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Acceptability as the source of syntactic knowledge

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In order to construct any representation of the syntax or of the vocabulary of a language, we must first know where information about syntax and semantics is to be found. The point of view of Lexicon-Grammar in this regard is that the source of knowledge lies in experimentation. We will therefore examine the experimental side of syntax and semantics. Most of this paper is based on M. Gross (1984, 1988, 1992, 1994).

Accumulation of data in experimental sciences

In every experimental science, accumulating data is by far the commonest activity. Thus, astronomers compile spectrographic measurements from as many regions of the sky as they can explore and for as many ranges of frequencies they can instrument, looking for unusual effects for which theories will be built or adjusted a posteriori. Molecular biologists analyse as many nucleic acids as their time, methods and equipment allow. The problem consists in determining the functions of proteins, in tracing their source to genes, with the hope that accumulating this type of knowledge will result in an understanding of some aspects of life. Theories proposed in the framework of molecular biology are indeed very concrete. Linguistic theories in the framework of Lexicon-Grammar have immediate goals too. They are more modest than, for instance, constructing a universal grammar that explains learning and generalizes the neural sciences.

When we construct lexicon-grammars, we consider that we are following the example of such undisputed sciences as biology, chemistry, or the earth sciences. In these fields, current work consists in accumulating empirical knowledge that leads to theories of a concrete nature. A well-known example is Wegener's theory; it took about thirty years for scientists to accept the theory that continents move apart from each other. The theory became accepted only because a large number of measurements forced earth scientists into adopting this solution. The theory was highly concrete and could be reduced to a simple idea that did not need any mathematical or formal expression.

For an active scientist, enumerating facts systematically is an important method for discovering new phenomena. Moreover, if enumeration of facts is possible and easy, no theoretician would take the risk of proposing a theory if accessible data had not already been gathered. In any case, when a theory is formulated, it requires careful verification on the basis of facts. Conversely, the observation of facts has always been an inspiration for designing scientific theories.

Acceptability judgments

As far as syntax is concerned, the simplest possible facts take the form of acceptability judgments on sequences of words, by introspection. Sequences are accepted as sentences or not. For example, when you substitute a word for another in a sentence, the resulting sequence may be accepted as a sentence or not:

My father died
?**My hair dryer died*

The mathematical notation with parentheses and the "+" sign allows us to present precise acceptability judgments on several sequences in one line:

*My (father + cat + cactus + ?*hair dryer) died*

If we substitute a synonym for the verb *die* in these sequences, acceptability judgments are different:

*My (father + ?*cat + *cactus + *hair dryer) passed away*

In these sequences, the "*" symbol is used to mark unacceptable sequences. The question mark is an informal comment signalling a dubious judgment. This experiment with substitutions shows that acceptability depends heavily on lexical content, even in the case of synonyms. Though *die* and *pass away* are felt as a synonyms, they do not combine with the same words. Therefore, acceptability cannot always be deduced from logical or semantic considerations.

Another example involves determiners. The following sentence is acceptable with or without the determiner *some*:

These experts need (E + some) information

When the verb *like* is substituted for *need*, the sequence with *some* seems much more difficult to accept:

*These experts like (E + ?*some) information*

When acceptability judgments are carried out for descriptive purposes, one requirement is that quick and clear-cut "yes" (acceptable) or "no" answers have to be given. No double-bind experiments or other techniques used by psychologists can be appealed to, for they would slow down the process.

Acceptability and the notion of sentence

An acceptability judgment must be carried out on a full sentence. Judgments made on phrases may be valid in simple cases, such as:

a blue cup of tea
a large number of her friends
inside the house
as large as a postcard

but such sequences of words are not perceived as sentences. If we can name them as noun phrases or adjectival phrases, it is the result of a thorough grammatical education that led us to analyse them so in the metalanguage of a consciously learned grammar. But a certain amount of uncertainty is present when one deals with the phrase *a cup of tea* which can be either interpreted as a container or as an amount of tea. Besides these trivial examples, we encounter phrases such as (Z. S. Harris, 1976):

a quick cup of tea

and here, it is clear that no judgment can be carried out outside a sentence because of the difference:

**I broke a quick cup of tea*
I drank a quick cup of tea

The empirical requirement of restricting judgments to sentences coincides with a theoretical position essential to dealing with lexicon-grammars: THE UNIT OF MEANING IS THE ELEMENTARY SENTENCE, AND NOT THE WORD. By elementary sentence, we mean (for European languages at least) the structures subject-verb-essential complements. This postulate is obviously necessary in the case of verbs. From a syntactic point of view, a given morphemic verb has no status. Subjects and objects are entirely determined and are unique for each verb. The same remark carries over to *be Adjective* forms. For nouns, it is less obvious so, and this point is discussed by Takuya Nakamura (this volume).

