A. Postulates for Axiomatic Functionalism.

Axiom A. All features in semiotic sets are functional.

Def. 1a. "Functional" for "separately relevant to the purport of the whole of which it is a part".

Def. 1b. "System" for "self-contained set of features with a common purport".

1b[1]. "Self-contained" for "representing all relative dependences of its members, as members of the set in question". In order to avoid a common confusion, it should be noted that a set is not a member, though it is a sub-set, of itself, and nor is any other of its sub-sets(i.e. members of the power-set of that set)a member of the set as such. Of course, some sub-sets may be self-contained themselves. The notions "functional"(Def. 1a.)and "self-contained" can be applied to "combinations(of items)" as well as to "sets". In the case of "self-contained" applied to "combinations", the term "members" has to be replaced by "constituents", and the term "set" by "combination".

Def. 1c. "Semiotic system" for "system of conventions for communication". That is to say all features of such a system are conventional and their common purport is "communication".

1c[1]. "Features" for "elements, analytical properties of elements, or[1] relations between elements or properties of elements".

1c[2]. "Entity" for "element or discrete disjunct analytical

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[1] "or" in formal postulates has to be understood as "and/or".

property of element".

1c^{3}. "Semiotic entity" for "entity in semiotic system".

Axiom B Semiotic systems contain simple, or complex unordered, or complex ordered signa or figurae.

Def. 2 "Information-value" for "specific set of potential interpretations".

2a. "Sign or symbol" for semiotic entity with both form and information-value", simply called "signum" or "plerematic entity".

2a^{1}. "Sign" for "signum with wholly fixed conventional information-value".

2a^{2}. "Symbol" for "signum with not wholly fixed conventional information-value, i.e. to which a temporary item of information-value can be attached by a definition".

2a^{2a}. "Proper symbol" for "symbol with partially fixed conventional information-value"(the latter being partially dependent on occasional definitions of an explicit or tacit nature). Examples to be found in algebra, symbolic logic, etc. Also "proper names" are proper symbols.

2a^{2b}. "Nonce symbol" for "symbol with no fixed conventional information-value"(the latter being wholly dependent on occasional definitions of an explicit or tacit nature).

2a^{3}. "Grammatical entity" for "signum in a semiotic system that has a grammar".

2a^{3a}. "Grammar" for "morphology or syntax". Alternative definition: "complex plerematic system"(see complex

system and plerematic system below).

Def. $2a^{3b}$. "Morphology" for "complex unordered plerematic system"(see unordered system below).

$2a^{3c}$. "Syntax" for "complex ordered plerematic system" (see ordered system below).

$2a^{3d}$. "Plerematic system" for "system of signa". This may be a simple or complex system(see simple system and complex system below).

$2a^{3e}$. "Grammar" for "complex system of signa"(alternative definition to Def. $2a^{3a}$).

Def. $2b$. "Figura" for "semiotic entity which has only form".

$2b^{1}$. "Cenological entity" for "figura in a semiotic system that has a cenology".

$2b^{1a}$. "Cenology" for "cenematics or cenotactics". Alternative definition: "complex cenological system"(see complex system and cenological system below).

$2b^{1b}$. "Cenematics" for "complex unordered cenological system"(see unordered system below).

$2b^{1c}$. "Cenotactics" for "complex ordered cenological system"(see ordered system below).

$2b^{1d}$. "Cenological system" for "system of figurae". This This is not necessarily a cenology, i.e. it may be a simple system(see below and compare with Def. $2a^{3d}$).

$2b^{1e}$. "Cenology" for "complex system of figurae" (alternative definition to Def. $2b^{1a}$).

Def. $3a$. "Phonology" for "Cenology in natural language".

$3a^{1}$. "Phonematics" for "cenematics in ≠ natural language".

Def. 3a^{2}. "Phonotactics" for "cenotactics in natural language".

3a^{3}. "Phonological system" for "cenological system in natural language".

3a^{4}. "Phonological form" for "feature belonging to phonological system".

Def. 3b. "Articulation" for "cenotactics or syntax".

Def. 3c. "Double articulation" for "both cenotactics and syntax".

3c^{1}. "Proper language" for "semiotic system with a cenology containing both a cenematics and a cenotactics, and a grammar containing both a morphology and a syntax". All natural languages, known to date, are proper languages, but not necessarily vice versa. Natural languages, in addition, incorporate a para-phonotactic and a para-syntactic system(see below), but also other other semiotic systems may incorporate para-tactic systems(see below).

3c^{2a}. "Proper cenology(or proper phonology, in the case of natural language)" for "system constituted by the interlocking of one cenematics(or phonematics)and one cenotactics(or phonotactics)".

3c^{2b}. "Proper grammar" for "system constituted by the interlocking of one morphology and one syntax". Note that a proper language is constituted by a proper cenology and a proper grammar.

3c^{2c}. "Interlocking" for "the one system providing the forms of the entities of the other system"(a cenology and a grammar interlock in this way), or "the one system providing the basic elements of the other

system"(a cenematics and a cenotactics, as well as a morphology and a syntax interlock in this way).

Def. 4a. "Simple system" for "system without combinations of elements".

Def. 4b. "Complex system" for "system with combinations of elements".

4b[1]. "Unordered system" for "complex system without ordering relations between elements"(see ordering relations below).

4b[2]. "Ordered system" for "complex system with ordering relations between elements"(see ordering relations below).

Def. 5. "Semiotic system" for "system constituted by the interlocking of one plerematic system and one cenological system"(alternative definition to Def. 1c). We can, therefore, have semiotic systems, where either the plerematic system, or the cenological system, or both are simple, unordered or ordered. This, in its turn, leads to various types of simple, unordered, or ordered semiotic systems: e.g. ordered systems that are cenologically simple but plerematically ordered, e.g. algebra or the reverse of this, e.g. the Morse-code etc.

Def. 6a. "Ordering relations" for "asymmetrical relations between entities in combinations". This does not necessarily refer to linear, or other spatial, ordering, as this is a matter of realisation".

Def. 6b. "Relations of simultaneity" for "symmetrical relations between entities in combinations". By Axiom A, only functional criteria can be brought to bear in deciding whether a relation is symmetrical or asymmetrical.

Def. 7a. "Paradigmatic" for "the oppositional or distinctive

aspect of semiotic entities".

Def. 7a^1. "Paradigmatic relations" for "relations of opposition between members of sets".

7a^2. "Commutation" for "alternation between semiotic entities (or "zero" and semiotic entities)in functional opposition as immediate constituents, in a given context".

