SEMIOTIC LEVELS

On the Metalinguistic Nature of Grammatical Meaning*

*1. Some general remarks on formal abstraction and scales of
grammaticality*

The views I would like to expound in the following pages
are a part of a general functionalist theory of grammatical
form, which will be worked out in detail in a forthcoming book
(*Iturrioz 1987a). It is, I think, an essential part of that
theory; and that is why I had to refer to it so often in my
paper on gender (see above): it is the indispensable distinction
of semiotic levels and the metalinguistic nature of what is com-
monly called "grammatical meaning".

Grammatical meaning is, I claim, a product of what I call
formal abstraction. "Abstraction" has to be understood here as
a dynamic and scalar process; and it is called "formal", because
it is responsible for the creation of grammatical form(s), of
formal concepts (schemata).[1] The development of a theory of
formal abstraction in this sense is a systematization of ideas
I pointed out in my paper on gender, but only in a marginal and
occasional fashion. The most remarkable historical precedent of
such a theory is to be found in Sapir (1921), who saw the need
of introducing, beside the "degree of synthesis" and the "tech-
nique", the "conceptual types". These "types" are founded on the
existence of four basic "classes of concepts": from the "con-
crete" (lexical) concepts through to the "pure relational" (to-
tally abstract) concepts; in between these two extremes we find
the "derivational" and the "concrete relational" concepts. But
it was already clear to Sapir that this is a continuum rather than
a categorial division, and that one could distinguish countless
intermediate "concepts". On the other hand, he seems to believe
that this newly introduced typological parameter is independent
of the other two (synthesis and technique). As against this, I
would say that it is impossible to determine which "conceptual
type" a language belongs to, i.e. which "concepts" a given lan-

guage chooses to express, if we do not pay attention to all criteria involved by synthesis and technique. A better way, I think, to come to terms with the phenomena Sapir wanted to accommodate within linguistic theory would be to consider that there is a correlation between the degree of semantic complexity and the morphosyntactic status of the grammatical means involved. Now, this would be a correlation between formal and semantical continua and as such would result in grammaticality scales, which would show the existence of programmes that realize immanent (intralinguistic) functions: the scales of INDividuation, DETermination, NOMinalization, etc.[2]

From a general (typological-universalistic) perspective we can maintain that there is a correlation between the degree of abstraction and the grammatical—analytic, synthetic and fusional—procedures. The language types distinguished in traditional morphological typology represent a continuum:

ISOLATING < POLYSYNTHETIC < AGGLUTINATING < FUSIONAL

The process of form creation starting from pragmatical discourse begins by taking elements out of the lexicon in order to make explicit a syntactic relation and in general a grammatical function. (You can read the symbol < as "less grammaticalized than".)

1.1 The serial verbs

The gradual transition from phrase to word can be clearly appreciated in the case of the development of serial verbs, constructed after the schema: NP V (NP) V (NP). The second verb gets slowly transformed in a grammatical instrument, so that a time comes when it is no longer adequate to speak of several propositions even though there are several verbs; actually, what we have before us is a complex predicate, where all verbs except one assume functions related with valency or aspect (formal schemata). This is an absolutely essential aspect of the matter, but it has escaped nearly all linguists that have written on it—either synchronically or diachronically—with the possible exception of T. Givón (see below). As this author correctly observes, the process in question is one of syntactization and morphologization start-

ing from free discourse. At the beginning of the process, we have paratactic expressions, weakly connected and admitting of several interpretations; thus

(1) *é nò tsī eye wo ku*
EWE   he drank water and he died

is a coordination of the elemental events *e nó tsī* 'he drank water' and *e ku* 'he died', where only the temporal sequence is expressed and a causal nexus is at most suggested. As the syntactic and semantic cohesion of the predicates increases, the possibility of multiple interpretation decreases and only one proposition results, with a unitary intonational contour and a complex predicate; in

(2) *é nò tsī ku*
EWE   he drank water died

death is the immediate consequence of having drunk water: "drinking water" and "dying" get fused in a unitary concept "drowning", *no tsī* and *ku* are not independently referential. In a further stage of grammaticalization the co-verbs get nearer to valency. In Thai there is only one verb which clearly has three places: *hâj* 'to give'; in all other cases, the introduction of a third actant may require the mediation of a co-verb, e.g. the aforementioned verb may be required to fulfill the dative function:

(3) *phŏm hâj nănsŷy khun lέεw*
THAI I   give book   you   already
      'I have already given you the book.'

(4) *khruujàj law prawàti khɔɔŋ rooŋrian hâj piyá faŋ*
THAI professor tell story   of   school   give Piya hear
      'The professor told Piya the story of the school.'

(5) *Oye mú iwé wa fún mī*
YOR   Oye took book came give I
      'Oye brought me a book.'

The process goes further and builds a complex concept where the co-verb expresses the directionality of the action, either as going towards the subject or starting from him:

(6) *Dichăn thoorásàb paj* vs, *dichăn thoorásàb maa*
THAI I   phone   go   I   phone   come

'Make a phone call' vs. 'get a phone call'

A co-verb can mark a re-arrangement of valency like that of the passive voice:

(7) *Zhāng-sān bèi   Lǐ-si pīping   le*
CHI   expose   criticism ASP

'Zhang-san was exposed to criticism (was criticized) by Li-si.'

The process reaches its summit with the use of co-verbs as aspect markers:

(8) *Naj khrna   câ kuŋtom araj   waj*
THAI in kitchen FUT cook   something . keep

'(He/she) has something cooking in the kitchen.