One must also pay attention to the degree of abstraction of the forms submitted to acceptability judgments. The degree of abstraction can vary between almost acceptable strings of words such as:

?*A waiter was hit by Bob*

to sequences of abstract symbols for which the notion of acceptability is irrelevant. In this respect, we favour concrete theories.

Dubious sequences

Reproducibility of experimentation is a general scientific requirement; it is ensured when the result of an experiment does not depend on the experimenter, which is of course never entirely true in the case of language, but can be approximately so, in so far as there are linguistic communities. Indeed, reproducibility of judgments is essential. During the construction of the Lexicon-Grammar of French verbs, no single information was retained, unless its validity was corroborated by the independent judgments of several linguists: at least two, preferably three or four. All information resulting from acceptability judgments have to be made explicit and preferably published, in order to be exposed to critical evaluation by other linguists.

Judgments made on sequences of words should be binary: sequences are accepted as sentences or not. In discussions we often introduce a question mark, thus allowing four values instead of two (acceptable and unacceptable):

Joe was hit by Bob
?*A waiter was hit by Bob*
?**Joe gave Mary to Bob*
**Joe gave Bob Mary*

But we exclude these expository values form the formal representation, or grammar, which is kept strictly binary. The main reason in favour of this position is the formal nature of the theory that aims at building the equivalent of a characteristic function, i.e. a device that for each sequence is able to determine whether it belongs to the language in question or not. The binary hypothesis, which is that of Z.S.Harris since 1952 and of N. Chomsky (1957), acknowledges that syntactic phenomena will appear as extremely complex, even when made abstract by the elimination of numerous delicate nuances. Hence, introducing additional ill-defined parameters of study in the first stage of the description will only result in blocking further progress. This view has proved to be entirely correct.

For many word sequences, one hesitates on the acceptability value to be assigned. We will indicate various procedures that allow linguists to obtain reproducible decisions. In

general, a failure to reach a decision about acceptability affects situations that are not well understood linguistically, which involve for example productivity, or the instability of not well established rules. Often, these fuzzy judgments affect sentences of a certain complexity, and this entails that they have a high degree of ambiguity. When we are unable to obtain reproducible data in such areas of the grammar, we consider that we cannot deal with the problem, at least for the time being. Consider an elementary example that bears on the determiner of the subjects of numerous verbs. In the pair of sentences

(1) *Bob hit Joe*
(2) *Joe was hit by Bob*

no acceptability problem arises. Consider now the close pair

(3) *Bob hit a waiter*
(4) ?*A waiter was hit by Bob*

We feel that the passive form (4) is dubious when compared to (2). There seems to be a phenomenon linked to the indefinite nature of the subject: with most verbs, and without context, indefinite subjects are of intermediary acceptability, and this remark is true for active forms as well. Compare the following four sentences in this respect:

Bob is working hard
?*A waiter is working hard*
Bob is standing behind the counter
A waiter is standing behind the counter

Since the phenomenon is not understood, we will not attempt to carry out acceptability judgments in order to separate the types of verbs involved, that is, we will not introduce in a lexicon-grammar a binary property that classifies verbs according to the felt difference. We do not say that the problem is not worth studying; rather, we consider that the question has not yet reached a stage where reproducible judgments can be made which lead to a formal representation.

Recognizing such a situation has then an important practical effect: when a form such as Passive is studied with a view to its systematic representation, one should avoid testing forms that contain an indefinite subject.

Apart form this requirement of prudence, several empirical observations help linguists to achieve coherent decisions. The most important is that experience has shown that intuition underestimates acceptability. Corpus-based studies have revealed an interesting feature of texts: forms that have been considered as dubious by linguists are attested. Many dubious forms can be improved by adding adjectives or adverbs, that is without altering the initial structure. However, one should be cautious when one lengthens sentences: long and complex sentences tend to be many times ambiguous, hence they offer more opportunities of accepting them, possibly unjustified ones.