7a^3. "Distinctive function" for "the set of commutations in which a semiotic entity may partake". Alternative definition: "the set of oppositions into which a particular semiotic entity enters". In symbols: $a \sim (bUcUd)$, which states the distinctive function of a, in case the set of oppositions a enters in is: ($a \sim b$, $a \sim c$, $a \sim d$), and no others. In fact, $a \sim (bUcUd) = a \sim bUa \sim cUa \sim d$. Suspension of opposition in given contexts, and governed by those contexts, is called neutralization. A phoneme(as a simultaneous bundle of distinctive features)exhibiting a suspension of opposition between distinctive features - in which case it simply does not possess those features - is called an archiphoneme. An archiphoneme is a self-contained bundle of distinctive features common to one or more phonemes. An example is the last phoneme of German "Hand", phonemically / anD/(or /hanT/), in which there is suspension of opposition between the distinctive features "voiced" and "unvoiced". The archiphoneme /D/(or /T/)is a self-contained bundle of distinctive features "apical" and "occlusive", and it has those two features(taken together) in common with German /d/ and /t/, but with no other phonemes of German.

Def. 7b. "Syntagmatic" for "The ordering aspect of semiotic entities".

Def. 7b[1]. "Syntagmatic relations" for "ordering relations between semiotic entities in combinations".

7b[2]. "Syntagmatic entity" for "entity capable of standing in ordering relations with other entities or having an internal structure such that it is capable of containing - as constituents - entities capable of standing in ordering relations with other entities". In other words, to be a syntagmatic entity, an entity should itself be orderable, or have something in its structure that allows it to have orderable constituents. The implication for language is that distinctive features(narrow sense)and monemes are not syntagmatic entities, whereas phonemes, words or grammatemes(pleremes), and phrases are. (cf. Def.7b) For "phonemes", "words", etc. see Defs. below).

Def. 7c. "Tactic" for "Cenotactic" or "Syntactic".

7c[1]. "Cenotactic entity" for "syntagmatic entity in cenology".

7c[2]. "Phonotactic entity" for "cenotactic entity in natural language".

7c[3]. "Tactic relations" for "constructional relations(whether ordering or not)between syntagmatic entities, as immediate constituents(see below), in combinations". Note that tactic relations are not necessarily syntagmatic(i.e. ordering)relations, but they are between syntagmatic entities.

7d. "Syntactic entity" for "syntagmatic entity in grammar".

Def. 7d[1]. "Syntactic relations" for "tactic relations in grammar".

Def. 7e. "Cenotactic/phonotactic relations" for "tactic relations in cenology/phonology".

Def. 7f. "Constructional relations" for "relations between immediate constituents".

7f[1]. "Constituents" for "entities(of the same kind, i.e. of the same level of abstraction)in self-contained combinations".

7f[1a]. "Immediate constituents" for "constituents that are not constituents of constituents within the combination in question".

7f[1b]. "Ultimate constituents" for "the last analytical entities of a self-contained combination of entities". It is theorematic that in cenematics and morphology, in contra-distinction with cenotactics and syntax, immediate constituents are always at the same time ultimate constituents.

Def. 7g. "Positions" for "divisions within a chain(see below), such that in every such division an entity, as an immediate constituent of that chain, can stand and alternate(i.e. commute)with other entities, or with "zero". Alternative definitions: "points on a chain (see below)corresponding to relata of direct tactic relations" and "points of intersection between paradigms(visualized as a vertical straight line, called paradigmatic axis)and a chain(visualized as a horizontal straight line, called syntagmatic axis)".

Def. 7g[1]. "Paradigm" for "set of entities in functional opposition in a given context, within a chain(see below)".

Def. 8a. "Ceneme" for "self-contained bundle of one or more distinctive features as its immediate(and at the same

time: ultimate)constituents". Alternative definitions: "self-contained bundle of one or more distinctive features" (cf. Martinet), "minimum syntagmatic element in cenology", "minimum cenotactic element".

8a[1]. "Cenematic complex" for "complex ceneme". A complex ceneme is a cenematic complex, as opposed to a cenotactic complex. A complex cenological entity is either cenematically or cenotactically complex.

8a[2]. "Phoneme" for "ceneme in natural language". Hence, of course, "phonematic complex" for "complex phoneme". Resulting further definitions for "phoneme" are those Def. 8, with "cene-" and "ceno-" changed into "phone-" and "phono-" respectively.

8a[3]. "Distinctive feature" for "minimum cenematic entity". In natural language, therefore, "minimum phonematic entity". This implies "minimum cenological/phonological entity". The term "distinctive feature" is also used, in a wider sense, for any functional feature, i.e. for "feature or complex of features that is separately relevant to the purport of the whole of which it is a part"(cf. Def. 1a). Note, however, that "the whole" should here be taken to mean "a complex semiotic entity", rather than "the semiotic system". This implies, in fact, that any semiotic feature can at one time or other be regarded as a distinctive feature, i.e. when it is regarded as a feature of a semiotic entity. In a theoretically trivial, but operationally not always trivial, sense, any feature is in the first place a feature of itself, i.e. we may recognise bundles of one

feature only. If one wants to distinguish between the only feature of an object and the object itself, as separate entities, one may call the former x-"ness", e.g. the only distinctive feature of the phoneme /l/ in English can be called "/l/-ness". At any rate, it may be necessary to distinguish in a consistent description between, say, the phoneme /l/ and its only distinctive feature, or between the word(see below)"cat", and its only moneme (see below). Whenever the term "distinctive feature" is used in a wider sense, i.e. for "any feature that is distinctive(i.e. functional)", rather than for "minimum cenematic entity", this should be entirely clear from the context, or it should be separately indicated.

Def. 8b. "Plereme" for "word or grammateme".

8b[1]. "Word or grammateme" for "self-contained(by definition: simultaneous)bundle of one or more monemes as its immediate(and at the same time: ultimate)constituents". Alternative definitions, "minimum syntagmatic entity in grammar", "minimum syntactic entity". It goes without saying that it is irrelevant for syntax whether the form of a word or grammateme is confined to a particular uninterrupted "space" within realizations of a chain, or whether it is even "all over the place", as it may be in systems that exhibit a great degree of "concord". This is a matter of allomorphy(see below), not of this, more abstract, syntactic level. The distinction between "word" and "grammateme", which is intensional, not extensional, will be dealt with in definitions below.

8b^2. "Morphological complex" for "complex plereme". A complex pleremo(i.e. a complex word or a complex grammateme)is a morphological complex as opposed to a syntactic complex. A complex plerematic entity(i.e. signum)is either morphologically or syntactically complex.

