

PREFACE TO THE TRANSLATION

1. Introduction

The original text of Roch Valin's *Perspectives psychomécaniques sur la syntaxe*¹ had no marked Preface or Introduction, nor did it have any headings or sub-headings. The text, however, begins with ten pages numbered vii-xvi, which constitute a preface or explanatory introduction. In this *Preface to the Translation* we have included all the important points of the original introductory pages, and added our own views and insights into the originality of this work, and its place in the history of twentieth century linguistics.

Roch Valin (1918-2012), who founded the Department of Linguistics at Laval University (Université Laval, Québec) in 1960, had the habit of chairing a weekly seminar for students, colleagues, and anyone else interested and capable of following the discussions, during his active years as professor of Linguistics, from 1963 to his retirement in 1986 and even for some years afterward. It was his own informal way of staying on the cutting edge of research based on the teaching of Gustave Guillaume, who had lectured in similar fashion to a small but remarkably diverse audience at the École Pratique des Hautes Études at the Sorbonne in Paris from 1938 to his death in February 1960. In 1963, his lectures, recorded in his manuscript notes, along with other significant manuscript materials – in all some 60,000 pages – were deposited in the newly founded Fonds Gustave Guillaume at Laval.

Valin had frequently been a member of Guillaume's audience at the Hautes Études, and had immersed himself completely in the Psychomechanics of Language (*la psychomécanique du langage*), as Guillaume was wont to call the theory that he developed, partly based on, partly in reaction to, the ideas expressed in Saussure's *Cours de linguistique générale*. Valin, a close associate of Guillaume from 1947 on, had published an introduction to the theoretical principles (*Petite introduction à la psychomécanique du langage*, 1954), and had set up at the Presses de l'Université Laval a series of *Cahiers* (to which Guillaume contributed numbers 1 and 4), a series which eventually produced, in 1981, the original version of the work presented here in translation from the French. The result of this very close collaboration was that Guillaume deeded all his professional papers to Valin, who spent the rest of his career continuing and

¹Cahiers de psychomécanique du langage, Québec: Presses de l'Université Laval. 1981

extending (as in the present volume) Guillaume's work in his own teaching and writing, and in the publication of the posthumous volumes of Guillaume's lectures and other manuscripts.

Publication of these manuscripts began in 1971, and so far 21 volumes of the *Leçons de linguistique* have been published, most of them joint publications of the Presses de l'Université Laval with European publishers. A volume of excerpts with the title *Principes de linguistique théorique* was published 1973 and its English translation *Foundations for a Science of Language* in 1984. Since then this volume has also been translated into Serbian (1988), Russian (1992), German (2000), Italian (2000), and Korean (2001). Besides the lecture notes, there are also manuscript monographs in the papers, and one of these has now appeared in two volumes (637 pages) with Guillaume's original title, *Prolegomènes à la linguistique structurale*, Volume I in 2003, and Volume II in 2004. A further volume entitled *Essai de mécanique intuitionnelle* appeared in 2007. This enormous posthumous production, to which Roch Valin dedicated long years of his career, makes Guillaume's published writings among the most extensive of any twentieth century linguist, and a valuable source of ideas and theoretical insights for posterity.²

The text here translated was the distillation of presentations and discussions in Valin's weekly seminar during the years 1977-78, 1978-79, and 1979-80. The purpose was to lay the foundations of a syntax based on Guillaumian principles, a study which had tended to be neglected in favour of analyses based on the facts of morphology and its meaning and function, as Guillaume himself occasionally lamented in the *Leçons*. This was not thoughtless neglect: it was simply an appreciation of the fact that in the act of language (in this case the creation of a simple sentence) it is words that are made into sentences (we speak colloquially of "finding the right words"), not sentences that are filled out with words.

Syntax is based on what is represented by the words and the grammatical forms intentionally chosen by the speaker, who shapes them grammatically and puts them in sequence in a way which will appropriately reflect the speaker's intended message. A sentence-based syntax is, in fact, a cart-before-the-horse syntax: the sentence does not exist before the words that are used to create it exist. The words are not generated in the sentence frame; the sentence is always the product of words chosen and suitably shaped for its creation. This is not a theoretical question, but a matter of low level observation: one can have words without having a sentence, but one cannot have a sentence without words (a minimum of one).

Such a view was certainly not the accepted dogma of the day, however, so this text is a sort of counter-culture text, making its own important statement regardless of the fashions of the day. The intent was not to create a new fashion, but to continue to build on the grammatical insights of the thinkers who established the original European grammatical tradition, stemming from the

² For details, and also for information on Guillaumian works in English, consult <http://www.ulaval.ca/fgg/>, site of the Fonds Gustave Guillaume. For a review article on the two dozen Guillaume volumes published posthumously see Hewson 2008.

pre-Socratic philosophers, and elaborated by Plato, Aristotle and the Greek grammarians. This longstanding European tradition profited from the extended discussions of the Modistae of the late Middle Ages, and was further elaborated and clarified early in the 20th century by Saussure, and later by those who followed him, developing the tradition in diverse ways: Meillet, Guillaume, Jakobson, Trubetzkoy, Buehler, Hjelmslev, Benveniste, Coseriu, Pottier, Martinet, Culioli, and others too numerous to mention.

The result is the 2500 year old tradition of dependency syntax was replaced by Bloomfield and his successors in favor of a constituency syntax that was supposed to be much more “scientific” because it depended on Immediate Constituents, that is, words that were next to each other in the stream of speech: position is, of course, directly observable. But observing position and ignoring the makeup of the word in the position is not science, but a form of reductionism: in English a *company bus* is something very different from a *bus company*; syntactic position can drastically change the meaning. Syntax is not meaningless.

1.2. Dependency Syntax and Constituency Syntax

It must also be realized that most of the discussion comparing the older form of syntax (Dependency) with the new (Constituency) has been limited to a discussion of English (see, for example, Peter Matthews excellent chapter *Constituency and Dependency* (1981:71-95)). The earlier forms of Indo-European, however, as shown in Hewson and Bubenik (2006:2-27), had only limited phrase structure (e.g. prepositions in Classical Latin) or none at all (Homeric Greek), so that for these languages constituency syntax is dysfunctional. A simple line of Latin verse, for example, as in (1), shows the adjective *tenui* for the noun at the end of the line (*avena*) situated in second position between another noun (*Musam*) and its adjective (*Silvestrem*). The relationship of adjective to noun is shown entirely by agreement (of accusative and ablative cases, respectively).

(1)	Silvestrem	tenui	Musam	meditaris	avena
	woodland	slender	Muse	ponder-you	pipe
	SG/ACC	SG/ABL	SG/ACC	V/2SG	SG/ABL

“You celebrate the woodland Muse on slender pipe” (Vergil, *Eclogues* 1:2)

Such examples raise the important question of the grammar of the word. A late 20th century study,³ in fact, concludes with the question “What is a word?”, a question Guillaume had posed half a century earlier⁴ and spent the rest of his life exploring. And so, by the third millennium,

³ “I conclude this discussion with a rephrasing of this question [Where’s morphology?], which will serve as the background to my own answer to it. At various times I’ve suggested that one of the key unresolved questions in morphology is ‘what is a word?’” Andrew Spencer 1991:453.

⁴ Guillaume 2005:1ff.

linguists dissatisfied with the dominant paradigms of the twentieth century in the English-speaking world were re-establishing, under such labels as Functionalism and Cognitivism, much that had been thrown out under the influence of mid twentieth century Positivism and Behaviourism.

Meanwhile work had gone on in various areas of the Saussurian paradigm that continued and developed the original teaching of Saussure rejected by Bloomfield. The Post-Saussurians mentioned above had their own followers, and there were also the Schools: the Prague School, the Paris School, the Copenhagen School, the Columbia School in New York, and in France and Quebec the Guillaumian School, centres where scholars worked at their own projects and recognized each other as fellow travelers in the linguistic counter culture.

The work of the Guillaumian School has been mainly in French,⁵ and only one of the twenty six volumes of Guillaume's own work published posthumously has been translated into English (the *Foundations* mentioned above). Consequently this work of Roch Valin, which had a significant impact on those who read it, is almost entirely unknown to the anglophone world. When it was written, in the early eighties, it would have been of limited interest to an English speaking audience, but today, with a growing interest in the relation between language and the mind, there is a much wider audience for this remarkably original work.

Roch Valin invited the members of his seminar to be as critical as possible, knowing that such an adventure into the unknown requires as much input as possible from those who understand what is being attempted, and he repeated that invitation to the readers of the subsequent text. To that original plea we can add another; that our English terminology may be subject to critical scrutiny and evaluated as to whether we have found the best way to present the concepts that emerge from this work.

2.0 Essential Guillaumian concepts for a syntactic theory

Valin also outlined certain fundamental features of the Psychomechanics of Language. Guillaume was an independent thinker who had refused to join the fashionable anti-mentalism of his day, and had often been critical of it. An unrepentant mentalist, he insisted that language is a mental activity which has to be described in dynamic, not static terms; it is a means of representing linguistically our ongoing experience to ourselves in order to express it to others. Each human language provides a system of representation that enables us to create whatever discourse we need for daily functioning. In what follows we shall endeavour to review the fundamental parameters proposed originally by Guillaume and sketched by Valin in his own introductory pages.

⁵ The site of the Fonds Guillaume (note 2) has a section covering publications in English with a Guillaumian orientation.

2.1 Operative Time

At the core of the Psychomechanics of Language is the principle of OPERATIVE TIME, the time necessary to form a word, to construct a sentence, to create discourse. One may well wonder, since it obviously takes time to create a sentence or paragraph that suitably and properly represents what we are trying to say (the intended message), why this operative time is important as a principle. Is this not the elaboration of the obvious? At one level, certainly. But it reveals other levels that, though far from obvious, are nevertheless important. It is, moreover, the principle underlying the relation between constituents in a sentence.

A subordinate clause requires a main clause. Adjectives modify nouns, and are in turn modified by adverbs. In all these relationships there is a BEFORE and an AFTER, where time is necessarily involved. Likewise the intended message necessarily precedes the initial drafting of the sentence, but it does not precede the already existing words and grammatical structures to be used in the creation of the sentence: This includes, for example, the sequencing that goes on within words (*book* > *books*), and within phrases (*book* > *the book*): a typical plural is made from a singular (one can not make photocopies without an original), and an article is typically used only if there is a nominal.

All this is, again, a matter of low level observation. But the important conclusion to be drawn is that the temporal sequencing is an indicator, if carefully followed, of the way that a sentence is put together by a speaker, in all its detailed steps and structures. This study presented here is an extended investigation, by a significant group of researchers, over a period of years, of everything that is required, as far as possible to the last detail, in establishing the mental relations between the words of a simple sentence.

2.1.1 The theoretical necessity of the Intended Message

Operative time, for example, directs our attention to phases of language that are not immediately obvious, and consequently neglected or ignored. One such neglected reality is what we have called *the intended message*. The act of language does not suddenly grow out of nowhere; it is always the result of an intended message, a prelinguistic entity which becomes incorporated into the act of language; without it there would be no act of language. If the speaker does not intend to say something, nothing will be said. Again, this is not a matter of theory, but of low level observation.

It is the intended message that is the target of the translator. To translate successfully, the translator must decipher the intended message from the source text, and then find the correct linguistic expressions to represent the same message by using the target language. This is the major problem confronting machine translation: one does not translate words; one translates messages, as in (2).

(2)	French (message)	Il	est	parti	en	voyage
	English (words)	He	is	left	in	voyage
	English (message)	He's gone off on a trip				

The intended message necessarily precedes the initial forming of the words and drafting of the sentence. But it does *not* precede the already existing lexemes and grammatical systems to be used in composing the words and creating the sentence; there is a sequencing and ordering that needs to be carefully observed by the analyst, since, as we shall see, it leads to all kinds of interesting insights that are not accessible if one is not prepared to do the painstaking observation that is necessary.

2.2 Clarifying the Saussurian premises

Most linguists are familiar with Saussure's equation:

$$(2) \quad \textit{langage} = \textit{langue} + \textit{parole}$$

to which Guillaume makes two significant adjustments. The term *parole*, which means only speech, is changed to *discours*, which is an improvement for several reasons. First of all it is easy to translate unambiguously into English as DISCOURSE, secondly it includes the written word as well as the spoken word, and thirdly it also includes other kinds of discourse such as the gestures of sign language.

Even more important for Guillaume is the necessary conclusion that these are not two different static aspects of language, a dichotomy, as they tend to be in Saussure (the community possession vs. the speech which vibrates on the airwaves), but two different phases of a single continuum, wherein the mother tongue (*langue*) of the speaker is the means of production and the speaker's discourse is the product. The arrow that Guillaume added to replace the [+] in the original, (see (3) below) emphasizes the importance of the activity that goes on between the means of production and the eventual product, an activity that is not a theoretical abstraction, but a reality that occupies operative time.

In passing we should note that translating *langue* is a significant challenge. In translations of Saussure the formula in (2) has frequently been left untranslated because French has two words (*langue*, *langage*) where English has only one: *language*. At other times *langue* has been translated as "a language", or "the linguistic system" as in the Harris 1983 translation of Saussure.⁶ Our own solution to this perennial problem has been to use "the mother tongue of the speaker" and occasionally simply to use TONGUE as a technical term for the language resources permanently available to a speaker, such as the lexemes and the grammatical systems with their

⁶ F. de Saussure. 1983. *Course in General Linguistics*. English translation by Roy Harris. London: Duckworth.

inherent mechanisms, which make possible the subliminal operations that necessarily take place before any discourse whatever reaches the level of consciousness.

Thus we can make, in (3), an English paraphrase of Saussure's formula in (2), using a different terminology. This represents language as an activity, which is a clarification of Saussure's original intention.

(3) language = tongue → discourse

In the normal course of the act of language a speaker's mother tongue becomes the means of production for creating discourse. A given tongue is a system of representation that enables speakers to express whatever they see in their ongoing experience to be relevant to the situational context in which they are engaged.

We may combine these linguistic factors into a single diagram which will also show that the act of language is a necessary phase between the means of production and the product, as in Figure 1 below.

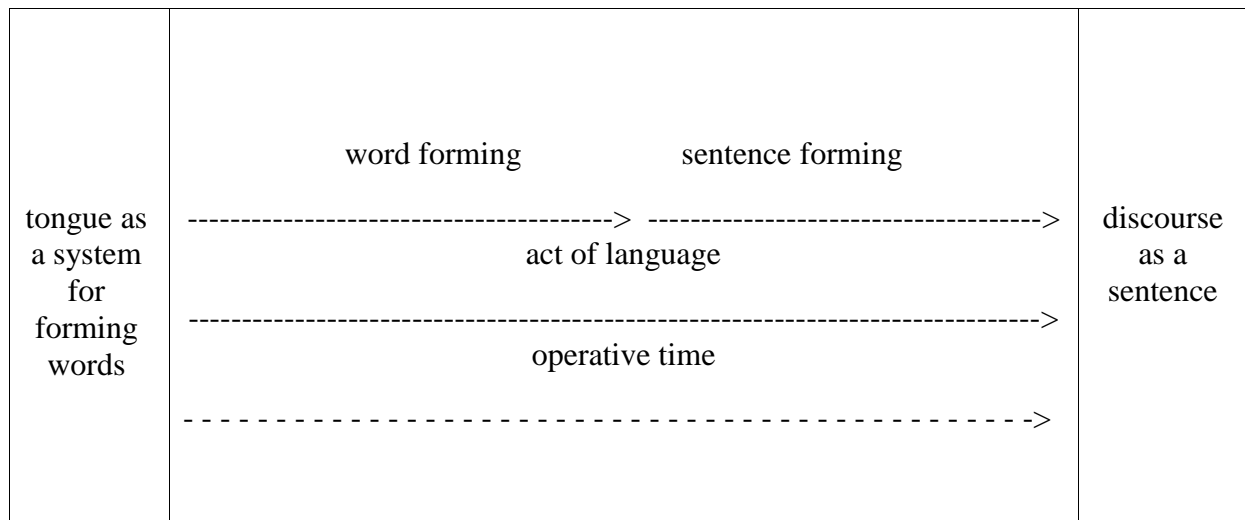


Fig. 1

The relationship between the speaker's mother tongue, the limited means available to the speaker, and discourse, the sentences produced with no limitation on their number or variety, is one of potential to actual, as we shall see below. Presupposed by this figure is the intended message, which is that portion of the stream of consciousness that a speaker wants to talk about. Originally extra-linguistic (as a necessary pre-condition for any act of language), it becomes incorporated into the act of language and is an important part of Valin's considerations in the text which follows.

2.3 Incidence: the interface between word, phrase, and sentence

It would be a serious mistake to conclude that the making of a sentence is a single holistic movement: that the act of language flows smoothly along a straight line from the first word to the last. There is a constant back-and-forth from the means of production to the intended product,

and segments may be constructed separately to be added subsequently to other already constructed segments.

In languages such as English or French there is, for example, an internal coherence to the structure of a Noun Phrase, and equally an internal coherence to the structure of a Verb Phrase, each of which is necessarily constructed separately. If the NP subsequently becomes the subject of the VP, there is an operation establishing a coherent relationship between the two phrases: in a dependency grammar it has always been understood that the NP is the support of the VP, and that the VP is consequently dependent upon the NP, an analysis which has been accepted from the time of Aristotle and the Greek *grammatikē* to the present day: NP ← VP = S.⁷

It was this analysis that was rejected by Bloomfield as ‘unscientific’, because dependencies are not directly observable, a conclusion that led him to create Constituency Syntax (IC analysis), based on *position* (Bloomfield 1926: Definitions 29, 30, 31) which is directly observable. Position marks certain grammatical values in configurational languages such as Modern English, but is often grammatically insignificant in the syntax of earlier forms of Indo-European, and other languages where the syntactic relationships are almost entirely marked by the grammatical morphology, and syntactic positions used for purposes of focus, emphasis, and stylistic elegance, as in the style of the classical rhetoricians⁸.

Syntactic dependencies, however, are the end product of mental predications (anathema to Bloomfield’s categorical anti-mentalism), an activity which attaches one item to another so that the so-called ‘dependent’ item brings its meaning to the meaning of the element of which it is predicated and which, consequently, supports it syntactically. In *bus company*, for example, ‘bus’ is said of ‘company’, whereas in *company bus* it is ‘company’ that is said of ‘bus’. (This is again low-level observation: what kind of company, what kind of bus?) As a result, *bus company* has a quite different meaning from *company bus*, and this difference of meaning, which is achieved by grammatical means, is marked by difference of position in Modern English. The difference of position is simply the way that dependency is most frequently marked in English.

For Guillaume, syntactic dependency is the result of an operation which he called *INCIDENCE*. Incidence establishes the relationship between a lexical import and its grammatical support. In Jespersen’s phrase (1924:99ff)⁹ *extremely hot weather*, the adverb *extremely* brings its meaning to the adjective *hot*, and the adjective *hot* brings its meaning to the noun *weather*. By the concept of incidence Guillaume takes the analysis one stage further: *extremely* is incident to *hot*, *hot* is incident to *weather*, and *weather* has its own internal incidence. There are three degrees of incidence (and only three) which correspond to Jespersen’s three ranks in the NP *extremely hot weather*: internal incidence (noun), external incidence in the

⁷Tesnière’s (1959) use of the chemical category of valence (to make the subject dependent on the verb) does not fit with linguistic reality: a finite verb may or may not have an object, but it cannot exist without a subject (implicit or explicit), demonstrating the verb’s dependence on its subject, a dependency often also marked by a verbal agreement: *I am, he/she/it is, they are*.

⁸ See, for examples the Homeric Greek examples in Hewson 2006:2-9 where there is a lack of any fixed prepositional configuration and all other syntactic relations are entirely determined by the morphology.

⁹Jespersen’s 12-page chapter “The Three Ranks” is a classic presentation of dependencies. It should be considered a fundamental document for the study of dependency grammar.

first degree (adjective), and external incidence in the second degree (adverb). These three degrees of incidence are extensively illustrated in Valin's discussions in the text that follows.

2.4 Potential → Operational → Actual

In Figure 1 above, it can be seen that in a typical act of language speakers start from a language which they normally possess as their mother tongue, the POTENTIAL from which, during the act of language they draw and adapt the representational elements needed for what they want to say, for the intended message. They proceed to put together the words required to construct a sentence which will normally be spoken to a hearer, and recorded in the working memory of both speaker and hearer. The act of language as something OPERATIONAL is complete at this point, where the meaning expressed is ACTUAL, but the working memory retains the sentence meaning long enough to work out the speaker's message. In this way one may set terms, a beginning and an end, to the act of language, and focus on its interiority.

Valin's introductory comments, however, point out the difficulty of finding one's way into this operational interiority without compromising the immediately antecedent or subsequent moments. The early pages of his account spend some time sorting out the thorny problems of where certain operations begin and how some must be allowed to persist (be put on hold) in the working memory while other contingent operations are carried out, and how there must likewise be a phase where the different processes involved in constructing, say, a noun phrase are brought to completion. In order to avoid overlooking any pertinent operation, or confusing the different phases where a given operation can be intercepted, he is led to make some rather detailed temporal distinctions.