The process is much more complicated, it goes through many more intermediate stages,[3] but this brief exposition can already suffice to draw the following conclusions:

(a) Serial verbs are no unitary category, neither as to form nor as to content, but they are located at different points of a grammaticality continuum ("genesis of syntax ex-discourse", Givón 1979:97) which is characterized by a progressive de-semanticization that correlates with a gradual loss of their syntactic autonomy.

(b) Co-verbs are neither free lexemes (root concepts) nor mere functional monemes. Even the less grammaticalized expressions work under syntactic restrictions that are alien to discourse; and the more grammaticalized ones do not constitute a unity (a word, a concept) with that degree of cohesion we are familiar with from the flexive and agglutinating techniques. Verb and co-verb are kept apart by the noun which is their common argument, but their position is not interchangeable, and, as you go up the scale, it becomes increasingly difficult to put some other word between them.

(c) No formal or semantic definition can account for the whole range of phenomena or for the remarkable differences that are found between the different segments. Foley's syntactic definition ("constructions in which verbs showing a common actor as object

are merely juxtaposed, with no intervening conjunctions") does not even exclude constructions that have independent propositions but within an identical categorial frame; moreover, it excludes the last stages of the process. His semantic definition, according to which the second verb has always the meaning of "further development, result, or goal" is to be criticized on exactly the same counts as the syntactical one.

(d) It would be absurd to dissociate syntax and semantics in the fashion of generative semantics and try to derive from one abstract predicate not only all stages of a co-verb, but also the "equivalent" elements of agglutinating or flexional (fusional) structures: causatives, adverbs, prepositions, preverbs, tense/aspect affixes. If you do so, and start from a given structure[4] (which in the case of generative semantics would "happen" to be analytic) so as to arrive at an agglutinating or fusional structure, then you will have to reckon with a change of meaning that correlates with the change of form.

(e) If the common denominator is not a "meaning", then it cannot be a structure either. The only way left to understand the data would be to admit that they point to a continuous process, to a series of qualitative changes (re-analysis), each one of which represents a new particular correlation of form and content—but not so new that it would be completely dissimilar to the prior one.

(f) The categorial opposition "free lexeme (root concept) vs. morpheme (with no meaning)" is inadequate to account for the gradual character of the observed changes.

Conclusions like these have been similarly drawn from the extended analysis of other phenomena, such as determination, comparison of individuation techniques across languages, the existence of different structural exponents in Euzkera to mark different steps (techniques) within the programme of reification of propositional contents,[5] etc.

1.2 Correlation between the two articulations. Iconicity of the scales

The displacements within the grammatical articulation and the increasing semantic impoverishment can have a reflection in the second (phonological) articulation, in agreement with the general

principle that governs "the phonemic and grammatical aspects of language in their interrelations" (Jakobson 1949) and establishes the frame conditions and the limits of l'arbitraire du signe. The functionalist theory of grammatical form is an attempt at extending and explaining observations that linguists have been making, at least since Paul's times, about the correlations between form and content. For instance, Kurylowicz (1949) speaks of isomorphism, of structural parallelisms between the form of the content and the form of the expression which reveal a new type of iconicity that is much more important and systematic than the old, hackneyed ones touching the substance of both levels (onomatopoeia).[6]

There can be correspondence within complexity: "Je komplexer die semantische Repräsentation eines Zeichens, desto komplexer seine semantische Repräsentation" (*Lehmann 1974b:111). A negative formulation would be more exact, because what we really can observe is that, when a sign loses content, it is also exposed to phonological waste: Latin *hoc die* → *hodie* → Spanish *hoy* (French *hui* in *aujourd'hui*); Latin *multum* → Spanish *muy*; Old High German *hiu tagu* → Modern Standard German *heute*; *dritter Teil* → *Drittel*; *antes de ayer* → *antiayer* (Spain) → *antier* (Mexico)... As the semantic complexity of a given sign decreases—its implicative potential—the signifiant tends to become shorter and to become part of a reduced subsystem of phonological contrasts. Loss of motivatedness can have as a consequence the disfiguration and fusion of the segments of a complex expression. A word becomes shorter as it is more frequently used (Zipf 1935): the informational value of a sign is inversely proportional to its frequency of use, and it is defined as the negative logarithm of the probability of its use. Now, the statistically more frequently used signs are precisely the grammatical signs (cf. Martinet 1960:§§4.19, 4.38, 6.9f.).

The fact that grammatical monemes belong to closed inventories points in the same direction: if the number of elements of a paradigm is small, then the number of distinctive features that is needed to specify them semantically will be small, too. Heger (1963) remarked, however, that the names of the days (months, seasons, fingers, numbers,...) constitute also a closed inventory

—a fact that precludes the identification of grammatical monemes and closed inventories. For my purposes, this shows that the closedness criterium is not absolute, but that the nature itself of the features needed to define grammatical monemes, as opposed to those needed to specify other, lexical monemes, may be quite important. On the other hand, I must would like to remark that the high frequency of use of grammatical morphemes derives from the fact that, within any given category, we are obliged to choose one of the elements of the paradigm (which is not the case with the other inventories mentioned by Heger). These observations bring us nearer to the nature of grammatical signs through a negative and insufficient characterization: by highlighting their scarce informational value. Lexical monemes, that much is clear, loss part of their meaning as they get grammaticalized: *hodie/hoy* has a more general meaning than *hoc die/en este día*; *Drittel* lacks the idea of order that we find in *dritter Teil*. The transition from a free syntagm to a functional expression (*to take place, to give offence*, etc.) and from there to a separable or inseparable) preverb[7] allows to observe a stage-by-stage process of semantic impoverishment, a gradual loss of specific features that yields more and more abstract meanings (spatial - temporal - metaphorical space/time - valuational scale). An example will suffice:

(9) a. *Der Mann trat zwei Schritte zurück*.
'The man went back two steps.'

b. *Jetzt müssen alle anderen Pläne hinter dieser grossen Aufgabe zurücktreten*.
'All other plans must now be postponed to this great task.'

c. *Der Minister trat (von seinem Amt) zurück*.
'The minister resigned (his office).'

d. *Er tritt ganz hinter seinem berühmten Bruder zurück*.
'He is quite inferior to his famous brother.'