8b^3. "Moneme" for "minimum morphological entity". This implies "minimum grammatical entity". Monemes are the grammatical analogues of "distinctive features"(cf. Def. 8a^3).

Def. 9. "Distributional unit(wider sense)" or "field of relations" or "chain" for "self-contained bundle of positions". The term "chain" is also used in a less abstract sense for "instance of a self-contained bundle of positions", etc., i.e. for "a self-contained combination of one or more syntagmatic entities". The syntagmatic entities stand, in that case, in positions of the conceived underlying structure, i.e. the self-contained bundle of positions.

Def. 9a. "Distributional unit(narrow sense)" or "cenotagm(in natural language: "phonotagm")" for "self-contained bundle of positions in cenology(or: phonology)", or for "instance of a self-contained bundle of positions in cenology(phonology)". Alternative definition: "minimum type of structure within which the distribution of cenotactic(phonotactic)entities can be described completely and exhaustively." This is to say that nothing outside such a structure can determine the distribution of immediate constituent entities within the structure. But see Def. 9b for possible further distribution of phonotagms themselves.

9a[1]. "Distribution" for "the set of occurrences of an entity in constructional relations with other entities".

Def. 9b. "Phrase" or "syntagm" for "self-contained bundle of positions in grammar", or for "instance of a self-contained bundle of positions in grammar". In practice, in natural languages, the parallelism with "distributional unit(narrow sense)" or "phonotagm" is not complete, as, in grammar, one can have phrases within phrases, those again within phrases, etc. For an exhaustive description of the distribution of a syntactic entity one has to consider all structures(syntagms)in which that element can occur, and then one has to describe the distribution of these structures themselves in a similar way, and so on. In practice, in phonology such complications are few, and generally of a different, i.e. not hierarchical, nature. In phonology one may have to describe the distribution of types of distributional unit, with respect to one another, in order to supplement the description referred to under 9a.

Def. 10. "Syntagmeme" for "ordered pair consisting of a paradigmeme and the position in which it stands", i.e. "member of a chain(cenotagm or syntagm) (Cf. Def. 9a, 9b and 10b).

Def. 10a. "Paradigmeme" for "member of a set of entities in functional opposition in a given context, within a chain", i.e. "member of a paradigm"(Cf. Def. 7g[1]).

Def. 10b. "Instance of a chain(also simply called: chain; cf. Def. 9)" for "self-contained simultaneous bundle of syntagmemes". Ordering relations may be between paradigmemes, but not

between syntagmemes, as the latter already include the ordering relations.

Def. 11a. "Relation of sub-ordination" or "determination" for "direct tactic asymmetrical relation of functional dependency(see direct relation below). Its converse is super-ordination or "government". This is, perhaps, the only type of tactic relation there is in phonology. If a and b are in a direct tactic relation, and a is for its tactic function(i.e. "position")dependent on b, but not vice versa(in symbols: $a \rightarrow b$), a is said to be standing in peripheral, and b in nuclear position in the chain(i.e. the self-contained bundle of positions).

Def. 11b. "Relation of coordination" for "direct tactic(by implication: symmetrical)relation of mutual functional independency". If a and b are in a direct tactic relation, and a is for its tactic function(i.e. "position") independent of b, and vice versa, a and b are said to be coordinated(in symbols: $a \not\rightarrow b$. This definition implies that, for instance, in the phrase "John and Paul" there is no relation of coordination between "John" and "and Paul"(there is no mutual functional independency here), nor between "John" and "Paul"(there is no direct tactic relation between these elements here), but there is, for instance, coordination between "big" and "black" in "a big black box".

Def. 11c. "Relation of inter-ordination" for "direct tactic(by implication: symmetrical)relation of mutual functional dependency"(i.e. functional interdependency). If a and b

are in a direct tactic relation, and a is for its tactic function(i.e. "position")dependent on b as well as vice versa, a and b are said to be inter-ordinated(in symbols: a ⟷ b). It means, in fact, that the relation between a and b is both one of sub-ordination and super-ordination, and the same goes for the converse of the relation. Compared with coordination we may say that in inter-ordination a and b are both nuclear and peripheral, whereas in coordination they are neither nuclear, nor peripheral.

Def. 11d. "Relation of apposition" or "quasi-syntactic relation" for "direct non-constructional - and, therefore, non-grammatical - relation between, qua tactic function, equivalent immediate constituents of a chain or of a sentential entity(see below)". If a and b are in a direct non-constructional relation, but each of them separately is, or corresponds to, an immediate constituent of a more complex entity, a and b are said to be in a relation of apposition(in symbols: a — b). This implies, of course, that such entities, though in a direct relation, cannot together constitute a sub-chain of a chain, though each of them, independently can. There are here two possibilities to be considered, i.e. that each of the elements in apposition is a separate, qua tactic function equivalent, immediate constituent in relation to other immediate constituents(e.g. "John, the fool, stayed behind"), or that two grammatical entities are in a direct non-constructional relation and exhaust the chain(which makes the relation uninteresting on that level, as it is merely

juxtaposition), but correspond, on the sentential level to clauses(see below). In the latter case we have a non-construction on the grammatical level, which corresponds to a construction on the sentential level, and this makes the non-construction, of course, indirectly of interest to the analyst. The latter can be called "sentential apposition". Examples of sentential apposition are: "Yes, he did it.", "He is a fool, isn't he.", "Voici, un livre!". The difference between apposition and coordination is that the relation in the former is constructional(i.e. it is not merely "juxtaposition", and has, therefore, semantic import as such)and results, therefore, in a construction (i.e. chain), whereas apposition is non-constructional. The term "quasi-syntactic" is appropriate, as, especially in proper languages, the entities involved may exhibit the the phenomenon of "contextual" or "partly contextual" variance, and bear, therefore, some superficial similarity with entities in constructions.[1]

Def. 12a. "Occurrence interdependency" or "bilateral(or mutual) occurrence dependency" for "relation such that neither of two entities in direct relation(see below Def. 15) which are immediate constituents of a chain can occur in the chain in question whilst the other is zero". In symbols: a b. This may be either a case of sub-ordination, or of inter-ordination, but not of coordination.

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[1] For much of the syntactic part of the theory I owe gratitude to A.H. C. Ward, in Toronto, with whom I had extensive correspondence and many discussions about this topic. Professor Ward was working on a syntax for Ancient Chinese along axiomatic functionalist lines.