2.5 Representation → Expression

We have already commented above that a given human language provides a system of representation. This is to be understood in the sense that a paintbox or an artist's palette is a means of representation: it can be used for painting a seashore, choosing or blending different shades of blue for the sea and the sky. And just as paintboxes can have a different range of colours available, but still be used to paint much the same picture, each language is a different system of representation from every other: some languages have no tense contrasts at all (and represent time differences by aspectual, modal, or evidential forms); others, such as English, have a binary tense system of Past versus Non-past; others, such as French, a ternary system of Past, Present, and Future, and there are languages with even more complex tense systems.

Translation from one language to another is consequently always a challenge, but is never impossible, because it is not the system of representation that is being translated, but the same message which is being expressed by different means of representation. Discourse, ultimately, is the expression of a message, to which may be added other expressive qualities, such as stress, intonation, tone of voice, gesture, pauses, and whatever varieties of syntactic arrangement the language permits.

2.6 Upstream and downstream science

In order to find out how many distinctive, contrastive vowel sounds there are in any given language, immediate access to the information is normally impossible: one has to look at the

usage of discourse, and analyze it, in order to discern the vowel contrasts and how they form a system which may be presented in a grid or a matrix showing the relationships of the elements which compose the system. Guillaume refers¹⁰ to this kind of analytic activity as *la linguistique d'amont*, or UPSTREAM SCIENCE, which is fundamentally the same methodological operation as reconstruction in Comparative and Historical Linguistics: drawing conclusions about the kind of systemic contrasts that *must* condition the observable data. He compares this with *la linguistique d'aval*, or DOWNSTREAM SCIENCE, whereby the phonologist in our analogy may explain how, in the construction of discourse, a given phoneme can produce a variety of allophones in certain given contexts. This too may be compared with the descriptions of Historical Linguistics, which explain how a protophoneme evolves into the phonemes of the daughter language, by splits and mergers, raising and lowering, fronting and backing, and other processes.

In the case of diachronic linguistics one is, of course, dealing with historical time, what Valin calls “glossogenic” (language constructing) time. In synchronic linguistics the time involved is operative time, as outlined above. Since the speaker’s language is the means of production, and discourse the product (as in Figure 1 above), upstream science analyzes the product in order to understand and describe the means of production: the underlying lexemes, morphemes, phonemes and systems of a language that condition the usage of discourse. Downstream science describes how these reconstructed systems (such as a vowel system) operate and thus explains the usage observed in discourse. It has often been commented, for example, that a vowel has a given value (Saussurian *valeur*) from its position in a system: that a high vowel in a three vowel system will have a greater range of allophones than a high vowel in a seven vowel system.

Recognizing the reality of these two different processes also allows us to distinguish morphology from syntax. Guillaume often commented that there are no grammatical paradigms in discourse (just as there are no vowel systems in discourse). Morphological contrasts can be discerned by the same kind of upstream processes that enable us to establish vowel contrasts and vowel systems; their function is to mark grammatical contrasts that are meaningful, as in *I see him* versus *He sees me*, where there are four different items from the paradigm of the personal pronouns of English, and two different paradigmatic verb forms. (There are also three different vocalic elements, and three different consonant elements).

Morphological paradigms and their systemic meanings (Hjelmslev’s *content systems*) belong to the systems of representation used for the grammatical shaping of words to be used in discourse. Languages that have a rich morphology (ancient languages such as Latin and Greek; modern languages such as Russian and Czech) often have considerable freedom of syntactic position that may be used for stylistic purposes. In this way, morphology, an upstream element, to a certain extent conditions syntax, a downstream element, since essential elements which are not marked morphologically will need to be marked syntactically. Even in a language as configurationally restricted as English, however, there is considerable freedom in the syntactic positioning of adverbial elements. Sentences are made from words; words are not made from sentences.

¹⁰ Gustave Guillaume. 1964:268.

4. Conclusion

Sentences are made from words. This commonplace entails an order between the two, a temporal order, which in turn entails a conditioning relationship: cause necessarily precedes effect. In the act of language, an intended message, a pre-linguistic element, leads to a preliminary choice of a lexeme or lexemes, and these will need to be modified, and shaped, both lexically and grammatically, for the purpose of sentence construction. Distinguishing between the lexical and formative elements of a word, as was done in the Middle Ages, and recognizing their relative autonomy in the process of word construction enables us to understand how a given lexeme can be formed by different parts of speech and so, as a word, fulfill different functions in different sentences.

This poses the challenge confronting the present study. Can the syntactic relationships observed in a simple sentence be explained on an operational basis, stage by stage, using only the three observable, and quasi-universal, stages of dependency: *primary*, *secondary*, and *tertiary* in Jespersen's terms, and, as we have seen, described operatively by Guillaume as three degrees of incidence. The term *incidence* designates activity: the conveying of a newly represented import of meaning to an already existing grammatical support. This conveying activity can be continuously recycled: within the word, from the word to the phrase, from the phrase to the clause, from the clause to the sentence. The recycling is open-ended. The proto-sentence itself may be recycled as a new sentence element in the same three ways: as a primary (noun clause), secondary (relative clause), or tertiary (adverbial clause).

Although these mental operations are conducted at a subliminal level, their product is directly observable. Continued and careful observation of the most minute details of the stream of discourse that is the product of the act of language, accompanied by extended reflection and discussions on the significance of these details, had led to the conclusions that are set forth in the remarkably insightful pages that follow.

John Hewson
April 2015

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PROLEGOMENA FOR A WORD-BASED SYNTAX

Roch Valin

Part I. The Act of Language: before, during, and after

From the outset it should be understood that this essay is not to be seen as a systematic attempt to cover the whole range of problems involved in developing a syntax based on the postulates and principles of the psychomechanics of language, and guided by the method of analysis called *positional linguistics* by its inventor Gustave Guillaume in *Temps et Verbe* (1929). Its purpose is far more modest: to try to retrace, as briefly as possible and without unnecessary complications, the progress made over three years at a weekly seminar that I conducted with colleagues and students. There is no guarantee, of course, that I will succeed in avoiding all the trial and error, the detours and the about-turns inherent in a research which, although it has no need to innovate with respect to the method followed, nevertheless does have to identify and delimit its subject, and to specify the nature of the analytic parameters involved. In short, this research involves finding a way of reaching the clearest possible understanding of the phenomenon under investigation, and of grasping its full scope. Consequently, the reader is asked in advance to excuse any errors or shortcomings, the former being for the most part the consequence of the latter.

The first of the problems to be addressed, by acquired reflex, one might say, was that of the foreseeable implications of relating the phenomenon of syntax to its underlying operative time (*temps opératif*), as is required in Psychomechanics. A number of mechanical constraints immediately come to mind which no act of constructing a sentence could conceivably escape.

The first of these constraints is that of having, like any other operation in cosmic time, an initial moment and, sometime later, a final moment. This immediately makes possible a first basic representation of the production of a sentence:

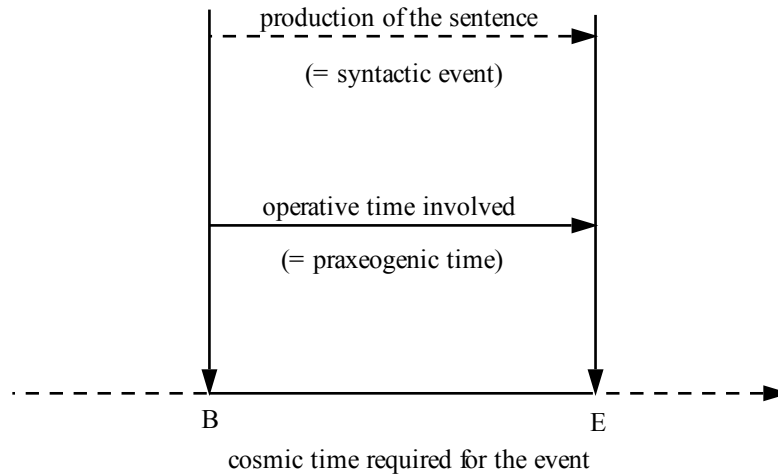


Figure 1

In Fig. 1 the symbols B and E denote respectively the beginning and the end of the process in the cosmic time involved in the linguistic event of constructing a sentence. This span of time - of cosmic time - stretching from B to E constitutes the *operative time* necessary for the production of the sentence, which is, by its nature, *praxeogenic* time, i.e. the time taken by the speaker of a language to produce a given linguistic result.

Once we have established this figure, it more or less completes itself, inviting the researcher to use it to register the necessary stages of existence of any sentence, whatever its content or particularity, i.e., the necessary stages of its construction. The production of any sentence is subject to the condition of linear successivity, as follows, in the following way:

1) as being *possible* and possible only, due to the existence, at a certain moment of time, of a speaker of a language confronted by an experience which he seeks to express. At this moment (M_1) the construction of the sentence has not yet begun, even if it is just about to do so.

2) as being already *underway* though still incomplete: the part already produced and the part to be produced may appear in widely different proportions at any given moment. This is moment M_2 at which the sentence may be observed in the process of its production.

3) as being *completed* after a certain stretch of time, which time can be as long or short as desired. This is moment M_3 corresponding to the stage of the phenomenon where the sentence is now seen as complete in its construction, and may be kept in its resultant form for various lengths of time. This suggests the following representation:

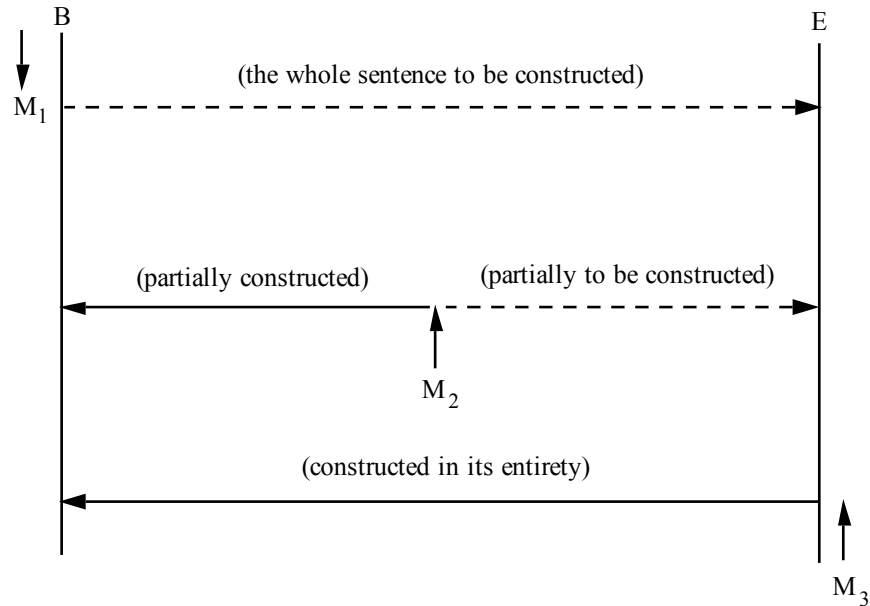


Figure 2

An interesting result of this way of looking at things is that it tallies with the three necessary analytic moments of the act of language discovered by G. Guillaume in the last years of his life and which he described as *potential*, *operational*, and *actual* (*puissanciel*, *effection*, *effectif*). For Guillaume, language as a linguistic event open to observation is to be identified with the sentence in the process of its production. *Prior* to the beginning of sentence production, language exists only in the *potential* state, being merely a possibility of language. *After*, once production is completed, language is over as a phenomenon and presents the result of its activity: it is said to be *actualized*. And it is only between these two extreme moments that language is an operational process, or, as Guillaume puts it, in *effection*, operational. Later on this distinction will be refined, but it goes without saying that some partial operational results may be observed in the course of sentence production. The truth is that the notion of operation, which covers everything in the transition from potential to actual, can invoke, according to the nature of the potential reality of language which is being converted into an actual reality, either an operation being accomplished within a minimal time period, a moment; or spread out over a varying sequence of different moments, the most extensive corresponding to the production of a complete unit of discourse,

namely a sentence. Thus the production of a sentence represents the maximum extension possible of the time required for the transition from a potential to an actualized state.¹

The reasons for this are not hard to understand but may take some time to expound. It will in fact take the rest of this essay, as we gradually come to perceive the conditions under which the transition from potentiality to actuality occurs: the transition universally involved in the praxeogeny of language, i.e. by the use of language, by language in action.

Of the three theoretical moments of language which appear as an inevitable succession in the genesis and production of the sentence -- potential language (M_1), language being actualized (M_2) and actualized language (M_3) -- the middle moment is, obviously, the pivotal one; it is here, and only here, that language may be observed as an event-in-progress. By this we mean that it is at this moment and this moment alone that language exists as a language event taking place in cosmic time alongside the myriad other events that constitute the reality of the universe. At this moment language, or at least one aspect of it, becomes an observable reality, a property that enables it to become an object of science. *Before* this moment M_2 of language-being-actualized, it does not and cannot exist other than as the possibility of a phenomenon, namely, the very complex set of conditions to which language, when it appears, owes its existence. *After* this moment M_2 , of the reality of a language event henceforth complete, there remains only the trace, of varying durability, of its occurrence in time. Consequently, only moment M_2 corresponds analytically to what we would call its *live existence* (*existence vive*). In M_1 there certainly exists something which has a close conditioning relationship to the reality of the phenomenon, but the phenomenon itself has not yet taken the form of a *language event*: what exists of it at this moment is the realized conditions for its appearance. In M_3 there certainly subsists also something of what was the reality of the event but, as an *observable language event*, it is irretrievably elapsed and lost in the past. And so it is not surprising that such analytic importance is given to moment M_2 that is necessarily the one in relation to which the other two have to be defined.

As to moment M_3 , where the development of the sentence is seen to be complete, all we need to say for the moment is that it results in *what has been said* -- the result with which every

¹This transition from a potential to an actualized state is always instantaneous as far as the grammatical meaning is concerned (*signifié formel*, or formal significate, later referred to as the *software program* of a language), but it is spread out in a sequence of instants, variable in length, as far as concerns the total lexical meaning (*signifié matériel* or material significate) of the sentence, or of any of its complex constitutive units, or phrases.

language act concludes. Once the sentence is completed, what remains is what the sentence has expressed about its subject matter, and this result of what was said may well survive for a certain time depending on whether it remains only in human memory or whether it was recorded and preserved, either in writing or through mechanical or electronic procedures of speech recording. The connection between this moment M_3 and moment M_2 is the one that links any outcome to the operation that produced it. Much could be said of this spoken product, but not much of any interest to the nature of language. We can consequently put this discussion aside at least temporarily, in order to confront the more intricate problems posed by the analysis of moment M_1 .

In M_1 , as already mentioned, language exists only in its potential state. What does that mean? It is important to be aware that here, as with the spoken product, there lies a fundamental ambiguity. Just as the final what-has-been-said can sometimes refer us to the substance of what is said and sometimes to the linguistic means of saying it, that is to say, to the wording of the sentence, the phraseology used, in the same way the potential state of language existing in M_1 can raise the question of either what is to be spoken of, or of the linguistic means that will be used in order to say something about it². In the latter case, the potentiality of the language act refers us to a *formal* causation in the sense in which Saussure speaks of a language as a form, and in the former case to a *material* causation which brings to mind the content of that which is to be spoken about.

It is easy to understand that in both instances language exists in potentiality, from the fact that in one case — formal causation — there exists a speaker who has command of a language and is thus able to *say something* about things he can and wants to talk about, and in the other case — material causation — every experience which a speaker stores in memory is capable of becoming a topic of discourse, that is to say, material for language. Furthermore, although both of these states are recognized as potentials, neither is sufficient, in and by itself, to trigger a language event (*alias* — a language act); this can only happen when the two work together. In order for there to be language, there must be, all other conditions being presumably satisfied, a speaker in command of a language confronting an experience of some kind, about which he can and wishes to speak.

² In fact, ‘say’ can refer either to what we shall call *the expressive intent* (*visée de discours*) (as it is in the sentence *Try to say it differently*, where ‘say’ is a synonym of ‘explain’), or on the contrary, to what will be called *the representational intent* (*visée phrastique*) as in *What is said may express very badly what is thought*, where ‘say’ evokes the linguistic means (the words) involved.

This immediately leads us to recognise that M_1 , at the outset of the language act to which the sentence will owe its construction, brings into focus the interplay of two goals or intentions (*visées*) of which the first is the *expressive intent* (*visée de discours*) materialized as the intent to say something about what one has in mind, about one's ongoing experience. This experience which we call the *intended message*, is, or at least *may* be, completely conscious. As to the second goal or intention which we call the *representational intent* (*visée phrastique*), it is strictly subconscious and involves recourse to the means of expression which the speakers have at their disposal in the language at their command: which amounts to saying that it is, by nature, a goal of *representation*, an intent to represent linguistically *the intended message*, the experiential content one wants to express.

Here we can see that it is the need for expression, the urge to say something, which commands and triggers the interplay of the potential acts of representation that make up the very substance of a language. The recourse to the multiple possibilities of expression of which these acts are the source, is independent of the will of the speaker who knows nothing of these *potential acts of representation*³ which give him the ability to express everything he experiences and perceives, whatever is for him a matter of experience.

To express any experience whatsoever, one first has to represent it, through the medium of the language one speaks. If there is one principle that G. Guillaume never tired of asserting, it is that of the universality, within the language phenomenon, of the necessary antecedence of *representation over expression*. We can only express something, he constantly repeated in his teaching, to the degree we have been able to represent it. For the very good reason that what we say of the things we talk about can only be made up from what we have been able to represent to ourselves of their reality. And that is exactly what a language has to provide for.

We have to be careful, however, not to conclude too hastily that if the intended message implies an *expressive aim* and the representational intent implies a *representational aim*, this automatically entails the antecedence of the latter over the former within the phenomenon. That reasoning would be erroneous. A moment's reflection leads to a recognition of the fact that by their nature the connection between the two can only have the form of an inclusion: throughout its existence in time, the intended message with its expressive intent envelops the intended sentence,

³ G. Guillaume used to say — to the puzzlement of some Guillaumians — that 'a language is a sum of acts of representation.'

with its representational intent. The closure of the representational event will always be prior: there will always be time to evaluate how well the intended sentence provides for the expressive result that is desired. To dispel any ambiguity, it should be added that the expressive intent, the very impulse that drives language, not only survives the representational intent (the subconscious recourse to the means of representation which enable expression) by at least one moment, but can sometimes survive much longer -- one single expressive intent often embracing, in actual discourse, several representational intents whose partial results, added together, contribute to an expressive intent which, from the beginning, was more extensive. In other words, to respect the living reality of language, it should be borne in mind that, while a sentence may constitute a complete though limited discourse, in certain circumstances realizing an *extended expressive aim* may require an undetermined number of sentences for the realization of the intent, often connected to each other by logical links provided in the language for such a purpose, a part of the means of representation and expression at the disposal of the speaker.

Keeping these remarks and observations in mind, the connection between the expressive intent and the representational intent may be depicted as follows, depending on whether the particular discourse is a limited or extended discourse, as in Figures 3 and 4.

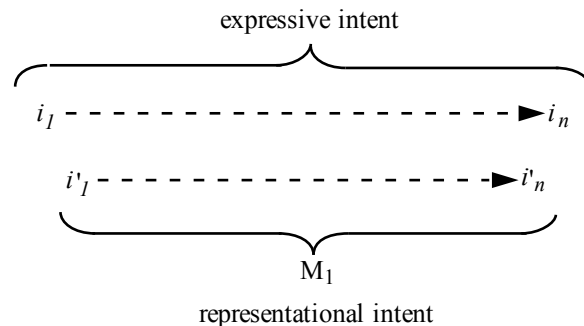


Figure 3

And for the extended discourse:

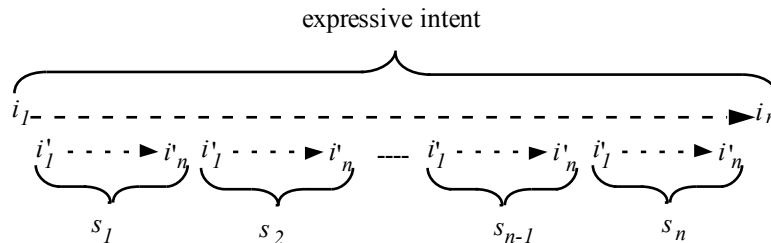


Figure 4

In Figure 4 the symbol s represents intended sentences each of which is only part of the extended discourse. The total intended message is fragmented and arrayed by the intervention of the representational intent, each portion of discourse corresponding to a sentence. In constructing these the necessary genetic sequences laid out in Figure 2 will automatically be followed.

A comment is called for, at this point, on the nature of the linguistic realities referred to at each of the moments M_1 , M_2 and M_3 , as well as the particular form of the relationship with time that each of these realities maintains. It has already been established that only moment M_2 has operational reality and corresponds to the staging in cosmic time (the basis of every process and every existence) of operations whose accomplishment requires various lengths of time, and which can ultimately be as short as is possible and conceivable. The longest of these operations is the construction of the sentence from its formative elements, which may in their turn already be *secondary* articulations obtained from *primary* elements. In each of these — primary and secondary — a more discriminating analysis will invariably lead to the recognition of the same three moments M_1 , M_2 , and M_3 that everywhere correspond to:

M_1 — a moment where a certain reality exists in which language is still only present *in potentiality*;

M_2 — a moment of *operational activity* in the course of which, however brief it is, there occurs a transition from the potential state — where language has not yet been actualized and realized its function (which is universally to provide human experience with a representation which enables expression) — to the completed state M_3 ;

M_3 — a moment where there now exists a result, an actualized representation which is capable of lasting for a certain time (in reality, as long as is needed). Here there is considerable variation, depending on the nature of what is represented, and for the whole sentence the possibility of its conservation, whether for the collectivity (by technology), or for the individual (in the retentive memory of the speaker).

