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Foundations for Typologies of Texts*

1. TOWARDS A THEORY OF TYPES

1.1. If we want to group certain objects into classes, these classes into larger classes, and if such a procedure somehow makes sense, scientifically speaking, it is important that we try to make explicit the criteria underlying such classifications. Similarly, we have to know which methodological, theoretical, and empirical procedures are basic for a formal classification of texts as different *TYPES*. This problem is relevant for both linguistics and poetics. Moreover, the other social sciences dealing with verbal behaviour and textual interaction, e.g., social psychology, content analysis, and cultural anthropology, will also be interested in such differentiations in the domains of study.

1.2. In order, then, to gain some insight into this problem of formal typologies of texts in general and of literary texts in particular, we shall first try to enumerate some features of the very notion of 'type' itself. This procedure is not wholly superfluous, because all disciplines seem to have their own specific implications of the general, and therefore ambiguous, concept of type. That is, any beginning science will normally distinguish *CLASSES* of empirical objects, within the global subject matter it is supposed to describe and to explain, according to sets of distinctive features. These sets, initially, may be wholly implicit, i.e., represent our intuitive and global knowledge of the empirical world. Thus any native

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speaker of a language will in principle be able to make a distinction between a poem and a handbook of mathematics, between an aside in the newspaper and a questionnaire. This implies that he has the initial ability to differentiate the universe of texts and to recognize different types of texts. We shall claim below that this fundamental ability is part of linguistic competence. We shall argue at the same time that this competence must be a TEXTUAL COMPETENCE, and that the formal model that will make such a competence explicit is a 'generative text grammar'. Only within such a general framework are we able to define formally the features defining the different types of texts.

1.3. Before we proceed to a discussion of these linguistic and literary issues, let us return to the problem of types and of typologies in general.

The main use of the notion 'type' is made within philosophy, mathematical logic, and the social sciences. Since the rather narrow framework of this paper does not allow a complete historical or systematic review of the extant literature, we shall restrict ourselves to some general aspects and to some main ideas on the subject.

We will first treat, very briefly, some logical implications of a theory of types, then the notion of type in the social sciences, and finally its general uses in linguistic theory. The whole discussion is to be localized within the domain of philosophy of science, because the concept of 'type' is a metaconcept although it has its specific applications in different disciplines.

1.4.1. One of the first uses of the term **TYPE** is common to philosophy, logic, semiotics, and linguistics, and opposes it to the term **TOKEN**.¹ This fundamental distinction has thorny epistemological implications, which will not detain us here. A type, in this sense, is essentially defined as an **ABSTRACTION**, and as such related to a linguistic 'concept' denoting this abstraction. A type can be defined as a name of a class of objects that are considered as 'identical' from a certain point of view.² The different objects of that class are called the 'tokens' of that type. Thus we have a type of animals denoted by the concept 'horse'. This type is

¹ For the distinction **TYPE** vs. **TOKEN** in philosophical, semiotic, and (methodo-) logical literature, cf. among many others: Peirce (1960: 142), Schaff (1962: 177), and Reichenbach (1947: 4), who uses the terms 'sign/symbol', vs. 'token'.

² The Identity of different tokens of a type is not without problems, and can be discussed on different levels, on the level of identical inherent properties for example. Cf. Quine (1961: 70-73), Russell (1962: 98, 123).

clearly an abstraction from the class of concrete (real) horses, the tokens of that type. These animals are 'identical' with respect to a set of distinctive features, and are 'different' only because they refer to distinguishable individuals. Similarly, we define a word *table* as a type, i.e. an abstraction from the infinitely different ways to pronounce that word. Every distinct occurrence of the 'same' word-type *Cable* is a token.

This distinction, under different names, is very old and was debated in the medieval, and now reopened discussion of universals. Important in that discussion was the status of the 'type' or 'universal': does it exist merely as a linguistic 'name' or is it 'real'; and if it is 'real', is it an 'ideal' or 'abstract' reality? We will not go into this philosophical issue. Important for us is the very fact that we may distinguish between individual objects and the abstraction from the class of identical objects.

Notice that the condition of identity is defined with respect to a certain 'point of view', or rather a given 'universe of discourse', e.g., a scientific discipline. Thus for zoology, 'horse' is one type (say as a species of the genus of mammals), and differences between individual horses (coloring, size) are not considered relevant by the zoologist though they usually are by the farmer. Similarly, a word *table* is one type for linguistic morphology, but may be realized in many different ways with respect to phonetic descriptions. We shall come back to this distinction below.

1.4.2. The distinction made above may seem trivial now, but its precise definition is not easy to give. We may say, for example, that individuals (tokens) are of the 'same type' if and only if they share a set of COMMON PROPERTIES, viz., precisely all those properties considered as 'relevant' to 'identify' them as belonging to the same class. This relevance, however, is not given *a priori*, but defined with respect to the universe of discourse. For a sound to have the same properties as another sound is different for phonology and for phonetics. These properties, then, are defined by the theoretical and empirical terms of a discipline.

The properties defining an abstract type are necessarily also abstract properties, and the properties of 'real' tokens are 'real' properties in a sense that we will not define here (cf. Nagel, 1961: 505). In the same way, an abstract property is a type with respect to all the token-properties of token-objects. Thus, the abstract property 'warm' may be used to apply to all objects having the property of being warm. We see that the very use of linguistic words (predicates) implies the denotation of a type, which itself is an abstraction of a real class of individual objects (tokens). Conversely, the abstraction from classes of individuals, i.e., conceptuali-

zation, is impossible without the use of linguistic entities (predicates, words, lexemes, etc.).

1.4.3. The definition of types is not based on sets of abstract properties alone. A decisive difference with respect to classical logic is the definition, in modern logic, of **RELATIONS**. Whereas a property like 'warm' can be applied to a single class of objects sharing that property, we need two classes to define a 'property' like 'similar (to)', or 'father (of)', viz., the class of humans' and the class of 'children', classes of which the individual elements are put into a certain **RELATION**. Relations are properties of pairs, and a relation is therefore normally defined as a set of ordered pairs; the relation (two-place predicate) 'father' applies to the set of ordered pairs {male human, child}. This relation can be both an abstract type or a concrete token : a particular father of a particular child (cf. Suppes, 1957: Ch. 10).