When an acceptability judgment is not convincing, it is wise to try examples that involve words synonymous (perhaps antonymous) to those of the original examples. Examples can often be varied within a given range of structures, and since the uncontrolled component acceptabilities may depend on the choice of words, shifting to a similar lexical item may lead to sharper judgments. Conversely, analogical judgments can be used in the following situation. Suppose one has arrived at a given set of similar verbs, for example semantically similar verbs (e.g. verbs of saying). Suppose now that one has to carry out an

acceptability judgment on one of the verbs of this class, e.g. verify whether *gargle* accepts the structure *I gargled to Max that he should leave*. Suppose moreover that judgments on this form are not conclusive. In this case, one should check all verbs of the class, and concentrate on those which provide clear data, e.g. *tell*. Then, the existence of a class leads to accept dubious cases. A negative judgment within the class should then be extremely sharp to be recorded as such.

Grammaticality

Grammars are formal representations which separate sequences into two types: grammatical or not, without intermediary cases. When we construct grammars, we try to ensure that for the largest possible number of sequences, the status predicted by the grammar (i.e., the grammaticality) coincides with the acceptability. However, the matter can be complex. The distinction between acceptability and grammaticality, as discussed by Chomsky (1957), is useful when we construct grammars for which forms that are unacceptable in a clear-cut way are considered grammatical. An unacceptable form considered grammatical is sometimes called a "theoretical" form. In Lexicon-Grammar studies, the notions of grammaticality and acceptability are usually kept close to each other, and the same "*" symbol is used to mark ungrammaticality and unacceptability.

In the example of the passive forms, a theory A could link the application of the Passive rule to conditions on the determiner of the direct object. Such a step might be costly, since Passive would no longer apply independently of the context of the noun phrases involved. But under a theory B where Passive is independent of the determiner of the direct object, the dubious passive sentences like (4) would have to be considered as entirely grammatical, which does not reflect the acceptability status of the sentences. Consider now the cleft transforms of (2) and (4):

(2b) *It is Joe that was hit by Bob*
(4b) *It is a waiter that was hit by Bob*

If (4) is not completely grammatical, we have to account for the fact that (4b), which is derived from (4), has normal acceptability, that is, is as acceptable as (2b). We then have the two syntactic paradigms or derivations:

(1) = (2) = (2b)
(3) = (4) = (4b)

They differ only in the determiner of the direct object. This lack of parallelism is avoided is (4) is accepted. In this example, the syntactic paradigm suggests regularizing (4).

Unclear forms can also be normalized with respect to the lexicon, instead of relative to the grammar, as above.

The use of acceptability judgments

Carrying out acceptability judgments on syntactic forms need special training and experience. Acceptability judgments tend to be very global, because they merge intuitions of varied origins. However, it is possible to avoid interferences between the components of a language by devising experimental procedures that will render judgments much more specific.

Thus, carrying an acceptability judgment on a string is usually not emitting an opinion based on a cursory reading of the string, but consists in devising an experiment aiming at the demonstration of some hypothesis. Hence, careful binding of examples, with appropriate choice of words, should be made; in order to avoid ambiguities that too often bring parasitic

intuitions. In general, sentences that constitute actual written or spoken discourses do not have such particular properties. Thus, examples have to be constructed with a particular testing aim in view. This can only be done by trained, professional linguists.

Seeking the judgments of non-specialists of syntax has not been found to be useful. Linguists are careful to avoid interferences between independent phenomena. As a consequence, they build sentences that have been simplified to the greatest extent for their experiments. Needless to say, eliciting acceptability judgments in a poorly known language from a poorly known informant is an entirely different field of linguistics. Results obtained in this way will have to be improved upon before they can be submitted to deep theoretical analysis.

Syntactic and pragmatic constraints

When a sequence is not likely to be ever uttered, it might for a number of reasons, not all of which are relevant to syntax. Compare for example the two following sequences:

(5) ?*Beijing is in the drawer*
(6) **Beijing is inhabited by Max*

Sentence (5) sounds very strange, because a piece of furniture cannot hold a city. The situation referred to by the sentence does not fit in the real world. The problem with (6) is different. It is intuitively rejected, but one can imagine an interpretation for this sequence: *Max inhabits Beijing*. This interpretation is constructed through some unconscious process, probably by applying the Passive transformation or by reference to similar sentences with another complement:

Beijing is inhabited by millions of people

Thus, (6) is a typical unacceptable sentence, although there is no contradiction between the meaning "associated" to it and the real world. The unacceptability of (6) is a syntactic constraint, which is relevant to the description of the syntax of the verb *inhabit*.

