging to the 'language' (literature) is generally not an all or none decision. Like most empirical, psycho-social, judgements of native speakers we have to do with aspects of **GRADIENCE**. In a theory of literary competence this phenomenon is formally accounted for in the explication of 'degrees of grammaticalness'; in a theory of performance the (non-corresponding) 'degrees of acceptability' must have a probabilistic character.

Our external testing of a theory of literary competence by asking judgements about the literary grammaticalness of a particular text turn out to be possible only through a stage of 'performance' : in fact, we do not test the grammaticalness of a text but the acceptability of the text, and only in a very limited and ideal range of circumstances these can be considered as 'parallel' (cf. Quirk and Svartvik, 1966: 11-12). With Chomsky (1965: 10) we have to suppose that a theory of performance includes a theory of competence. The literary abilities of native speakers (readers) can only be **EXPLAINED** if an abstract automaton, generating the infinite number of literary texts the reader can interpret, is postulated. The theory of this automaton, i.e. literary grammar, will however be 'situated' in a wider, empirical frame of additional rules, conditions, factors, functions, etc. accompanying the actual communication of literary texts. Thus, a theory of literary performance is not only a 'bridge' to the explanation of the production/reception of concrete literary texts, it has to formulate those principles determining the conditions, the verbal and non-verbal **CONTEXT** of the text, the role of which is decisive for judgements about its specifically **LITERARY** character, or rather : its concrete membership of the set of literary texts that in culture x at time t is considered as 'literature' or as a corresponding derived concept ('drama', 'narrative', 'myth', etc.).

4.4 One will notice that the distinction between competence and performance in literary theory not exactly mirrors the analogous distinction made in TG-grammar. It is well-known that a great number of intricate problems in transformational linguistics are said to belong to the study of performance and not to that of competence. The theory of performance is thus often considered as the wastepaper-basket for unresolved

We have already tried to prove that the study of textual structures in general constitutes a part of the grammar and not of a theory of performance. In the same perspective 'regularities' occurring in some TYPES of texts, like literature, must not hastily be rejected as merely 'stylistic' or even 'ad hoc' and accidental, thus banning them either to a pretheoretical fuzzy domain or to the study of language use.

Deviations from 'basic grammar' *GN*, as is well-known by now, can be as regular, in literature, as other rules of the language and thus may have their own possibilities of variable, 'stylistic' performance. A classical example are the occasional, local deviations from a well-established metrical pattern in traditional poetry. The production, recognition and interpretation of literary structures having a regular character must therefore be considered as a type of FORMALLY LINGUISTIC (or at least 'semiotic') ABILITY. Chomsky (1968: 64) does not seem to exclude other types of human competence theorizable by types of generative grammars.

If this is true, the grammar of a language which has to account also for this type of linguistic regularities, will assume a much more abstract character than is postulated by Chomsky. Both his sentential grammar and the textual grammar accounting for 'everyday-discourse' structures modelled on it, would be only a specific sub-type, a DERIVED grammar, of the more general grammar *G*.

Including rules of textual (literary and non-literary) structures in that abstract grammar reflects a habitual situation in the development of any science. Phenomena that at first sight only seem fortuitous, as mere *ad hoc* properties of some observed data, later often turn out to manifest other, more complex regularities. As for the theory of literary texts, it might be clear that if no system of regularities — described by explicit rules — should underly these texts, nothing like a phenomenon of 'literature' could be perceived at all.

Having eliminated the possibility of the non-existence of literary 'regularities' (and having thus underlined the possibility of a theory of literature) the methodological problem at issue is therefore only the

decision whether these regularities must be accounted for by formal, grammatical rules, or by simple probabilistic statements or law-like expressions. My main hypothesis must be interpreted in the frame of this discussion : the more fundamental regularities of literary texts must be described by rules if we want to explain the possibility of producing and interpreting an infinite number of literary texts. The probabilistic aspects only can reflect the regularities both general and individual (stylistic) of the existing corpus of literary texts. They only reflect how the rules of literary grammar have actually been put to use.