We conclude provisionally, then, that a type is an abstraction from a class within a given universe of discourse and defined by the set of properties and/or a set of relations, which all members of the class satisfy.

1.4.4. We have to specify, below, some properties of this formal definition of a type with respect to its empirical implications. We should mention briefly here that the concept of 'type' is also used in mathematical logic to denote a level of a universe of discourse. Russell's famous 'theory of types' was devised to elicit certain antinomies in logical theory, for example, the contradictions arising from taking a class as a member of itself.³ Thus a class or a complex predicate is said to be of a higher 'type' than its constitutive elements: a class of books, e.g., a library, is not a book itself.

Similarly, our logical discourse has to have level-specified assertions. Talking about a language having a word *table* is different from talking about empirical tables in that language. That is, we have to distinguish between a word (a sign, a lexeme) as **USED** in a natural language to denote extralinguistic things, and the **MENTION** of that word in the theory of that language, i.e., a language made for describing that language, its meta-language or grammar.⁴

³ Cf. Reichenbach (1947: 222ff.), Quina (1961: 90-93, 124f.).

⁴ The literature about this distinction is abundant, and details can be found in any introduction to le: The distinction goes back to the scholastic pair of terms *suppositio formalis* vs. *suppositio materialis* (cf. Rescher, 1964: 19). Cf. Carnap (1958: *passim*) for detailed discussion about level-dependent discourse in logic. Furthermore Stegmüller (1969), Reichenbach (1947: 9ff.).

This is all very well known by now and needs no elaboration. We only wanted to stress that the notion of 'type', here, refers to the level of our discourse (our language) and 'its elements, not to the abstractions denoted by them as they were defined above, although the relation between abstractions and names for classes is very close.

1.5.1. After these introductory remarks about two extremely general but very important notions of type, we now have to consider its different applications in the empirical sciences. If we want to describe how and why we make typologies of texts, it is useful to know what reasons have led the social sciences to the use of different typologies.

One of the crucial reasons for using such notions as type in scientific discourse is the very necessity of GENERALIZING with respect to the infinite diversity of objects, properties, and relations of the empirical reality we are dealing with. Thus, psychology is not so much interested in the idiosyncratic and ad hoc properties of a certain individual *A*, but will try to describe some mental structures of humans in general, or the specific behaviour of humans under certain circumstances. Similarly, sociology as a theoretical science, is not so much interested in the precise (inter)actions in a certain group of individuals, but in the interaction of similar groups in general. They will thus arrive at definitions of specific 'types' of mental structures, of human behaviour, and of social interaction. We see again that the notion of type implies an abstraction from idiosyncratic properties and the explication of sets of properties (relations) considered as 'identical' for a class of objects.

1.5.2. Note that this sort of scientific abstraction may correspond to our intuitive procedures of comparing, abstracting, and generalizing. All cognitive processes are thus based on global '(re)constructions' of the indefinitely diverse objects we perceive: although all cars are different (and even those of the same sort may differ in detail) we are able to consider them as belonging to one class of cars. That is, from a given point of view the differences are considered irrelevant and the common properties decisive for conceiving some objects as forming one class, denotable by some linguistic concept (cf. Neisser, 1967).

1.5.3. Our task in scientific description and explanation is precisely to make these relevant common properties explicit in a set of STATEMENTS. We may want, first, to establish classifications of the empirical objects we are dealing with. The distinction of classes is based, as we saw, on the enumeration of a set of properties. All objects satisfying a joint set of properties belong to the class, others do not. This classification is

supposed to be relevant with respect to the universe of discourse of our discipline: we distinguish between types of `characters', of `society', of `languages', of `texts', because we hope to gain knowledge from these distinctions. We may discover, for example, that a character-type *A* defined by the properties *abc* generally has a behaviour-type *B* defined by the properties *del*.

These classifications are based on pretheoretic formulations of two different sorts. The first sort of classification is based on **DEFINITION**, i.e., on the explicit enumeration of a set of conditions which an object has to satisfy in order to be conceived as belonging to the class. Thus, a person will be included in the class of `bachelors' only if he satisfies the following conditions: being male, adult, and unmarried. Such **DEFINITIONAL CLASSIFICATIONS** operate exclusive and exhaustive partitions in a universe of discourse (e.g., of humans). In the class of humans every individual not fulfilling all of the mentioned conditions is not a bachelor.

Many social sciences, including poetics, establish **DEFINITIONAL SCHEMATA** based on some primitive terms like `married', `verse', `narrative function', etc. Related to these definitional schemata are schemata formulating logically true statements on the basis of the predicates involved in the definitions: so-called **ANALYTIC SCHEMATA**. Trivial examples of such statements are: "No woman is married to a bachelor", "No poem having less than 14 lines is a sonnet", etc., of which the truth follows from the definition of bachelor and sonnet respectively.

Classifications based on definitional schemata thus specify the conditions for the application of their terms to the objects classified. Those based on analytic schemata do not necessarily provide us with exclusive and exhaustive classifications: we cannot classify bachelors only by the fact that no woman married them.⁵

1.5.4. Whereas the above-mentioned classifications provide **FORMAL HEURISTIC INSTRUMENTS** for social hypotheses and theories, we also have typologies based not on definitional criteria but on less systematic abstractions from empirical reality.⁵

⁵ For discussion about classification in the social sciences, see Rudner (1966).

This discussion of `types' in the social sciences has led to serious controversies. For a rather formal discussion see again Rudner (1966) and the well-known article by Hempel (1952) summing up and elaborating the book he wrote together with Oppenheim (Hempel and Oppenheim, 1936). Hempel refers to traditional discussions about types by such scholars as Weber, Sheldon, Kretschmer, Parsons, and others. A critique of Hempel's logical and comparative approach was given by Lazarsfeld (1962), who defended the `pragmatic' approach: the definition of methodological principles on the basis of concrete social research. Cf. furthermore Nagel (1961, Ch. 13, 14).