In this example there is still no change of status caused by a coming down the constituent hierarchy, such as can be observed

in:

> Latin *ille* → Spanish *él* [free pronoun] → *el* [article, bound]
>
> → French *il* [free pronoun] → *l( )* [article, bound]
>
> Latin *homo* → French *on* [bound pronoun]
>
> Latin *habeo* → Spanish *he (de hablar)/he (hablado)/(hablar)-é*

Now, beside the loss of semantic (lexical) features we also observe the appearance of new contents like "definite", "impersonal", "modality", "aspect", "tense", etc., which are directly related to the categories of the lexemes to which they are bound and above all to the function that underlies those categories: reference/individuation, propositional function, etc.

It is usually claimed that "the degree of polysemy of a given word—the number of its meanings—increases with its frequency of use" (cf. *Lehmann 1974b:114); but I am unable to agree with such claims. The polysemy of grammatical formatives, anyway, is almost always only apparent. And when it is real, as is the case with Spanish *haber* (see above) or with Euzkera *-ta-* (cf. *Iturrioz 1982b), its nature is completely different to anything we observe in the case of lexemes: the various readings depend on the strictly grammatical context, of the position within the constituent hierarchy, and they are on different points of the same scale or functional continuum; it is not quite correct to speak of different meanings (or uses) of "the same morpheme"; and the differences cannot simply be described as a loss of semantic features, but rather as a specific process of abstraction that is bound to different grammatical functions (positions in a scale of grammaticality.

We can make similar observations about the progressive simplification of the phonological representation along the scales of grammaticality; a reduction of the number of phonemes that constitute a given paradigm is observed with the transition from composition to derivation and to flexion; the same is true of the phonological features required for specification; in sum, new systems of oppositions and constrasts are born that defy any identification with elements of other subsystems.

1.3 HABEO as an exponent of a language programme. Synchronic and diachronic aspects of the creation of grammatical form

A very apt illustration of what we have been saying is the diachronical development of the Latin verb *habeo*, which we can follow step by step, from a full verb to a flexion suffix for tense in the Romance languages (similar phenomena can also be observed to occur in Germanic languages, as we shall see).

The first step belongs to the more general phenomenon of the verbs of possession. In many (not only Indoeuropean) languages, verbs having the original meaning of "grasping, grabbing, seizing", change their meaning in the course of time and come to express the relation of possession holding between two NPs (cf. Boeder 1980). First comes the loss of the semantic feature [+ dynamic], as a result of which we get a verb with the meaning "holding"—German *halten*, Latin *teneo*—that survives in expressions like *in der Hand haben* (Spanish *haber en la mano*). Latin *habere* in *habeo librum*, English *have* in *I have a goose*, German *haben* in *ich habe ein Buch*, are static verbs. But the English and German (and other Germanic) verbs are etymologically identical with Latin *capio*, Gothic *hafjan*, German *heben* 'to take, to heave' (Greek *kaptō* 'to take with the mouth, to swallow'; like Northern German and Dutch *happen*); all these words go back to a root with the meaning "to grasp, to grab" (Indoeuropean *kap-* and its many variants, one of which probably is behind Latin *habere*). Anyway, German *haben* is static, whereas Latin *capere*, that is not used in possessive expressions, is still dynamic; Old High German *haben* belongs to the "weak" verb class in *-ē-* that denotes subjective states in the fashion of the medial and passive voices of other languages. The meaning of possessive *habeo* is yet poorer and more abstract; it is not a full verb any more, but an auxiliary verb with very little selective power. *Clasen (1981:22) sets forth the hypothesis that the only selective restrictions in constructions with both *haben/habeo* and *sein/esse* come from the nouns used:

(10) a. *Das Haus hat zwei Türen*. 'The house has two doors.

>   b. *Das Haus hat Zähne*. 'The house has teeth.'

*Seiler (1977:256f.) distinguishes logical predicates from se-
mantical predicates. The latter, represented by full verbs, im-
pose selective restrictions to their arguments, e.g. *bite* re-
quires the agent to be [+ animate]; the concept itself of an agent
requires such a feature, so that to open an argument position
such as "agent" is already typical of semantic predicates; neither
sein nor *haben* are compatible with the agent category. Seiler
seems to contradict this:

> The above mentioned "auxiliaries", on the other hand, do not show any
> such restrictions. Thus, the logical predicate EXIST, or the logical
> predicate APPLIES (surfacing as the copula or as 'to be') can take any
> kind of argument. For any conceivable argument it may be asserted that
> it APPLIES to something, or that it EXISTS. (*Seiler 1981:99.)