4.5 In transformational linguistics the grammar is set up as a theory of idealized competence of native speakers. In the same way — following TG-grammar, at first as a **HEURISTIC MODEL** for our own research — we have to ask if a generative grammar of literary texts is in fact a theory of an assumed **LITERARY COMPETENCE**. If such a specific competence exists, i.e. if there is some theoretical and empirical evidence yielding interesting explanations based on it, we may try to make explicit its theoretical status, for example by specifying its relation to 'normal' linguistic competence.

A literary competence is considered as the native speaker's ideal ability to produce literary texts. Such an assumption, as we intuitively know, is rather strong: even when a great number of native speakers can read literary texts, they are only very seldom able to write them themselves. To meet this empirical evidence a literary competence must be considered as a **RESTRICTED** mental automaton, that is: its **ACTIVE** component is limited to only very small social groups. Literary competence seems to be a **PASSIVE** ability like much other **SYMBOLIC** behaviour: we can perceive and interpret paintings, drawings, traffic signs, etc. without actually being able to produce them ourselves. The active ability to produce literary texts could be qualified as a 'Skill', i.e. a learned, not an innate ability. Moreover, in the same way, the passive ability of reading and interpreting literary texts is restricted to rather small groups in society and its extension is culturally very different. It is furthermore striking to observe that literary texts that are most frequently read have highly conventionalized structures (classical novels, popular novels, kitsch, detective stories) and/or are least 'remote' from non-literary texts (memoires, historical novels, etc.).

We could of course leave these issues about the 'psychological reality' and the 'social extension' of literary competence either to a metatheory of all semiotic behaviour or to the theory of literary performance:

writing, reading, etc. The role of education in learning the 'rules' underlying literary texts should be explained in the same perspective of a theory of performance, or of psycho-social context. These rules however are seldom learned explicitly: the native speaker regularly confronted with the 'data' of literary texts themselves therefore mentally constructs his own elementary literary theory', which by continued reading can take a highly sophisticated form. This cultural process is not qualitatively different from learning a natural language. The fact that the ability is boté socially and individually restricted or partial, and the fact that the learning' of the literary system does not take so short a time as the learning of a language is however a serious counter-argument against considering literary competence either as innate or as 'general' or even 'universal'.

On the other hand, literature or literature-like texts having similar functions, seem to be part of every culture and — what is more — they share some very fundamental properties, which can be considered as LITERARY OR ESTHETIC UNIVERSAL& Repetition and antithesis might be considered as such universal operations. The rules defining literary texts even appear to be independent of specific languages : a detective-novel in French has the same properties as an English one. Only minor operations at the surface of the text can be language dependent (e.g. phonological structures like rhyme and rhythm). Like other textual rules they must therefore be based on the abstract rules of the postulated 'general' grammar G.

We can call literary competence therefore a type of secondary or DERIVED COMPETENCE with respect to more general linguistic competence.

However, it might be clear that a possible 'universal' literary grammar, accounting for transcultural literary rules, cannot easily be TESTED without a proper prediction of some universal structures. We therefore have to limit ourselves in order to meet certain conditions of feasibility to the elaboration of 'middle-range theories' (Merton) of only some types of literary texts (novel, poetry, etc.), just as in linguistics we first construct a grammar of language L_i before we can proceed to considering more universal structures hoping that L' reflects at least some of them. A general theory of epic or folk-narrative has in this way been searched for (Barthes, 1966: 2). Clearly such SUB-GRAMMARS in literature can much more easily be tested on existing texts.

4.6 There are many other problems related to a DEDUCTIVE theory that is a (formalized) literary grammar. In Chomsky's model the AXIOMATIC

'initial symbol' *S*, for sentence, seems hardly sufficient or even needed in a grammar of literary or non-literary texts. I have supposed (cf. van Dijk, 1972a for detail) that textual deep-structures are derived from an initial symbol *T*, standing for Text. I furthermore argued that *T* has to be postulated while texts cannot adequately be described as a string of linearly related sentences generated by recursive embedding or right-hand branching. But even if we need *T* it might be asked whether *S* could be dispensed with as an axiom. Perhaps we need it as an axiom establishing the relation between textual semantic macro-structures and syntactico-semantic micro-structures like sentences. Perhaps *S* could as a theorem be derived from *T* when we assume that the minimal form of *T* is in fact a sentence (Reichenbach, 1947: 77). On the other hand it remains, like in generative semantics, an open question whether syntactic categories like *NP*, *VP*, etc. can be derived from the logico-semantic categories expanding *T*.