A first group of typologies is the one referred to as *EXTREME TYPES*, based on polar concepts, like 'happy' 'unhappy', 'open' — 'closed', etc. These are called 'extreme' because no empirical entity will normally satisfy one of the polar terms than approximately. They thus establish an *ORDERING* in a universe of discourse. They define relations, not two mutually exclusive classes: some object has a property *A*, in such or such degree, not either *A* or *not A* or *non-A*. These typologies based on extremes have important heuristic value for the formulation of significant hypothetical statements (predictions, or explanations): an individual having property *A* in a degree, will tend to behave like *B*. Measures of approximation to one of the two polar concepts may be represented by one relation, e.g., 'bigger than', 'more grammatical than', etc.

The relation established normally either *SERIALLY* or *QUASI-SERIALLY* *ORDERS* the universe of discourse: a member of a class has a property either more or less than another member, or has it to the same extent (for ordering relations, cf. Suppes, 1957).

The most explicit form of (quasi-)serial ordering is reached when we can give explicit criteria for this ordering, e.g., in quantitative or, in general, in metrical terms. Such explicit measures however are difficult to give in most theories of the social sciences, because even when we may measure an ordering based on one variable (category) this ordering does not necessarily converge with a metrical characterization of the other variables of the set of objects.

1.5.5. Similar remarks may be made for typologies based on so-called *IDEAL TYPES*. Of course, any abstraction presupposes an idealization, but the traditional theory of 'ideal types', which has occupied the attention of scholars in psychology and sociology (cf. note 6), supposes that such hypothetical constructions have to be made, like extreme types, in order to characterize objects with respect to this ideal object. No real object will normally satisfy the conditions underlying the construction of an ideal type, because idealizations reduce the set of properties of the object to those theoretically or intuitively felt as 'relevant' (cf. Nagel, 1961: 505ff.). Since such typologies imply sets of statements about the relations between the properties of the ideal type, they in fact often do not differ from (primitive) *THEORIES* (cf. Hempel, 1952). The description of the properties of an ideal society, an ideal speaker-hearer communication system, an ideal language system, etc. implies in fact a theory of such ideal objects. That is, assertions about the properties, structures, and relations are hypothetical and require

empirical confirmation, unlike the types established on merely definitional or logical grounds treated above.

In the following sections we shall see which sorts of typologies are used in linguistic and poetic theory and what the use and implications of such procedures may be for adequate theory construction in these domains.

2. TYPES AND TYPOLOGIES IN LINGUISTICS

2.1. In the previous section we noticed that the basic distinctions between typologies in logic and the social sciences are valid also in linguistics. The abstract categories like lexeme, phoneme, etc. of linguistic theory are also types, abstractions from real words (word-meanings) and sounds, considered as tokens used in concrete communication processes.⁷

Firstly, we may simply distinguish types of linguistic objects by virtue of their definition. a vowel will be defined as a type of phoneme having a feature [vocalic], and determines a class explicitly distinguished from the class of consonants. Under specified conditions, however, we may in the same way define semi-vowels and semi-consonants. Further subtypes can be similarly defined by enumerating other features [-F open],

closed], etc.

In the same way we distinguish different types of morphemes, e.g., with respect to the number of their syllables. This imposes a simple metrical order upon the class of all morphemes and the typology is explicit if the notion of syllable can be unambiguously defined.

Similarly, types of lexical units can be distinguished on the basis of the presence or absence of a semantic feature or a complex of features. The classifications we thus arrive at are well known under the name 'semantic fields', e.g., the field of all human males, of all inanimate globular objects, of all colours, or all kinship terms (Schmidt, 1969). From their lexico-semantic definitions we can derive such (trivial) analytic statements as: *all bachelors are men, all mothers are women*, etc. (cf. Leech, 1969).

Typologies based on simple definitional schemata are not very illuminating in linguistics, as we see. In order to acquire some empirical

⁷ The distinction between abstract and concrete phenomena for linguistic theory had been made, at least since Saussure, in all modern studies in linguistics. The terms type vs. token in linguistics are also often used to denote the linguistic approach to signs. Cf. Seuren (1969: 2ff.), Pike (1967: 617).

relevance, typologies have to be more comprehensive and complex, for example when a distinction between types is used for further hypothetical assertions about relevant properties of the types.

In this sense we might for example distinguish between **TYPES OF LANGUAGES**, a well-known procedure of structural linguistics, e.g., the distinction among agglutinating, isolating, and inflective languages based on the structure and interrelation of morphemes.⁸ This distinction however, is based on ideal types, because no languages satisfy exactly the conditions specified by the definition. The typology thus acquires the value of an empirical theory about a given type of language, by formulating the relations among certain of its specific properties.

2.2. Perhaps in a somewhat unexpected sense we can consider **GENERATIVE GRAMMARS** as explicit 'typologies' for the sentences of a language. That is, they separate by a series of related hypothetical statements (rules) the set of grammatical or well-formed sentences (i.e., the language) from the set of ungrammatical or ill-formed sentences. These two properties are precisely the polar concepts of extreme types. The grammar, thus, is a theory of an ideal type of sentences that are perfectly grammatical, although in reality (performance) the use of the rules is interfered with by numerous other factors. Less grammatical sentences (or rather utterances) may then be formed by the native speaker?

The 'classification' of the well-formed sentences is a recursive definition of the notion 'grammatical sentence of the language'. However, the statements constituting this definition are synthetic and therefore open to empirical procedures of verification.

A generative grammar, furthermore, has to provide an explicit measure for the **DEGREE OF GRAMMATICALNESS** of sentences, and therefore orders the universe of discourse, i.e., the sentences of the language. Instead of the extreme concepts grammatical vs. ungrammatical it specifies a quasi-serial relation 'more grammatical than'.

However, although grammars are explicit definitions of the structural properties of sentences, it is not easy to give the precise criteria for the degrees of grammaticalness. A provisional criterion has been sought in the level and the number of categories/rules violated (Chomsky, 1964; Katz, 1964). There is some evidence against this purely formal characterization of the types involved: the violation of minor rules like *NP* → *Det*

⁸ See Lyons (1968: 187ff.), Bach (1964: 177).