To provide a more complete view of things, it should be added that, of these three moments, at whatever level of the phenomenon one intercepts the sequence, M_1 and M_3 , are invariably *moments of existence* of a certain language state (potential in the case of M_1 and actualized in the case of M_3), whereas, by contrast, M_2 is always and everywhere *a moment of transition* from the initial potential state to the final accomplished state, the speed of this transition depending on

whether the articulations are simple primary ones corresponding to already individuated words in the speaker's mother tongue, or secondary articulations, created from the product of the operations which govern the primary articulations.

For the sake of convenience we will first consider here, in the discussion that we are about to undertake on the relationship between the expressive intent and the representational intent, only those intended messages that are minimally complex, that involve only a single intended sentence (see Fig. 3). Furthermore, with a view to simplifying our initial presentation, we will consider only those intended sentences with simple articulations, and minimally complex secondary articulations.

Here then, keeping in mind the observations previously noted and the reservations formulated above, is a first sketch of the interrelationship between the two intents (goals) and the cosmic time in which they emerge, exist and expire:

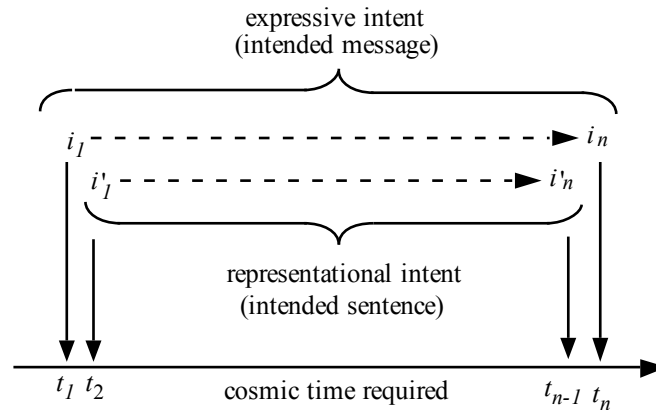


Figure 5

In Figure 5 above i_1 stands for the instant of the emergence of the expressive intent (with its intended message), and i_n denotes the earliest moment of its closure. In turn, i'_1 and i'_n represent respectively the first moment of the initiation of the representational intent (with its intended sentence) and the moment of its expiry. As for t_1 , t_2 , t_{n-1} and t_n , they mark the relative positions of i_1 , i'_1 and i'_n in cosmic time, where the two intents take place.

Instant i_1 and instant i_n (pertaining to the expressive intent and represented in cosmic time by t_1 and t_n) coincide with the moments M_1 and M_3 in Figure 2, as already indicated in Figure 3, and mark the exteriority of instants i'_1 and i'_n , the first and the last moments of the representational

intent, marked as t_2 and t_{n-1} in cosmic time. Which amounts to saying that the succession of instants from i'_1 to i'_n constitutes the durational content of the theoretical moment M_2 in Figures 2 and 3. Thus it would be possible to complete Figure 5 as in Figure 6.

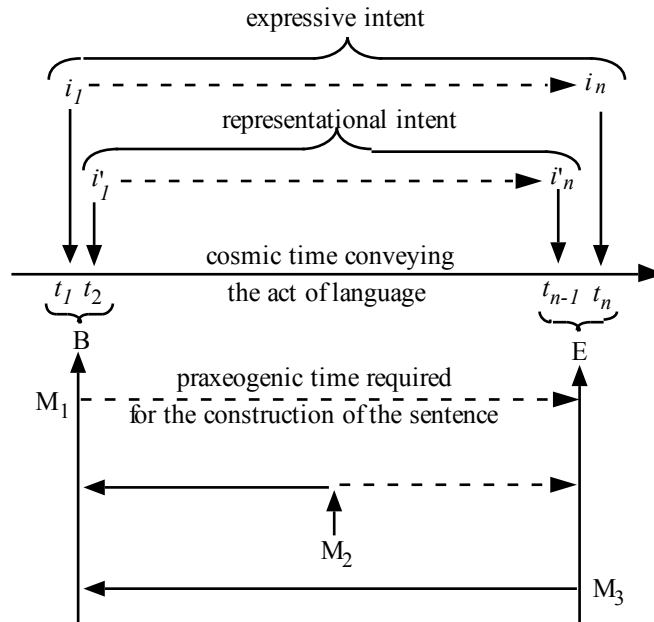


Figure 6

This way of representing things has numerous advantages. One of its merits is to demonstrate the *intentional* character of the expressive intent, stemming from a desire to express what the speaker has in mind (which then becomes its material content), and also the *executive* character of the representational intent, which, under the impulse of the expressive intent, finds the means of representing, for the purposes of expression, particular experience present in the intended message. This presupposes in the speaker the permanent presence of these means of representation in the form of the speaker's (mother) tongue which ensures their free availability: it is a coming together of the immediate presence of a tongue — with all that that entails as permanent possibilities of representing and expressing an experience — and of the first moment of the existence of a conscious desire to put into words a particular experience which takes the form of a momentary intended message which, in turn triggers, or at least makes possible, the subconscious onset of the representational closure which will produce the desired result. Thus our moment t_1 of cosmic time is seen to convey simultaneously:

- a) the existence of a certain language that a speaker possesses and has readily available;
- b) the existence in this speaker of a more or less clearly perceived experience;
- c) the existence of an intent to speak, the object of which is the experience, now in the form of an intended message.

Each of these existences coincides with moment M_I of a language act, the moment where the only existing reality of language is that of the possibility of an observable language event that is to take place in cosmic time, given that all the necessary conditions for its immediate onset have been realized. This is the state of the existence of language that Guillaume, in the last years of his life, called *potential (puissancier)*.

Another advantage of this way of representing the complex relationship of the language act with the expressive intent and the representational intent is to bring into focus the difficulty of singling out the real linguistic phenomenon, namely the construction of the sentence, the unitary product of discourse, out of the continuous texture of which it is an integral part. No phenomenon in the world — a linguistic event such as the creation of a sentence no more than any other phenomenon — can be represented in isolation, distinct from the phenomena to which it owes its existence, or from those that owe theirs to it.⁴ In other words, no phenomenon can have an absolute beginning or an absolute end. This becomes obvious as soon as one attempts, by analysis, to attach the beginning or end in question to cosmic time. One very soon discovers that these necessary limits of beginning and end, without which it would be impossible to individualise the event under consideration, can be approached from either the *external* or the *internal* view of the limit. Our Figure 6 clearly illustrates this for the initial limit: we have t_1 where the language being used (the *formal* causation of the phenomenon) comes into conjunction with the expressive intent and the experience that is its object (the *material* causation), and the limit t_2 which coincides with the onset of the representational intent. There is in fact an instant, the instant t_1 , where, since all the conditions necessary for the onset of the language act are realised, the operation of sentence construction is ready to begin, but not yet under way, and an instant immediately following, the

⁴Not even — as *relativity* teaches us — time from space.

theoretical instant t_2 , where the construction, albeit minimally, has already begun. The possibility of obtaining a clear view of the two moments other than by analysis is excluded on the grounds that there is no momentary interval between the two.⁵

And so, in one's experience of the phenomenon, there can be no loss of continuity in passing from the potential state of language into its actualized state: it is this seamless passage from one to the other, which, however paradoxal it may seem,, constitutes the reality that we call *actualization*. The actualized state, insofar as language is concerned, is contained within the potential in a double way: (i) *formally* in the speaker's mother tongue, by virtue of the possible ways that it provides for representing the intended message; (ii) *materially*, in the experience itself which, because of the prior existence of the means of representation provided in the mother tongue, already has a potential linguistic representation.

Thus the passage of language from its potential state to its actual state presupposes a confrontation (within the framework of an intended message) of a certain particular, fleeting experience with the general and permanent means of representing this experience, provided to speakers by the language they possess. From this confrontation, prompted by the intention of the speaker, comes the instant triggering of a representational intent, that is, a spontaneous and subconscious recourse, in reponse to the conscious intended message, to the multiple representational possibilities contained in tongue. Were it not for the totally subconscious nature of this operation, it would resemble the correcting action of a lens. As a result the experiential content seeking expression in the expressive intent becomes, once the appropriate linguistic means offered by the language in question have been found, a linguistic representation capable of becoming a *linguistic expression*, as soon as it has been arrayed in its appropriate morphosyntax. It is this confrontation operating at *MI* which initiates the act of language and the process of constructing the sentence.

This process, as may now be seen, can only occur in the presence, behind the intended message, of a particular experience, the memory of which must necessarily be present through the whole process of sentence generation⁶. This clarifies how, at each instant from the very beginning,

⁵ This is the problem that inevitably faces the linguist when analysing the concept of actualization on a *formal* level.

⁶ Oddly enough, it is from ignoring the reality of the expressive intent (with all its implications) that Generative Grammar is stuck with the strange and (upon thorough reflection) false problem of agrammaticality. (Cf. p.27 below).

one can see the potential (M_1) under its two species — *formal* (linguistic representation) and *material* (extra-linguistic experience) — changing into the actual (M_3), this continual mutation constituting the reality of the process of actualization (M_2). As a result, one can visualize this continuous change (made possible by the presence of the totality of the language of the speaker at every single moment) as an uninterrupted sequence of partial mutations, equal in number to the number of primary and secondary articulations identifiable in the sentence.

There immediately arises a problem concerning these different successive mutations: what is their relation to the operative time that underlies them? A distinction immediately arises between the secondary articulations (phrases) and the primary articulations (words), and then, among the latter, between words perceived by the speaker as compound or derived and those that are not. Only primary articulations corresponding to the words that are perceived as neither compound nor derived may be analysed as occurring instantaneously in operative time, their production taking place in a time too short for the speaker to be conscious of it.

Furthermore, it is self evident that this instantaneous transition, corresponding to the passage from the potential to the actual for the primary articulations, exists only at the level of representation, the level of the significate. From the point of view of the sign, the material symbol which represents the latter, things are quite different. No sign is ever produced instantaneously: it always extends over a given sequence of instants throughout which there persists, as one might expect, the result of the immediate passage from the potential significate to the actual significate, a persistence which enables the meaningful construction of syntactic constructions, and, ultimately, of the sentence itself.

With respect to meaning, the syntactic structures of a sentence are underpinned, like the sentence itself, by a sequence of instants. Some of these are *instants of mutation* from the potential to the actual, while others are *instants of persistence* during which the results of these mutations remain apparent until the mutations are incorporated into the sentence as part of its primary structures. Each of these results may in turn persist in varying degrees, always long enough for it to be incorporated into the systematic complex of the sentence as a whole. As to the sentence itself, and the persistence of the meaningful content it brings to the discourse, the problem it raises is too complex to be raised here even in summary form.

Returning to Figure 6, it will be seen that two other kinds of time involved in the phenomenon have yet to be included in this diagram. The first is glossogenetic time, so called

because it underpins both the historical construction of the speaker's language and the continuance of its successive states. The second, which will be called glossological time, corresponds to Guillaume's instantaneous operative time. Although it involves micro-stretches too short to be perceivable, it must however be posited for analytical purposes. Both of these two types of time are inclusively connected to the two other previously described types. Figure 7 shows the relation obtaining between these different views of time:

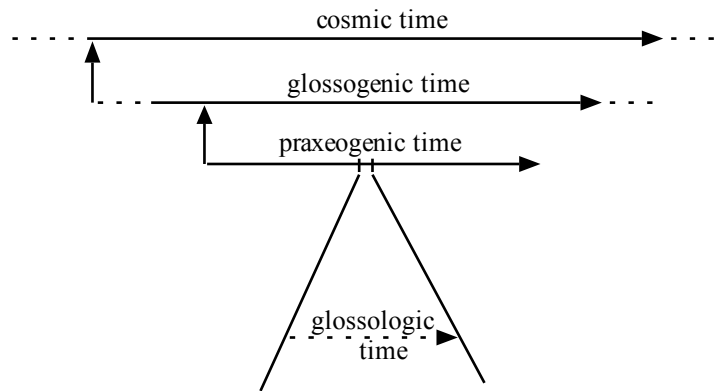


Figure 7

This makes it easier to understand the interaction of the two *intents* (cf. Figure 6) with these four kinds of time, and likewise with the different temporal requirements that are necessarily imposed on the act of language, to which the sentence owes its construction. In order to get a clear picture of the complex totality of these relations, the following must be kept in mind:

1. that somewhere in *cosmic time* — which, in common experience, has neither a beginning nor end in view — glossogenetic time perceived under the same conditions has its origin;
2. that somewhere in *glossogenetic time* — which in the common mind constitutes an infinity just like cosmic time — praxeogenetic time has its origin; the very experience of the speaker shows it as finite, and it has a manifest beginning and end;
3. that somewhere in the sequence of instants that constitute the perceivable reality of finite praxeogenetic time, there occurs, moment by moment, the reality of instantaneous *glossological time* which is also finite but due to its extreme brevity, imperceptible.⁷

Once the relationship is perceived between each of these kinds of time and each of the others, all that is needed, in order to get a clearer view of things, is to make a mental projection of Figure

⁷The figure on page 64 will attempt to give an idea of the complexity of relations which are established in the course of sentence production between praxeogenic time and glossological time.

7 onto Figure 6. Then it becomes obvious that the praxeogenetic time required for accessing tongue includes between its two limits B and E a time equivalent to the persistence, in cosmic time, of the representational intent from t_2 to t_{n-1} .

In this it is opposed to the time of the persistence of the expressive intent, which, running from t_1 to t_n , represents what could be called *logogenetic* time, that is to say the time of language production viewed in its phenomenological totality, because it involves, in succession, the three essential states necessary for language, which are: in M_1 potential language, in M_2 language undergoing actualization, and in M_3 actualized language.

But bringing together Figures 6 and 7 allows us to understand another fundamental aspect of the praxeogenetic time needed to actuate the possibilities for representation and expression, the sum of which is the speaker's language (tongue). This is the fact that within the limits of praxeogenetic time there occurs, in response to the expressive intent, a transition from what is only a *possibility* of representation in tongue into what will be in discourse a *reality* of representation - namely of the particular experience which is the object of the intended message by the intention of the speaker. The operative reality of glossological time corresponds to this instantaneous moment-by-moment transition, those instants that do not correspond to the transition from potential to actual being *instants of persistence*, as the result of these changes accumulates throughout the whole time needed for the formulation of the sentence, phrase by phrase.

The upshot of this is that praxeogenetic time appears to be made up partly of instants of high speed transition, and partly of instants underlying the persistence, in time, of the results of these transitions. It is, in fact, the totality of these instants of transition and persistence that makes up the praxeogenetic time underlying the active phase of the phenomenon, to which Gustave Guillaume gave the name of *effection* (actualization), symbolized here by M_2 . Actualization occupies the time necessary for the realization of the signs allocated to mark the representations drawn from the total possibilities of the speaker's language. At the onset, in M_1 , the speaker's experience is in fact linguistically represented *in potentiality*; at the end, in M_3 , the same experience has become something represented *in actuality*. Meanwhile, in each word and phrase of the sentence there occurs a conversion, fragment by fragment, of the experience perceived *outside* and before the linguistic representation, into an experience perceived as a part of and according to the linguistic representation, a conversion achieved by the speaker's exploitation of the linguistic means available.

In short, hidden behind the words we actually pronounce (or of which we simply evoke the acoustic image) there is a very complex interplay of subconscious operations of which these words are, in a way, only a conscious and more or less delayed echo. Moreover, the order of words in the stream of speech does not necessarily correspond to the sequential staging of the mental representations of which they are only the symbols. We shall now try to illustrate this with a few examples chosen to be as simple as possible.

Part II. The Making of a Simple Sentence

Here is our first example: *The cat has caught a bird. (Le chat a attrapé un oiseau)*. Even a sentence as simple as this raises numerous questions. We will now attempt to sort them out, in order to see how the parameters we have adopted function in this case.

With a sentence like this there is no difficulty in identifying the intended message that would naturally lead to its actualization. The situational context which would produce it is easy to imagine, and possible variations in context are not important. In order for this particular sentence to be uttered, it is necessary and sufficient for the speaker to have in mind a scene representing an unfortunate bird which has fallen into the merciless clutches of a cat. This scene constitutes a *personal experience* made into an *intended message* for the purpose of self expression.

The intention created by this desire for expression triggers, quite outside the awareness of the speaker, what we have called a *representational intent*, i.e. a subconscious search for the appropriate means of providing a linguistic representation of the experience underlying the intended message. If this representation were not itself a mental reality, there would be no possibility of expressing, in words assembled into phrases and a sentence, the simple fact which the speaker is trying to communicate. The speaker is completely unaware of this ongoing search, based on the functioning – too rapid to be perceived – of the automatic reflexes required to trigger the representational schemes and operative programs corresponding to each word, and to the grammatical categories involved in each. Given the nature of these processes, the speaker is only aware of the results, and because the results so proposed can be challenged, it sometimes happens that a conscious choice will be made when, confronted with the intended message, they turn out to be less than adequate representations of the complex of unanalysed impressions that makes up the speaker's personal experience. Universally, in fact, the function of tongue, prompted by a need to express an intended message, is to present to the speaker (who possesses, constantly accessible in permanent memory, the appropriate means of representation), as faithful a representation as possible of the perceived impressions to which the expressive intent owes its origin and its persistence.

It need hardly be said, at this point, that we are still a very long way away, in the present state of development of the Psychomechanics of Language, from being able to follow the fine details of the highly complicated interplay of the multiple subconscious operations at the end of which there emerges into consciousness the complete representation prompted by tongue in

response to the prompting of a need to express a personal experience as simple as the one that might yield the sentence *The cat has caught a bird*. We know very little, not only about the exact nature of this complex of impressions that we have called a real world experience (an ignorance shared alike by linguists, psychologists, and others interested in the phenomenon) but also about the exact conditions in which the connection is established between the conscious zones of the mind where more or less distinct contours of the particular real-world experience take shape and the subconscious zones where its linguistic counterpart, the strategies of representation, are worked out.

We can however make the claim, without too much risk of going astray, that what is being sought for in the mind of the speaker throughout the whole of the language act is an equation, as exact as possible, between a set of impressions of a first order, belonging to the speaker's conscious awareness (which in no way implies that he has a clear vision of them), and a corresponding result, with impressions of another order, produced by a subconscious system of representation (the speaker's language) operating on the first-order impressions. This latter is a system constructed, throughout the ages, by a process of generalising common human experiences, thereby reducing individual experiences to a common denominator. It is in this way that individuals belonging to the same linguistic community are able, through reference to this generalised representation of their human experience, recorded as a mother tongue in their subconscious, to convey to other members of the community the multiple and diverse impressions that affect them, the totality of which constitutes the stock of personal experiences that provides the fodder for discourse.

Although we know so little about the details of the conditions under which the connection is established between the momentary experience which provides the material for an utterance and the general mechanism for representating that experience linguistically (to which the statement in question owes its particular form), what Psychomechanics has so far succeeded in discerning of this mechanism nevertheless allows us to explain a number of important phenomena present in the production of the sentence, which Gustave Guillaume rightly saw as the actualized unit (*unité d'effet*) of discourse. The first results obtained are in fact so promising that they prompt us to try to explain – at least for the benefit of readers already familiar with the views and ideas of Guillaume and his disciples – some of those which do not require a lengthy and involved explanation.

Let us return to the sentence introduced above, this time for a more sustained analysis. In such utterances as *The cat has caught a bird* there have long been distinguished three principal articulations traditionally identified by the names of subject (*the cat*), verb (*has caught*) and direct object (*a bird*). Let us accept this analysis, at least temporarily, and consequently enquire as to what corresponds to the three articulations in question, in the functional reality of a syntax perceived not in terms of a static result, but operationally. This involves an attempt to show the interaction of the operational mechanisms of such a sentence, an interplay which gives the sentence its status as a linguistic unit.

First observation: none of the articulations or units that our chosen sentence can be broken down into appears as a *primary* articulation. All three appear as *secondary* articulations containing two primary units or articulations, that is two elements of tongue whose autonomy is recognizable by a variety of properties, an autonomy that gives them their status as words. In other words, the phrases [*the + cat*], [*has + caught*], and [*a + bird*], albeit functional units of discourse, are each of them the result of a summarizing operation to which they owe the semantic homogeneity which shows that they are autonomous linguistic units, but of a different order. To characterise them, Guillaume sometimes described them as *discourse words* intending thereby to mark the *late* production – occurring late in the operative time underlying the production of the sentence – of these secondary language units, in contrast to the *early* production – so early that it totally escapes consciousness – of the primary units, the words provided by tongue. A noted property of the latter is to appear as prefabricated, that is, to stand, insofar as the particular meaning they represent (which opposes them to each other within the framework of the same grammatical category) is concerned, as already established in the potential state of language represented by tongue. In a language, every word exists as an *operational programme* appearing in the form of an operational sequence that is always the same and capable, when accessed in discourse, of achieving closure in such a short space of time that it is impossible for consciousness to detect any duration in its production (if it is obviously not a compound nor clearly a derivation), all that is perceivable being the time necessary for pronouncing the phonetic elements constituting the sign and serving as its symbol.⁸

⁸These operational programmes all constitute what can be called, without abusing the word, the “*software*” of a language. In the various successions and sequences that create the programming of this *software*, time is necessarily involved: no operative sequence is conceivable without *moments before* and *moments after*, and every “before” and “after” corresponds to one or another form of time. But until one of these operative programmes from the software of

Quite different are the conditions for the formation of the phrases [*the + cat*], [*has + caught*] and [*a + bird*]. None of these phrasal functional units is, as such, provided for in tongue as a single ready-made content resulting from the fusion of the two elements that participate in its formation⁹. All that pre-exists in tongue is the operational programmes corresponding to the possibility of actualizing each of the elements participating in the construction of the phrase, as well as the related possibility, because of what these elements are by nature, of taking part in an operation in which, without renouncing their nature in any way, they form a larger language unit that will always owe its formal and functional properties to one of them. What is this formative element from which the phrase borrows both its nature and its function?