Def. 12b. "Unilateral occurrence independency" or "unilateral occurrence dependency" for "relation such that one of two entities in direct relation(see below)which are immediate constituents of a chain can occur in the chain in question whilst the other is zero, but the other one cannot". In symbols [a]b or a[b], the square brackets indicating the occurrence dependent entity: i.e. it requires the other entity for its occurrence, but not vice versa. Such an entity between square brackets is called an "expansion"(see below). This is always a case of sub-ordination.

Def. 12c. "Bilateral(or mutual)occurrence independency" for "relation such that each of two entities in direct relation(see below)which are immediate constituents of a chain can occur in the chain in question whilst the other is zero". In symbols [a][b]. Occurrence dependency, etc., has to be carefully distinguished from functional dependency, etc. Bilateral occurrence independency is always a case of coordination.

Def. 13a. "Nucleus" or "governing entity" for "entity in nuclear position(see Def. 11a)". In symbols b→a, [b]→a, a←b, or a←[b], in which a is the nucleus. The nucleus is the "identity-element" in the chain in question, i.e. the tactic functions of all other elements depend on their relation towards the nucleus.

Def. 13b. "Peripheral entity" or "governed entity" or "determinant entity" for "entity in peripheral position(see Def. 11a)". In symbols b←a, b←[a], a→b, or [a]→b, in which

a or [a], is peripheral.

Def. 13c. "Expansion" for "immediate constituent that commutes with zero". In symbols [a]→ b, in which [a] is an expansion; also [a]↮[b], in which both [a] and [b] are expansions. Complex expansions may contain entities that are themselves not expansions, e.g. [[a]→ b] → c, or even [a→ b] → c.

Def. 13d. "Bound entity" or "actualizer"(cf. Martinet's concept of "actualization"; see below)for "peripheral immediate constituent that does not commute with zero". In symbols: a →b, in which a is a bound entity.

Def. 13e. "Free nucleus" for "nuclear immediate constituent that does not require the presence of a non-zero peripheral constituent. In symbols a←[b], in which a is a free nucleus.

Def. 13f. "Actualization" for "situation in which a nuclear immediate constituent requires the presence of a non-zero peripheral constituent". In symbols a←b, where a is said to be actualized, and b is said to be a bound entity(Def. 13d) or actualizer. There is a resemblance here with Martinet's concept of "actualization", but my use of this term is not confined to the actualization of predicates.

Def. 14a. "Disjunctive or diverse determination" for "complex tactic relation such that two or more peripheral immediate constituents are subordinated to the same nucleus, but in different ways". I.e. a R_x c and b R_y c, where a and b are peripheral, c is nuclear,

and R_x and R_y are different tactic relations(relators).

In symbols: $\begin{matrix}\underline{a}\\ \underline{b}\end{matrix}\Big|\!\rightarrow \underline{c}$

Example: $\begin{matrix}\text{he}\\ \text{him}\end{matrix}\Big|\!\rightarrow \text{hit}$ "he hit him"

Def. 14b. "Conjunctive or parallel determination" for "complex tactic relation such that two or more peripheral immediate constituents are subordinated to the same nucleus, but it cannot be ascertained that they are so in different ways". I.e. $\underline{a}\ R_x\ \underline{c}$ and $\underline{b}\ R_y\ \underline{c}$, where, as far as we know, $(x \neq y)$, i.e. $x = y$. In symbols

$\left[\begin{matrix}\underline{a}\\ \underline{b}\end{matrix}\right]\rightarrow \underline{c}$ Example $\left[\begin{matrix}\text{the}\\ \text{old}\end{matrix}\right]\rightarrow \text{man}$ "the old man"

This situation differs from certain cases of coordination, i.e. $(\underline{a} \not\leftrightarrow \underline{b})\rightarrow \underline{c}$, which, indeed, implies $\underline{a}\ R_x\ \underline{c}$ and $\underline{b}\ R_y\ \underline{c}$, where $x = y$, but where $\underline{a}$ and $\underline{b}$ stand in a direct tactic relation, and hence are together <u>one</u> immediate constituent(rather than two separate ones)in respect to $\underline{c}$. Because in cenotactics(phonotactics)all relations must involve time or space in a functional capacity, parallel determination cannot obtain in cenotactics (phonotactics), only in syntax. E.g.

/pit/ = $\underline{p}\rightarrow i\leftarrow t = \begin{matrix}\underline{p}\\ \underline{t}\end{matrix}\Big|\!\rightarrow i$, rather than $\left[\begin{matrix}xp\\ \underline{t}\end{matrix}\right]\rightarrow i$.

Various adaptations and combinations within this type of presentation are feasible, especially in syntax. For instance, one can use this type of notation for the abstract presentation of a chain in terms of positions only, or combine this with a presentation of an instance of such a chain, and further combine this with an

indication of occurrence dependency, e.g.

$\left|\begin{matrix}\underline{a},\underline{x}\\ \underline{b},\underline{y}\end{matrix}\right| \rightarrow \underline{c},\underline{z}$, $\left[\begin{matrix}\underline{a},x\\ b,y\end{matrix}\right] \rightarrow \underline{c},\underline{z}$, $\left|\begin{matrix}[\underline{a}],x\\ b,y\end{matrix}\right| \rightarrow c,z$, or $\left[\begin{matrix}[a],x\\ b,y\end{matrix}\right] \rightarrow \underline{c},z$

as the case may be, where x,y, and z are positions and a, b and c are entities(or 'zero')in those positions. Furthermore, terms, e.g. a, b, c, if syntactically complex, may be represented themselves in this way whenever feasible, and so on, just as, say, in ordinary algebra. Round brackets or other devices may have to be used in such cases in order to show the immediate constituent structure, just as, say, in ordinary algebra. A useful further convention with respect to occurrence dependency could be: one pair of brackets enclosing more than one item(in separate positions), in those cases where either one, but not, say, both, in the case of two items, as an expansion. E.g.

$$\left[\begin{matrix}\text{the}\\ \text{one}\\ \text{old}\end{matrix}\right] \longrightarrow \text{man}$$

This formula accounts for "the man", "the old man", "one man", "one old man", "the one man", "the one old man", but it excludes "old man".

Def. 14c. "Underlying structure" for "abstract representation of a chain in terms of positions with or without indication of functional dependencies, or occurrence dependencies". E.g.