⁹ For a distinction between sentence and utterance, cf. Lyons (1968: 170ff.), Bar-Hillel (1969).

N (S) e.g., by postposing the anide, often results in strings intuitively conceived as much less grammatical than the permutation of major constituents (cf. van Dijk, 1971c). The intuitive notion of grammaticality here seems to be related to the still inexplicit concept of 'interpretability', for which no measures have as yet been proposed. The formal syntactic or syntactico-semantic typology can nevertheless be applied automatically. We only have to ask ourselves what the empirical relevance of such a characterization might be.

A generative grammar, as is well known, is not only a theory about the sentence structures of language, but at the same time a model for the competence of native speakers. This competence is considered as idealized intuitive knowledge of the language by a native speaker and is thus also an abstraction from the concrete uses of the language by a class of speakers/hearers in a given period. Similarly, the very notion of language (*langue*) is an ideal type with respect to the set of utterances (*parole*). A theory of the language is thus empirically based on an ideal type of language of a completely homogeneous speech community (Chomsky, 1965). The empirical problems related to this claim have often been emphasized (cf. Labov, 1970), and will not be treated here. Like all 'ideal types', it is a construction of the linguist rather than an empirical object. In a more abstract way it is not the set of well-formed sentences but the system underlying those sentences (Bierwisch, 1966; for detail Lieb, 1970: 214ff.).

Linguistic theory has recently also accorded attention to the problem of a **TYPOLOGY OF GRAMMARS** themselves. Chomsky, especially, in a series of highly technical discussions, has tried to order grammars with respect to their weak and strong generative capacities and their degrees of observational, descriptive, and explanatory adequacy (cf. Chomsky, 1965: 37ff.; and above all Chomsky, 1963, especially 360ff.). For a survey of these ideas see Bach (1964: 160ff.). Types of grammars (and the languages they specify) are thus characterized by the fundamental restrictions formulated upon their possible tales.

2.3. Let us assume now that generative grammars can be made still more powerful by letting them specify not only sentence structures but also the **SET OF WELL-FORMED TEXTS** of the language together with their structural descriptions. Such **TEXT GRAMMARS** or **T-grammars** have only recently been postulated as necessary extensions of **S-grammars**.¹⁰

See Sanders (1969) for methodological foundations and arguments for the necessity of 'discourse'-grammars For a survey of these ideas and further

They describe all relevant structural relations among sentences (phonological, syntactic, and semantic) and define notions like 'well-formed sequence of sentences'. They are supposed to yield also adequate and simple descriptions for such phenomena as anaphorical expressions (pronouns, articles), topic/comment focus, presupposition, and *coherence*. At the same time they have to define the *MACROSTRUCTURES* of texts, considered as basic for their global coherence. These macrostructures may be identified with global semantic representations or deep structures of texts. They underlie and determine transformationally the linear surface coherence of the subsequent sentences of the text. Text grammars are to be conceived as models for the intuitive knowledge (competence) of native speakers to produce/interpret coherent texts of the language, to summarize, and to memorize texts without being able to recall the surface-sentences, and so on. No further details will be given here, only that the form of the internal deep structures is presumably similar to the internal structure of the propositions in a modal predicate logic: performative categories, modal categories (both accompanied by pragmatic operators of time and place), followed by a nuclear proposition formed of a predicate and an ordered set of arguments, related, through functional categories like Agent, Patient, Object, Instrumental, with the Predicate, denoting Action, Process, Event, or State.

2.4. Now, text grammars will not only be required to enumerate the well-formed texts of a language and to assign structural descriptions to these texts. We will require that they also *ORDER*, in some way, the set of generated well-formed texts. That is, they have to provide the formal means of distinguishing between different *TYPES OF TEXTS*. This task has empirical correlations, for it has to be a model for the description and explanation of the linguistic ability of native speakers to differentiate texts from each other, to recognize a short story, a poem, a manual of algebra, etc. We claim, in fact, that no explicit typology can be established without having recourse to the theory of texts (a T-grammar).

Let us assume provisionally that the categories and the rules of text grammars are given — a fairly premature assumption; we may then ask which formal criteria might underlie the classification of the 'universe of texts' into types of texts.

references, cf. Ihwe (1971b), van Dijk 1970a, 1971b,c. Some names of scholars in this field of research are: Dressler, Petófi, Isenberg, Hartmann, S.J. Schmidt, Bellert, Rieser, Karttunen; Rieser's work especially (cf. Rieser, 1971) is directed to the formal establishment of textual typologies. An early article in this field is Hartmann (1964). For some formal criteria of textual typology, see Van Dijk, Ihwe, Petófi, and Rieser (1972).

2.5. A first typology is suggested by the notion of degree of grammaticality (in T-grammars). The preciseness of such a typology, which has to be based on the putative rules and categories of T-grammars (which include S-grammars), derives from the explicitness of the rules. But which criteria are to be considered empirically significant? We may have texts with ill-formed macro- or deep structures. Even if such structures could serve as input for further stages of derivation (which is not at all sure), such texts would *be* globally incoherent, i.e., they would have neither a global predicate (denoting an action or event) nor a global set of arguments, the 'roles' of the 'actors' of the text. The result is not the generation of a text but at most the generation of an incoherent sequence of sentences. This type of text may have such empirical correlates as the discourse of children or seniles, and occurs in cases of pathological disturbance, -h perfectly well-formed sentences may be constructed but not a globally coherent text, e.g., a narrative, a coherent dialogue or proof (cf. Labov, 1970: 78ff). Similarly, ahI types of lists or enumerations are generated by this principle: they have a phonological or semantic ordering (alphabetic or thematic), but no deep structure, because they have no argument-predicate as a macroproposition determining a global semantic relation.

Conversely, a text may have well-formed deep structures (semantic representations) but the (transformational) rules generating the later stages of its derivation, e.g., in the formation of sentences, may be disturbed. The violation of global macrotransformations, as we will see, is characteristic for such types as (modern) novels, while the violation of superficial (microstructural) sentence rules normally defines types such as the modern poem, a specific kind of advertisement, and some forms of pathological discourse.