It is the interplay of incidence (the internal dependencies) within the phrase. There are relations of incidence between the various words of the phrase, some of which are meaningful *imports* and others *supports* for these imports: one and the same formative is capable of being a support in one relationship and an import in another. It is in this way that Guillaume explains the interplay of the syntactic relationships within a single phrase, between a substantive noun, an adjective, and an adverb. In a phrase such as (a) *very big cat* (leaving in abeyance, for the moment, the problem posed by the article) we may claim that *very* is incident to *big*, and *big*, in its turn, is incident to *cat*, as in Figures 8 and 9.

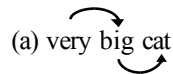


Figure 8

the language is accessed, this logical time of computation cannot be one of material duration, even a millisecond or less of what we have called *glossological* time. To designate this time, a vector of the systemic progressions of the language – a time within which *operative time*, and the operations it underlies, are reduced to a state of mere possibility – we will use the term *programme time*. A remarkable feature of *programme time* is that when it switches from a potential to an actual state (in the form of the microduration of glossological time required for each particular operation carried out) it must always appear as *instantaneous*, as Guillaume had already perceived in *Temps et Verbe* (1929).

⁹Whenever one is confronted by what appears to be a contradiction – think, for instance, of *freemason*, *beef-eater*, *sidekick*, *midwife*, or even *forget-me-not*, *hand-me-downs*, *matter-of-fact*, *off-the-cuff*, etc., it is often a case of utterances in which the speaker cannot find the meaning of the term from its constituents, but which the morphology shows to have been of syntactic origin. In many cases, moreover, the lexicalization is so obviously complete, and has been for so long, that even the spelling no longer shows the original components: *gosling*, *raspberry*, *woman*, *mannequin*, *bosun*, etc.

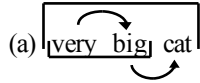


Figure 9

Figure 9 is only a first approximation; as other analytical techniques have long demonstrated, it is obvious that *very big* is itself an autonomous phrase within the phrase *very big cat*, which, as will be explained later, is in turn dependent on the *a*, the indefinite article. But there are many other things to be explained first, and in particular how an adjective – and often the same – can occur, whether accompanied by an adverb or not, sometimes before a noun and sometimes after it.¹⁰

Let us begin by stressing the point that it is the system of incidence which determines the grammatical category of words and the parsing of words into *parts of speech* of different kinds. This is particularly clear in the series of parts of speech called *predicative* by Guillaume (noun, adjective, verb, adverb) which are characterised by the fact that they convey an easily identifiable lexical content which can be contrasted with that of other words belonging to the same category, and whose number theoretically has no limits. In this respect, this first set of parts of speech – noun, adjective, verb and adverb – clearly contrast with all the others, called *transpredicative*, whose characteristic is, on the one hand, to form closed sets not permitting free proliferation, and on the other hand, to show an ever-growing resistance to being defined lexically as one progresses through the paradigm of their systems. To appreciate this fact one only has to look at what a dictionary can tell us about the underlying meaning of a preposition, a conjunction, any kind of pronoun (personal, interrogative, relative, etc.), or *a fortiori*, that of a verbal auxiliary (*do*, *be*, *have*) or an article (*a* or *the*).

Let us now return to the parts of speech called predicative and try to see, for example, how an adverb is different from an adjective and an adjective from a noun, and what comprises the difference. We will leave aside the problem of why there exist verbal adverbs and adjectival adverbs, which might lead us to considerations we have no wish to address at this point. What is it that, grammatically, makes a specific difference between a noun, an adjective and an adverb? These differences, as mentioned above, are to be found in the *system of incidence* proper to each of the categories, as can be readily demonstrated.

¹⁰We will deal later (Cf. pp.54 ff) with the role of the postposed adjective and the configurational ordering of the phrase.

It is in fact evident that in the noun phrase (a) *very big cat*, what the word *very* says – the particular meaningful content that this word conveys (in this case the idea of a high degree) – is attached, or rather *mentally applied* – to what is said by the word *big*. Under the influence of the adverb *very*, the notion conveyed by the word *big*, denoting as it does a quality, an attribute of *cat*, is raised to a high degree. As for *big* – thus mentally promoted to a raised degree by the modification effected by the adverb *very* – it is perceived as speaking of what is designated, *outside language*, by the word *cat* and, as such, applies to this reality the proper meaningful content by which it differs from other words belonging to the same grammatical category. As to *cat*, it is not perceived to attach its meaningful content which distinguishes it, in opposition to all the other words of the same grammatical category, to any of the other constituent elements of the phrase to which it belongs: in contrast to *very*, which ‘is said’ of *big*, and of this latter, which ‘is said’ of *cat*. To what, then, does the word *cat* refer, and to what does it apply that notional content which makes it different from all other nouns? There is the real problem, and its solution depends in turn on the solution of the problem posed by that enigmatic part of speech, the article, whose grammatical category is linked to the noun.

The set of facts that we have just looked at concerning the syntactic relationships which so obviously link the grammatical categories of the noun, adjective, and adverb to each other led Guillaume to formulate what he finally came to call ‘the theory of grammatical incidence’. It is fundamental for understanding and differentiating the grammatical categories of words to which the different parts of speech correspond, as well as the various syntactic relationships that can arise between them. This theory will be summed up in what is said in the following paragraphs.

Concerning the noun, Guillaume explained that what characterizes it from a grammatical point of view is the fact that its notional content should not be applied, *in proper usage* and without due processing, to any other idea to which it would bring a notional complement. This distinguishes it from the adjective and the adverb whose proper meaningful content is destined to serve as a notional complement to the content conveyed by another word. And with that there is an important distinction which discriminates the adverb from the adjective: the adverb is designed to carry a notional complement to a notion which is itself intended as the complement of another notion.

Expressed in terms of incidence, this amounts to saying that whereas the adverb and the adjective operate within the system of *external incidence*, which means that they both achieve in

discourse the kind of incidence (or dependency) for which they are designed by bringing their meaning to a support which is not predictable from their own notional content. The noun, on the other hand, announces beforehand, from its own meaningful content, the nature of the support on which the potential incidence which it brings as a linguistic element will be realized. In this it shows that it possesses not an external, but an *internal* system of incidence. It is obvious, in fact, to any attentive observer of discourse that what is said by an *adverb* like *very* (a high degree of a quality) will be said of what is expressed by an adjective like *big* which in its turn is seen to say something (a size above average) of what is rendered by a word like *cat* which typically alludes to a domestic feline. As to *cat*, it is quite evident that it can refer to nothing else but what is, by nature, a cat except when it is used metaphorically (e.g. *that so-and-so is such a cat*).

But saying that the word ‘cat’ when used properly can only denote *a cat* leads to one of these self-evident truths that could be embarrassing, even frankly suspect. It is undoubtedly true that in the case of the adjective and adverb the external character of the incidence is made evident by the fact that in order for the phenomenon to occur, two lexical words are needed, and they establish a syntactic relation which is incontestable, whereas in the case of a noun it is impossible to identify the external support of another lexical word. One must admit that if there is incidence – if the noun says something about something (which it would be difficult to deny) – it necessarily takes place entirely within the framework of the lexical meaning that makes it this particular noun and not another. But this does not give us any better insight into the mechanism of an *internal* incidence that no observable syntactic phenomenon reveals, establishing in this way a mental phenomenon in complete contrast to what happens with the adverb and adjective, where not only can one recognise the operation of a manifestly *external* incidence, but also observe that the adverb is incident to the adjective, which in turn is incident to the substantive, requiring us to acknowledge, alongside an external incidence of the first degree, the existence of an equally *external* incidence of the second degree.

The difficulty we confront here stems from the fact that in the case of the adjective and the adverb, there is manifestly in discourse the realization of a grammatical function provided for in tongue as a potentiality, as a fact of nature. The semantic contribution made by the adjective and the adverb clearly finds its support in a word belonging to a different grammatical category, in other words, a support of a different nature not only notionally but also grammatically. Whereas,

in the case of the noun there is a notional *form* whose characteristic feature is to evoke not a *quality* predicated of an entity of a certain *nature* (as in the adjective), nor a *modality* of possessing that quality (as in the adverb), but *the very nature* of the entity to which the quality in question is attributed. As a result, the noun, having by its *grammatical nature* (i.e. by belonging to a particular type of word) the ability to represent a “nature”, is capable of denoting all and only those beings and entities whose nature it designates. By this very fact, and regardless of the quantity momentarily taken into consideration¹¹, these entities are *potentially* – that is to say in anticipation of actual existence – within the range of its “potentiality” of designation, but in no way *operationally*, that is by virtue of the series or the totality mentally and momentarily considered in an intended message¹².

Under the normal conditions of language practice it is from the possibilities available, from what is *potential*, that a noun can be said to form its internal incidence. In actualized language, when it is put to use, the noun -- or, to be more precise, the notional content for which it provides, as Guillaume says, “le port et le transport” (what is conveyed and the conveyance) -- is always mentally *applied directly*, and so *directly incident* to an extralinguistic reality that is being spoken of, as part of the expressive intent. Which is not the case for either the adjective or the adverb, which can only refer indirectly to the personal experience that forms the intended message, through the noun to which they are incident, one directly (the adjective) and the other indirectly (the adverb).

That is the only way, in our view, of correctly interpreting the phenomenon of internal incidence, which is responsible for the syntactic behaviour of the noun. It is at the potential level of tongue, at the very beginning of the language act, that the grammatical categorization operates

¹¹One would like to use here – if such a term existed – a word such as *quantitude* in order to designate what is, in reality, not a definite quantity, but an order of magnitude. Whether a notion is understood in a general sense (*The cat is a feline*) or in a less extended meaning (*The Siamese cat has a bad character*), a given quantity of individuals of the cat species is not in question. It is only in the case where what is evoked is a particularly specific image that a numeration becomes possible (*She had 22 cats* or *The neighbour’s cat*). But this is just a particular case within the range of a variation extending numerically from *one* to *infinity*. Most cases have an indeterminate number, the only impression being a completely relative order of size.

¹² It would not be possible to have a usage where the whole of the noun’s potential meaning would be actualized in discourse, except when, as in the usage of metalanguage, there is only a notional content without any reference to extralinguistic reality whatsoever. It effectively takes place when, e.g. we say that the idea of the notion ‘dog’ is less extensive than that of ‘animal’, or when William James writes that “the concept of *dog* does not bite”. Everywhere else, even where the concept is used in a general meaning, its potential meaningfulness is reduced to one of its possible extensions.

which enables us to parse words into the traditional categories of nouns, adjectives and adverbs, the noun being, at this moment of the phenomenon, grammatically characterised by its internal incidence. In this way, as Guillaume insists, it presents, from the very notional import that singles it out lexically from other nouns, the *nature* of that which in discourse is going to serve as its support and which - except when used in metalanguage - will be an extralinguistic reality present in the complex of impressions to be found in the speaker's experience which gives rise to the intended message.

Quite different is the mental situation created by the adjective and the adverb, which can only enter into a *referential* incidence to the intended message through the intervention of the noun, and more specifically, by means of its notional content. This implies an intervention of the representational intent to provide, through the play of the available grammatical incidences, the conditions which will permit the language act to satisfy its necessary obligation to express what we are thinking, or wish to convey, about the things we are discussing. This primordial function – essentially “referential” – of language is just as easily satisfied, alas, by errors, falsehoods, or lies, as by the moral or scientific truths that we express.

So the mechanism of grammatical incidence – with, successively, an internal incidence, and an external incidence whether of the first or of the second degree – has nothing mysterious about it: it stems from a logic of its own which, which in the functioning of the mind, precedes that of philosophers, being the language of logic itself. It should therefore interest grammarians and linguists, who might then no longer have eyes only for the later manifestations of the language act – discourse that is already constructed – but include in their gaze the earlier stages of the phenomenon where, outside of awareness, in what might rightly be called the ‘programming’ of language, the conditions are determined which make possible the forms and shapes of discourse, both syntactic and morphological. Guillaume insists that what grammatically specifies the noun, the adjective, and the adverb, is the mechanism of incidence, immediately accessible in tongue, and distinguishing an internal incidence – immanent to the lexical content specific to the noun – and an external incidence, necessarily transcendent to that notion. External incidence itself provides the possibility of an immanence of transcendence (external incidence of the first degree) contrasting with a transcendence of transcendence (external incidence of the second degree), as in Figure 10.

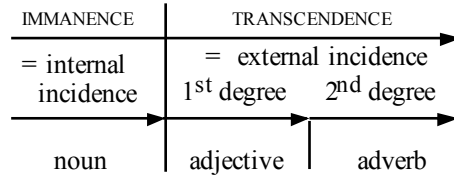


Figure 10

This leads to the postulate that a notion, before it can be categorised grammatically as a noun, an adjective or an adverb, must satisfy certain conditions concerning the *meaningful import* that constitutes its distinctive notional value. The only notions that can be used as nouns are those that are capable of carrying a direct reference to what is spoken about in the expressive intent, which will always be an entity whose *nature* the noun will define by anticipation, and will appear sometimes as a concrete thing (*cat, race, song, etc.*), sometimes as an abstract item (*beauty, intelligence, superiority, etc.*).

The adjective will always suggest a property or an attribute perceived as momentarily or permanently affecting an entity whose *nature* has been previously defined in the mind with the inevitable result of only referring *indirectly* to what is being spoken about. As to the adverb (we are at the moment interested only in adjectival adverbs), it will appear as a property of what is already (by its notional nature) the property of a ‘nature’ previously determined by the mind. As a result, the word in question can only refer to what is being spoken about through what the adjective contributes, which in turn refers to what has already been established by the noun. In this way the notional constituents of the noun phrase may be seen to refer, of necessity, through the the grammatical categories that define them formally, to what is spoken of in the intended message, the reference being established, in the case of the noun, directly and without intervention of any other grammatical element carrying a national content, and in the case of the adjective or adverb, indirectly and with the intervention of such an element.

In this way we get a clear view, in the construction of the noun phrase, of the relationship between the two linguistic aims of the language act – the expressive intent and the representational intent – that we distinguished at the beginning of this study. The purely syntactic interplay of incidences are often represented in Psychomechanics in a simplified way, as in Figure 11.

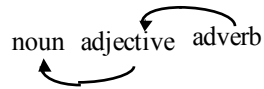


Figure 11

This diagram *correctly* indicates the *grammatical* relationship between the forms. But it does not take into account either the particular nature of the lexical elements, or the relationship connecting the *representational intent* of constructing a sentence – an intent which necessarily involves both lexicon and grammar simultaneously (the lexical component can only be predicated through the grammatical one) – to the *intended message* which prompted it. Indeed, if this mechanism is interpreted purely formally it fails to account for the phenomenon as a reality in the speaker's experience, and leads directly to the curious and false problem of agrammaticality, since the interplay between the expressive intent and the representational intent is not incorporated into the mechanism of predication. In a real and normal language situation where the observable conditions on which a true science of language can be based are realized, there are always speakers who, *wanting to say* something, and prompted by an intended message, access the representational possibilities available in the words of the language being used in order *to make observable*, with the help of words or *signs*, what they have to say. From the original intended message to its complete linguistic expression the focus is always on the purposeful production of meaning.

It should be pointed out that even though it is quite clear that the grammatical and syntactic interplay of the substantive, adjective, and adverb forms is based on an absolutely mechanical function, this interplay is in no sense that of a robotic automaton. The production of words and phrases through which the production of a sentence occurs entails a moment by moment projection into awareness of partial results, obtained at each moment in the functioning of the representational intent, onto the backdrop of the expressive intent, where the intended message is profiled. Each of these results is constantly open to a review requiring a replay – sometimes back to the starting point – of the operation of representing this experience, and this can go on until a result that is deemed satisfactory is obtained.

The existence of such a mechanism monitoring the development of the sentence at each stage of its production allows for all sorts of possibilities. One of these is the following: as a result of successful partial results of the representational intent, the speaker may proceed to a reworking, or rather a redefinition of the content of the intended message, a content to which these results may

in fact contribute a clearer insight. Another possibility is that of completing an intended message: it often happens in writing that the representational intent to produce a sentence arises too soon, before the intended message is sufficiently well-formed to provide the material for the formation of a complete sentence. And there may even be cases where, in these circumstances, the sentence is not completed for lack of a clear idea of what the speaker is trying to say.

After these considerations, the only purpose of which was to anticipate certain difficulties and objections that might be raised, let us address, now that we have a clearer idea of what a substantive noun is and of the set of relationships that it supports and integrates in the noun phrase, another problem posed by the noun phrase, namely the relationship which links article and noun.

The role of the article

Gustave Guillaume spent a lot of time on “the problem of the article”. That is in fact the title of the first of his linguistic works to which he attributed any importance, and he often came back to the analysis of this grammatical category which, in his view, can teach us many things about the nature of language. Some of my own work has further clarified aspects of the theory he proposed, and this specialist literature¹³ can be consulted, if need be. Here we shall simply review the elements essential to a sufficient understanding of the role of this category in the construction of the noun phrase.

Let us begin with a reminder that the article belongs to the group of parts of speech called “transpredicative” (Cf. above p. 21), and that as such it represents, in language, a *formal* element which consequently contains no material notion: no ideational substance capable of informing us about the nature (cf. the noun), the properties (cf. the adjective), activities or states (cf. the verb), or their modes (cf. the adverb) of the intended message of a sentence or phrase, which might be used by an expressive intent to produce a linguistic representation.

This automatically gives the article its grammatical appearance as a word which, unlike the noun, the adjective, or the adverb, has no kind of material notion, but something which is already, by its nature, a grammatical form. Guillaume described this state of affairs as being that of a form

¹³ Cf. R. Valin, *Grammaire et logique: du nouveau sur l'article*, in: “Travaux de Linguistique et de Littérature” of the Centre de Philologie romane de l'Université de Strasbourg, 5, I, 1967, pp. 61-79, Paris: Klincksieck, and the *Introduction* in the first volume of the *Leçons de linguistique*, 1948-1949, series A, pp. 9-67, Québec: Presses de l'Université Laval, Paris: Klincksieck, 1971.

(in this case the ideational content of *a* or *the*) replacing a content. The result is that the article is, in tongue, a “form in search of a content” (i.e. of a material notion), and at the same time, in discourse, the support of this notional content. In this way reference can be made to whatever is spoken about, in accordance with the intended message, in any sentence, phrase, or phrasal segment. This leads us to complete the set of dependencies drawn up in the following way in the figures on page 21.

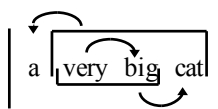


Figure 12

We will not be concerned here with establishing what makes the difference between *a* and *the* or partitive articles such as French *du*, *de la*, *des* in a noun phrase which includes an article: for those who might be interested the footnote on page 28 provides additional information. Instead we shall examine the question of the difference between the very particular formal determiner constituted by the article and the other determiners, equally formal, such as the demonstratives (*this*, *that*, *these*, *those*), or the possessives (*my*, *his*, *her*, etc).

This difference stems essentially from the fact that not only do the articles add no notional specification concerning the “nature” of the designatum of a given noun, which is equally true of the behaviour of the demonstratives and possessives, but, in contrast to these latter, articles also add no formal determination which is not already grammatically involved in the formal profile of the noun. Whereas the demonstratives and possessives bring to the noun a determining element indicating a spatial relationship which is foreign to what the noun represents (if left to its own resources), the article’s role is simply to bring into focus the internal incidence of the noun, and its two different modes of realization: a particularizing movement (article *a*), or a generalizing one (article *the*). Which means that the article is a completely different kind of determiner (as Guillaume had realized): a kind of exponent of the most general formal property of the noun, the very one which determines its grammatical specificity as a part of speech: its internal incidence.