Now, there are several ways of interpreting sentence (5). One can imagine, for instance, that *Beijing* refers to a miniaturized representation of Beijing. Or one can interpret *drawer* metaphorically. Since no lexicalised metaphor is attached to this word, nor to the phrase *in the drawer*, whoever reads the sentence is free to understand the metaphor in their own way. It is probably not wise to consider such creative metaphors as grammatical and to include them into grammars systematically, because they are highly unpredictable. But if we select the interpretation with the miniaturized representation, (5) appears as an acceptable sentence. The pragmatic problem perceived at first sight is strictly relevant to features of the outside world. It disappears if we find in the world a situation in which the sentence fits. Acceptability is a property of linguistic sequences, not of situations in the real world. So, the strangeness of the situation is a wrong reason for rejecting (5). If we decided to consider (5) ungrammatical, we would be including into the grammar a representation of the fact that some concrete objects, like drawers, cannot contain cities. Since a grammar of a language must take into account the entire vocabulary, such encyclopaedic information should be provided for all concrete objects. With all this encyclopaedic information, the quantity of information to be gathered for the construction of the grammar would probably be multiplied by more than ten. In many cases, the encyclopaedic information to provide would be dubious: for instance, can a bathroom contain an elephant?

Due to these problems, the Lexicon-Grammar method discards pragmatic constraints from the syntactic knowledge used to carry out syntactic description. Pragmatic

considerations about the plausibility of situations must not be taken into account in acceptability judgments.

One of the consequences of this position is that selectional restrictions are sometimes difficult to account for precisely. Take for example the following sentence:

John is drinking tea

If we produce a representation of the set of possible noun phrases that can substitute for the subject *John* and the same for the complement *tea*, we will be abstracting a sentence scheme from this particular sentence. We can do this by judging the acceptability of sentences like:

(*John* + **Water* + **Bleach* + **The agreement) is drinking tea*
John is drinking (tea + ?*bleach* + ?**Mary* + **an agreement)*

A noun is accepted as a direct complement of *drink* if the corresponding sequence is an acceptable sentence. However, pragmatic and syntactic constraints may be difficult to separate. The fact that drinking bleach is very dangerous is of a clearly pragmatic nature; we suggest a more indirect argument to confirm that the sequences with *Mary* and *agreement* are unacceptable: *Mary* can be syntactically classified as a human noun, and *agreement* as an abstract noun. For the description of the distribution of subjects and essential complements of most verbs, the Lexicon-Grammar of French verbs makes use of a classification of nouns in three classes: human (*Mary*), non-human concrete (e.g. *tea*), and abstract (*agreement*). Projects of more precise descriptions (G. Gross, 1994) directly address the problem of separating pragmatic and syntactic constraints.

Syntactic and stylistic constraints

Maurice Gross made the hypothesis that a first approximation of a description should not include socio-linguistic data in the grammatical representations. Thus, we make no provisions for notions such as idiolect, multiple grammars for a single speaker or separate grammars for separate groups of speakers. Nor do we distinguish between styles, such as literate speech and slang. As a consequence, stylistic constraints must not be taken into account in acceptability judgments. Take for example the following sentence:

John hid into the box Mary's favourite book by Gabriel García Márquez

It is acceptable and contains a long direct complement. If we permute the two complements, we obtain a slightly less pleasant sentence:

(7) ?*John hid Mary's favourite book by Gabriel García Márquez into the box*

This effect is often observed in English when a long noun phrase is followed by a short one. The same effect is not observed when the two noun phrases are of comparable length:

John hid into the box Mary's book
John hid Mary's book into the box

However, there is no stable, precise threshold of difference of length beyond which the effect would be clearly felt. This is a typical stylistic constraint, and it does not justify that (7) should be marked as unacceptable.

The following pair of sequences exemplifies a permutation in another syntactic context:

(8) *John gave Mary a book*
(9) **John gave a book Mary*

The unacceptability of (9) is not related to a stylistic constraint. It is just as clear as the unacceptability of (11):

(10) *John gave Mary a famous book by Gabriel García Márquez*
(11) **John gave a famous book by Gabriel García Márquez Mary*

Therefore, the constraints that rule out (9) and (11) are worth including in a Lexicon-Grammar of English verbs.

In the same way as stylistic differences can interfere with acceptability judgments, there can be minor dialectal differences between variants of a language spoken in separate regions. There are two ways of dealing with dialectal data. The first way consists of neglecting the geographical origin of the variants and mixing up all variants in a unique grammar. If the variants of the language are close enough, this solution is quite reasonable. The opposite solution is more accurate, but it involves constructing distinct grammars for variants spoken in corresponding regions. Each grammar takes into account only the forms observed in the corresponding region. Comparative work between the variants of the language takes the form of a description of the differences between the grammars. Such work is currently being performed on the Belgian, French, Quebec and Swiss variants of the French language (J. Labelle, 1989).