2.6. There is no need, however, to restrict textual typologies to ill-formed structures. Texts may also be classified according to criteria other than the violation of categories or rules. Actually, most intuitive discourse typologies are not based on formally syntactic aspects but on semantic representations, i.e., they are classified with respect to their (global) 'content', and the operators modifying it.

Thus, an advertisement will have the global underlying structure: PRODUCT X IS GOOD BUY PRODUCT X, that is, an evaluative statement and its pragmatic conclusion in the form of an exhortation. Similarly, a propaganda text in a voting campaign will probably be defined as a type by the underlying structure CANDIDATE X IS

GOOD \rightarrow VOTE CANDIDATE X (or its antinomy about an opposing candidate Y).

Newspaper anides are normally characterized as descriptions of 'important events', having the modal characterization 'factual'. Historical texts are normally more complex but have essentially comparable structures: a narrative of a series of (past) events and the explication of their circumstances, causes, and consequences.

The rules underlying such types, as for narrative in general, are rather strict: they presuppose human actors (agents, patients) with e.g., a property [IMPORTANT] and the global coherence condition that proposition P_i underlying T_i (in a compound text) has a temporal operator t_i which is smaller than the temporal operator $t_{i,k}$ of $P_{i,k}$ underlying $T_{i,k}$, and optionally that $p_i \rightarrow$ (presupposition) or $p_i \rightarrow p_{i+1}$. (entailment). (Our notation is simple and ad hoc but may be formalized rigorously.) Note, however, that such rules are normally not deductive but probabilistic (inductive). Only scientific texts may give descriptions of 'events' logically related to each other. This criterion, formulated in methodology, is one among those defining types of scientific texts, i.e., their well-formedness conditions. Moreover, scientific texts will normally be restricted to arguments having the property

[ABSTRACT] by the very fact that they characterize structures, properties, and relations.

From these few examples it may have become clear that a T-grammar provides a definition for such notions as global semantic representation, and that this representation often determines — by its structure or by its (pre-)lexical specification — a type of text. A text thus realizes (disjunctly or jointly)

- states, events, actions, processes
- animate/inanimate agents, patients, etc.
- factual, hypothetical, counterfactual modes
- assertive, interrogative, incitive, performatives...
- past, present, or future time operators
- etc.

The different combinations of these fundamental macrosemantic categories define the types of texts.

There is no need to stress that the sophistication of the typology is determined not only by the amount of precise empirical data, but also by the refinement of the T-grammar. As long as the precise structure of macrostructures and their relations to sentential surface structures are

obscure, only very tentative and imprecise statements can be made about formal typologies.

2.7. Much in the same way as sentence grammars are inadequate models for language systems and putative competences, and T-grammars had to be postulated in order to describe a number of yet unexplicated systematic linguistic structures, (a) grammar is not a full theory of (a) language. More specifically, phonology, syntax, and semantics describe only text structures as such but not, for example, the systematic relations holding between those structures on the one hand, and text users and the structures of enviroing society on the other.¹¹

These aspects of communication processes can be accounted for in part within a future **PRAGMATIC COMPONENT** of the grammar (cf. Wunderlich, 1970). Some pragmatic properties have already been formalized under the heading of hypothetical performative categories and in the temporal and local operators determining time and place of the utterance (Ross, 1970).

A full theory of language has to comprise an adequate theory of language use, i.e., a theory of performance.

The differentiation of texts is also determined by the various factors of performance. Texts have specific conditions and functions, they are used appropriately or inappropriately, they are acceptable or unacceptable in given situations. The distinctions among types of texts are also derivable from their **FUNCTIONS** in a linguistic process of interaction. Thus, articles in a newspaper have 'informative' function, and a manual of algebra has 'instructive' function, while literary texts are traditionally said to have 'esthetic' function. The criteria of these typologies according to

functions not exhaustive and exclusive: informative texts may be incitive advertisements about pharmaceutical products for example).¹³ global function of the text is normally determined, however, by its dominant features, by its general functional property, not by occasional ones. Again, we meet ideal types, which in empirical reality have clear-cut representatives.¹²

¹¹ The criticism of generative-transformational grammar in this respect is rapidly growing, not only within formal linguistics proper (cf. Wunderlich, 1970), but also in psycholinguistics (cf. Lyons, 1970), and sociolinguistics (cf. Labov, 1970, also for further references). Cf. van Dijk (1971c, Ch. 9).

¹² Typologies of language use, i.e., of utterances and their functions, were discussed by Bühler, but the theory has not much advanced since. Cf. especially Morris (1946), classifying types of discourse in a matrix defined by functions on one hand and formal properties on the other. Cf. also Jakobson (1960), Miller (1964).

A precise description of textual communication processes is needed if we are to be able to define functions and their related types. We do not know how text structures, say semantic representations (SR), relate to cognitive structures, and which SRs are informative and which are not, or less so. We shall return to this problem below, when we illustrate some of our previous remarks on a subset of texts: literature.

3. TYPES OF LITERARY TEXTS

3.1. Typologies of literary texts have been made since Antiquity and form a recurrent chapter in any treatise on poetics and rhetoric. These classifications are not only established at the level of scientific description. All users of literature, both writers and readers, are clearly aware of typological differentiations. A theory of literary types therefore has to be a model formally representing this knowledge, by providing the textual and contextual criteria underlying it.