But the contradiction is only apparent. Seiler's assertion is
correct insofar as arguments and semantic predicates are quoted,
mentioned in a metalinguistic statement: *"bites" is said of/is
predicated of/applies to "the dog"*, but it is not if it refers
to the (surface) object-linguistic formulation of such statements:
der Hund hat Hunger, der Hund ist treu—here it is scarcely pos-
sible to speak of semantic roles; that the second argument of *ha-
ben* is no genuine "object" is related to the fact that such pre-
dicates are not subject to passive transformation; and the first
argument is not an agent, either. Seiler's logical predicates
are identical to the logician's (relational or attributive) con-
stants: "is included in" ( ), "is element of" ( ), "applies to"
($\Phi^2 A^1 a$, in second-order logic), which are sometimes "invisible"
(Hasenjaeger 1962:112f.) but can be superficially realized by
means of the auxiliaries *sein, haben,* etc.

> The function of logical predicates is thus basically metalinguistic...
> A verb of POSSESSION must imply a certain amount of metalinguistic
> potential. This means that what it asserts or predicates must pri-
> marily or predominantly refer to the mode of the relationship between
> the two nominals. (*Seiler 1981:99, 101.)

How can they become invisible? The marginal status of the auxi-
liaries often results in a defective formal paradigm; the copula
is often represented by cero, especially in the present tense
(Russian) and it can be suppressed in Latin. This does not hap-

pen with the equivalents of *haben* to the same extent, but we
must take into account that disappearance is only the extreme
form of what we have been trying to see as a simplification of
the second articulation. In Old German there were both regular
and reduced forms in the formal paradigm: *habēm, habes, habēt,
habēmēs, habēt, habēnt* vs. *hān, hast, hat, hān, hānt*; some of
the reduced forms took over with time, namely the Present Tense
forms *hast* and *hat*, and the Past Tense form *hatte*. It is inter-
esting to observe that this did not happen with the full verb
sich gehaben 'to behave' derived from *haben (gehabst, gehabte,*
etc.).

Both *Clasen (1981:23) and *Seiler (1981:99f.) emphasize that
the distinction between semantic and logical predicates is not
categorially discrete, but continuous. This means that, the farther
a verb evolves from the original meaning "to grasp", the smaller
is its restrictive potential and the greater its metalinguistic
content. Seiler, who sees in the introduction of possession verbs
an instrument for "establishing" relations between nouns, predicts
that, when such a verb appears as a link between two inherently
related nouns, this is a mark of a high metalinguistic content
and, by implication, of a scarce or no selective potential:[8]

> If the selective force emanating from the verb—a logical predi-
> cate in principle—is low, and the restrictions are between noun
> and noun, we are presented with a predominantly inherent posses-
> sive relation. (*Seiler 1981:100.)

The following comparative scale will make more concrete all these
somewhat abstract claims. It is a fact that the possession verb
HABEN has not in all languages the same combination possibilities.
This means, for me, that it has not reached the same degree of
formal abstraction in all languages. The more similar it is to
a full verb, the less it is able to establish an inherent re-
lation. In all afore-mentioned languages HABEN may express pos-
session in the ordinary, colloquial sense: *I have a book, ich
habe ein Buch, habeo librum, j'ai un livre*—except in Spanish:
**yo he un libro*; at this end of the scale, Spanish differs from
other languages in that it is farther from being a full verb; in
its place, it is now used *tener: tengo un libro*; but again, Spa-

nish *tener* is a bit far from the original Latin *tenere*, in whose place we regularly find *sostener*, although it is possible to use it in the old sense: *tenme la mesa, que si no se cae* (*ten esto* in the sense of *toma esto*); in *tengo un libro*, however, *tener* has already lost the original specific feature "physical contact with something" ("sostener") or rather this feature is transformed or dilluted in the more abstract feature "to dispose of something" (control). Now, in Spanish you can say *tener veinte años* but not *haber veinte años*; in German, such an expression is altogether impossible (except for some dialects): **zwanzig Jahre haben*—to express age you must use the more grammaticalized auxiliary *sein*, like in Latin (or English). Again, only in Spanish and French has HABEN become a flexional affix for the formation of a grammatical tense: *hablar-é, (je) parler-ai*. These facts are not accidents; they are rather systematic; they obey a law which is the law of an ordered scale or grammaticality and of the principles that constitute the dimension of POSSESSION. A chart covering four languages, each represented by two verbs, follows:

	teneo	habeo	tenir	avoir	tener	haber	halten	haben
I. 'to grasp, grab'	(+)	–	(+)	–	(+)	–	(+)	–
II. 'to hold'	+	–	+	–	+	–	+	–
III. 'to support'	+	–	+	–	+	–	+	–
IV. Age	–	–	–	+	+[9]	–	–	(–)
V. 'to have, possess, dispose of'	–	+	–	+	+	–	–	+
VI. Part-whole relation (eyes...)	–	+	–	+	+	–	–	+
VII. Physical/mental state (pain...)	–	+	–	+	+	–	–	+
VIII. Aktionsart	–	+	–	+	+	–	–	+
IX. EXIST[10]	–	(–)	–	+	+	+	–	+
X. Modality	–	–	–	+	+	+	–	+
XI. Aspect	–	–	–	+	–	+	–	+
XII. Tense	–	–	–	+	–	+	–	–

The first meaning is also the most specific in that it contains the greatest number of lexical features, but also in that it describes concrete operations that imply contact with something.