It is impossible, in the actual stage of research (which has not yet yielded a textual derivation) to decide about the purely theoretical motivations underlying this problem of axiomatization. We can only stress the fact that it is most unlikely that a theory of literary texts ever can be based on a sentential grammar, instead of being derived from a general textual grammar (Hendricks, 1969).

Another problem of Chomsky's deductive model concerns the status of his derived structures. If we compare them with THEOREMS derived in mathematical proofs (cf. p. 94) we have to assign them a type of truth-value. However, the sentences and texts of the language which can be derived by following the rules of the grammar can be both true or false, values that are independent of their form. Therefore, in a linguistic theory, the only thing we want to know is whether the sentence belongs to the language, i.e. whether it is 'grammatical' or otherwise related with a grammatical (semantic or syntactic) representation. The question of truth-value in linguistics therefore must be restricted to the well- or ill-formed character of sentence- or text-structures, i.e. to LN-truth, or LN-falseness. The empirical correlate of this purely formal (Boolean) condition, acceptability, can as we saw only indirectly be related with the predictions of the grammar. Just so in literary grammar; a lot of work has still to be done to relate formally literary structures with the actual psycho-social (esthetic, etc.) process of literary acceptability.

5. SOME METHODOLOGICAL ASPECTS
OF A THEORY OF LITERARY PERFORMANCE

5.1 At this point of the discussion a short sketch of some methodological problems involved in a theory of performance is needed. Any empirical support of the grammar of literary texts has to be formulated in such a broader frame (for details see van Dijk, 1971c).

It might be useful to make a distinction between two different TYPES OF ACCEPTABILITY, in order to be able to account more explicitly for the relation with the structures that are formally derivable. Like in other social theories we could make a distinction between IDEAL and ACTUAL acceptability (cf. Rudner, 1966: 54sq.). Ideal acceptability would be close to grammatical, is based on general knowledge, i.e. intuition, and in some ways corresponds to laboratory situations of testings. The purely formal concept of grammaticality (or 'derivability') needs an empirical correlate, for a theory of competence is not simply a model for the use or the users of a language (Miller and Chomsky, 1963: 421). However, as has often been remarked: without the formulation of restrictions of the length, the complexity or the degree of syntactical or semantic deviation of sentences no such transition can be made. Even for an ideal empirical acceptability we have to postulate memory limitations and 're-construction boundaries' within which deviating structures can still be interpreted. The ideal acceptability is a hypothetical construction of a theory of performance, it is the over-all result of a number of tests, and can be described in probabilistic terms: under conditions *a*, *b*, *c*,... subject *x* will with probability *p* assign a degree *y* of acceptability to sentence-type *z*. In ACTUAL situations, however, sentences that would be ideally rejected as sentences of the language being contrary to linguistic intuition (reflecting competence), can very well be accepted, i.e. a semantic representation can be assigned to them, for example under the influence of such situational factors as knowledge of intended referents, of the habits of the speaker, etc. Such factors, however, are completely *ad hoc* and therefore pre-theoretical. A theory of performance only has to explain the regularities of ideal acceptability processes. The probabilistic character of such a theory of language-use entails that counter-examples do not directly disconfirm the assertions we can derive from the theory.

5.2 Similar observations can be made for a theory of literature. Texts that 'ideally' would be considered as non-literary, say philosophical essays, can under certain circumstances be accepted as belonging to the

set of literary texts. Probably the converse also holds true; texts that at a time t_i are considered literary by individual or group a might well be rejected as such by group b at time t_i . Or even at the same time t_r different groups may assign different degrees of literary acceptability to the same texts. Historical and sociological factors must of course in these cases be made explicit to explain such important but complex phenomena. In using a term like 'scriptible', Barthes (1970) seems to refer to similar facts: a text of Balzac is 'readable' (interpretable) in our time, but we cannot 'accept' the production of similar texts in our time. The same situation can be observed in other arts : a modern painter can produce 17th-century paintings, but — as in the case of the pseudo-Vermeer — these would be considered either as fakes or as anachronisms, which in both cases will result in social sanctions. In the same way speaking Middle-English could be grammatically correct and interpretable, without actually being acceptable in our time.