We have to stress that our systematic insight into literary classifications has scarcely advanced since Aristotle's *Poetics*, at least not until the work done from Russian Formalism onwards. The problem however is well known and literary types even have the special name of **GENRE**.¹³

In what follows we want to argue that satisfactory typologies of literary texts have to be based on generative text grammars, and more specifically on **LITERARY TEXT GRAMMARS**. Moreover, from the discussion in the previous section, we may even now conclude that any explicit typology in fact coincides with a normal empirical theory. Indeed, it is not sufficient to enumerate alleged distinctive traits of a postulated type of (literary) text, we must also specify on the one hand the relations between these traits, and on the other hand the relations between the distinctive and the nondistinctive traits, i.e. general properties of the type of text we want to characterize. Such descriptions are plain theories and our typological knowledge derives automatically from an accepted partition of the universe of (meta-)discourse, i.e., from a division of the theoretical labour. It is further motivated by empirical reasons of the restricted

¹³ For a survey of the work done on literary genres, cf. Wellek and Warren (1949: ch. 17). A historical introduction is provided by Prang (1968). See furthermore the traditional work done by Donohue (1943, 1949), Ehrenpreis (1945), Seidler (1965). We do not treat of alleged psychological or metaphysical elements underlying the different types of literary texts. Cf. finally Ruttkowski (1968), Leibfried (1970: 240ff.). There seem to be no methodologically adequate modern discussions of literary types, only theoretical descriptions of given types (e.g., novels).

generality and validity of our descriptions and predictions. At an early stage of research, which characterizes current theoretical poetics, we may be satisfied with the description of rather homogeneous subclasses of literary texts, that is, of types. The discovery of more general properties is either premature or leads to rather trivial generalizations blurring empirically interesting differences among types of texts.

These facts have been intuitively recognized in traditional literary theory: all manuals treat literature by studying its respective 'genres'.

3.2. A first remark that should be made in this context is that the notion of literature' itself implies or has implied a textual typology. Clearly, the distinction of a set of texts called literary' presupposes a set of non-literary texts, and exclusively and exhaustively defines the universe of texts. This is trivial only at first sight, because we also might give a nonbinary, nonexclusive, typology of that universe. Strictly speaking, some types of literary texts — like short stories — are 'closer' to some types of nonliterary texts than to other literary texts — e.g., poems. This fact cannot be overlooked and seems to indicate that 'formal' (textual) resemblances or differences are often secondary criteria for typology. In many cases the performance-based functional criterion esthetic vs. nonesthetic seems to be dominant here.

The literary vs. nonliterary dichotomy is a good example of what have been called extreme types. These have been characterized along several different fines. Pragmatically the literary text was described as *dulce* (vs. *utile*), as a source for *interessenloses Wohlgefallen*, as unpractical, nonfunctional, etc. as opposed to the nonliterary or 'normal' text used in communication processes with practical import (information, instruction, question, assertion, proof, etc.). Semantically, it has been distinguished as 'nonreferential' or as 'fictive', 'having no truth value', etc. Syntactically, it has been characterized as 'deviant', ungrammatical, 'semigrammatical', etc. These polar extremes have normally been used rather loosely and reflect the intuitive division in language use made by unsophisticated native speakers. Our classification of the criteria already indicates that they may be formulated on different levels of description.

Other forms of dichotomy have often been established between the types of *texts that* are closest to the extremes, for example, poetry and scientific texts (erg., Richards, and the New Critics inspired by his work).

Such typologies may have important heuristic value, although an explicit enumeration of differentiating criteria and the degrees in which these types satisfy them is necessary.

FOUNDATIONS FOR TYPOLOGIES OF TEXTS

A still more simplistic but powerful typology actually represents the viewpoint of the linguist. In his hypothesis, according to which linguistic description is based on abstractions from actual use, he will define his empirical object as an idealization from normal, correct language use. Given the traditional scope of sentence grammars, such a working hypothesis may of course be defended, because the differentiation of textual types cannot be given by them.

The description of given sentences/utterances is thus provided with respect to the rules of a 'normal' grammar. We will speak of a 'basic grammar', because it represents basic requirements of grammaticalness and acceptability. Structures incompatible with the rules are classified as 'deviant'. Deviance can be specified with degrees of grammaticalness, although the precise criteria, as we saw earlier, are not yet formulated in a satisfactory way.¹⁴

Normal or basic language (or rather 'normal' **USE** of language) can therefore be considered as the ideal type, and the texts satisfying its rules 'normal' or 'ideal' texts. In principle, a grammar has to provide structural descriptions, on the formal level, of these deviant sentences/texts.

3.3. Similarly, in performance it is possible to describe 'normal' or 'average' language use statistically, not only by lexical units — as is done in traditional stylistics — but also by frequencies of given syntactic structures (mises and transformations). Deviance from average use may lead to differentiation of types of utterances, according to the level and categories of their significant deviation from the mean. Also, we may give values for statistical, objective, and subjective information, and conclude that the literary use of the system is characterized by a large amount of information (unexpectedness). Although the grammar does not contain probabilistic statements, we may use such descriptions for performance typologies, i.e., for the classification of uses of the rules and the lexicon. However, probabilities cannot be calculated for texts (no data are available about transition probabilities in texts consisting of more than one rather short sentence), so that reliable conclusions about textual entropy cannot be made. Only global estimates can be

¹⁴ The literature on the notion of 'deviation' (or *écart*) is extensive, and comprises nearly all work done in traditional and modern stylistics. For a review, cf. Enkvist (1964) for traditional approaches. Van Dijk (1971a) gives a critical survey of transformational notions of deviation. Cf. especially the work of Levin (e.g. Levin, 1965) and other work in Kreuzer and Gunzenhäuser (1965).

given in those cases, but their value therefore probably does not exceed heuristic procedures.¹⁵

3.4. Let us assume, then, that empirical evidence can be found for the theoretical isolation of a subset of texts called literature'. We are obliged to formulate the rules and the categories needed to generate this set and this set alone. Further, a specific theory of literary communication has to be developed, formulating the regularities of literary production, reception, conditions, functions, references, etc.

It can be demonstrated that such a grammar includes a basic or normal grammar of the language (cf. Ihwe, 1971a, 1971b; van Dijk, 1970b); this can be concluded from the trivial fact that no nonliterary structures are excluded in, say, modern literature. There are some temporal and cultural restrictions, but these will not detain us at the moment. -

We shall assume, furthermore, that a literary grammar' is also an abstraction from a set of literary grammars { G_l 1, G_L }, which describe different types of literary texts, just as literature' is an ideal abstraction based on the existence of novels, poems, dramatic texts, etc.