$\left|\begin{matrix}x\\ y\end{matrix}\right| \longrightarrow z$, $\left[\begin{matrix}x\\ y\end{matrix}\right] \longrightarrow z$, $\left|\begin{matrix}[x]\\ y\end{matrix}\right| \longrightarrow z$, $\left[\begin{matrix}[x]\\ y\end{matrix}\right] \longrightarrow z$, x y z, [x] y z,

where x, y and z indicate positions, and are in the presentation of the underlying structure usually

replaced by convenient labels indicating the positions, e.g.

$$\left.\begin{matrix}\text{subject}\\ \text{object}\end{matrix}\right| \longrightarrow \text{predicative}, \left.\begin{matrix}\text{subject}\\ [\text{object}]\end{matrix}\right| \longrightarrow \text{predicative}$$

Def. 15. "Direct relation" for "relation between constituents (not necessarily immediate constituents) that is not a relation via other constituents". The relation of "being in a relation with", if not further qualified, is transitive. I.e. a R b and b R c implies a R c. When also the converse is true, i.e. a R c implies a R b and b R c, the relation a R c is by virtue of a R b and b R c - in fact a R b and b R c, on the one hand, and a R c on the other, are in that case equivalent. We may, then, say that the relation a R c is via b, and a R c is, consequently, not a direct relation. In semiotic systems there are direct relations between peripheral immediate constituents and the nucleus, and between the immediate constituents in coordinative and interordinative constructions. As these are relations between immediate constituents, they are at the same time tactic relations, and, consequently, they are direct tactic relations. There are also direct relations between the nuclei of peripheral constituents and the nucleus of the corresponding nuclear constituent - the nuclei constitute, as it were, the joints in multiply complex constructions - but as the nuclei in that case are mere constituents, not immediate constituents, such relations are direct, but not tactic, relations, i.e. direct non-tactic relations.

Relations between peripheral immediate constituents in a subordinative construction are tactic, but not direct, i.e. they are indirect tactic relations. All other relations between constituents are indirect non-tactic relations, and as such uninteresting. Also in the case of quasi-tactic relations(apposition)which are, of course, non-tactic, we may, in the case of appositional complexes, distinguish between direct and indirect relations, i.e. in "John, a carpenter in Crail, a little town in Fife, Scotland" there is a direct quasi-tactic relation between the first and the second, between "Crail" and the third, and between "Fife" and the fourth part. The relation between "John" and "carpenter", that between "Crail" and "town", and that between "Fife" and "Scotland" is direct but not even quasi-tactic, and therefore of little interest, and all the other relations are even less interesting, as they are not direct nor even quasi-constructional.

Axiom C. Figurae may have para-cenotactic features and signa may have para-syntactic features.

Def. 16. "Para-tactic features" for "para-cenotactic or para-syntactic features". In natural language these are usually, but(from a functional point of view)inappropriately, lumped together under the term "prosody". This is because their phonetic substance is usually simple "pitch" or "amplitude", or a mixture of the two. The lack of variation in substance leads to a great deal of amalgamation (physical simultaneity)and layering at the phonetic level,

and disentanglement at this level is usually impossible. The following definitions make disentanglement possible at both the cenological and the grammatical, and within these at the contrastive, as well as distinctive, levels. Another type of para-tactic feature, frequently encountered in natural language, is differences in sequential order(i.e. permutation)of the tactic entities involved. E.g. "Can he do it" versus "he can do it". This should not be confused with permutation as a means of expressing syntactic relations, e.g. "he hit me" versus "I hit him". The latter are inherent in the tactic construction and, therefore, not para-tactic.

Def. 17. "Para-cenotactic features" for "cenological(phonological) features accompanying, but not determining the identity of, cenotactic(phonotactic)entities". Of course, a cenotactic entity in combination with such features assumes an identity of its own on another level of analysis.

Def. 17a. "Contrastive para-cenotactic features" for "features with the sole function of groupment over and above cenotactic groupment". I.e. para-cenotactic(para-phonotactic)features that give form and unity to cenotactic(phonotactic) complexes as such(i.e. form over and above the inherent form of the cenotactic entities themselves). Typical examples are "juncture", and normal unit-accent, e.g. so-called "word accent", "word-group or phrase accent", etc. Juncture, especially when not always realized by "pause", is frequently a function of accent. To be distinguished from unit-accent, which - after Martinet - I prefer to

call "contrastive accent", is "connotative stress" and other features fulfilling the same function, which may be considered as(usually non-discrete)features of an auxiliary semiotic system used to draw attention to specific parts of an utterance, at the cost of others, and so adds connotation to the denotation, which remains constant. Examples of connotative stress are seen, for example in the difference between "he hit him", "he hit him" and "he hit him"(the stressed parts are underlined), which have the same denotation, but which are different as to connotation. Of a similar nature, and often occurring in conjunction with the former, is what one might call "connotative modulation", which usually takes the form of pitch-modulation, similar in appearance to, but to be distinguished from, the phonetic forms corresponding to intonation(see below).

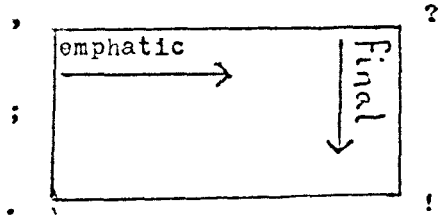
Def. 17b. "Distinctive para-cenotactic features" for "para-cenotactic features that are in a relation of commutation(see Def. $7a^2$) with one or more other para-cenotactic features, or with 'zero'". A typical example in natural language is "tone", as, for instance in Chinese. Also the phonological forms (see below)of distinctive intonations(see below)are distinctive para-phonotactic features, whilst the intonations themselves are distinctive para-syntactic features(see below).

Def. 18. "Para-syntactic features" for "features accompanying, but not determining the identity of, syntactic entities". Of course, a syntactic entity in combination with such features assumes an identity of its own on another level of analysis.

Def. 18a. "Contrastive para-syntactic features" for "features with the sole function of groupment over and above syntactic groupment". I.e. para-syntactic features that add further organisation to syntactic complexes as such. Typical examples in natural language are cases of "suspensive" clause intonation, usually, in writing, symbolized by a comma, which may help to distinguish between say, "John bought a horse, Peter sold it again."(one sentence), and "John bought a horse. Peter sold it again."(two sentences), and cases of so-called "thème and propos"(or "topic and comment")arrangement, e.g. "John, is not a bad guy", as opposed to "John is not a bad guy". Such features may also affect variance at the syntactic level, e.g. "John, he is not a bad guy", but not "John he is not a bad guy.", or "It was Napoleon, who lost at Waterloo." as opposed to "Napoleon lost at Waterloo.". Also cases of "apposition"(see Def. 11d)are usually formally marked by such features.