These facts seem rather trivial but they suggest that there might be also a difference between ACCEPTABILITY and what might be called PRODUCIBILITY. The new structures of a modern (narrative) text (*nouveau roman, etc.*) can very well be produced but the lack of knowledge in the reading public of the rules of interpretation for such structures might give these texts a very low degree of acceptability. Many other factors are intervening here: the empirical judgement of a reader about the literary character of a text is often also explained by ESTHETIC (or even ethical) considerations. The concept of literature then loses its formal character — indicating a type of text — and assumes properties assigned to them by the reader out of a system of esthetic norms and values. Most types of para-literature are often excluded from the set of literary texts for such esthetic reasons. It might be clear that a theory of performance has to make a distinction between formally literary properties and the values assigned to these properties at time t by group g . Whereas a theory of esthetic evaluation may formally be modelled on a generative grammar (the assignment of values is rule-dependent and productive), we need social and psychological models to describe the actual behaviour of people implicitly or explicitly judging literary texts.

5.3 It was noticed that a theory of textual performance is the domain in which we have to test the grammar, while formal grammaticalness cannot be tested directly and as such. We therefore need transition rules relating grammaticalness with different types of acceptability, interpretability, 'producibility', etc. However, what are we actually

EXPLAINING in doing this? WHAT in fact do we test? The sentence itself, the grammaticalness of the sentence (its well-formedness), its acceptability, etc., i.e. the structure of the sentence as it is specified by the rules of derivation?

Psycholinguists have tried to find a psycho-social 'reality' for some linguistic rules, especially transformations, by means of measuring time and ease of reception and interpretation of sentences or of relations between sentences.

According to Chomsky a generative grammar aims at EXPLANATORY adequacy by giving an evaluation of different grammars with the same descriptive adequacy of the same empirical data, thus accounting for the fact that a child can select the grammar which is most adequate to deal with the words and sentences of his native language perceived in the first three or four years of his life. Besides this META-THEORETICAL explanation, a generative grammar explains the empirical phenomenon consisting of the native speaker's ability to produce, with a limited competence, an infinite number of new sentences. The argument underlying the explanation of this empirical law could be something like:

- (i) A generative grammar generates the infinite set of all the sentences of a language and no other sentences.
- (ii) A generative grammar is a finite set of rules.
- (iii) A generative grammar is a theory of a finite mechanism called competence.
- (iv) AH native speakers of natural languages have such a competence.

? . • . All native speakers of a language are able to produce a potentially infinite set of sentences.

Not only such types of explanations of empirical laws are however given by generative linguistic theory. Predictions can be deduced from the grammar about individual phenomena like sentences or texts. On the one hand any sentence derivable from the set of grammatical rules is said to belong to the language and on the other hand any sentence of the language can be derived with the rules of the grammar. The rules themselves however are not empirical law-like all-statements. The occurrence of actual sentences not having *NP VP* as their constituents is no direct disconfirmation of this first rewrite rule. Unlike general laws, rules can easily be broken in actual performance. Furthermore, just as in literary texts, OTHER rules can be created, like *S --> NP*, which does not eliminate the grammaticalness of the sentences derived with the

S NP VP rule. The rules are part of a formal construction and we can only confirm or disconfirm the actual sentences we derive from them, but while only wrong rules lead to false predictions, i.e. ungrammatical sentences, we have means to disconfirm the correctness of hypothetical rules.

The methodological problems of testing the predictions begin — as we saw — with the discrepancy between 'intuitive correctness' of sentences and their acceptability (cf. Leech, 1968: 95).