Thus, the specification of I needs at least the features [+ dynamic, + directional, + contact, + continuative]; from among these, the second feature must already be negatively specified for II; the third feature for III; and the fourth keeps valid all the way down till IX at least. From then on it has no sense to go via ne-gationis. In fact, for the specification of "grammatical contents", we need such new features as [± resultative], [± control], [± disposition], [± perfective], [± past], which are nothing but labels that summarize the complex propositional facts behind the correct use of tenses, etc.

The differences between a language and another are remarkable in two respects: (a) the two verbs don't cover the same part of the functional range, a fact which is determined by the their distances to both ends of it; (b) the logical relation between the two verbs (intersection, complementary distribution, etc.). In Spanish, where *haber* is reduced to logico-grammatical contents, there is a minimal intersection; the French verb *avoir* is gone as far as the Spanish verb *haber* in the grammatical domain but without withdrawing from the lexical domain as much; almost the same situation is found in German. The fact that *habeo, avoir, haben* are widely kept as full verbs explains that *teneo, tenir, halten* have made small progress towards the other end of the scale. The Latin expression *habeo dictum* (*factum, scriptum,...*), corresponding to Spanish *lo tengo dicho/visto...*, and not to *he dicho/visto...*, is on the fence between Aktionsart and Possession in the strict sense of the word (cf. *Seiler 1973: "possessor of an act"). Modal expressions with *haben/haber/tener* etc.: *has de saber, tienes que trabajar, du hast zu schweigen, vous avez a payer*.

The above chart makes clear that the opposition "full vs. auxiliary" (semantic vs. logical, etc.) is not categorial, but continuous, "squishy". Even in the cases where they are more like a full verb, *haben/avoir/tener* are verbs with a poor objective semantic content, as is shown by the fact that they scarcely have any selective potential: their function is to establish a relation between two NPs, a relation whose nature is understood from the meaning of the nouns involved, from their definiteness or indefiniteness and from the context generally. A chart that compares

these verbs with other verbs that express more specifically pos-
session (*Clasen 1981:19f.) follows:

	Vater	Sohn	Kopf	Haar	Intelligenz	Hose	Haus
	'padre'	'hijo'	'cabeza'	'pelo'	'inteligencia'	'pantalón'	'casa'
haben 'tener'	−	+	+	+	+	+	+
besitzen 'poseer'	−	−	?	+	+	+	+
gehören 'pertencer'	−	−	−	−	−	+	+

Now, given that this is a continuum and that each verb covers a
different range of it, To what an extent may we affirm that all
languages possess (have) a verb HALTEN and a verb HABEN? May we
speak of an only sign HABEN covering a more or less wide range
of the functional continuum within any given language? These are
questions that have no easy answer. The problem involved is simi-
lar to that of the semantic field of colours: language have got
various colour basic terms that cover different areas of the light
spectrum; what is one area (one colour) for a given language may
be two for another, and besides the boundaries won't be identical
(there will be more or less clear displacements) in most cases.
Similarly, the "area" of the functional "spectrum" covered by
French *avoir* is divided in two in Spanish: *tener* and *haber* are
almost complementary within a "fuzzy" zone as high as Modality;
the displacement is especially clear if we compare HABEN in several
languages. The different labels on the left side of the chart
should not suggest that there are here several sememes and that,
therefore, we are justified in speaking of several morphemes: *te-*
neo₁, teneo₂, teneo , habeo₁, habeo₂, habeo . On the other hand,
it is difficult to maintain that *he* in *he de decir* and in *dir-é* are
variants of one sign HABER; without doubt, we should reckon with
focal instances and quasi-categorial cuts. Anyway, it is clear
that the dichotomy semantic/formal does not bring us very far.
Not even concepts like "modality", "aspect", "tense" are perfect-
ly defined in languages, as is shown by diachronic change and

synchronic overlapping. The "future" both in German and in Spa-
nish is strongly modal:

(10) [*Calculo que*] *tendrá unos quince años.*
      'I reckon he will have some fifteen years.'

In the "present perfect" the aspectual and temporal components
overlap in different degrees for different languages (cf. Comrie
1976:ch.3).

2. Metapredicative, metalinguistic

The above example allows us to understand something about the
nature of formal abstraction: it is a scalar process that leads
to the creation of grammatical form. The concept of grammaticality
is defined formally on the basis of properties like separability,
interchangeability, modifiability, autonomy. It is only at an ad-
vanced stage in the process of grammaticalization that concepts
like "Aktionsart", "aspect", "tense" and other concepts related
to the valency or actantial structure of verbs appear. However,
very little has been said about a possible functional common de-
nominator for such concepts and about the justification of our
talking of them as "grammatical". Two considerations are relevant
here: (a) that they are metalinguistic in nature; (b) that they
are or represent formal schemata. In this paper I shall only deal
with the first consideration; but I hope to write more extensively
about the second one in a soon forthcoming paper.

Modern logic defines a metalanguage as a sign system that is
used to describe another language (e.g. a natural language), the
so-called "object-language". The difference between metalanguage
and object-language is not only in use; in any natural language
the objective and metalinguistic elements are mixed, and an es-
sential stage in formalization consists of their separation, so
as to bring into light what Hasenjaeger called "invisible pre-
dicates".

> We shall analyze the logical nature of connective operations; we
> shall show that the meaning of these operations can only be defined
> in the metalanguage. (Reichenbach 1949:42.)

Die einfachsten Regeln... haben die Form

"X ist p" erlaubt "X ist q"

"X ist p" erlaubt "X ist nicht q"

Diese Regeln formulieren Operationen, die mit Elementaraussagen vorgenommen werden sollen. Man spricht hier also über die Sprache, das Wort "erlaubt" gehört zur Metasprache, wie man sagt. In der Umgangssprache formuliert man solche Elementarregeln etwa in folgender Weise:

Wer vernünftig ist, ist gütig.