Differential acceptability

In addition to carrying out acceptability judgments on sequences of words, we sometimes compare the level of acceptability of two sentences, as we did between (3) and (4):

(3) *Bob hit a waiter*
(4) ?*A waiter was hit by Bob*

In that case, we say we perform a differential acceptability judgment. The distinction between absolute judgment and differential judgment is also found in the domain of physical measures. The absolute measure of a temperature or mass is relatively coarse, differential measures of the same properties are very accurate. In syntax, differential acceptability judgments, like the (3)-(4) comparison, are noticeably stable and reproducible.

Analytical sentences

The theory of syntax makes use of sentences asserting basic facts in the generation of sentences. For example, by combining the following elementary sentences:

(12) *A person is drinking a drink*
(13) ?*John is a person*
(14) ?*Tea is a drink*

through known syntactic operations like construction of relative clauses, we can obtain:

John is drinking tea

Forms like (13) and (14) are called analytical sentences. Their acceptability is usually low, because the facts asserted are so general that such forms have a nearly zero plausibility of occurrence in discourse. However, they have a theoretical importance in the theory of syntax.

Facts asserted in analytical sentences are usually true, but the syntactic relevance of such sentences is not related to whether the corresponding assertions are right or wrong. For example, if we construct *John drank bleach* in the same way as *John is drinking tea* above, we will have to use either ?*Bleach is a drink*, too wrong to be clearly acceptable, or *Bleach is not a drink*, which sounds more like typical analytical sentences. A similar effect of negation is observable in analytical sentences with nouns of parts of the body:

(15) ?*A person has a nose*
(16) ?*A person does not have a nose*

(15) is strange because it refers with a general fact known of anybody, and (16) because it is usually wrong. However, if we use these sentences with (13), we will obtain

(17) ?*John has a nose*
(18) *John does not have a nose*

where (17) is much more strange than (18), because it asserts a highly predictable fact.

Since the acceptability of many analytical sentences is difficult to determine in a reproducible way, they can be considered as a theoretical tool. In discussions about such sentences, the distinction between acceptability (an empirical notion) and grammaticality (with respect to a formal model) is useful.

Other sources of syntactic information

Acceptability judgments are the simplest and most useful source of syntactic information, but a small number of other empirical tests on language are also efficient in the construction of formal syntactic descriptions. We will now list a few of them.

Question/answer pairs

It is possible to evaluate the acceptability of a question/answer pair:

Whom did John choose? — *John chose Mary*
What did John choose? — **John chose Mary*

This test with the pronouns *who* and *what* allow us to measure the correlation between the syntactic notion of human noun (they answer *who* questions) and the semantic notion of human. The correlation is not perfect. For example, in the following pair, the human noun answers a *what* question, and not a *who* question:

Whom did John change? — **John changed drivers*
What did John change? — *John changed drivers*

However, syntactic tests give more accurate and more reproducible results than semantic tests, because they rely on acceptability rather than on semantic intuition. This is why they are systematically preferred.

Differential assessment of meaning

Differential assessment of meaning consists in evaluating the semantic difference between two sentences (M. Gross, 1975, p. 32). For example, the semantic difference between the two following sentences:

(19) *John bends the branch*
(20) *The branch bends*

can be described in informal semantic terms: in (19), the cause of the process is John's action; in (20), there may or may not be an external cause. Such descriptions cannot be formalized, but comparison between differential evaluations is particularly useful. For example, the same semantic difference as (19)-(20) is felt in other pairs:

(21) *The nurse burped the baby*
(22) *The baby burped*

In addition, as we noticed for differential acceptability, differential assessment of meaning is much stabler and more reproducible than absolute semantic judgment. The fact that the same semantic difference is felt between (19) and (20) as between (21) and (22) is an important fact for the formal description of the syntactic transformation between these sentences.

Support sentences

The study of locative verbs also required a direct use of semantic notions. The definition of dynamic locative elementary sentences (A. Guillet, Ch. Leclère, 1992) involves "support sentences". For example, the following sentence:

(23) *Max loaded boxes onto the truck*

can be related to a "support sentence":

(24) *Boxes are on the truck*

The situation before the process denoted by (23) is described by the negation of (24); the situation after the process is described by (24) itself. In order to classify (23) as a dynamic locative elementary sentence, we check these two facts.