5.4 It has become clear that the notion of literary grammaticalness ('literarity' — *literaturnost'*) is still very problematic. Whereas for formal systems as, say, propositional logic and (linguistic) grammar we can refer to our partly innate abilities of reasoning or speaking, it will be a less fundamental confirmation if we test the formally derived literary texts against a pretended 'literary intuition'. If both language and reasoning are already culturally co-determined, a literary intuition is perhaps wholly culturally dependent and therefore either completely arbitrary to rely on in testing a grammar, or of limited value to test culturally restricted literary grammars (in fact we do not test a grammar of French on Japanese speaking people either). Testing derived texts must therefore be limited to those who have learned the 'language', i.e. those who by frequent reading have been able to construct a literary grammar' in terms of a (derived) competence. Their judgements of 'literarity' are however dependent on an existing TEXTUAL competence while the specific character of literary texts can only be established by the intuitive knowledge of the identical or differential properties of other types of texts. The differences with testing the grammaticalness of sentences must be noted here. No simple (Boolean) condition seems to hold in testing a theory of texts: a text is primarily said to be non-literary because it is a newspaper-text, or a linguistic manual, or a public address etc., and secondarily because it is a non-text.

Even when literary intuition', strictly speaking, seems a product of culture and education we still did not yet explain why literature' is universal, why some types of texts — like narrative — have undoubtedly universal properties, and why any literary text can be wholly determined by a limited number of rather general rules operating on the basis of linguistic categories. As we said these facts can only be explained if we assume that a general grammar provides formal possibilities for deriving different types of grammars which can be mutually inconsistent (like language of modern poetry and that of newspaper articles), i.e. if in

our competence we have a mechanism that permits us to extend or change that competence. A theory of learning (of for example other languages, or literature) can only be developed on such a basis if the set of 'derived' grammars falls within a grammar of a specific natural language L'; this set can be characterized as a class of connected or 'following' grammars, i.e. grammars that either have slightly different lexica or a different set of theoretical symbols and rules (cf. Bierwisch and Kiefer, 1969: 60sqq.).

6. THE RELATIONS BETWEEN A GRAMMAR OF LANGUAGE AND A GRAMMAR OF LITERATURE: THE CONCEPT OF 'MODEL' IN LITERARY THEORY

6.1 In the preceding sections I have assumed that we can construct a grammar of literary texts and that Chomsky's generative grammar (of sentences) may be considered as an 'example' of how such a grammar could be set up. This assumption was based on common properties of the OBJECTS studied in both disciplines of linguistics and poetics, viz. linguistic objects like sentences or, rather, TEXTS. Analogous phenomena have thus led to analogous theories, viz. generative grammars. This sort of theory formation is rather current in scientific processes and some of its aspects have to be discussed here in the light of the criteria formulated by philosophy of science for such 'imitating an example'-theorizing (Stegmüller, 1969: 131sqq.; Nagel, 1961: 106sqq.).

6.2 Especially in the last decade numerous studies have been devoted to the relations between linguistics and poetics (For a review of these attempts, cf. van Dijk, 1971a and especially Ihwe, 1972). I will not discuss here the pros and cons of the well-known debate about these problems, which as such is rather sterile if we realize that the way we try to 'find' our theory is completely irrelevant to the value of that theory. If the 'use' of linguistic theories leads to adequate descriptions and predictions of 'literary objects' there can be no objection whatsoever to such procedures. Traditional scholars in literary scholarship have frequently levelled criticisms against the imputed 'reductionism' of linguistic interpretations of literature (they will hardly speak about literary THEORIZING because they will normally also refuse to formulate rules or laws accounting for the regularities of the objects they view as 'unique', etc.). Without taking up issues that should be settled by now, I shall briefly discuss the (inevitable) nature of reduction in theorizing.

6.3 A generative grammar, as part of a full-fledged linguistic theory, has been used as a **MODEL** for a part of a literary theory, viz. the theory of the formal properties of literary texts. The use of such a model can give insight into a field where theory-formation is still rather weak if not wholly absent. Obviously some conditions have to be formulated in advance, because not every model yields as successful suggestions as others do.

The **TYPE** of model we here refer to is the **ANALOGICAL** model (we previously used the term model to indicate the 'interpretation' of an abstract calculus in terms of a specific theory; see below). (For general discussions about the different uses of 'models' in science, cf. Stegmüller, 1969: 131sq.; Nagel, 1961: 106sq.; Apostel, 1961; Chao, 1962; Steinbuch, 1970; etc.) The analogies can be discovered on several levels. **SUBSTANTIAL** analogy for example can be established between the phenomena studied in both disciplines. Even if generative grammar limits itself to the study of sentences it can be demonstrated that such a grammar must be extended to a grammar of textual structures in order to be able to account for some very important linguistic relations in the utterances of native speakers. Such a textual grammar can be constructed on the model of a generative grammar of sentences — but cannot formally be derived from it as I tried to indicate. If linguistics thus assumes as one of its tasks to study the regular structures underlying discourse, the substantial analogy with the object of literary scholarship lies at hand. In fact, the literary text would in that case even be considered as a specific **TYPE** of text and its study would coincide partially with textual linguistics.