Wer gerecht ist, ist nicht barmherzig.

Man kann es diesen Sätzen natürlich nicht ansehen, ob sie als Regeln gemeint sind. (Lorenzen 1974:14.)

Metalinguistic operations, as the quoted passages suggest, play an important role in ordinary language; logic, as applied to natural languages, has the task of systematically separating "levels of language" and of making explicit the operations that in ordinary language are implicit or covert.

Jakobson has in several papers emphasized the importance of "metalinguistic operations" as part of our usual linguistic activities, as a learning instrument, as a technique that is lost during aphasia (loss of the naming faculty), and finally as a method of semantic description both for lexical and for grammatical elements: efficient translation of a message into another language or sign system, metalinguistic interpretation of messages through paraphrasis and synonyms (*a bachelor is an unmarried man*), use of lexical means to express number or tense into languages that do not have them (the Old Russian dualis *brata* is translated with the aid of a numeral adjective: *two brothers*):[12]

An ability to speak a given language implies an ability to talk about this language. (Jakobson 1959a:262.)

To the extent that Jakobson extends these assertions to all signs, included grammatical signs, as against Chomsky's nonsemantical theory of grammatical structure—what he seems to do is, not explaining the dichotomy "semantic (lexical, full) vs. logical (formal, auxiliary)", but explaining it away, in that he identifies both terms:

It was clear to Boas that any difference of grammatical categories carries semantic information... He would not accept an antisemantic theory of grammatical structure, and any defaitist allusion to the imaginary obscurity of the notion of meaning seemed to Boas itself obscure and meaningless. (Jakobson 1959b: 493.)

But it is only apparent. Jakobson believes that, if a given language lacks a grammatical category, its sense may nevertheless be translated into it by lexical means, but he admits that the fidelity of the translation would be impaired. When we translate the sentence *She has brothers* into a language which discriminates dual and plural, we <u>are obliged</u> to choose between the propositions "She has two brothers" and "She has more than two brothers"—or else to leave the decision to the listener and say "She has either two or more than two brothers"; and again, if we have to translate into English from a language that lacks grammatical number, we <u>are obliged</u> to choose between two alternatives: *brother* (singular) vs. *brothers* (plural)—or else to mention both: *She has either one or more than one brother* (Jakobson 1959a:263f.). Another difference has to do with the cognitive function of language, with respect to which language is scarcely dependent on the grammatical system

because the definition of our experience stands in complementary relation to metalinguistic operations—the cognitive level of language not only admits but directly requires recoding interpretation, i.e. translation. (Jakobson 1959a:265.)

Nevertheless, in phantasy, in dreams, in magic, that is, in what we could call linguistic mythology, and also in poetry, the grammatical categories are quite important semantically; even grammatical gender, often believed to be purely formal, plays an important role in the mythological attitudes of a community:

Under these conditions, the question of translation becomes much more entangled and controversial. (Ibid.)

In fact, whenever Jakobson insists in the convenience of a semantic description of grammatical structure, he hurries to say that the essential difference lies in the fact that "the grammatical pattern of a language (as opposed to its lexical stock) determines those aspects of each experience that <u>must</u> be expressed

in the given language", that "languages differ essentially in what they <u>must</u> convey and not in what they <u>can</u> convey" (1959a: 264]. that "the true difference between languages is not in what they may or may not be expressed but in what <u>must or must not</u> be conveyed by the speakers", "grmmar [is] a real <u>ars obligatoria</u>" (1959b:492). In order to translate correctly the English sentence *I hired a worker* into Russian or Spanish, an additional information is required, because in those languages we must choose between perfective and imperfective (*nanjal/contraté* vs. *nanimal/contrataba*) as well as between a masculine and a feminine noun (*rabotnika/ obrero* vs. *rabotnicu/obrera*). In English, the choice of a noun was selected automatically from the pair singular/plural and from the pair definite/indefinite, as against many other languages (American Indian, Asiatic, etc.), that have no grmmatical procedure to express those concepts.

> This was for Boas the paramount question which... enabled him to draw a demarcation line between the domain of morphology and syntax with their compulsory rules and the freer field of vocabulary and phraseology. (Jakobson 1959b:492f.)

What Jakobson, however, has not yet clearly understood is the connection of this with metalinguistic operations. He seems to have taken for granted that grammatical information contains also aspects of experience (!) with the only peculiarity that these aspects must be obligatorily expressed. But grammatical information is not part of the message, but part of the code; it is not information about "things", but about language itself; it is not objective (object-linguistic) but metalinguistic. Jakobson's above quoted remark has now got a much more specific sense: when we speak a language, we necessarily speak about that language, namely through its grammatical elements. Beside the greater or lesser degree of semanticity (sense, motivation) of a given grammatical category, its degree of predicativity, i.e. what it contributes to the message or propositional content which is not contributed to them by any other constituent is practically nil. Let us suppose for one moment that the degree of motivation of gender in a language was so high that we could say it is merely a reflection of the semantic category "sex", e.g. German *Kuh* 'cow'