Thus the relationship of the article to the noun is a very special one. Where it is used, the article brings to the noun its final formal determination, which brings the process of substantiation to a close. The speaker can close this process in two ways: with recourse to an article which will specify the way in which the internal incidence is to be realized, or *without* resorting to

an article, whenever such a move might be felt to conflict with the expressive intent. In such cases, recourse is made to a zero article: *Faint heart never won fair lady. A bon chat, bon rat.*

Constituency

We are now in a position to explain the first and the last constituent phrases of the sentence chosen as an example (*The cat has caught a bird*). In the case of both “the cat” and “a bird” the Psychomechanics of Language invites us to envisage, underlying each of these phrases, the genetic operations that produced them. Consciousness is not capable of recording the duration of these operations, because of the extreme brevity of the operative time that underlies them. Confronted with a given sentence, of whatever length, we are conscious of the praxeogenetic time required to pronounce it. We can articulate each of the groups of sounds involved in the various phrases of which this sentence is composed, whether it is realised phonically or as simply mentally audible. To get a view of all that is involved, however, we should picture the activation, moment by moment, of subconscious operations occupying a glossological time perceived as instantaneous. These operations necessarily precede the production of words -- which emerge in response to them -- of which consciousness records only the results. It is precisely this product of completed subconscious operations, organized into syntactic phrases, that results in their persistence for a certain length of time in the mind and immediately poses the problem of the order in which they arise in the mind. Does their developmental order correspond to the order of their appearance as words, or could it somewhat paradoxically be otherwise in certain cases?

It is here that the concept of *representational intent*, a demonstrable linguistic reality, helps us to shed light on things. In fact, if we rely only on the intended message, the analysis soon leads to an insoluble problem. It is obvious that it can only be the requirements inherent to the functioning of the operational mechanisms of the speaker’s language which determine the order of appearance of words within the phrase and the sentence, either imposing this order directly, or simply providing the possibility. Otherwise one would have to assume different intended messages for different languages where this order varies when the same things are said. What could be the nature of the requirements in question? In this regard, the psychomechanisms perceived by Guillaume provide answers which, even if they are not always complete and categorical, are at least sufficiently revealing to encourage us not only to believe in the reality of the operations of the subconscious mind that we have been led to postulate, but also to attempt – with whatever

explanations or necessary revisions are needed – a thorough investigation of the operational consequences.

Part III. The Mental Genesis of the Noun Phrase

Getting back to the two noun phrases in our model sentence and looking for some insight into what is going on, let us try to reconstitute the mental event which, in the living reality of the phenomenon, consists of constructing a phrase like “the cat” or “a bird”. From the point of view of Psychomechanics, every time one has recourse to a grammatical category, this triggers, without the speaker realizing it, a preconscious operation corresponding to a schema or operative program – grammatical “software” one might say – which is already instituted in tongue and which leaves nothing to chance in the execution of the operation to be carried out. Thus any *noun* which the intended message calls for at a given moment to be part of a discourse will necessarily include in its formative elements:

1. A notional substance of the sort defined above (cf. p. 23) which constitutes what Guillaume calls the *matter* of the word;
2. a series of *vectorial forms* (gender, number, function), so called because they successively configure the particular notion singled out and *convey* it to its final form, the *part of speech* called “noun”.

This final form is an integral part of a systemic set, the system of the parts of speech, some of which are predicative (like the noun, they bring in *notional matter*) and the others transpredicative (like the article, conveying only *formal matter*). What characterizes the noun formally, grammatically, is to declare at the outset that any particular notion it categorizes is one whose very makeup as a notion gives it the capacity for *internal incidence*; that is, it belongs to the category of notions that indicate the “nature” of whatever they are called on to designate.

As for the article, it was explained in the paragraphs above (cf. pp. 28ff) that instead of the place of a particularized (notional) *matter* opposed to other notions of the same sort within an open series (like the noun and the other predicative parts of speech), the article brings in a *form* which is part of a *closed series*. Nevertheless the article, like the noun, brings to the mind involved in an act of language its “software”, its operative program involving successively:

1. the *genesis* of a particularizing *matter*, the ideational matter involved being represented by *a* (*an*).
2. a *formal genesis* whose vectorial forms, following the pattern of the substantive, mark the formal phases of the mental itinerary leading to the *transpredicative* part of speech traditionally called “article”. Its function, purely grammatical, is to specify the formal operation whereby the internal incidence, provided in tongue by the grammatical categorization of the substantive noun, is carried out. All of which gives the article a tautological character which is also found, *mutatis mutandis*, in the auxiliaries of the verb. [In French the grammatical categories of the noun are marked in the article, and the grammatical categories of the verb in the auxiliary].

Thus what an article offers to a speaker in the act of language is not a *notion* opposed to another notion of the same “species”, but instead a *formal substance* which is one of the phases of a system within which the operation of particularization symbolized by *a* precedes the operation of generalization represented by *the*. This constitutes a replica, from an operative point of view, of the very successivity to which the noun owes its own institution, *a* being a homology of the particularizing movement within which the notional content of the word is defined, and *the* a homology of the movement which, grammatically, makes the notion thus defined into a noun, as Guillaume clearly saw.¹⁴

Consequently we see the close relationship that links the article to the noun grammatically and makes the article not a *notional complement* adding its content to further determine what a noun is capable of signifying with its own notional substance, but, in fact, a *formal complement* specifying, by its own function, the conditions in which internal incidence is realized (internal incidence being what gives the noun its specific grammatical character). The article does this by determining the form of extensity – *a* or *the* – as the *support* to which the noun will bring its own notional substance which prefigures the nature of this support. Thus once in place the article really appears to be a *formal determiner* through which is realized the noun’s incidence to that in the intended message which is perceived to be of the nature indicated by the noun’s own notional content. The article’s function is precisely that of adapting the noun by anticipation to the most general conditions of variation it has to meet from one intended message to another, namely

¹⁴ Cf. J. Maillard and R. Valin, «Nom et article» in *Vox Romanica*, 12, 1, 1959, pp. 31-48.

variation in *extensity*, wherein the notional import of the noun is applied to a support of variable scope, sometimes wide, sometimes narrow.

In the two noun phrases which gave rise to the preceding observations, the article *the* in “the cat” as well as the article *a* in “a bird” appear to bring in an extensity which could not be narrower, the noun for which they provide a formal support being in each case, by expressive intent, referred to the percept of an individual being. Taking all this into account, the syntactic relation that links respectively “cat” to “the”, and “bird” to “a” could be represented as follows:

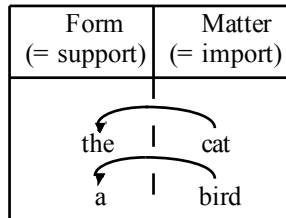


Figure 13

This calls for a first observation, namely that what the articles *a* and *the* provide a form for – a specified form of extensity – is in fact what the words “cat” and “bird” evoke *notionally*. The notional content of each of these two words is already committed, by *representational intent* (that is, by recourse to those linguistic means required by the *expressive intent*), to the realization of the operative programme – the software program you might say – corresponding to the part of speech called “noun”. This operation, of constructing the noun phrase (itself involving only one moment, a partial realization, of the intended sentence), is finally brought to a close by the intervention of the article. This amounts to saying that in its first phase (the first word-forming instant), the representational intent commits the mind to activating the operative program provided by the system of the noun, to the exclusion of the last operation in the program, the one corresponding to the formal condition grammatically defining the noun, namely *internal incidence*. Thus in the total genesis of the noun there occurs a pause permitting the mind to enter into the mental program of the article until it reaches the position meeting the momentary requirements of the expressive intent. It is at this second moment and only then that the summation of the formative elements of the phrase takes place in the mind, a summation corresponding to the closing of the process of substantivation, delayed by the intervention of the article and of the operative activity which it involves. This summation also corresponds to the possibility, acquired *ipso facto* as a result and

hence consciously, of configuring the notional matter proper to the noun in the form suiting the circumstances of discourse. This could be depicted in a figure as follows:

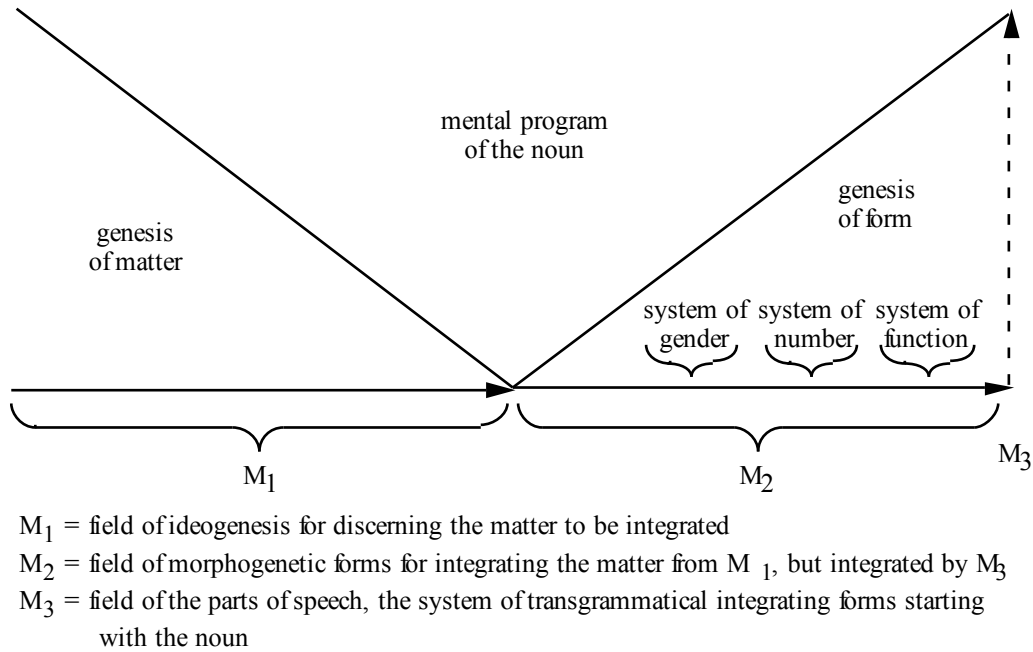


Figure 14

Hence only at M₃ – and therefore once the ideogenesis and the grammatical morphogenesis are completed – is there recourse to the article, a recourse that entails passing through the chain of categories of the parts of speech right through to the final place in their system, the place occupied by the article category. Once there, the article system offers a sequence of positions to be scanned to find the one corresponding to the momentary expressive intent. Although carried out in instantaneous word-forming time, these operations nevertheless have the effect of delaying the process of realizing internal incidence. When the article does not intervene to specify how it is to be realized, internal incidence can be completed without going beyond the position of the noun within the mental program proper to the parts of speech. That is, with a bare noun, internal incidence is carried out on entry into the system of the parts of speech, at its very beginning, and is not delayed until the end of the system.

It need hardly be specified here that the mind turns these operative delays to its advantage, which after all are not considerable; in fact what is lost in rapidity of representation is gained in precision of expression. So rather than dwell on this problem, it is preferable to evoke another,

closely related one, with consequences that even the most inattentive observer cannot miss, namely the syntactic order of words arising within the framework of the noun phrase. If our analysis has not gone astray, what was said above concerning the activity involved in the representational intent to construct phrases of the *article + noun* type implies the two formative elements in reverse order, depending on whether one considers the *genetic preconscious operative order* of putting the terms in position as one might say, or the *conscious resultative order* of stating and uttering them. Does this involve just one more paradox, or does this put us in an impasse?

This is not a serious difficulty. Appealing once more to operative time will suffice to settle it, so that the constructing of the two phrases “the cat” and “a bird” will now be referred to this parameter. Since both these phrases are made up of two words, running through the mental program corresponding to each word will require an instantaneous word-forming time in each case, as has already been pointed out. As a first step, the beginning of the representational intent (the part corresponding to the forming of the phrase “the cat”) can be diagrammed by means of a dotted vector, as follows:

$$i_1 = \begin{array}{c} \text{'cat'} \\ \cdot \\ \cdot \\ \cdot \\ 1 \end{array} \cdot \cdot \cdot \cdot \blacktriangleright$$

Figure 15

Here, in position 1 occupied by [*cat*], what should be understood is all the operativity of Figure 14, which took us up to M3, the final position in the word’s program corresponding to the part of speech called “noun”, whose own operative program – the mechanism of internal incidence – is for the moment on hold, that is, kept in a state of potential incidence. This mental process of substantiation is the content of instant i_1 , where the emergence of the word “cat” indicates the beginning of the intended sentence.

In a second phase, the positioning of the first intended element, namely [*cat*], is followed by the positioning of the second element [*the*], which will have the effect of shifting the element [*cat*] one place over in the projected sentence, so that [*cat*] is now able to take its place in the intended field of [*the*]. This can be depicted as follows:

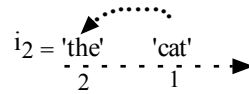


Figure 16

Here, [*the*], the second element to emerge, should be understood to be the product of the programming involved, requiring a run through the systems involved until the appropriate systemic position is reached and occupied. That is, in the following order:

1. accessing the part-of-speech programming until the final position in the system is reached, that occupied by the system of the article;¹⁵
2. accessing the programming proper to the system of the article until the systemic position symbolized by “the” is reached;
3. once this position is reached, movement along the vector representing the operation of the generalization symbolized by the article to a position best suited to the momentary intended message.¹⁶

It would be well to keep in mind that it is only once this “mental itinerary” (Guillaume’s expression) has been actualized that it becomes possible to realize the *formal incidence* of [*cat*] to [*the*]. That is, actualizing one of the articles allows the noun to realize the formal condition of *internal incidence* imposed by its grammatical nature. This possibility is what the graphic symbol i_2 is supposed to suggest by depicting the incidence of [*cat*] to [*the*] as a dotted line.

It is only at the next operative instant, i_3 , when in fact the conditions have been mentally realized, that the incidence of [*cat*] to [*the*] postulated above (cf. p 33) will take place. That is to say, [*cat*] will be able to *actually* take its place in the mental space represented by [*the*], thereby completing the operation of “focussing” mentioned above (p13) as in Figure 17.

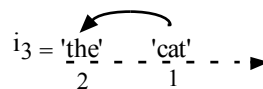


Figure 17

¹⁵ Guillaume viewed the system of the parts of speech as divided into two main series, one after the other – the *predicative* followed by the *transpredicative* parts of speech – each in turn organized in two new series, some based on *space*, the others on *time*. The grammatical category of the article appears at the very end of the system based on *space*.

¹⁶ Cf. note 13 above.

In this way a moment of the sentential intent is realized, when what is proposed to the mind is no longer the view of a *potential* grammatical incidence as in i_2 , but an incidence *being realized*, the result of which will be, the instant after (in i_4), an incidence realized, complete and hence *actualized*. This can be depicted as follows:

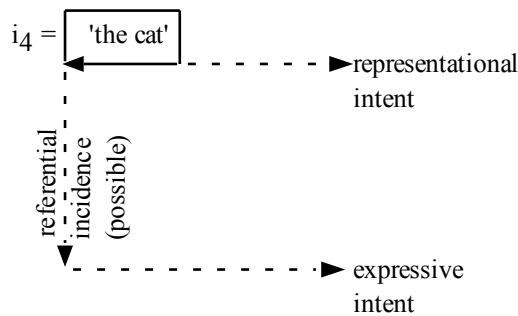


Figure 18

This figure is intended to suggest:

1. that at this operative phase, in realizing the representational intent, the grammatical reality of the phrase “the cat” is something already acquired. Hence the solid-line, backward-oriented vector placed over the vector symbolizing the development of the representational intent from moment i_1 on.
2. that the acquired grammatical reality of the phrase now makes *referential* incidence possible: referring the ideogenetic import of the phrase to the impressions involved in the intended message. This is indicated by the vertical, dotted vector.
3. that, the sentence not being finished yet, only a part of the intended sentence is actually realized at this moment. Hence a continuation of the operative development of the representational intent is yet to come, and this is indicated by a dotted vector extending beyond that portion of the representational intent already realized.

Moment i_4 is not pure fiction. It corresponds to the summation and fusion of the constituent mental elements in the phrase, the mind now being enabled to become conscious of what has just been constructed in it. This is actually what is going to take place in i_5 , the moment when the semiological machinery is called on, the function of the signs being, in fact, to keep before the

conscious mind as long as is useful a view of the phrase's ideogenetic substance and to realize thereby the conditions permitting the *referential* incidence – necessarily conscious – of this ideational content to the live experience focused on by the expressive intent. Without this incidence it would not be possible to satisfy the primordial condition of real language. And so this incidence, already acquired at moment i_4 , passes from the state of possibility to the state of reality:

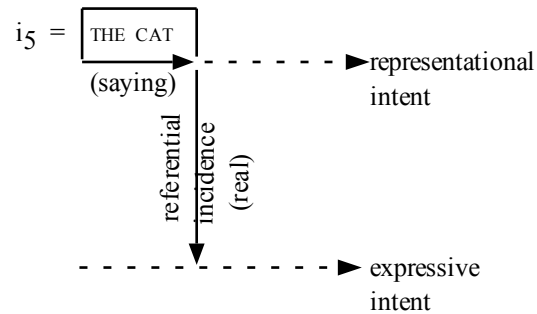


Figure 19

A temptation to be avoided at this point in our analysis would be to consider this fifth operative phase the final one, at least insofar as the genesis of our phrase is concerned. This would be an error with unfortunate consequences for the further development of our analysis. As has been brought out since moment i_4 , what moment i_5 brings into view is in effect nothing more than an on-going *saying* – in the real syntactic order of their production and uttering – of the units of potentiality, or words, which arise one by one to make their momentary contribution to the genesis of a sentence, that is, to the realization of a representational intent whose own goal is the realization of an expressive intent. In the sentence being generated, then, our phrase “the cat” by itself represents only one complex formative element which, once produced and uttered, constitutes the realization of a *part* of the total act of saying it is helping to produce. In order to grasp the phrase as a total phenomenon, this leads to proposing another, final moment to indicate precisely that: what has been totalized, what is acquired so far in the *saying*. Thus as a result of forming and saying the phrase, that part of the sentence has now been realized and so the genesis of the next formative element can begin, an element which, depending on the sentence construction involved, could be a simple word, or a complex word or a phrase, as in Figure 20.

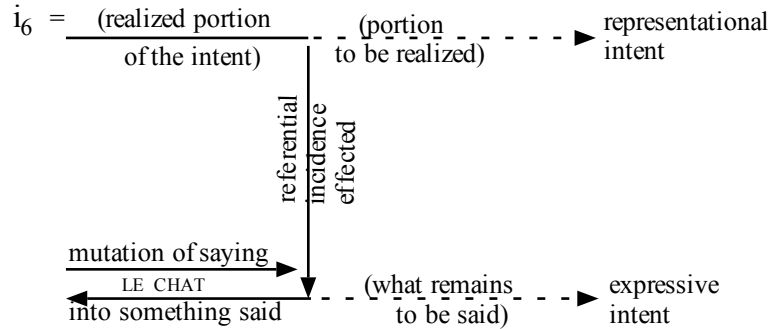


Figure 20

The theoretical developments just presented have numerous implications but only two or three whose significance is obvious will be commented on here. In the first place, the advantage of representing things in this way is not only that it satisfies all the postulates and theoretical requirements of Psychomechanics, but at the same time accounts for a rather intriguing and, up to now, mysterious phenomenon, namely agreement in examples where the determiner precedes what it determines. It can now be seen that agreement is made possible because, at the first instant of the genesis of the phrase in the unconscious representational intent, the noun appears already provided with all its grammatical properties (cf. p. 35) except the means for realizing the formal incidence which characterizes it. The article will provide this means.

There is something else quite fundamental which finds its explanation here, and in this case it concerns the relations between sign and significate, as follows: where the phrase is concerned, the realization of the physical signs is delayed until the moment when the content of the phrases, its "psychic" content as Guillaume would put it, is completely constructed. Only at this point does the phrase present a notional content suitable now for a referential incidence to the live experience that is the focus of the intended message. If it were otherwise, and the signs had to be produced in the order in which the constituents are called to mind, we would be led to say, not "the cat", but **cat the*, an eventuality, incidentally, having nothing to do with the situation in languages (Rumanian, Swedish, Danish, etc.) where the postposed article is incorporated into the morphogenesis of the noun and agglutinated like a suffix, sometimes present, sometimes absent.

The fact that the appropriate signs are called for only after the phrase is constructed mentally in the unconscious expressive intent, and the *significate*→*sign* link is actualized, not as one might think on the basis of individual words, *significate* by *significate*, but with signifying ensembles corresponding to phrases – this fact finds striking proof in a certain language pathology involving quite complex phrases. Most of us have probably heard people say, or have caught ourselves at a moment of particular fatigue saying, “I got some dirt on the book of the cover”,¹⁷ something arising from a certain abnormality: what one obviously intended to say was “I got some dirt on the cover of the book”. Our explanation would be that the speaker of such an absurdity constructed the mental content of the phrase quite correctly in the unconscious representational intent, and the disturbance did not arise until the moment of establishing the link between the phrase normally constructed in the unconscious mind and the workings of the mechanisms involved in realizing the sign phonetically, making it conscious. In other words, this appears to be an accident arising quite late within the phenomenon.¹⁸

Having made these observations, let us now return to the mental arranging of words within the representational intent, this time considering the case of article plus noun accompanied by a qualifying adjective (itself often qualified adverbially) which may precede, or follow the noun, sometimes even with two qualifiers, one appearing before, the other after.

Noun Phrases Containing Preposed Adjectives and Adverbs

Take, for example, the phrase “a big cat”. As a first phase, we will propose:

$$i_1 = \underset{1}{\text{'cat'}} _ _ _ \blacktriangleright$$

Figure 21

In the first moment the mental program of the word “cat” must be carried out instantaneously up to the final position, that corresponding in Figure 14 to the formal condition of internal incidence

¹⁷ [The original example: “La voiture a tourné sur les roues de chapeaux.”]