On the basis of these substantial analogies between phenomena we may further ask ourselves if we are also confronted with what we can call **EXPLANATORY** analogies, i.e. if the aims — the phenomena we want to explain — are also similar. Crucial difficulties seem to be present here. We want to know intuitively and in accordance with traditional literary study not so much something about properties of the linguistic structures of literary texts, but we would prefer to isolate those structures we consider 'typical' for literary texts and, moreover, what are the special literary and esthetic functions of these structures in psycho-social context (Éjkhenbaum, 1965; Todorov, 1968). At this level we find analogies with other arts and not only with linguistics: the object studied is an **ESTHETIC OBJECT** if we interpret literature' no longer as merely a type of text but as a set of qualitatively different objects the specific functions of which partially coincide with those of other esthetic objects

like paintings, films, etc. These facts undoubtedly are true but regard a theory of literary performance : the USE or function of texts in society. And even here the difference with the study of the functions of other types of texts (advertisements, propaganda, essays, etc.) is not fundamental.

As for the text itself we are confronted with questions that are similar to those raised in transformational linguistics: how is it possible that a writer/reader can produce/interpret an indefinite number of different literary texts by using only a limited (derived) competence, and how can these texts be differentiated from non-literary texts in order to be able to say that they can perform their specific function in the

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Not only the objects of linguistics and poetics seem to be analogous but also some of the questions we put about them. Here we have obviously found some motivation for establishing also FORMAL ANALOGIES between the two disciplines, viz. by constructing analogous THEORIES.

In those cases we normally take the theory that is considered as most developed as the model for the construction of the other theory. The generative grammar being a DEDUCTIVE theory we naturally suggest that a theory of (literary) texts also might have such a formal character.

Similarly we shall want to formulate RULES to account for those structures of texts we hypothetically consider literary, such as :

(a) some phonological and graphological structures (rhyme, rhythm, metre, whites, alliteration, etc.) which play no systematic role in non-literary texts.

(b) some syntactic structures that would be considered ungrammatical in non-literary written texts, or as mistakes characteristic of performance (inversions, deletion of verb-phrases, etc.)

(c) some semantic and semantico-logical structures absent in non-literary texts like antithetic thematization, chronological permutations, etc.

Furthermore we assume that any literary text may contain any grammatical structure (phrase, sentence) as defined by a non-literary

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includes a grammar of non-literary texts. The domain of poetics can therefore be defined by the task of formulating the set of COMPLEMENTARY RULES which are not part of a non-literary textual grammar (cf. van Dijk, 1972a: Part II).

6.4 On the basis of substantial, explanatory and formal analogy we are confronted with other implications of our use of a generative grammar

as a model. We could, for example, say that all literary structures can be described in LINGUISTIC TERMS. In this case we do not merely use grammar as a model, but we do in fact REDUCE structures from one discipline to qualitatively similar structures in the other discipline. This does not prevent the literary structures to be 'specific' in their own way (cf. Hanneborg, 1967: 182sq.); only the levels and categories of description are said to be identical, the construction made out of these categories can very well be specific for the discipline reduced. Corresponding situations can be noticed for the relations between biology and chemistry, chemistry and physics, etc. Within the frame of literary theory the linguistically described constructions can of course be considered as 'units' in their own right, having their specific formal properties (e.g. rhymes, metaphors, etc.). Since literary texts are linguistic objects, there do not seem to be any exceptions to this rule of 'reducibility': any literary structure/operation lies on the semantic, syntactic or morpho-phonological level and can be described by the categories defined in linguistics proper (for details about conditions of reducibility, cf. Sanders, 1969).