A modest theory of literature, in effect, will try first to describe empirically given' types of texts, not unlike generative grammars are often restricted to the description of specific languages. Further investigation will probably yield universal categories and rules, but we will not normally begin with the search for them.

Literary types, then, are defined by a set of related **LITERARY SUBGRAMMARS**, probably intersecting at some levels because different types of literary texts, e.g., a short story and a novel, will share many relevant properties.

Before considering the possible differentiating rules and operations, let us briefly return to the data of traditional literary scholarship.

3.5. A systematic account of traditional literary typologies and the different criteria used explicitly and implicitly in their classifications is necessary. We must confine ourselves, however, to some main lines of thought, because the literature on 'genres' is overwhelming.

To begin with, it is interesting to note that Aristotle was aware of the problem of classifications. He first recalled that Greece did not have a

¹⁵ Quantitative literary stylistics occupies a large area in modern descriptive poetics. See, among other readers, Kreuzer and Gunzenhäuser (1965) and Dolezel and Bailey (1969).

word to denote the set of literary mas of art', and that the concept of 'poetry' simply was applied when metre was used. Although he did not provide such a term, he understood that some types of texts, like scientific treatises, though having properties ii common with literary texts, had to be excluded from the set. His further differentiation into the types of 'heroic poetry' (epic), 'tragic drama', 'comedy, and dithyrambic poetry' (lyric), on which a secular el was built, was based on differences in the 'means', 'the manner' and the 'object of representation (of reality)'. The 'manner' is normally associated with the set of stylistic figures, i.e., with surface operations ::::e transformations and lexical selection, together with macrodivisions like those made for drama. It is well known that his observations apply mainly to what would be called narrative structure (diégésis), including drama, which seems to differ only at the level of performance (in both the modern and the traditional sense) and in such features as length and metre. He indicates the (normative) rules of formation by providing the constituents and their order as well as the optional transformations and the specific operations of 'style'. Literary types are differentiated not only with respect to each other but also with respect to nonliterary texts. The famous difference between literary narrative and ordinary narrative (history), he says, is their truth value: in literature representations have to be 'probable' not 'real', general not particular. As we have indicated earlier, we may formalize such differences in the modal categories of derivation.

We have mentioned Aristotle in order to stress that his tentative typology remained unmatched until the development of modern literary theory. The same may be said for classical rhetorics, which presented a general (pragmatically based) theory of texts and their specific operations rather than a formal typology of literary texts.

Similarly, most modern manuals reduce the main extreme types of literature to 'fiction' (narrative), 'poetry' and 'drama'. The perennial character of this distinction may be explained by convention alone, but its empirical validity seems to indicate that some textual constants are associated with them. An adequate theory of literature has to account for such constants, even if it should turn out, e.g., in modern literature, that many texts actually realize cross-classification of basic distinctive features.

3.6. There are no serious reasons to reject *a priori* a trichotomous approach, and we may therefore adduce some formal criteria for this kind of typology.

In terms of structure, 'fiction' and 'drama' hardly differ, both are formed of narrative macrostructure. Therefore, differences have to be sought in surface structure (and in performance, e.g., in the stage representation of dramatic texts, which will not detain us here). The main distinctive feature of dramatic texts, then, is the nearly exclusive representation of embedded performatives ('dialogue'); actors describe and are described by linguistic utterances alone; their actions and the pragmatic circumstances are only briefly (optionally) indicated and further realized on the stage. That is, narrative deep structure has to be directly inferred from utterances and actions, since it is not immediately represented by linguistic description. We might reduce both types to one main literary type: literary narrative, irrespective of surface manifestation and performance. However, since these last aspects are intuitively felt as crucial, it would be empirically inadvisable to blur the distinction. Moreover, the general property of 'narrative' is not even typical for literature, so that further generalization would be needed. Finally, poetry (lyric) is mainly characterized by surface operations, and normally has not narrative, but only thematic deep structure. All subclassifications into the proper 'genres' are based on these criteria plus some other features, to which we will now turn.

3.7.1. A wealth of discriminating criteria for the definition of genres has been given in traditional literary scholarship. Few of them were really distinctive and they actually led to cross-classifications: prosody is not restricted to lyrical texts, neither is metaphorization; narrative structure may develop in poetic texts, etc. The criteria, inasmuch as they were explicit enough to have predictive value, had first of all to be applied jointly, not unlike the definition of phonemes by a set of features, certain of which hierarchically dominate others.

The simplest typologies in literature are those given by DEFINITION. They are always based on METRICAL structures, which realize a *priori* schemata of phonological or graphemic organization. Thus a sonnet, for example, may be considered as a subtype (or subgenre) of poetic texts defined exclusively by the rules of metrical theory. Optional transformations of the structures generated either yield acceptable varieties (when they are conventionalized) or remain on the level of idiosyncratic style (idiolect).

Note that metrical structures as generated by rather simple metrical base rules and transformations can be considered as structures typical for literary texts only in some periods. As Aristotle remarked, and as

was the practice until the 16th century at least, nonliterary texts, e.g., didactic texts, might also be realized under codetermination of metrical rules (defining verse, lines, rhymes, metrical stress, etc.).

It is clear that typologies based on metre, or prosody in general, can be infinite because theoretically any length of the text, any length of line, any variation of other metrical units (feet, stanzas) may yield a specific 'type'. Highly sophisticated literary periods actually do realize these types and subtypes, and only historical, cultural, and other pragmatic reasons of performance will determine social acceptability and distinguishability of types.

The formal description of these different types is rather easy because it is normally based on different **VARIABLES** introduced into the rule schemata deriving metrical structures. Constraints on well-formedness are often fixed in given periods and may be very precise, although performance differences are acceptable.