¹⁸ The following lapsus was heard recently in a television interview: “He no longer calls the question into society.”

grammatically defining the noun, this incidence being suspended for the moment and remaining purely potential. The process of substantivation has been undertaken, but no more.

At the second moment, the persistence of the result obtained by carrying out the mental program of “cat” – this persistence to be marked by placing a backward-oriented vector under *cat* to suggest an acquired result – makes it possible to focus the intent on the word “big” and instantaneously run through the corresponding mental program in the subconscious, which involves successively:

1. accessing the macro-system of the parts of speech and running through its operational program until the position corresponding to the adjective’s micro-system is reached and occupied. This position, within the field of the predicative parts of speech, arises immediately after that of the noun and immediately before that of the adverb.¹⁹
2. carrying out the program of the adjective, whose formal determinants (*vector forms*) are the same as the noun’s, occupying on the way the positions corresponding to what the noun “cat” expresses in the phrase being constructed, namely [for French *chat*] *masculine* gender, *singular* number and *subject* function (pure hypothesis here).²⁰

Once satisfied, these conditions put “big” in place ready to be made incident to “cat”, thus in a position of potential incidence. Hence for i_2 :

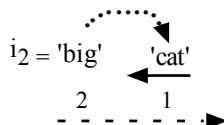


Figure 22

¹⁹ Cf. note 2 above.

²⁰ [On the basis of adjective inflexions in French, the author proposes the same vector forms, gender and number, for adjective and noun, but evokes as hypothetical, as a question to be explored, the question of function in the absence of any inflexions for case. In the same vein, confronted with the absence of inflexions not only for case but for gender and number as well in the English adjective, the proposal that it has the same vector forms as the noun must be considered a question to be explored. That is, the software of the adjective enabling it to exercise external incidence has yet to be described.]

What happens in i_3 is the *actualizing* of the proto-phrase “big cat” by carrying out the incidence of “big” to “cat”. This supposes the persistence both of “cat” in the state it has reached in its mental processing, and of “big” in the state resulting from its completed program. Schematically:

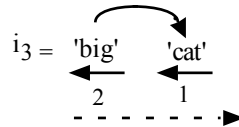


Figure 23

As a consequence, the next moment, i_4 , records the summation and the subsequent consolidating of the proto-phrase “big cat”. This is depicted as follows:

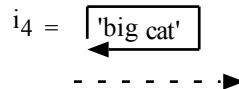


Figure 24

This phase in the realizing of the intended sentence will be followed at moment i_5 , in the mental genesis of the phrase under construction, by the operation of focussing the representational intent on the article “a”, and then carrying out its mental program. This is accompanied by the necessary persistence in subconscious memory of the proto-phrase “big cat” and entails, as a consequence, the possibility of its formal incidence to “a”. This can be diagrammed as in Figure 25.

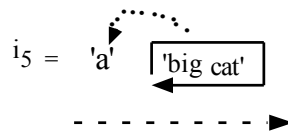


Figure 25

The next phase involves making the proto-phrase “big cat” incident to the last element represented, namely “a”, the phase that both brings to a close the process of

substantivation (begun in i_1 by focussing the intent on “cat”²¹) and brings into being the phrase “a big cat”. Schematically:

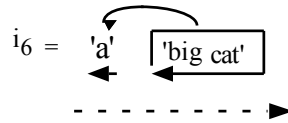


Figure 26

In the next operative moment, namely i_7 , the phrase “a big cat”, the fusion, by summation, of its parts having just been accomplished, now exists as a single unit, and this, *ipso facto*, realizes the conditions making possible its referential incidence to the intended message. Consequently, we may propose:

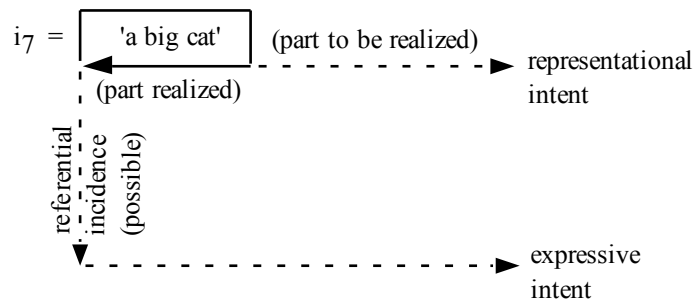


Figure 27

This brings us to the penultimate operative phase – penultimate not in the total representational intent but in the portion of this intent corresponding to the phrase under construction. This phase is the one that materializes the actual referential incidence of the ideogenetic substance of the phrase to the intended message: it triggers the process of actualizing – in some cases only mentally, otherwise both mentally and physically – the phonetic signs potentially linked to the mental formative elements of the phrase, the function of which is, by triggering the *saying*, to make the referential incidence conscious. In diagram form:

²¹ Cf. Figure 21.

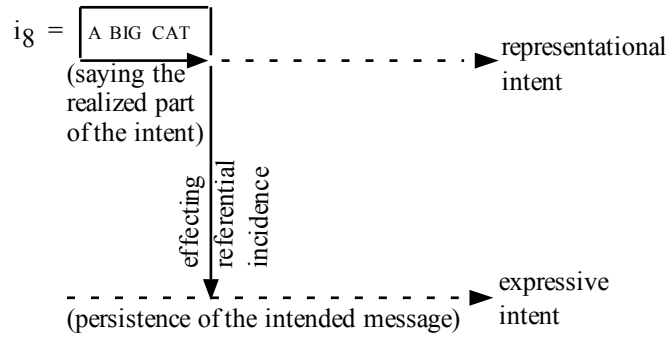


Figure 28

Last but not least,²² let us not forget that this last-minute referential incidence satisfies the primordial condition for the existence of language, which is that once an act of language has taken place something should have been said about someone or something. Moreover, let us not lose sight of the fact that, by concluding the phenomenon, this referential incidence corresponds to a correlative portion of the intended message which has been linguistically represented and *said* with the help of the phonological signs and mental resources made available to speakers by their language. In other words, phase i_8 evokes part of an ongoing saying which leads to something said, representing the portion momentarily realized of the total discourse being realized by the representational intent. The ultimate stage in the genesis of the phrase may consequently be represented as in Figure 29.

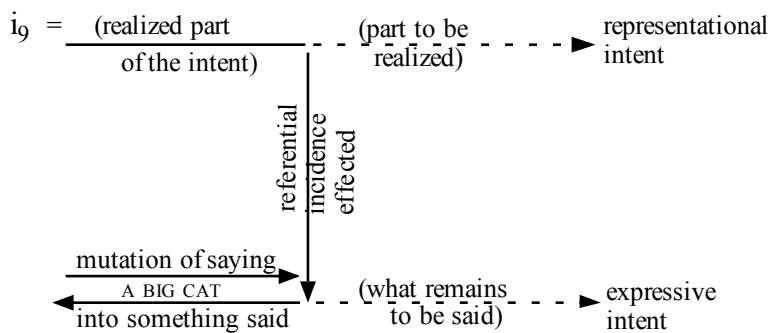


Figure 29

²² [In English in the original text.]

Such are the operative phases which, at this stage of our analytical understanding of the phenomenon, appear to be required for the genesis of a phrase of the type “a big cat”, here for convenience sake seen in the function of subject. It need hardly be pointed out that there is nothing to exclude a later, more refined description showing that the moments found necessary here are insufficient, and that further intermediary steps whose necessity has been overlooked may need to be distinguished. Nor is there any suggestion that for a sufficient understanding of the operative reality involved it is necessary to indicate all the phases taken into account here. In certain cases it may be advantageous to simplify the analytical apparatus, as we will have occasion to do in what follows.

In the meantime, before going on to consider noun phrases where the adjective is postposed, a phrase with a preposed adjective qualified by an adverb will be analyzed. The same phrase with the adverb “very” added, “a very big cat”, will serve the purpose.

Obviously there is no change for the first two moments i_1 and i_2 , so we can write:

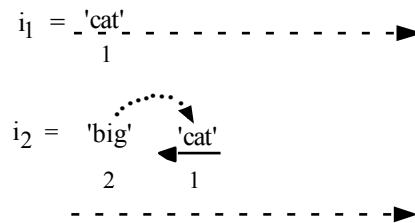


Figure 30

The insertion of “very” into the representational intent arises in i_3 with, as a consequence, not only recourse to supplementary software whose operative program produces the adverb, but above all putting off to a later moment the actual incidence of “big” to “cat”. The latter operation can only take place once the incidence of “very” to “big” has been realized because this involves qualifying the adjective. Consequently the following may be proposed for i_3 :

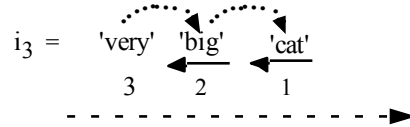


Figure 31

For i_4 , after the elaborating of the protero-phrase “very big” (as a necessary precondition for establishing the proto-phrase “very big cat”) this gives:

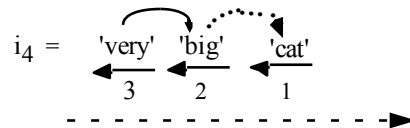


Figure 32

And for i_5 , the summation of the protero-phrase having been accomplished:

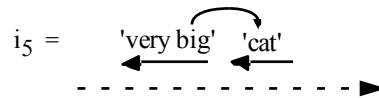


Figure 33

That is, once the incidence of “very big” to “cat” has been completed, the resultant summing up of the constituents gives the proto-phrase “very big cat”, whence:

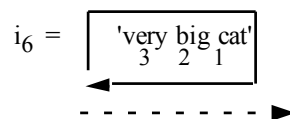


Figure 34

As for the remainder of the operative sequence, there is no problem since it is already known. We need only refer to the model of “a big cat”.

In i_7 with the incidence of “very big cat” to “a” being merely potential, we get:

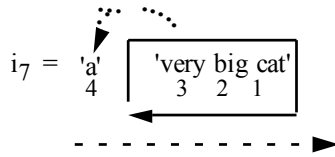


Figure 35

And then, with the realization of the above incidence:

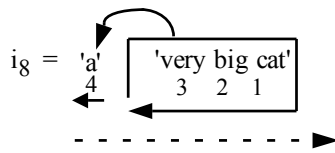


Figure 36

This then leads to:

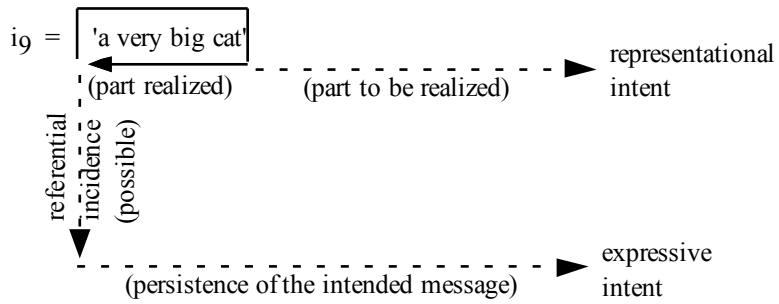


Figure 37

which in turn brings about:

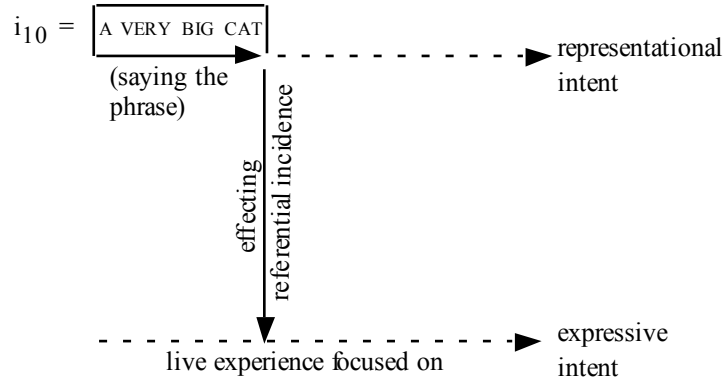


Figure 38

The last version, once actualization is completed, becomes:

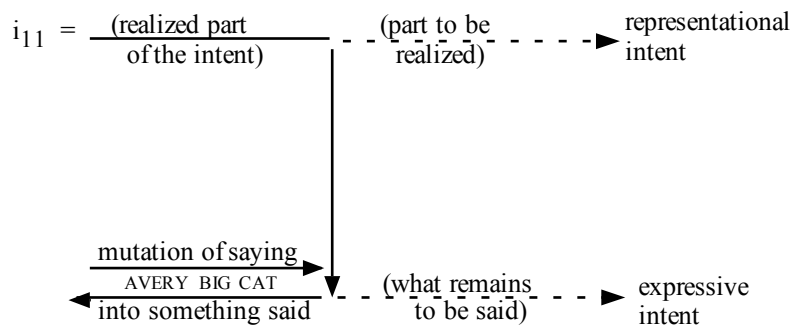


Figure 39

A comment is in order at this point. The preceding series of developments does raise a problem which calls at least for some elements of an answer before proceeding to the next analysis, that of phrases where the adjective is in postposition. This problem is concerned with operative time which, it should not be forgotten, remains the fundamental parameter of this analysis. In the preceding pages a somewhat awkward attempt was made – such awkwardness being inherent to any first attempt to present a difficult subject – both to give an idea of the way a so-called “noun” phrase is constructed in the representational intent, and also to show what relationship is necessarily established between the expressive intent and the representational intent through such a phrase, since the final aim is to give an explanation for the syntactic order of words as they surface in the flow of speech. It is clear that a major difficulty remains, namely referring the succession of operative phases to the horizon of operative time supporting the constructional

operativity inherent in the representational intent. The series of moments distinguished above could be depicted, in a first approximation, as follows:

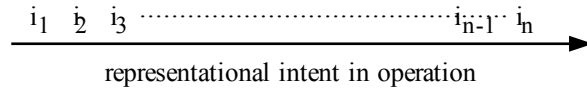


Figure 40

In reality, these successive moments are like a snapshot taken at some moment or other within the on-going representational intent, each of which gives a cross-section view of what is going on in the course of its own operativity at that precise moment. What is thus depicted in profile is in some cases an *on-going instantaneous operation* – the flow through, for instance, of a word’s operative language program already preconstructed (i.e. an *actualizaion*), or in carrying out an item-by-item incidence. Otherwise these moments may profile the *persistence of a constructed state*, a portion of the intended sentence which results from an already realized operation, either *endo-lexical* (an accomplished mental program), or *exo-lexical* (an accomplished item-by-item incidence). This amounts to saying that the distinct operative instants brought out here are in fact either *instants of a genesis* (a genesis of representation by mutation of the potential into the actual), or *instants of persistence* of an acquired result of genesis, as already noted on p. 13. To get a synoptic view of the flow of this series of instants, some underlying actualizations in progress, others ensuring the persistence of the acquired result of these actualizations, all we have to do is to place each of these genetic states crosswise, on a longitudinal axis symbolizing the operative development of the representational intent. For just the first instants of the last phrase analyzed, this would give something like what follows:

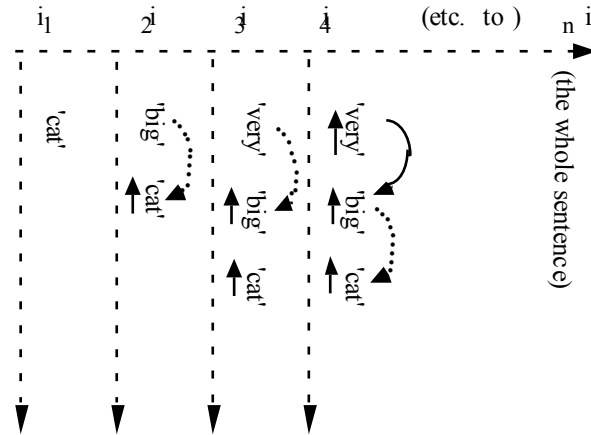


Figure 41

The rest can be readily imagined and even depicted in the diagram. It does not require much effort to understand that to produce a sentence of a certain complexity its representational intent soon reaches a degree of operative intricacy comparable to the feats of an electronic brain. Although foreseeable in theory, this gives much food for thought.... The similarity can hardly be a matter of pure coincidence even if at present, because of our ignorance concerning the fine-tuning of the functioning of language, we are still far from the moment when linguists will be in a position to get a computer to mime from beginning to end the incredibly complex mechanism of the operations on which is based – in the mental depths of the unconscious where it is worked out through the representational intent – the constructing of a single sentence of average length and complexity. The linguist working in Psychomechanics is not out of the woods yet and any triumphalism at this point would be naive and presumptuous.

Noun Phrases with Post-posed Adjectives

So let us now return to the more limited horizons of the noun phrase with its constituent elements and examine the case where the adjective, instead of preceding the noun, follows it in the

order of articulation.²³ And here we are immediately confronted with a difficulty. In a phrase like “the window opposite”, should we in fact postulate the incidence of the attributive “opposite” to the noun first, and then, once this incidence is realized, that of “window opposite” constituted as proto-phrase to the article “the”, or on the other hand should we imagine that the incidence of “window” to the article is carried out first, and only then that of “opposite” to “the window” already constituted as a phrase and ready to carry out referential incidence to the intended message?

After a moment’s understandable hesitation, we realize the impossibility of constructing an operative model capable of accounting for things on a basis other than that hypothesized by Guillaume, who, for reasons quite different from those evoked here, postulated that in the case of postposition the attributive adjective is incident to a process of substantivation already complete. In terms of the analysis proposed above for the *article + noun* phrase, this appears to imply a formal incidence of noun to article already accomplished. This incidence, once over, has the effect of grammatically closing the process of substantivation by bringing to the noun being formed for discourse its final formal determinant, thus effectively providing it with the capacity to satisfy its formal defining condition, which as we know is internal incidence.²⁴ The fulfilling of this condition is indicated syntactically by the fact that, unlike the adverb and the adjective, the noun, whether it occurs with zero article or with a represented article (*a* or *the*), is perceived as not applying its notional complement or supplement to anything but itself within the framework of its own phrase. The referential incidence to the support whose nature the noun indicates by grammatical function (cf. *supra* pp. [23ff]) is undertaken without it having to depend on any notional support outside its own notional import.

As a consequence of this situation imposed by internal incidence, the effect of the article is to provide the noun with the possibility of entering into referential incidence with whatever it is – in that complex of impressions making up the live experience kept before the mind by the expressive intent – that called for the noun and of which the noun is to be said. Having this

²³ [Postposed adjectives being far less frequent in English than in French, the original example *un chat gris* cannot be used here. For comments on the example adopted here, and other such adjectives, cf. P. A. Erades, *Points of Modern English Syntax* (Amsterdam: Swets & Zeitlinger, 1975) pp. 102, 131-136.]

²⁴ On the relation between the article and the noun’s formal condition of definition see R. Valin, “Grammaire et logique” in *L’envers des mots*, 83-99. Cf. also *supra*, [n. 13, p. 37xxx].

possibility, however, does not entail *ipso facto* instigating this incidence. Mental situations may arise where the already acquired possibility of referential incidence is not immediately realized (but not abandoned either) since the noun persists in a state of *suspended incidence*.

The consequence of this is that the permission thus granted brings to the virtually constituted phrase – during the time involved in its referential incidence – a notional addition.²⁵ This addition takes the form of a qualification felt to be purely contingent and consisting simply of an extra item of information. Thus there is a subtle difference in expressive effect felt between “the opposite window” depicting a stable situation and “the window opposite” depicting a temporary situation (cf. Erades, p. 135). This appears to be due to the postposed adjective finding a support, not like the preposed adjective in “window”, but in the virtually completed phrase “the window”, whose referential incidence to the intended message would, at the moment when it is suspended for adjectival qualification, have had the time to progress but not to be fully accomplished, at least in ordinary uses. This then permits “opposite” to be part of the phrase “the window”. In the less usual but foreseeable case where an adjective enters into incidence with a phrase *after* the latter’s referential incidence to the intended message, it would not then, judging by the result, become part of the phrase. This is what would happen in an imaginary dialogue like the following:

- A *cat* just came into the kitchen.
- What colour is it?
- *Grey*, I think.
- That must be *the cat from next door*.

²⁵ [A use of the postposed adjective not found in English is introduced here: *un chat siamois* (= a Siamese cat), where the adjective’s notional qualification is seen as “inherent in the support and indispensable for its identification as notional substance”. This use is opposed to an adjective import which is “felt to be purely contingent and consisting simply of an extra bit of information” as in *un chat gris* (= a grey cat). To explain the “quasi-concept” of *un chat siamois* it is proposed that the incidence of the adjective to the proto-phrase is extremely early “during the time of incidence of *un chat* to the intended message”, whereas in the case of *un chat gris* the adjective’s incidence occurs later during the process of referential incidence of the proto-phrase to the intended message. In what follows, the text, rather than providing a translation, will be adapted in order to illustrate the author’s analysis as applied to English usage.]