Literary structures as I said could however be considered as 'autonomous' units in an 'independent' literary theory, for example as SIGNS. In that case we take the more general SEMIOTIC MODEL to describe our object. However, a grammar is also a semiotic model, having a very explicit and precise character. If we want to deal with linguistic objects it seems better to use this more specific type of semiotic model than the more general theory of signs, for which there are no rules of derivation or construction, which have to be formulated to account for complex sign-structures like texts (van Dijk, 1971b, 1971d).

There are different types of reduction. We can for example DERIVE poetics from linguistics, or rather a literary grammar from a more general textual grammar, when the BASIC TERMS used in both disciplines are identical, say lexeme', 'phoneme', etc. To be able to generate literary texts we must then formulate some ADDITIONAL RULES which in fact create the new theory, for a deductive theory is wholly determined by (a) a set of axioms (b) a set of theoretical terms (c) a set of formation rules (d) a set of transformation rules, and — in grammar — (e) a set of final symbols: a lexicon.

A literary grammar probably has additional members in the sets referred to in (b), (c), and (d).

The function of these types of reduction is not only to use already elaborated 'tools' in terms of theoretical categories and rules, but also

to give an explicit account of the basic properties of literary texts as LINGUISTIC texts. Their specific character, as we more than once said, can only be 'derived' from this basis.

The 'distance' often felt between the typical literary units and linguistic concepts can, however, be rather large. More than for morpho-phonological and syntactic operations this can be noticed in the description of semantic macro-structures like 'personage', 'action', 'character', 'situation', 'events', etc., which can be derived from different types of abstract semantic units (Greimas, 1966; van Dijk, 1970f). This distance between intuitively perceived units in literature and their linguistic components is however the inevitable result of any theorizing in which macroscopic phenomena can only be explained by analyzing them in (abstract) microscopic phenomena and the rules/laws operating on them (cf. however Seiffert, 1970; Apel, 1967).

In literary scholarship's growth to maturity we have to accept this sort of scientific practice; theories are not intended to 'mirror' the facts but to describe and explain them in their own abstract way. We have to underline the fact that we do NOT reduce literary PHENOMENA to linguistic PHENOMENA, but in order to simplify theory-formation we formulate part of the (literary) THEORY in TERMS of a well-known (linguistic) THEORY. We only relate STATEMENTS about phenomena, not necessarily phenomena themselves. No literary text can be automatically 'derived' from ordinary colloquial discourse, only the rules underlying both type of texts are partly identical, and if not identical, analogical.

It is clear that these assertions disconfirm possible attacks from proponents of other ways of explaining phenomena like emergentism, holism, etc. (For refutation cf. Rudner, 1966: 68sq.) I did not say for example that literary properties can be 'predicted' from linguistic properties and not that there are no specific literary wholes' (units). Neither did I assume that literary texts do not have specific functions, for example, cultural, esthetic, ethic or ideological functions, etc. The use of a model implies only that our speaking about these literary properties in a theoretical text may take an example from a theoretical text accounting for similar phenomena. We do not in fact describe — in poetics — literary texts as unanalyzed wholes, we only try to give a falsifiable, i.e. an explicit, description and explanation of its respective PROPERTIES (Stegmüller, 1969: 337). A great number of these properties, no one will deny, are linguistic, a fact which alone motivates the use of a linguistic model.

16.5 However, even when grammar as a model seems to be extremely attractive as a result of the sophistication of modern linguistics, there are OTHER MODELS that can be used in literary theory. Especially the theory of literary performance, just like the theory of linguistic performance, might use several theories from the social sciences as a model.

For the study of the structures of literary text itself we argued that units might be isolated that can be considered as autonomously literary. Several MATHEMATICAL MODELS may be used to study the relations between these units. Topology for example can consider the (literary) text as a space on which typical operation may be defined (cf. Bense, 1969; Fischer, 1969; and especially Marcus, 1970).

Less abstract are the mathematical and statistical models we use in the study of literary performance of the literary operations in concrete literary texts. Frequency-counts and the calculation of average length or number of linguistic or literary units like syllables, sentences, verbs, metaphors, rhymes, etc. are classic and can — if a good theory of language use is developed — be applied in stylistics. (Of the many monographs we only cite the well-known anthologies of Kreuzer and Gunzenhauser, 1965; and Dolezel and Bailey, 1969.)