3.7.2. All other criteria for literary typology are less precise and therefore not so easy to describe formally. Moreover, like many types based on metrical criteria, they clearly have restricted historical and cultural extensions. Whereas metrical criteria are characteristic for surface structures, most other criteria are based on deep structures, i.e., on **SEMANTIC REPRESENTATIONS**. Within the domain of lyrical or poetic texts we thus have to define ballads, elegies, odes, epigrams, hymns, etc. with respect to their semantic 'content', although specific metrical aspects may be linked with them: most typologies imply cross-classification of features and sets of features. Thus a ballad will be defined as a lyrical text with narrative underlying structures and rather heavy constraints upon lexical selection: agents are humans with specific features, e.g., [+ ROYAL], and locatives are restricted to specific lexemes. Similarly, elegies apart from their original metrical aspects — will normally have a semantic representation the form of which is roughly I MOURN FOR *X*, where *X* usually is an embedded text representing an event *Y DIED*, etc.

Another main criterion of lyrical texts is the specific surface operations on the syntactic, semantic (lexical), and phonological levels : inversions, deletions, metaphorization, alliteration, etc. These microoperations still characterize poetic texts in modern literature. Important in all cases is not only the semantic macrostructure (the 'subject-matter') but also an additional global constraint on lexematization. This constraint can be called **THEMATIC** and is based on specific secondary or connotative features of lexemes like EUPHORIC], POSITIVE], etc. They

generate what is traditionally called the 'connotative' aspect of a text.

We shall not go into detail here, but only indicate at which levels types can be defined. From our discussion it is already clear that features do not always converge. That is, we may have semantic representations characteristic of elegies realized in the metrical form of an ode.

3.7.3. The situation is similar for the definition of narrative texts, where (after classical and medieval epic) prosody and metre are no longer distinctive. The main differentiating criteria are therefore to be sought in semantic representations: i.e., in prelexical content and the complexity acrostructures. In addition, the referential relation to empirical reality is a main criterion, although in principle any literary narrative is imposed to be 'fictive' in a special sense of counterfactual.

Narrative types are definable at the level of deep structure and the specific restrictions upon the selection of lexical insertion into the macrocategories. Thus legends are simply characterized by the restriction of main agents to saints or gods, and fables by restriction to (personified)

ANIMATE], [— HUMAN] agents: animals and their specific actions. Similar restrictions upon agents are characteristic in nearly all premodern texts, when only highly placed persons could have a semantic role in the text. Epic poetry of all kinds has this restriction as to its heroes. In this line we also find the restrictions of the predicative attributes of the Agents: noble heroes have a principal property VALIANT], FAITHFUL], etc., which at the same time determines the nature of their actions.

More global is the set of features defining such types as myths, popular tales, and fairy tales. They are described by operators as NEG FACT, NEG POSS, and NEG PROB, i.e., they are not only 'fictive' but also supernatural, representing agents and actions existing only in imagination. To be sure, this is only one general property. The precise syntax and semantics of actions, as described in Proppian functions, may be given for such types. This implies that all empirically relevant types have their own subgrammar with specific constraints on modal and temporal operators and on Agents and Actions.

Novels, for example, can be typologized according to the type of action (MURDER in detective stories) or agents (WOMEN, CHILDREN, POLICEMEN, POLITICIANS, etc.), and by the DEGREE of dominance of action, process, or state descriptions of the predicates. Psychological novels will mainly have state descriptions and behaviouristic novels will have action descriptions. Notice that for all these types the normal formation roles for narrative underlie further constraints and

surface operations. To generate short stories a restriction will customarily be formulated upon the complexity of textual embeddings, and be based on, say, one action-predicate and a limited number of agents. No clear-cut distinctions can be given here, however.

3.8. We may conclude from our brief discussion that the typology of literary texts is based on a set of criteria, corresponding to different levels of description (Fig. 1).

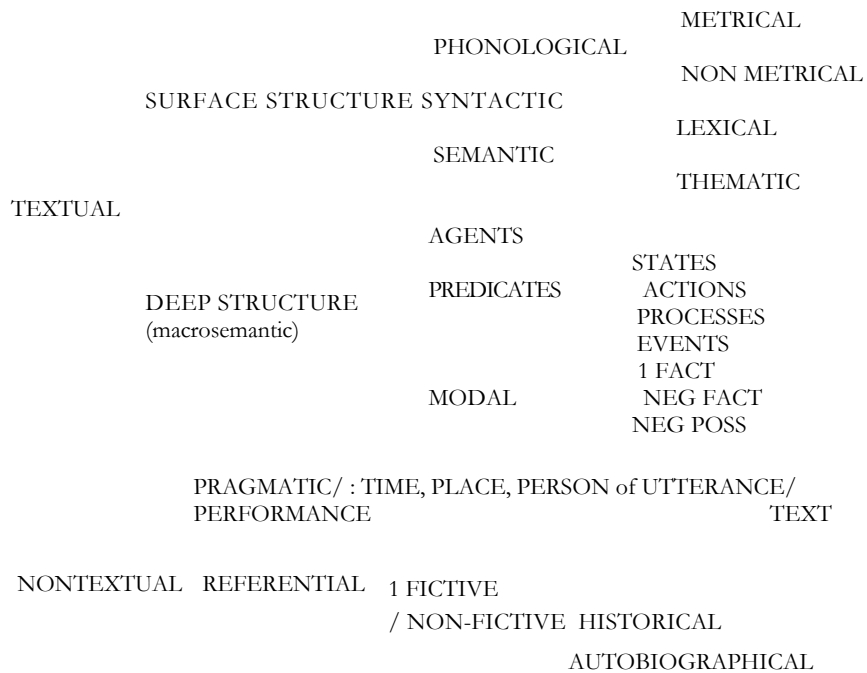


Fig. 1

3.9. It has become clear that textual typologies simply coincide with a theory of literary texts and a theory of literary communication in general. Moreover, this theory includes a DIACHRONIC comPomEhrr describing and explaining the historical changes within some main type, like the novel or the drama, where the constraints upon lexematization and dominance of certain types of predicates may change, often determined by esthetic or other psychosocial phenomena. Diachronic change can only be described when the precise rules of the system underlying a given type are known.

Classification in literature, therefore, can be made explicit only when we have a profound insight into the nature of textual structures and their underlying tales and categories in general. All detailed typologies have to be situated in such a framework of generative text grammar.

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