It is now time to try to produce a generalized representation of the mechanism that is the basis for the postposing of adjectives, but only after calling attention to an important fact that has not been explicitly evoked so far: when the attribute follows, the process of qualification involved takes place in the time occupied by the *material* incidence of the noun to its referential support, i.e. to whatever reference is made through the expressive intent. On the other hand, when the adjective arises during the process of substantivation itself, it is during the time of the *formal* incidence of the noun to the article that it is intergrated into the noun phrase.²⁶ For the incidence of the postposed adjective, which therefore arises after the close of the process of substantivation, this suggests something like the following diagram, which corresponds to i_5 in Figure 19:

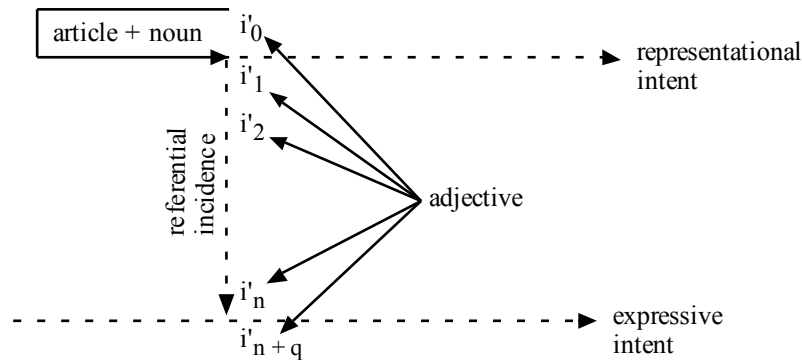


Figure 42

Although explicit enough in itself, this figure does call for a comment. The only positions that actually lead to the constituting of a phrase through postposition are those going from i'_1 to i'_n . In fact, at i'_{n+q} not only is there no integration of the adjectivizing process into the process of substantivation (which in cases of postposition always ends before, perhaps only the briefest moment before, the adjectivization takes place), but there is not even integration of the attribute into the phrase, an integration which would entail its participating in the phrase's referential incidence to the intended message. At position i'_{n+q} the incidence of the adjective

²⁶ Even in the case of adjective before noun without article – *good luck, orange marmalade* – the incidence of the adjective is still carried out during the time of the notion's incidence to its internal formal support, the condition defining it as a noun. The process of adjectivization thus taking place before the process of substantivation is closed.

becomes an autonomous incidence to something in the intended message already linguistically characterized and present in conscious memory. This is the mental situation corresponding to the attribute “grey” in the above imagined dialogue, as it is for the attributes in the well known lines from La Fontaine (*The Cat, the Weasel and the Young Rabbit*):

This person was a hermit cat,
A cat that played the hypocrite,
A saintly mouser, *sleek and fat*,
An arbiter of keenest wit.

Of interest in this example, is not only the italicized attributive complex but also the play of the subordinate clause introduced by “that”, as well as the appositive sense of the last two lines. This not being the appropriate moment to examine these lines in detail, it must suffice to point out that, in itself, this passage provides an excellent illustration of the variation that adjectivization by postposition lends itself to.

The position i'_{n+q} discussed in the preceding paragraph is not, as might be thought, the only postposition characterized by importing a qualification that does not contribute to constituting a phrase along with the noun it is nevertheless related to in the context. The position i'_0 puts the mind in the same mental situation, except that, instead of the non-participation being due to the qualifier arising too late, it is just the opposite here: it arises too early, so early in fact that the speaker is not even aware of the relation that is established between the constituents of the expression thus formed.²⁷ This is what happens in terms like *man-of-war* and *mother-of-pearl*, whose meaning cannot be guessed just on the basis of their components. Moreover it is by the expedient of this position i'_0 that some words have been formed historically, words which only a philologist or someone interested in the history of the

²⁷ [Since there is no English equivalent to many of the French types of expression discussed here – *cheval-léger* (= light horseman), *bec-de-perroquet* (parrot-fish), etc. – the position i'_0 will be illustrated less abundantly than in the original.]

language might know to have originated from phrases, for example, *atonement*, (at-one-ment); similar results are found in lexicalizations arising from the preposing adjectives, as in *red-neck*, *gentleman*, *walrus* (*whale-horse*), *greenhouse*.

There is no problem interpreting the examples just mentioned by referring them to their respective position, i'_{n+q} or i'_0 , but this is not always the case. Given our present understanding of the phenomenon, it is sometimes difficult to decide. There are even situations where it will necessarily be difficult, and even impossible, to determine unambiguously the moment the adjectivization process arises and so to decide if one is confronted with a lexicalization, and consequently by a cancelled adjectivization of the i'_0 type, or if it is a matter of an early adjectivization in i'_1 position, that is within the scope of referential incidence. It seems fairly reasonable to imagine that an expression like *court martial* has not been perceived as a phrase by many speakers for a long time – as witness the plural *court martials*, as well as the verb *courtmartialed* – in which case the position involved is unquestionably i'_0 . But it is by no means excluded that some (cf. *courts martial* as plural) still think the adjectivization process in the i'_1 position to be immediately contiguous to i'_0 and separated from it by a mere limit. Likewise for notions like *notary public*, *governor general* and *mother-in-law*: for some speakers it still seems possible for the adjectivizing to arise just within the scope of referential incidence, in the i'_1 position.

The same problem arises in perhaps an even subtler way for positions i'_n and i'_{n+q} , but it is not possible to discuss this as yet. So far there is no explanation of what really goes on in cases of postposition when the adjectivization occupies one of the positions ranging from i'_1 to i'_n , i.e. within the scope of referential incidence. At the very most the undeniable existence of positions *outside* the scope of incidence (i'_0 and i'_{n+q}) and positions *within* the scope of incidence (from i'_1 to i'_n) has been demonstrated, but nothing concerning the latter has been proposed except the possibility of an alternation between the positions i'_0 and i'_1 because of their immediate contiguity.

For the positions situated beyond that of i'_0 , the mechanism of incidence schematically depicted in Figure 42 inevitably implies putting off for a time however brief the forming of the phrase called to enter into referential incidence to the intended message. In the case of i'_{n+q} this delay even ends up making integration into a phrase impossible because in this position the adjective is really incident to the result of an already accomplished referential incidence and, consequently, incident to something already characterized linguistically in the intended message. This would suggest the following operative schema (suggested by the moment i'_6 in Figure 20) for the moment when the adjectivization represented by i'_{n+q} takes place. It could correspond to a sentence like “A cat... *grey*, I think... has just come into the kitchen” or to the imaginary dialogue on p. [54]:

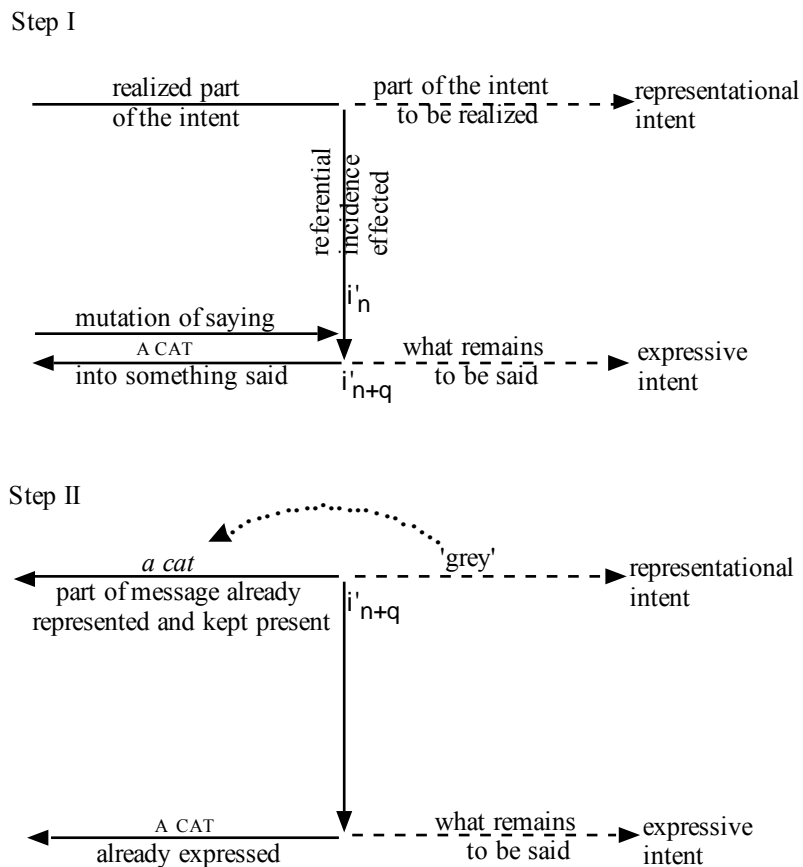


Figure 43

The subsequent steps can easily be imagined. The point to be brought out here is that the incidence of “grey” only takes place when the referential incidence of the *saying* of “a cat” itself

has taken place, with the result that, through the partial realization of the representational intent, its linguistically represented content has been converted into *a thing said* about the thing which is being spoken of in the intended message.

It should be noted in passing that in cases of adjectival incidence to the result of a referential incidence already carried out (position i'_{n+q}), the representational intent does not operate directly from the raw content of the intended message, as in the case of the phrase “a cat”, but rather (cf. Step II in Figure 43) from an intended message now partially configured in the memory of the speaker as a conscious linguistic representation. That portion of the representational intent corresponding to carrying out the underlying program attached to the adjective (here “grey”) remains, for the moment, unconscious.

This prompts us to emphasize that throughout the constructing of the sentence, mental activity constantly shuttles back and forth between the expressive intent and the representational intent. Starting from the conscious live experience that has become the intended message, the mind accesses the means of representation available in tongue, but necessarily returns from moment to moment to its starting point and confronts the result of its unconscious activity of construction – this is *referential incidence* – with the intended message. This message is sometimes in the form of raw material – the case of constructing the phrase “a cat” in our example, and, more generally, when starting any sentence – and sometimes in the form of a linguistic representation already partly constructed, and this is the case in particular when adjectivizing arises in the i'_{n+q} position, after a first phrase has been constituted.

So it can be laid down as a principle – apart from exceptions such as the insertion of an element not integrated into the sentence being constructed – that the beginning of every sentence normally stems from the live experience itself, but that, once a first phrase is constructed the rest of the construction is based on an intended message already linguistically represented in part – that part which the representational intent has already processed from the live experience originally focussed on for representation and expression. In other words, what confronts the mind moment after moment in the intended message focussed on by the expressive intent is not just each element of the sentence taken one by one and constructed individually, but rather each member it has just constructed considered in its relation to the

other members already so constructed. In this way the expressive intent is constantly present while the representational intent is in operation, underlying it, but in such a way that, as the representational intent progresses, some part of the intended message is mentally perceived in the linguistic dress that the prior representing activity has provided it with. This explains numerous phenomena that cannot be gone into here.

Rather, so as not to lose the thread of this essay, the moment has come to get back to the problems summed up by Figures 42 and 43, leaving out positions i'_0 and i'_{n+q} , the first of which (i'_0) being subliminal corresponds to a referential incidence not undertaken (one might say an annulling of adjectival incidence), and the other (i'_{n+q}) being ultraliminal corresponds to a referential incidence of the noun already completed. Everywhere else, that is from i'_1 to i'_n , the adjectivization process intervenes while the noun's referential incidence to the intended message is being carried out. This intervention has the effect of suspending what is, at that point, mentally and phonetically permitted for the proto-phrase [*article + noun*], namely transforming the actual and conscious *saying* of its content into the actual and conscious result of *something said*. This transforming of *saying something* into *something said* is delayed until the incidence of the adjective to the proto-phrase has been carried out, thereby making possible the referential incidence of the whole phrase

article + noun + adjective →

to the intended message. In other words, getting back to the above analysis of the *article + noun* phrase, between the i_5 moment of Figure 19 and the i_6 moment represented by Figure 20 a whole series of intermediary moments must necessarily be inserted, a question calling for some discussion at this point.

For the genesis of the phrase “the wall opposite”²⁸, up to moment i_5 nothing needs to be changed in the description of the successive operative states given on pages 48-52. So picking up the development at the i_5 moment, this then gives us Figure 44.

²⁸ [The fact that the French example, *un chat gris* (a grey cat), calls for a preposed adjective in English indicates clearly that both pre- and post-positions of adjectives are exploited differently in the two languages. Although it

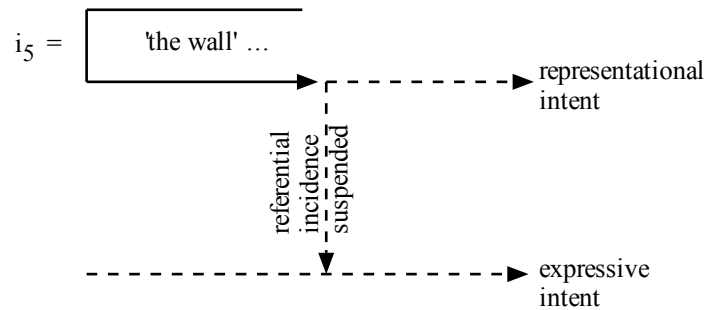


Figure 44

This is identical to Figure 19 except that, instead of being carried out immediately (thereby closing the phrase), the referential incidence is suspended at some point during its realization. This involves making “the wall” into a *proto-phrase* (*the wall ...*), and not a phrase, that is, keeping it in a state of pure virtuality, thereby enabling and permitting it to be made more complex by the addition of a qualification yet to come. Figure 44 attempts to suggest this by not closing the right side of the frame delimiting the proto-phrase and by drawing the vertical vector symbolizing referential incidence as a dotted line.

The next operative moment to be foreseen corresponds to that at which the attribute “opposite” is brought into the representational intent with what this entails, its potential incidence to the proto-phrase “the wall”. Assuming all the prior steps accomplished, this gives the following:

remains to explore the far less frequent postposed adjective in English in the light of the theory presented here, it seems that examples like *the wall opposite* can be explained in the same way as the French example.]

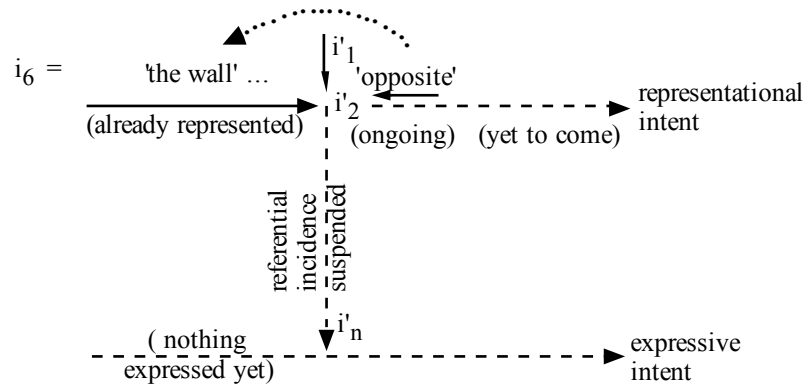


Figure 45

Here intervention of the adjective (“opposite”) is to take place at instant i'_2 of the referential incidence since i'_1 is understood to be the place for early incidence of the *court martial* type.²⁹ These expressions are characterized by the impossibility of inserting any grammatical element between the noun and the adjectival determiner, this being the indication of the earliest possible instant when adjectival incidence can occur. It will be recalled³⁰ that i'_0 corresponds to an even earlier integration, arising in tongue, of the adjectival substance (formerly autonomous and mentally distinguished as a word) by the concept. At this i_6 moment the *acquired state of the representation* consists of the proto-phrase “the wall...” and nothing is yet consciously perceived as constituting an *already expressed* part of the intended message (the object of the expressive intent). For that we must wait for a later moment in the development of the representational intent: the moment *after* the intervention of the adjective, i.e. when the incidence of “opposite” to “the wall...” has produced its result. At the moment depicted in Figure 45, this incidence is in a state of pure possibility (in technical terms, *kept as a potential*) because so far only the operative program of “opposite” has been executed. Thus several more stages are called for, the next as in Figure 46.

²⁹ Cf. *supra*, p. 56.

³⁰ Cf. pp. 57ff.

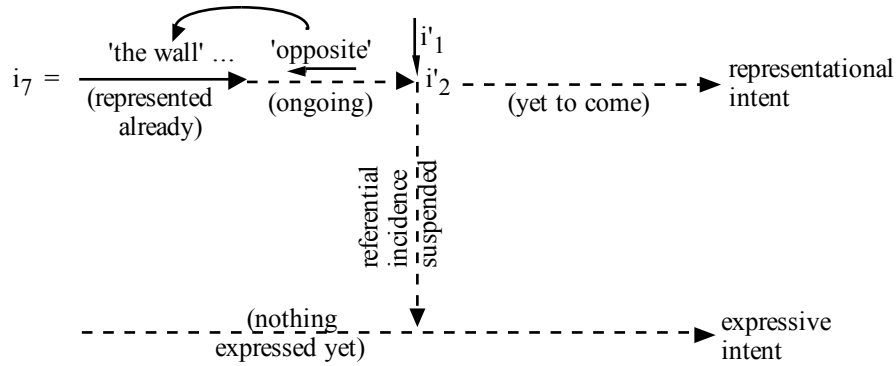


Figure 46

Here “opposite” passes from the state of a grammatically *potential* incidence (Figure 45) to the state of an incidence *being actualized*, thus preparing for the next step (i_8) by enlarging the portion of the intended message that the phrase being constructed will be called on to cover at the moment when its referential incidence has been effected. Hence for i_8 :

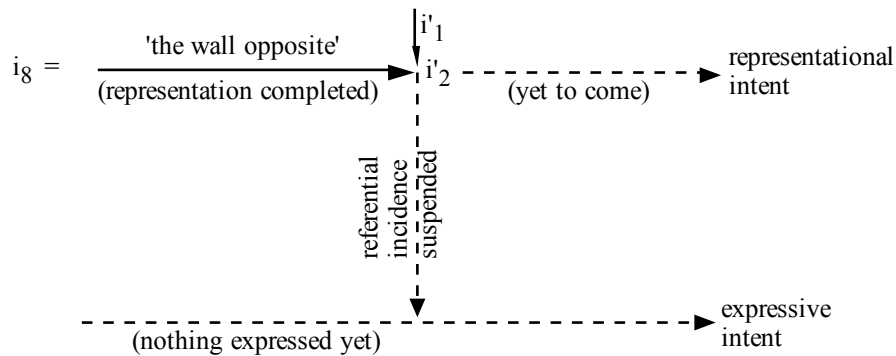


Figure 47

Here we no longer have:

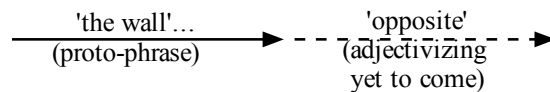


Figure 48

but, once the adjectivizing has actually taken place, a phrase finally constituted as follows:


article + noun + adjective


Figure 49

The phrase being complete at last, the referential incidence to the intended message (delayed up to this point) now becomes possible. Whence for i_9 :

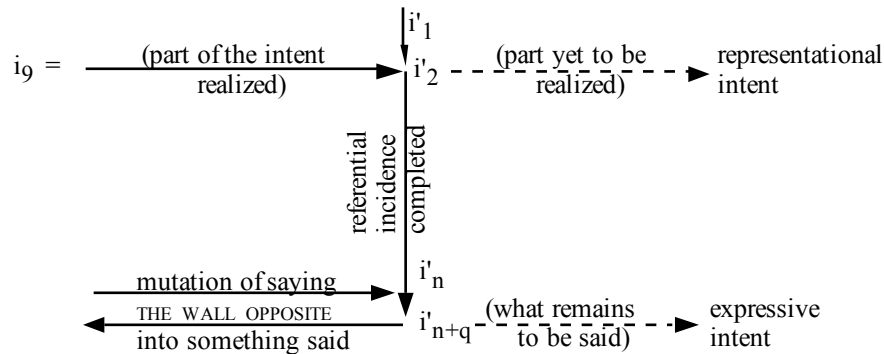


Figure 50

Here, at i'_{n+q} , there is no longer, as in Figure 43, a phrase “the wall” positioned for an adjective yet to intervene, but – thanks to the adjective intervening in i'_2 (cf. Figures 45, 46 and 47) *before* referential incidence was completed – an enlarged phrase, “the wall opposite”, which, in i'_{n+q} , takes in a wider portion of the particular experience specified by the expressive intent. Mentally, there was a discontinuity in the *representation*, a pause in position i'_2 thanks to which the representational intent took a step forward. On the other hand, at no moment was there a hesitation on the level of what is *expressed*, in the conscious mental scanning of the portion of the intended message involved in the actual *saying*. When this sort of discontinuity arises – whenever referential incidence reaches i'_{n+q} – there is usually the possibility of pausing, perhaps only slightly, in pronouncing the elements constituting the phrase. This is what makes the difference between the following:

1. “the wall *opposite*”

an example to be referred to Figure 50, and

2. “A cat... *grey*, I think... has just come into the kitchen.”

where Figure 43 provides the appropriate diagramming.³¹

The Mental Genesis of the Verb Phrase

All these considerations on the construction of a commonplace noun phrase may suggest that the original goal – that of explaining the workings of the various incidence mechanisms responsible for the construction of the sentence *The cat has caught a bird* – has been lost sight of.³² But such is not the case, and we return immediately to our own discursive intent. The desire not to skip over major difficulties encountered led to an analysis of the noun phrase in greater detail than originally planned. Even so, we realize that many aspects of the phenomenon could have been dealt with more explicitly and so might have contributed to clarifying certain difficulties raised by the hypotheses advanced. For instance, nothing has been said about position i_2 ³³ where the postposed adjective itself is the object of adverbial modification, nor about how to represent modification involving several adjectives. To prevent prolonging the discussion unduly, curiosity about such questions must be left unsatisfied, though an answer can be worked out by extrapolating from the notion of ‘operative stand-by’ postulated in Figures 45, 46 and 47, and allowing for the complexification of the adjectival modification and the consequent delaying of its incidence to the proto-noun phrase. Thus noun phrases such as *a cat barely visible* or *a cat wily and thieving* involve the prior incidence of *barely* to *visible* and the constitution of the cumulative qualification *wily and thieving* before adjectivizing can occur.