The theory of Markovian channels may be applied to the study of linear perception of literary strings. In general, information theory will be used to measure frequency rates in relation to expectancy in the reader, in order to determine information and redundancy of literary texts compared with non-literary texts. The limits of such approaches have however often been noted by grammarians: transition probabilities cannot be given for complex sentences and texts while their frequency of occurrence is — when taken into account the famous creativity of language — very much near zero (cf. Miller and Chomsky, 1963). The more general, philosophical, arguments of cybernetics and information-theory can however be used as confirmation for certain psychological aspects of the perception of literary texts: relations between originality, high information-rate and esthetic evaluation; the role of redundancy of structures and themes in the perspective of tradition, etc. (Cf. Moles, 1958; Bense, 1969; Kreuzer and Gunzenhäuser, eds., 1965; Ronge, ed., 1968, etc.)

Besides these different types of models in the study of psychological aspects of literary performance, we need models for the SOCIAL aspects of literary context. Different social theories can be used to account for these aspects. Applications however have until very recently only been very global. No functional theory of some sophistication has been

applied to literary phenomena considered as social behavior of groups (readers, writers). Research has been dominated either by blunt empiricism (the study of purchase of books as cultural objects) or gross subjectivism (Verstehen's analyses of writers' intents, etc.). In this domain of the social aspects of literature we are confronted with the same methodological criteria. Without functional or operational definitions of our terms and without explicit formulation of the regularities postulated no serious theory can be constructed. Before we can 'explain' something we may well ask **WHAT** has to be explained. 'Literature' as such will be extremely difficult to explain, only about some of its properties may be gained some insight by explicit theories. When we view 'literature' as (one) **ASPECT** of cultural behaviour in general we seem to provide rather a **SOCIAL** theory than a literary theory, because in these cases hardly anything is explained about structural properties of the text, but only about characteristics of its function as a cultural phenomenon. We may, like for the grammar, use such social theories as models for the description and explanation of properties of the psycho-social system of literature. We might want to explain the **CHANCE** of the literary system by giving an explicit account of changing factors in subsequent **STATE DESCRIPTIONS** of the system. As is well-known from sociology such state descriptions are extremely difficult to provide when the number of factors determining the structure of the system — i.e. the type and functions of rules and operations used at place *p* and time *t* — is very large. This is why a social theory of literary function is still only in its beginnings, and the methodological criteria will in this field only progressively be fulfilled.

A theory of literary performance, however weak it still may be, is required to give the necessary complement to the grammar of literary texts. The numerous conditions that determine the acceptability of formally derivable texts as actual literary texts in the last place decide if the text can be called 'literary' or not. The linguistic and the literary grammars are not the only **SEMIOTIC CODES** underlying the communication of literary texts. An esthetic code has to be elaborated to assign esthetic representation to derived literary structures (cf. Schmidt, 1971a).

We see that models from numerous other sciences can be used to gain insight in different literary properties. In all these cases the partial theories elaborated are **LITERARY** theories and the confirmation of them lies in the field of poetics: the usefulness of the models is **HEURISTIC**, not explanatory: no purely linguistic grammar can fully describe and explain literary structures.

6.6 Explanation in literary performance does not differ from explanation in other social sciences. Without the formulation of regularities in probabilistic or nomological laws no sound explanation can be given. So-called 'unique' phenomena (if any) are theoretically uninteresting, and differences can only be identified against common properties. Like no human behavior the production and the structure of literary texts is completely lawless, even when many intervening factors may undergo complex variations. 'Genetic' explanations and 'teleological' explanations are based on the same structure as those of nomological or probabilistic explanation, when only all the supposed regularities upon which the arguments are based are made explicit (Stegmüller, 1969).

A fruitful, unified theory of literary texts can only be reached when the deductive and inductive methodological criteria of theory- and concept-formation are followed. The use of adequate models does in that case not only serve progress on the **THEORETICAL** level, but also helps us to realize which **METHODOLOGICAL** criteria must be followed in order to be able to reach that level. The different sciences cannot be 'Independent', but they all are mutually related. Progress in literary theory is equally dependent on such interdisciplinary efforts.

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