Def. 18b. "Distinctive para-syntactic features" for "para-syntactic features(of a plerematic nature, i.e. involving both form and information-value)that are in a relation of commutation(see Def. $7a^2$)with one or more other para-syntactic features". A typical example in natural language is "sentence-intonation". Note, for instance, the difference between "John goes home.", "John goes home?" and "John goes home!". It has to be distinguished from the clause-intonation

in "John goes home,....", which is contrastive, rather than distinctive. Nevertheless, sentence-intonation is at the same time clause-intonation, and therefore contrastive, as it is a para-syntactic feature of the last, or the only, clause in the sentence(for "clause" and "sentence", see below). However, this is not the sole function of sentence-intonation, and the latter is, therefore, a distinctive, rather than a contrastive, para-syntactic feature. There are several complications with respect to "intonation", owing to the fact that the systems involved are infinite, i.e. there is no discrete set of members. This is not the place to go into all of them. Suffice it to say that, as far as I know, all systems exhibit a cline from suspensive [,], to final [.], and, within this, from non-emphatic [,] or [.], to emphatic [?] or [!] respectively. We can represent this by the following square:



The most common situation seems to be that "suspensive" is phonetically mainly characterized by the steepness of the rise or fall in pitch, often accompanied by an increase of amplitude. The "form" of an intonation may correspond to any point on this square, and the information-value of the intonation stands in a direct relation to

its relative form(i.e. "relative" within its potential range of variation within the above square).

Def. 19. "Para-tactic(i.e. para-cenotactic or para-syntactic)unit" for "self-contained entity constituted by tactic(i.e. cenotactic or syntactic)entities, together with accompanying para-tactic features". The tactic entities involved are called the "base" of the unit. For instance, in natural language, a sentence is constituted by its base(one or more syntactic entities)and a sentence-intonation(a distinctive para-syntactic feature). Similarly a clause is constituted by its base(one or more syntactic entities)and a clause-intonation(a contrastive para-syntactic feature). In phonology, a word-accent-group consists of a base(the complex of one or more phonotactic entities, usually roughly corresponding with the phonological form of a word in terms of phonemes)and a so-called word-accent. A phrase-accent-group is a complex of the latter, together with a superimposed so-called phrase-accent, or a combination of phrase-accent-groups together with a further phrase-accent, and so on. A tone-unit e.g. tone-syllables in Chinese, is a phonotagm, together with its tone. E.g. in Pekingese, where there is distinctive opposition between four tones and "zero", "ma^{1}", "ma^{2}", "ma^{3}", "ma^{4}", and "ma" correspond to one and the same phonotagm, but are different para-phonotactic units.

Def.19a. "Complex para-tactic unit" for "self-contained entity constituted by two or more para-tactic units, together

with further accompanying para-tactic features". Because of amalgamation these "further" features may be superimposed on para-tactic features of one or more of the constituents themselves. An example in phonology has already been mentioned under Def. 19, i.e. a phrase-accent-group.

Axiom D. All semiotic systems contain sentences.

Def. 20. "Sentence" for "signum with such features that it cannot be a feature(constituent, or other feature)of another signum". Alternative definition: "signum such that it is a self-contained vehicle for conveying messages". It should be noted that other signa, even though they have information-value, can only convey messages if and when belonging to, or constituting the base of, a sentence. That is, the notions "information-value" and "message" have to be distinguished.

Def. 20a. "Clause" for "potential constituent(perhaps the only one) of a sentence". "Constituent" should, of course, not be confused with "feature". Sentence-base(see below), and intonation, for instance, may both be "features" of a sentence, but not "constituents". Constituents(Def. $7f^1$) are entities of equivalent status within a self-contained combination of such entities. In semiotic systems where sentences are para-syntactic units(as in natural language), clauses must, therefore, be para-syntactic units as well.

Def. 20b. "Base" for "in a para-tactic unit, the total complex of those features that correspond(on another level)to tactic entities". E.g. in Pekingese /ma/[2](i.e. the syllable /ma/

under the rising tone), the base is the phoneme-complex (phonotagm) /ma/. Example from syntax: the sentence-base of "I believe he is a good chap." is the corresponding syntagm(i.e. without the intonation). Of course, in semiotic systems with no para-syntactic features, i.e. where the sentential level is part(the highest)of the hierarchy of the syntactic level(this would imply that there is no extensional difference between sentence, base, and syntagm)these distinctions can be ignored. Sentences in such a system are just certain types of syntagm. Similar considerations hold for systems with no syntax, let alone for systems with no grammar.

Def. 20c. "Sentential features" for "such features - belonging to the base, or additional to the base(in the latter case they are by definition para-syntactic) - as determine particular signa to be sentences, or constituents of sentences.

Def. 20c[1]. "Sentential markers(sentence-markers or clause-markers)" for "sentential features belonging to the base of sentential entities(i.e. sentences or clauses)". Alternative definition: "sentential features that are not para-syntactic features". Examples in English are such syntagms as "isn't he", etc., at the end of a sentence-base, or clause-base.

Def. 21. "Ellipsis" for "defective realization of a syntagm, such that one or more of its constituents are not realized at the utterance level". This implies that ellipsis belongs to realization, rather than to the form of a

signum. It does not have to be accounted for, except at the utterance-level, and the phenomenon can therefore be ignored in syntax, i.e. in syntax one regards the constituents as being present. Still it is sometimes difficult to recognize ellipsis in syntax for what it is. The following are mere rules-of-thumb for solving the problem. In the first place, it is typical(though not necessary)for contextual(see below)ellipsis that it is the nuclear element of a syntagm that is left out in realization. Unless one can analyze a syntagm with suspected elliptical realization in such a way that this is shown not to be the case, one must conclude that it is, indeed, a case of elliptical realization. In case it is a peripheral element that is left out, one has to test whether the message would have been affected by its inclusion. If so, it is not ellipsis. E.g. "John eats", and "John eats soup" have different denotations, and the former is, therefore, not elliptical, but "John hit, and Peter pushed him" is elliptical. Within "ellipsis" one might wish to distinguish between the already mentioned "contextual" or "proper" ellipsis, e.g. "No, not a cow, "a horse." as an answer to, say "Did he buy a cow?", and "conflation", e.g. "John hit, and Peter pushed him". The difference between the two types is that, whereas in the former it is impossible to establish precisely which is the syntactic sign that has to be regarded as corresponding to the utterance in question - even if one knows the context -, in the second one can say exactly

what and where the ellipsis is, and the corresponding syntagm can be established, without any reference even to the context in which the sentence is used. For that reason one might wish to have a formal notation for such a "construction". Such a notation could be:

$$\left(\begin{array}{|c|}\hline \text{John} \\ \hline \text{him} \\ \hline \end{array} \longrightarrow \text{hit}\right) \longleftarrow \left(\text{and} \longleftarrow \left(\begin{array}{|c|}\hline \text{Peter} \\ \hline \end{array} \longrightarrow \text{pushed}\right)\right)$$
$$\text{him}$$

the box indicating the suppressed part of the realuzation. It should be noted that in both cases we may recognize the realization of the sentences, qua sentences, to be well-formed, i.e. one might be tempted to regard "ellipsis" as referring to a discrepancy between syntactic and sentential well-formedness. Though such a view is not factually incorrect, one is likely to encounter difficulties in establishing the precise extent of the discrepancy. Only in the case of "conflation" are we able to establish the syntactic structure of the sentence-base, as, in the case of "contextual ellipsis", the utterance could correspond to any one of a number of structurally different syntactic entities, *e.g.* "No, he did not buy a cow, but he bought a horse", or "No, what he bought was not a cow, but a horse", etc. At the sentential level we must, therefore, consider ellipsis to play no role at all, and the only analyses possible at that level are one into constituents, the clauses, and one into base and para-syntactic features. It is irrelevant at the sentence level whether the base corresponds to a well-formed realization of a syntactic

structure. It is only at a different level, i.e. the syntactic one, that ellipsis becomes an issue, and from the point of view of that level we may say that it is merely a matter of defective realization of a syntactic entity as an utterance. The fact that, in normal communication, all realization presupposes utterances of sentences, is, analytically speaking, irrelevant. There is no reason why one could not recognize the realization of something to be not well-formed at one level, but perfectly well-formed at another. After all, a similar discrepancy may occur between phonological and grammatical well-formedness, morphological and syntactic well-formedness, syntactic and semantic well-formedness, etc. In this theory - I should like to stress this - the syntactic and sentential levels are regarded as entirely different levels. The latter occupies an important position in the whole of linguistic analysis, because all realization, as I said already, presupposes sentences, and actual sentences(but not necessarily the abstract sentential level)have, therefore, constantly to be referred to, especially when decisions as to matters of identity(on all other levels)are concerned. It is, indeed, via sentences that the ultimate identity of any semiotic feature is to be established, but once established such a feature has become a member of its proper inventory of features, and is, from that moment onwards, independent of the sentence-utterances it may be instanced in. In order to avoid a common confusion, it should be noted

distinctive function of a particular signum". This is in agreement with Hervey's definition of "utterance" as "a model for a single realization of a signum", and with his tenet that a signum is a class of utterances. The same considerations of "equivalence", mentioned below with regard to "signum", "expression", and "content", apply here too.

Def. 22a. "Phonetic form" for "realization form in natural language". A phonetic form is, for instance, the phonetic feature "labiodental", or the class of denotata corresponding to a "letter" in the International Phonetic Alphabet, duly defined within Phonetics. In general, all phonetic features that may be the realizations of figurae are phonetic forms. As far as linguistics(phonology)is concerned, phonetic forms(as all realization forms)have the status of mere generalized "protocols", i.e. statements of fact, notwithstanding that there exists a highly developed science(phonetics)that provides us with those "protocols".

Def. 23. "Phonological form(symbolization: p; formally defined as $\{f\}^{x}Rd^{x}$, see below)" for "a particular maximum class of one or more phonetic forms $\{f\}$, each member f in its capacity of standing in a relation with a particular distinctive function d". Alternative definitions: "A class of all and only the phonetic forms able to be, and in their capacity of being, distinctive, in a particular way, with respect to a message, in the language in question", "self-contained class of allophones".

that there are no ill-formed entities in language, i.e. "well-formedness" or "not well-formedness", is always a matter of realization with respect to a particular level of analysis, not of entities at the level in question. The two examples just mentioned are both well-formed from the point of view of the sentential level, and both not well-formed from the syntactic point of view. The difference between the two is merely in the fact that in the case of "contextual ellipsis" the base defies syntactic analysis, whereas in the case of "conflation" the actual syntagm corresponding to the base can be reconstructed, and consequently analyzed.

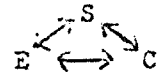
Axiom E. "There may be a many-to-one relation between realization form and figura(allophony), and between cenological form and signum(allomorphy), and vice versa(homophony and homomorphy respectively)".

Def. 22. "Realization form(symbolization: f)" or "substance form" for "generalized model for a class of impressionalistically similar phenomena that may correspond to one or more figurae". Because of the generalization involved, a realization-form is already a class of what one could call images", these being "models" of the unique form of a single realization. If we symbolize image as i, i.e. $f = \{i\}$, we may, in anticipation of what follows, define "utterance" as "iRs", (where "s" stands for the distinctive function of a particular signum), i.e. as "a model(image) for the specific form of a single realization in its capacity of standing in a relation with the particular

Mutatis mutandis, with a change of terminology, these definitions can be applied to other Semiotic Systems as well. The same holds for the remainder of the definitions.

Def. 23a. "Allophone' or "phone"(formally defined as $\underline{f}^{x}R\underline{d}^{x}$, where $\underline{f}^{x} \in \{\underline{f}\}^{x}$, and it is the case that $\{\underline{f}\}^{x}R\underline{d}^{x}$ for "a particular phonetic form *f*, member of a particular class of phonetic forms $\{\underline{f}\}$, in its capacity of standing in a relation with a particular distinctive function *d*". Alternative definitions: "A particular phonetic form *f* in its capacity of having a particular distinctive function *d*", "member of a phonological form(as a class)". Though "allophone" is partly derived from Greek "allos" (different)and, strictly speaking, the term, therefore, is only appropriate in the case of a class having more than one member, by convention the term "allophone" is used also in those cases where the term "phone" would seem to be more appropriate. The same goes for "allomorph" and "morph".

Def. 24. "*Signum*"(formally defined as E & C, or as $\{\underline{p}\}^{x}R\underline{s}^{x}$ & $\underline{s}^{x\vee}R\{\underline{p}\}^{x}$)" for "the conjunction of a particular *expression* and a particular *content*, which mutually imply one another"(alternative definition to Def. 2a). As also a particular *signum* and a particular *expression*, and, therefore, a particular *signum* and a particular *content* mutually imply one another, we can represent this as follows:



As this implies equivalence between signum(S), expression(E) and content(C) in any statement using any of these terms, we can, in practice, ignore the difference between S, E and C. Though, if we define (see below) E as $\{\underline{p}\}^{x}R\underline{s}^{x}$, C as $\underline{s}^{x\breve{R}}\{\underline{p}\}^{x}$, we have to define S as $\{\underline{p}\}^{x}R\underline{s}^{x}\ \ \underline{s}^{x\breve{R}}\{\underline{p}\}^{x}$, we are allowed, for reasons of simplicity, to act as if S were simply $\{\underline{p}\}^{x}R\underline{s}^{x}$.