In the case of shock verbs, the systems punctually passes through the situation described by the support sentence during the process:

Max hit the box against the truck
The box is against the truck

Ambiguity

Any acceptable sentence can be interpreted, but some of them have several interpretations. They are called ambiguous sentences. For example,

This plant irritated Max

can be interpreted either physically (*This plant irritated Max's skin*) or psychologically (*Some event related to this plant irritated Max*). The recognition of ambiguous sentences is roughly

as reproducible as the recognition of acceptable sequences, and it is an important process for syntactic analysis.

Attestations in texts or dictionaries

By chance, the example under test may be given in a dictionary (often in a slightly different form). Dictionaries are intended to represent usage, that is, current texts. Examples have been chosen in a representative way, but may not correspond to the precise syntactic property under discussion. Searching texts for significant examples may constitute a verification procedure. This technique involves

- the use of a collection of texts, or a corpus,
- the definition of a linguistic form to be searched, for instance in the form of a graph,
- the use of a text-search computer tool like Unitex. These tools construct concordances, i.e. collections of occurrences of the linguistic form, displayed with their context, each one in a separate line. In addition, Unitex is an open-source tool and allows the user to define linguistic form in the readable form of graphs.

However, it should be reminded that as to day, computerized searching procedures have not been developed to the point where they could be used in the evaluation of acceptabilities. The use of texts for checking acceptabilities, that is, attestations, is time-consuming. In the case of a phenomenon dependent on multiple conditions, the yield of the examination of large amounts of texts can be quite meager. There is never any prior indication that one or more dozens of pages of concordances will provide an interesting set of, say, passive forms with indefinite subjects. Moreover, no results about unacceptable strings can emerge from a text. The importance of unacceptable strings for syntactic analysis should be clear from the examples above, e.g. (6), (9), (11)... Hence, a corpus-based approach can only be considered as a source of hints, or as an appendix to the combinatorial technique that consists in varying forms and lexical items, and in testing their acceptability.

Conclusion

In these pages, we have surveyed the main sources of syntactic information and discussed how they can be applied to the construction of formal descriptions. Several points of this survey are worth remembering, because they have been confirmed by actual practice in real-size projects of description of the syntax of languages:

- the main primary source of syntactic knowledge is the acceptability of sentences, felt by introspection;
- pragmatic and stylistic constraints should be distinguished from syntactic constraints and discarded for the construction of formal grammars;
- differential judgments are more reliable and reproducible than absolute judgments;
- the resort to semantic intuition must be integrated in specific methods ensuring the reproducibility of results;
- search for attestations can be a help, but exhaustive results are obtained only by systematic constructing sequences and carrying out acceptability judgments.

References

Chomsky, Noam. 1957. *Syntactic Structures*. The Hague: Mouton, 116 p.

Gross, Gaston. 1994. "Classes d'objets et description des verbes". *Langages* 115, pp. 15-30, Paris: Larousse.

Gross, Maurice. 1975. *Méthodes en syntaxe*. Paris: Hermann, 414 p.

Gross, Maurice. 1984. "A linguistic environment for comparative romance syntax". In *Papers from the XIIth Linguistic Symposium on Romance Languages*, P. Baldi (ed.), pp. 373-446, Amsterdam/Philadelphia: John Benjamins.

Gross, Maurice. 1988. "Methods and Tactics in the Construction of a Lexicon-Grammar". In *Linguistics in the Morning Calm* 2, Selected papers from SICOL 1986, Seoul: Hanshin, pp. 177-197.

Gross, Maurice. 1992. "The argument structure of elementary sentences". *Language Research* 28:4, Seoul National University, pp. 699-716.

Gross, Maurice. 1994. "Constructing Lexicon-grammars". In *Computational Approaches to the Lexicon*, Atkins and Zampolli (eds.), Oxford Univ. Press, pp. 213-263.

Guillet, Alain, & Christian Leclère. 1992. *La structure des phrases simples en français. Les constructions locatives*, Genève, Droz, 446 p.

Harris, Zellig S. 1952. "Discourse Analysis". *Language* 28, Baltimore: The Waverly Press, pp. 1-30.

Harris, Zellig S. 1976. *Notes du cours de syntaxe*. Transl. and presented by Maurice Gross. Paris: Éditions du Seuil, 236 p.

Labelle, Jacques. 1989. "Norms and variants in French", *Lingvisticae Investigationes* 13:2, pp. 281-305, Amsterdam/Philadelphia: Benjamins.