In the last few pages of this essay it remains for us to propose an explanation of the three phrases making up our model-sentence:

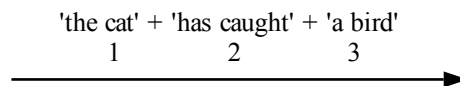


Figure 51

³¹ [And, it might be added, the phrases *the opposite wall* and *a grey cat* can be referred to Figure 29.]

³² Cf. *supra passim*

³³ Cf. Figure 45 and ff.

This calls for a brief sketch of the system of nominal function, the phenomenon of transitivity and the composition of verb compounds.

Verb Compounds

Insofar as verb compounds are concerned, this is not the place to spell out all the complex details of the theory of aspect developed by Guillaume in *Temps et Verbe* and in later papers and lectures. In his writings and subsequently in Valin 1994 (37-52) it was explained that verb aspects in French arise in a systematic sequence:

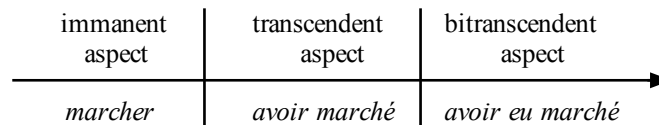


Figure 52

In this system the *transcendent* aspect is so called because it presupposes that the *process* is referred to a place in time signified by the auxiliary – a place which is seen mentally as a position beyond the process's immanence, i.e. after the place in time occupied by the real or imagined duration of the process. The bi-transcendent, for its part, represents a position beyond the place in time corresponding to the first transcendence. In the case of *he has walked*, this implies the following order of construction with respect to *he walks*:

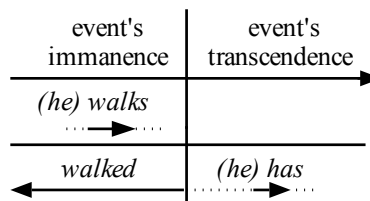


Figure 53

In other words, putting oneself mentally in the position corresponding to *(to) have walked* means going beyond the place in time imagined for *(to) walk* to occupy an imaginary temporal space situated immediately subsequent to that of *(to) walk*, a space represented by the auxiliary. From

the point of view of this subsequent imaginary space, the process is necessarily perceived as an event whose duration, whether long or short, has been left behind; consequently, this duration is necessarily felt to be past with respect to the moment in time marked by the auxiliary. This produces a type of past which is compatible with any tense or mood, i.e. which is not tied down to a particular time-sphere since it is not defined with respect to the speaker's position in time (the present), but with respect to a place in time occupied by the person designated by the auxiliary. This place necessarily corresponds to a position in time from which the duration of the process signified by the verb is seen as a prior position.

The mechanism of representation just described is interesting from the syntactic point of view because it illustrates the principle that the order of mental construction of a phrase is the opposite of its order of utterance. In other words, in order to conceive (*to*) *have walked* somewhere in time one must necessarily go through the mental space corresponding to the duration of *walk* (the role of the *past participle* being to indicate this) and represent the support-person of the verb as occupying a position in time immediately beyond this duration. Consequently, while the order followed by the unconscious mental process is:

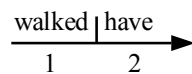


Figure 54

in the ensuing conscious process the inverse order is followed:

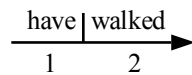


Figure 55

This order indicates first the place in time from which the completed event is to be depicted. In terms of the sentential intent, this gives a sequence of operations whose first stage is:

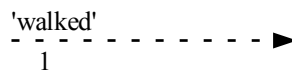


Figure 56

and the second:

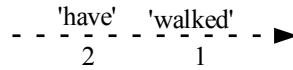


Figure 57

with *walked* (depicting an accomplished event) being incident to the place in time indicated by the auxiliary *have*.

Thus as mentioned above, the relation between the main verb and the auxiliary is not just equivalent to but, *mutatis mutandis*, perfectly isomorphic with the relation between the substantive and the article.³⁴ Both the article and the auxiliary are cast in the role of *form* and *support* (purely spatial with the article, spatio-temporal in the case of the auxiliary) with respect to a grammatically categorized *material content* in the role of *import*:

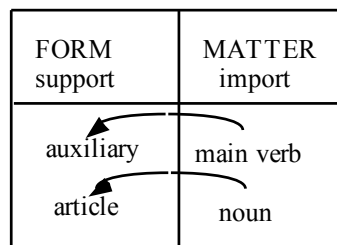


Figure 58

In any case, it should be pointed out that a grammatical *form* is always in the position of *support*, and a material content in that of *import*, both in morphogeny (constructing a word; cf. Figure 14) and, as in the case under discussion, in praxeogeny (constructing a phrase).

As has been explained in the first part of this essay, the same relation between import and support is found in the syntactic relation between adverb, adjective and substantive within the noun phrase, with the important difference that this relation is not paralleled in this case by a *form/matter*

³⁴ Cf. Figure 13.

relationship. Along with its grammatical form, each of these categories conveys a material content and indicates the particular way in which this notional content is to be made incident to a support which is material in nature rather than formal.³⁵ This is not the case either for the article³⁶ or for the auxiliary, which have been described by G. Guillaume as forms “refusing any material content”, i.e. as forms which do not contain a particular notional substance which is lexically opposable within an open series to the notional substance found in other words of the same grammatical category.

Noun-Verb Relationships

In the case of the relationship *subject-verb-object*, the situation is analogous. The links between these three basic components of the sentence are relations of one material content to another but are not established in terms of three different grammatical natures – substantive, adjective, adverb. Rather, in this case the relationships are conditioned by one of the constituents – the verb, which determines the form of the others as sentence elements: setting up the subject as a support; and the object as an import.

These two functions are generally marked in inflected languages by two different cases: the nominative and the accusative. Subject function represented by the nominative, presents the substantive noun (or its pronominal substitute) as the support of the notional content of the verb. Object function, marked by the accusative, presents a substantive as a notional import required by the verb in order to complete the mental image of that particular event.

Indeed, in order to be conceived as an event, a transitive verb must not only receive the notional complement of an *import*, but must also – and this applies to intransitive verbs as well – have a *support*. The support provides a place for the verbal incidence: it affords a spatial coordinate which, along with its temporal coordinate, situates the event at a particular point in the spatio-temporal universe. The need for a support is a simple grammatical requirement inherent in the category of the verb itself, whereas a transitive verb’s need for a further adverbial style import stems from the fact that the verbal lexeme is found to be inadequate, notionally incomplete, to

³⁵ Cf. *supra*, pp. 22 ff.

³⁶ Cf. pp. 29 ff.

represent the process targeted in the intended message. This does not exclude the possibility of leaving undefined either the import as in the common phrase *I know*, or the support, as in a sentence typically found in recipes: *Feeds five*.

This brief sketch of the general theory of transitivity will suffice for our purposes.³⁷ Based on what has just been proposed, the subject-verb-object relation can be depicted as follows:

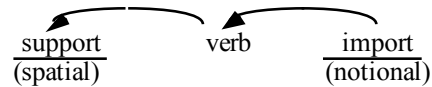


Figure 59

In the particular example we are using as an illustration, this gives:

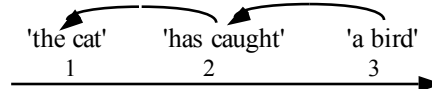


Figure 60

Since the forming of the three phrases has already been analyzed, the focus here is on the analysis of the operations underlying the construction of the sentence and their sequencing. This raises the following questions. Since a language like English has dropped case endings from the substantive, how can a substantive of the same form play the role both of support and of import with respect to the verb? Secondly, from the point of view of the explanatory framework adopted here, how can these contrary syntactic functions of the substantive be imagined as part of the mental program corresponding to the category of the substantive?

To answer these questions we may turn to Guillaume's theory of *synaptic case*, which proposes that in languages which have ceased to express the distinction between support and

³⁷ For a more complete view see Hervé Curat. 1982. *La locution verbale en français moderne. Essai d'explication psycho-systématique*. Québec : Presses de l'Université Laval.

import functions by means of case endings, the substantive category has acquired a new synthetic case – its only case in English – which encapsulates the two contrary functions of subject and direct object.³⁸

In the grammatical morphogeny of the substantive noun (cf. Figure 14) syntactic case occupies the last position (after gender and number) before transgrammatical morphogeny, i.e. just before the definition of the substantive as a part of speech. Since grammatical morphogeny within the word is based on isomorphic contrasts, occupying this final position in the construction of the substantive requires opting for either the support or the import function. The same requirement is observed for number (singular vs. plural) and for gender (animate vs. inanimate, and within the animate masculine vs. feminine).

In the choice of function there are two possible situations. On the one hand, the substantive can depend on a verb directly, as is the case with transitive verbs. On the other hand, it can depend indirectly, by means of a preposition, on a verb or on another substantive, adjective or adverb. When it depends on the verb directly, its function can be either support or import according to the sentence intent. When it depends on a preposition, its case will necessarily be realized as an import, since the substantive provides the *empty form* of the preposition with the notional content it requires to be used in discourse. The situation is thus analogous to that depicted in Figure 58 in which the substantive and the past participle are in the position of notional import of a material content and the article and the auxiliary in that of “a form in need of a material content,” to use Guillaume’s phrase. Moreover the preposition is, like the article and the auxiliary, not just in the position of a *form*, but as such is a form specifically for the substantive, as is the article, whereas the auxiliary is a specifically verbal form.³⁹ Thus the auxiliary specifies the place in time to which the already accomplished event denoted by the past participle is incident, an essentially verbal function, and the article specifies the operational form of the noun’s internal incidence, while the

³⁸ The evolution of these two functions is quite special in the history of the Indo-European languages (cf. Valin “Problématique du changement linguistique et psycho-systématique du langage” in *L’envers des mots*, Sainte-Foy & Paris: Presses de l’Université Laval & Klincksieck. 1994: 207-230.

In Old French, for instance, there was an opposition between a *subject case* and an *oblique case*. The first designated the substantive as support of the verb, the second as an import not only to the verb, but also to the substantive *e* (*la fille le roi* “the daughter of the king”) and to the preposition. This system gives way in modern French to one in which the substantive expresses the antinomic functions of support and import, but requires the use of a preposition to be incident to anything but a verb. The full detail of this story is as yet unwritten.

³⁹ Cf. *supra*, p. 29.

preposition specifies the type of relation being established between a substantive in the position of notional import and whatever in the sentence intent is to constitute its support – a verb, a noun, an adjective an adverb, etc. The relation between the noun and the preposition can therefore be added to the chart in Figure 58:

FORM in support position	MATTER in import position
preposition article auxiliary	noun noun {participle infinitive

Figure 61

The system of nominal functions can thus be divided into two categories. On the one hand, there are the functions contained in the synaptic case, which represent forms *integrated* into the morphogeny of the substantive. On the other hand, there are the functions not integrated into the nominal morphogeny but arising as *integrating* forms; these are the prepositions which, along with the auxiliaries and articles, belong to the series of transpredicative parts of speech, all of which are characterized by the fact that they bring in no particularizing notional substance.⁴⁰

After these necessary clarifications, the interplay of the incidence mechanisms giving rise to the structure of the example sentence (*The cat has caught a bird*) can be described. Given the intended message assumed at the outset,⁴¹ the verb *catch* requires an explicit support, i.e. a subject. Being transitive here, *catch* also calls for a notional import, which will be realized grammatically as the direct object. This establishes the relations of incidence, as depicted in Figure 60, between the three phrases making up the sentence..

If we accept that the phrase *a bird* is incident to the phrase *has caught*, which is incident to *the cat*, one difficult question nevertheless remains: how to determine the order of appearance of the phrases in the sentence intent constructing the sentence. The numbers assigned to them in

⁴⁰ Cf. supra, p. 21

⁴¹ Cf. supra, p. 17.

Figure 60 were merely meant to denote their order of utterance in discourse. The order in which they are mentally generated by the speaker may not be the same. The fact that the functions of subject and direct object are called for and determined by the verb suggests that it might be the verb phrase *has caught* which is produced first. On the other hand, it must be remembered that the grammatical subject is the spatial support of the verb, and that without this support it would not be possible to initiate the chain of the incidences which will result (once the sentence intent has operated) in the linguistic representation of the speaker's experience focused on by the discourse intent. This chain requires a beginning, a mechanical necessity, and the subject appears to be the only possible starting-point.

This hypothesis is supported by the fact that it implies as a consequence an explanation for the functioning of one of the categorial variants within the verb, that traditionally designated by the term *voice* or *diathesis*. Voice signifies the situating of the subject with respect to the event of which the verb indicates it to be the support.⁴² With respect to an event the subject can be active, passive or middle (i.e. partly active and partly passive). It would seem impossible to choose one voice over another unless the speaker had already evoked the support to which the event will be made incident. On the other hand, if one assumes that in the sentence intent the mental genesis of the support precedes that of the verb, the choice of voice can be explained quite easily: depending on the impression the support gives, the systemic mechanism will fix on the appropriate voice. It comes down to a sort of agreement between subject and verb, comparable to that between adjective and substantive, with only the verb's morphology signifying the situation in which the subject stands with respect to the event.

Voice is not the only grammatical indication providing support for the hypothesis that the subject is the first element mentally engendered within the scope of the intent for constructing a sentence involving a subject, a verb and an object. This hypothesis would also appear to account for a syntactic phenomenon, namely the postposition of the subject in interrogative sentences, a question involving so many new parameters it cannot be gone into here.

⁴² Cf. G. Guillaume, *Langage et science du langage*, pp. 127-142.

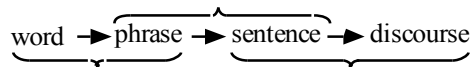
Although the weight of the evidence just evoked clearly tips the scales in favour of the hypothesis that the subject is the first element mentally engendered through the sentence intent, objectively speaking, this hypothesis has not been proven beyond all reasonable doubt. The question is a complex one, and the explanations proposed here are still too conjectural to be considered more than tentative. The same thing goes for the present state of analysis concerning the relation between a verb and its object. The incidence mechanisms proposed in Figure 60 are eminently plausible, but nevertheless they do not show the order of constructing the phrases in the sentential intent. All the figure does is to depict the end result, the situation resulting from the construction of the phrases. One can only hope that continued reflection will ultimately lead to finding a solution.

The somewhat scandalous situation of being unable to determine the order of appearance of the phrases making up such a simple sentence, chosen because of its very banality, should not surprise us. This problem pushes the analysis to the outer limits of theoretical reflections in this area, with all the risks of error that this implies. This does not mean however that the point reached is surrounded by quicksand on all sides. On the contrary, the analysis of the internal workings of the phrases examined here provides solid ground on which to build. Understanding, at least in a first approximation, the integrative and summative mechanisms giving rise to the existence of phrases is a significant step forward in itself. In addition, tentatively determining the operative moments and the successive phases in constructing certain types of syntactic constructions represents another important contribution. Moreover, to show, for the type of phrase analyzed, that it is morphology that conditions the mechanisms governing syntactic relationships, as Guillaume claimed, is a step forward for this type of analysis. Beyond the level of the phrase, a syntactic unit formed by transgrammatical morphogeny (the part of speech system), it remains to investigate the mechanisms of integration and summation which give rise to the sentence as a grammatical entity. The interplay of these mechanisms must, it seems, be conditioned by the endomorphogeny of the phrase, just as constituting the phrase is conditioned by the endomorphogeny of the word. This would mean distinguishing and contrasting the interplay of two successive syntaxes, with the first phase (that of phrase-constructing mechanisms) exercising a conditioning effect on those operating at the level of the sentence.

The difficulties encountered in this study are largely related to our lack of knowledge of the mechanisms of this higher-level syntax. This would seem to be due to an insufficiently clear view of how syntax operates within the phrase, which in turn reflects an as yet imperfect knowledge of the word's endomorphogeny. Closer attention to the detail of syntactic operations will lead to a closer scrutiny of the intricacies of the operative mechanisms giving rise to the word, ultimately the basis for a better understanding of all the rest.

Conclusion

The points on which progress has been made in this essay suggest perspectives on the type of syntax to be elaborated within the framework of the Psychomechanics of Language. Developing these points to enhance their plausibility would call for an extensive study, to which will fall the task of working out a syntax reflecting a real phenomenology of language, one which will explore the relation



in such a way as to define the domain of syntax from both the inside and the outside. Examining this operationally sequenced relation will lead to distinguishing an endo-sentential phase from two exo-sentential phases, one before and one after the operation of constructing the sentence. This could be illustrated by a diagram such as:

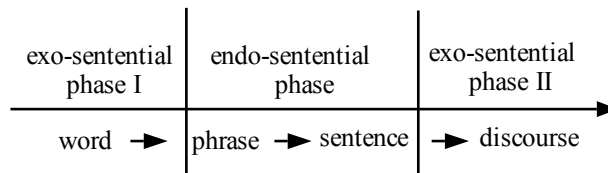


Figure 62

The first exo-sentential phase involves problems which are essentially morphological (“*morphogenic*” in our terminology), whereas the second exo-sentential phase involves problems which are primarily *logical*, giving rise to an extended discourse by the addition and

interconnection of the sequence of sentences making up its linguistic substance. In between is the endo-sentential phase, which corresponds to what is called “syntax” in traditional terminology. It operates between the morphological and the logical phases and, since it ensures the transition between them, participates in both.

Enough has now been said to give an idea of what a Guillaumian syntax will look like. From this new point of view the main outlines of the phenomenon can be discerned, and like any phenomenon which scientific analysis has managed to cut out from the unbroken fabric of observable reality, syntax can be seen to be in *syndesmosis* (if this technical term is admissible) both with the prior phenomena which give rise to its existence and with subsequent phenomena whose existence depends on it. As a consequence, it would be possible to describe all that is involved in the case discussed here in terms of syntax, provided that one distinguished all the different types of syntax involved.

There exists, for example, a *word-internal* syntax. This is fairly obvious for many non-Indo-European languages, in which the makeup of the word is observable through its outer form, and even for English in compounding and derivation. Even where this internal syntax of the word is not obvious from the outside, there is still an unconscious operative program constituting its endomorphogeny, which is the basis and prerequisite for the transcendent syntactic operations manifested within the phrase. Similarly for the sentence as a form, its internal syntax is made possible by the pre-existing phrase-internal syntax, which it therefore transcends, thereby bi-transcending word-internal syntax. Lastly, there is also a form of syntax corresponding to the logical ordering of sentences within an extended discourse, a discourse-internal syntax transcendent with regard to sentence-internal syntax and bi-transcendent to phrase-internal syntax. Figure 63 below attempts to depict the relations between these different phases of syntax.

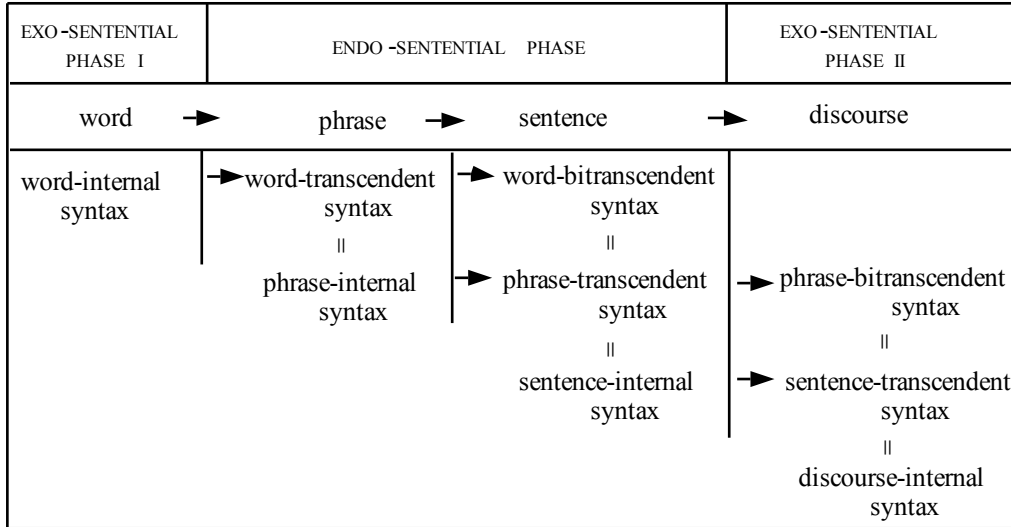


Figure 63

Could it be that the elegant chain of reciprocal operations that this table outlines, which are produced by the repetition of the same relation between a phase of immanence, its immediate transcendence, and the transcendence of this first transcendence, is a mere illusion or a product of chance? There are simply too many examples of this mechanism at work on the level of endomorphogeny itself, the systemics of diverse categories distinguished in tongue, for chance to be a plausible explanation.

Whatever the final verdict may be, these are the prospects opened up for further research by the sketchy and incomplete exploration of the syntactic domain undertaken in this essay. They constitute the inevitable point of departure for continuing a careful and rigorous process of reflection within the analytical framework initiated by Gustave Guillaume in *Temps et verbe*, published more than three quarters of a century ago,