Def. 24a. "Expression(symbolized E, formally defined as $\{\underline{p}\}^{x}R\underline{s}^{x}$)" for "a particular maximum class of one or more phonological forms {p}, each member p in its capacity of standing in a relation with a particular distinctive function s". Alternative definitions: "A class of all and only the phonological forms able to be, and in their capacity of being, a phonological form of an instance of a particular signum", "self-contained class of allomorphs". The latter definition, by equivalence (see above), is also appropriate for defining content, and signum. The symbol s, standing for the distinctive function of a signum, is chosen in order to distinguish it from d, which stands for the distinctive function of a figura. Distinctive function s(in the case of "signs")is properly included in "semantic function", from which it has to be distinguished. The difference is, however, only important in the case of "synonyms", which have the same semantic function, but - as they are different signs - different distinctive functions.

Def. 24a[1]. "Allomorph" or "morph"(formally defined as $\underline{p}^{x}R\underline{s}^{x}$, where $\underline{p}^{x} \in \{\underline{p}\}^{x}$, and it is the case that $\{\underline{p}\}^{x}R\underline{s}^{x}$) for "a particular phonological form p, member of a particular class of phonological forms $\{\underline{p}\}$, in its capacity of standing in a relation with a particular distinctive function s". Alternative definitions: "A particular phonological form p, in its capacity of having a particular distinctive function d", "member of an expression(or, by equivalence, of a content or a signum)(as a class)".

Def. 24b. "Content(symbolized C, formally defined as $\underline{s}^{x}\breve{R}\{\underline{p}\}^{x}$)" for "a particular distinctive function s, in its capacity of being the particular distinctive function s of each member of a particular class of phonological forms $\{\underline{p}\}$. Alternative definition: "the converse of expression".

Def. 25. "Homophone" for "allophone of one figura having the same phonetic form as an allophone of another figura". Formalized definition: $\underline{f}^{x}R\underline{d}^{x} \sim \underline{f}^{x}R\underline{d}^{y}$, where $x \neq y$.

Def. 26. "Homomorph" for "allomorph of one signum and having the same phonological form as an allomorph of another signum". Formalized definition: $p^{x}Rs^{x} \sim p^{x}Rs^{y}$, where $x \neq y$.

Def. 27. "Homonym" for "total class of allomorphs of one signum, in comparison with and its members having the same phonological forms as those of the total class of allomorphs of another signum". Formalized definition: $\{\underline{p}\}^{x}R\underline{s}^{x} \sim \{\underline{p}\}^{x}R\underline{s}^{y}$, where $x \neq y$. One could

define "homonymy", informally, as "total homomorphy between signa".

Def. 28. "Synonym" for "signum, in comparison with and having the same intrinsic information value(denotation)as another signum". By implication these signa differ from one another in the class of phonological forms of their allomorphs. Formalized definition: $(\{p\}^{x}Rs^{x}RD^{x} \sim (\{p\}^{y}Rs^{y})RD^{x}$, where $x \neq y$, D = "denotation". It goes without saying that, if we speak about "different signa", we mean "different signa belonging to the same Semiotic System", as comparison of signa from different systems with respect to their distinctive functions(i.e.....S^{x} .....~.....S^{y}....), and, consequentially, their identities, is meaningless, even though signa of different systems may conceivably have the same denotation(i.e. referential correspondence with the same class of denotables).

Def.29a. "Word" for "plereme, as a class of allomorphs, established in such a fashion that all its members have a continuous (i.e. uninterrupted)phonological form".

Def.29b. "Grammateme" for "plereme, as a class of allomorphs, established in such a fashion that some of its members have a noncontinuous(i.e. interrupted)phonological form". The problem of having to distinguish between "word" and "grammateme" arises especially in languages that exhibit the feature of so-called "concord", i.e. contextual variance with regard to allomorphs of words, which variance is governed by the use of another constituent in the

construction. A classical example of this is so-called "gender", as, for instance, in French or German. In French, for instance, we may say that "la grande montagne blanche", /la grãd mõtañ blãš/, contains, as constituents, four pleremes. Now, it is equally correct to say that the phonological form of these pleremes, in this particular instance, is /la/, /grãd/, /mõtañ/, and /blãš/ respectively, as it is to say that their phonological form is /l/, /grã/, /a...d mõtañ....š/, and /blã/ respectively. In the first case we have to add that /la/, /grãd/ and /blãš/, are affected by "concord", i.e. that their variance is governed by the fact that they are in construction with a so-called feminine "noun", as this is not immediately clear from the presentation. In the second case it is immediately clear that "mõtañ" governs the variance, but we have separately to account for the fact that the <u>particular</u> phonological form the other entities assume is governed rather by the <u>identity</u> of the pleremes "la", "grand" and "blanc", and only the fact <u>that</u> they assume that form is governed by their being in construction with the plereme "montagne". The two ways of presentation are, therefore, complementary, rather than being in competition. As the difference between the two modes is intensional, rather than extensional, i.e. it does not affect the identity of the pleremes in question, one can use either, or both, according to the convenience, or according to the emphasis on the one, or the other, aspect of the case. The term "grammateme" can also be used, irrespective of whether

there is "concord" involved, in other cases where the phonological form of a plereme is discontinuous, or crosses boundaries of what is normally the phonological form of a word. E.g., in English, the plereme "can afford to" can be called a grammateme, rather than a word, and so can, say, the plereme "umbringen" in German, in view of allomorphs having such phonological forms as /bri ...um/, etc. In the last two examples, the pleremes in question can only be set up as "grammatemes", not as "words". In the earlier examples, they can be set up in both ways. Some pleremes can only be "words", as they cannot be set up in such a way that some of their allomorphs have discontinuous phonological forms. Some languages may have only one type of plereme, others may have only two of the three(i.e. only establishable as words, only as grammatemes, and both as words and as grammatemes)possible types of pleremes one may find in a language. Of course, by definition every language has pleremes. Any semiotic system that has a syntax must have minimum syntactic entities, i.e. pleremes. Cf. Def. 8b[1]. Pleremes are the grammatical analogues of cenemes(phonemes), just as monemes are the grammatical analogues of distinctive features(cf Def. 8b[3]).