(female animal → feminine noun)—*Stier* 'bull' (male animal → masculine noun)—*Rind* 'bovine' (logical sum, one or the other → neuter noun)—*Kalb* 'calf' (nonadult, immature animal   neuter noun). In this case, gender does nothing but reproduce/reflect a semantical gender that is already contained in the noun, so that the predicativity of the iterated marks in

$$ein\text{-}e \quad alt\text{-}e \quad weiss\text{-}e \quad Kuh, \quad welch\text{-}e$$
$$un\text{-}a \quad viej\text{-}a \quad blanc\text{-}a \quad vaca, \quad l\text{-}a \; cual$$

is nil: none of them expresses nothing that is not already expressed in the nucleus. The only thing they represent is a metalinguistic operation whose function is "constancy of the object": all the constituents that bear that mark are "predicaments" of the same object as the noun is, they all carry the same variable. It is well known that the degree of semanticity of gender in European languages is generally rather low, hence that the above example is more the exception than the rule; in the sentences

$$ein\text{-}e \quad alt\text{-}e \quad weiss\text{-}e \quad Jacke, \quad welch\text{-}e...$$
$$un\text{-}a \quad viej\text{-}a \quad blanc\text{-}a \quad chaquet\text{-}a, \quad l\text{-}a \; cual...$$

the agreeing elements do not reflect a semantical feature of the head noun (female object), but an arbitrary quality of that noun, namely its belonging to a semantically unmotivated noun class. In this case, not only the degree of predicativity but also the degree of semanticity is nil. But the fact of its iterated occurrence remains—and also the function of the metalinguistic operation that is behind that (formal) fact. In both cases, an elementary function of individuation is hidden behind the (motivated or unmotivated) reference to the noun, as we shall see. In the second case, it can be more clearly seen that the gender marks do not immediately say anything of the object in question, but of the noun; but both cases are functionally equivalent, against Martinet's opinion (1962) that the English gender (reference to the object) and the French gender (reference to the noun) are not the same. In my opinion, we have in both cases a metalinguistic reference, and the difference lies elsewhere, namely in motivatedness: it is not the case that English would refer to an object (except for the whole NP, of course), but only

to a semantic feature of the noun by means of the satellites; in both cases, a classification of nouns, not objects, takes place.

The degree of semanticity can itself be used as a parameter, in order to measure the degree of grammaticality of different procedures—agreement, noun classes, numeral classifiers, and other indidivuation techniques. In spite of an eventually quite high degree of semanticity, a given element can be obligatory and hence grammatical and metalinguistic; for instance, the numeral classifiers have in some languages the status of lexemes, thus Viet *con* in *ba con trâu* 'three animal buffalo', that only conveys an information that is already present in *trâu* (its object-predicativity is nil). Now, if the degree of semanticity is high, that of obligatoriness—and hence of predicativity—is usually low; in fact, numeral classifiers are in general obligatory only in the presence of a numeral; in some languages, there are other categorial environments that also trigger its use (pronouns, adjectives), and this can be used to establish a scale of obligatoriness. Predicativity and semanticity are logically independent parameters, although there is doubtless a correlation between them. The difference between numeral classifiers and gender is not of kind but of degree—with respect to each parameter. This scale, as well as other scales that have so far been subject to scrutiny, have shown grammaticality to be a continuous property; in all cases, we are attending to a process of form creation by which lexical elements progressively lose objective (object-linguistic, object-predicative) value, as fast as and to the extent to which they become metapredicative elements; object-predicativity and metapredicativity are always present ("dosed", "apportioned") in inversely proportional degrees along the different homo-functional instances that make up a scale of grammaticality.

This concept of "metalinguistic", firmly bound to that of "form" (structure, grammar), is much more differentiated and explanatory than the logician's; it means as much as self-referential and encompasses all those categories whose "meaning" can only be grasped by referring back to the code they belong

to. These conclusions are already implied in Jakobson's paper on Russian verbal categories (1957:130ff.), where he points out that message and code, the two pillars of communication, function "in a duplex manner":

> They may at once be utilized and referred to (= pointed at). Thus a message may refer to the code or to another message, and on the other hand, the general meaning of a code unit may imply a reference (renvoi) to the code or to the message. Accordingly four DUPLEX types must be distinguished: 1) two kinds of CIRCULARITY—message referring to message (M/M) and code referring to code (C/C); 2) two kinds of OVERLAPPING—message referring to code (M/C) and code referring to message (C/M). (Jakobson 1957:130.)

The four types come together in the English sentence

(11) *Jim* (C/C) *told* (M/M) *me* (C/M) *"flicks" means "movies"* (M/C).

C/M: it embraces a class of grammatical units that Jakobson calls "shifters"—code units that connect the message with the speech situation and cannot be defined without reference to the message, e.g. personal pronouns or affixes, temporal affixes. *I* denotes the person who says *I* and has an existential relation to the utterance: it is the utterer.

C/C: proper nouns. Its general meaning cannot be defined without a (circular) reference to the code: *Jim* denotes any person who is called *Jim*—without any common property but the fact of being so called. The general meaning of *child* or *pup* can be indicated by means of abstract nouns like *childhood* or periphrases like "young dog"—but not so with proper nouns, which lack any symbolic value.

M/C: parts of discourse used autonymously, i.e. as indicating or denoting themselves—*flicks* and *movies* in the above example. Closely related to mention or quotation within a discourse.

M/M: utterance directly or indirectly quoted; a message within a message, an utterance about an utterance. It embraces a whole set of procedures for referring back to the message, from quotation proper through to substantive abstraction (nominalization).

Now, formal abstraction in my sense is a process of code creation, of transformation of message into code, of objective information

into metalinguistic information. The elements of the code can refer either to the message or back to the code; and in the former case, they can either refer to the message proper, the utterance, or to its being uttered, to discourse—and, within each group, they can refer to the action/situation or to the actants/participants. Jakobson includes all "shifters" into the category C/M. That is because he does not discriminates predicativity and metapredicativity. Thus he takes for granted that the category of gender refers to the message (C/M:P^e). This may be valid for English, and in general for semantic agreement, but not for mechanical agreement, where the affixes refer clearly to the code—to the class the head noun belongs to—on the basis of nonsemantical criteria. And even if agreement is basically semantic, there is the case of unmarked terms within a semantic opposition, and here the agreement affix must refer to the grammatical class (!) the noun belongs to, i.e. to the code (C/C:P^e):[13]

Latin   *vir, qui; mulier, quae; homo, qui*

German   *der Ferkel, der; die Sau, die; das Schwein, das*
          der Enterich, der; die Ente, die; die Ente, die

Number is another case in point; in German *die Unkosten waren hoch*, the verb has to be in the plural, even though the noun does not designate a semantic plurality (plurale tantum, like *Trümmer, Spesen, scissors, pants,*...). Similarly, the personal affixes of the verb do not necessarily refer to the semantic roles of the participants, but often, and in the last instance, to grammatical (syntactical) relations—or to pragmatic roles. Formal abstraction converts the schema C/M into the schema C/C, which is nothing but a consequence of the transformation of M into C (message into code) Jakobson models aspect as C/M:E; but from the exposition contained in *Iturrioz 1987a it follows that the schema of aspect is much more complex than that; it refers certainly to Aktionsart (M), but is also coordinates Aktionsart with role codification (especially the object role) and also with individuation, besides establishing relations between statements through the schema of incidence.[14]

3. Last remarks on the concept of grammaticality

A. Grammaticality is a continous, not a discrete quality, both morphosyntactically and semantically (progressive dissociation from lexical semantics).

B. The theory sketched here brings into light some principles that underlie the evolution, the gradual process through which grammatical form evolves out of the lexicon.

C. This theory accounts for the gradual differences found between several meanings (functions) associated to one and the same *significant*, or between several instances within one and the same language, or between different languages. These instances are scalarly ordered and directly comparable when contiguous.

D. It is capable of explaining the parallelism between phonological and grammatico-semantical subsystems in a fashion that is more adequate than is the postulation of underlying structures. Here is an example. It is commonly supposed that in *he's* /s/ represents the same phoneme that in other subsystems (e.g. that of derivational elements or that of lexemes), and that, as a morph, it represents ambiguously the morphemes HAS and IS. In truth, the only thing it represents is [± 3rd person, + singular, + present], because here the grammatical contents [± transitive, ± active] have disappeared—they are predictable from the context, as are the full forms.

E. In both cases, it is not the concrete instances that are universal, nor the number of concurring (paradigmatic) elements within a functional continuum, nor the way they are distributed in it. In some cases, they can be in complementary distribution, e.g. in *tenir* vs. *avoir*—each language determines the boundaries; and in general there is partial overlapping—albeit in different places and to a variable extent. In other cases a term is generic (unmarked), the other specific (marked).

F. The only universal is the programme, the schema as such, i.e. the principles that give it form.

José Luis Iturrioz Leza
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FOOTNOTES

[1] Cf. for a start *Iturrioz 1985c.

[2] For a general exposition, see *Iturrioz 1986a.

[3] For details cf. *Iturrioz 1987a ("Von der freien (pragmatischen) Rede zur Syntax." The examples are taken from Givón 1975, Mallinson/Blake 1981, Li/Thompson 1973a, 1973b, Stahlke 1970, Lord 1973.

[4] There is no semantics without a syntax; a semantic calculus is nothing but a metalanguage with its own syntactic structure.

[5] Cf. *Iturrioz 1982b, 1985a.

[6] Among recent contributions I would like to point out Gamkrelidze 1976, *Lehmann 1974b, Mayerthaler 1980. Not so related to our specific question, but very enlighening as to the general underlying principle is *Lehmann 1974a—on the iconic nature of relative order in conditional sentences.

[7] Cf. *Iturrioz 1987a.

[8] Seiler calls "established" and "inherent" the two principles that govern the co-variation of form and content and the consequent scalar ordering of diverse structures within the dimension of POSSESSION. Cf. *Seiler ed. 1973, *Seiler 1973a, 1980a, 1981.

[9] In Mexico it is possible to say e.g. *tiene diez años viviendo acá*.

[10] Expresions such as Spanish *hay*, French *il y a*, are cases of lexicalization; but that is also the meaning of *tener/haben* in *el río no tiene peces, es hat Fische im Rhein*.

[11] For German, Vater 1975 claims that the dominant component of what is habitually considered as the future formative *werden* is not temporality, but modality (inferential).

[12] See Jakobson 1956:245ff.; 1959a:260ff.; 1959b:489ff.

[13] On the two types of agreement (semantical and mechanical), cf. *Heine 1982, *Walter 1982, *Ostrowski 1982a, *Serzisko 1982b, *Lehmann 1982b.

[14] On aspect and roles see Hopper/Thompson 1980, Bolinger 1971. On the schema of incidence see Klein 1974:80f.

GENERAL FOOTNOTE: *This paper is very closely related to the above paper about gender, but it does not follow immediately because it touches matters that are also implicit in Leal's paper on set-talk.

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*N.B. The references marked with an asterisk refer to UNITYP items and,
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tífica de UNITYP" in this volume.*