

From ΛΟΓΟΣ to XP: The Evolution of a Linguistic Idea

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Preface

We present here a selection of basic original texts, in chronological order, from the history of western linguistics from the Greeks to the present. The texts, together with the further references which they suggest, are sufficient for the construction of an outline history of the concept sentence. They are given here without any exegetical analysis. Readers should reconstruct for themselves the original intended meaning of the key terms. It soon becomes clear that the failure to take this first, indispensable step is the source of most of the misunderstanding of earlier work by those who propose to supplant it with their own formulations.

Excluded from the discussion are foreign language works which seem to accomplish the same ends. A variorum grammar of grammars is not the intention. Instead, we have a huge historical space filled with insight and common sense about matters of language and linguistic structure, that is open to all who will take the trouble to discover what X meant by saying Y.

Presocratic Linguistics

[Protagoras (c490-c421 BCE)] was the first to mark off the parts of discourse [λόγος] into four, namely, wish, question, answer, command; others divide into seven parts, narration, question, answer, command, rehearsal, wish, summoning; these he called the basic forms of speech. Alcidamas (4thC BCE) made discourse fourfold, affirmation, negation, question, address.

Diogenes Laertius (3rdC AD/CE), *Lives of Eminent Philosophers*. With an English Translation by Robert Drew Hicks (1850-1929). Two Volumes. Loeb Classical Library, 1925, Volume II, Book IX, Protagoras, pp 466/467

Protagoras' four sentence types correspond to the optative, indicative (twice), and imperative moods (conjugations) of the verb.

Classical Greek Grammatical Terms (Liddell & Scott, 1871)

ἔπος, *épos*, I. *a word*. II. generally, *that which is spoken, uttered in words, a speech, tale*: also *a song*. III. 1. *a prophecy, an oracle: a proverb, maxim*. 2. *the meaning, substance of a speech*. 3. *poetry, etc.*

Cf Homeric ἔπεα πτερόεντα, *épea pteróenta*, ‘wingèd words’.

λόγος, *lógos*, 1. *a word in pl. words, language*; 2. *a saying, expression: an oracle, maxim, proverb*; 3. *conversation, discussion*; etc. (L & S do not give the sense ‘sentence’ among the many other senses listed.)

λέξις, *leksis* (< λέγῶ, IV. *to speak, say, utter, etc*), *a speaking, speech*. 2. *a way of speaking, diction, style*.

περίοδος, *períodos*, *a well-rounded sentence, period*. [< περί, *perí*, prep., *round, around, round about* + ὁδός, *hodós*, *way, track, road*] *a circular or circuitous route*.

Aristotle defines the period ‘logically’ [*ie* not metrically or rhythmically, as Fowler shows is often stated; see *eg* Hubbell on p 5 below. DAR]. It is a syntactic structure with an inner cohesion provided by the logical, pre-planned arrangement of the parts according to the requirements of the whole. ... (p 89)

In a ‘logically’ constructed period, the parts have a clear relation to one another, and their position in the sentence is determined by the requirements of the whole. [Footnote 5 p 90: This usually involves syntactic subordination, but not always, since a period can sometimes have only one colon ...] The structure of a period is pre-planned. The hearer can recognize the presence of this structure and follow the direction provided that the period is not too long. The end of the period, when it comes, seems pre-ordained. It is required to complete the sense; the end of a non-periodic sentence, by contrast, may arrive simply when the speaker runs out of things to say, or breath ... Clearly the nature of the period’s τέλος [*télos*, ‘conclusion’, ‘completion’] is important; (p 90)

Robert Louis Fowler (*b* 1954). 1982. Aristotle on the Period (*Rhetoric* Chapter 3, § 9). *Classical Quarterly* 32:80-99.

κῶλον, *kôlon*, *a member or clause of a sentence*. [NB: *not* κόλον, *kólon*, English colon, the large bowel. DAR]

κόμμα, *kómma*, *a short clause in a sentence*. [< *κόπτμα, derivative of κόπτω. κόπτō, 3. *to cut off, chop off*.]

Classical Latin Grammatical Terms (Smith, 1877)

periodus = περίοδος, in rhet. *a complete sentence, a period.*

colon = κῶλον, *a member of a verse, of a period.*

comma = κόμμα. In gramm.: a division of a period (pure Lat incisum). II. In verse: the caesura. [Cf caesura. III. In metre: *a pause in a verse, caesura*; called incisio.]

incisum, rhet. tech. term. *a section or division of a sentence, a clause.* [Also ‘segment’ aka *cæsum* (Augustine). (‘In gramm. *a stop, comma.*’). From *incisus*, ppp of *incido* (*in + caedo*), ‘to cut up’.]

membrum, 2. Esp. of style: *a member, clause.*

On these last two terms, and of the difficulty of finding names for new or unknown concepts, cf Cicero aka Marcus Tullius Cicero (106-43 BCE), *Orator* lxii.211, Loeb Classical Library edition, ed. & transl. Harry Mortimer Hubbell (1881-1971), 1939:482/483-484-485:

211 Haec autem forma retinenda non diu est, non dico in peroratione, quam in se includit, sed in orationis reliquis partibus. Nam cum sis eis locis usus quibus ostendi licere, transferenda tota dictio est ad illa quae nescio cur, cum Graeci κόμματα et κῶλα nominent, nos non recte *incisa* et *membra* dicamus. Neque enim esse possunt rebus ignotis nota nomina, sed cum verba aut suavitatis aut inopiae causa transferre soleamus, in omnibus hoc fit artibus ut, cum id appellandum sit quod propter rerum ignorationem ipsarum nullum habuerit ante nomen, necessitas cogat aut novum facere verbum aut a simili mutuari.

211. This [ornate, periodic] style should not be maintained for a long time; I do not mean in the peroration which falls entirely into it, but in the rest of the speech. For when you have finished the passages in which I have shown it is permissible, the whole style [or text] must be altered to those [plain] forms which, since the Greeks name them *commata* and *cola*, I don’t see why we should not appropriately call *incisa* [‘sections’, ‘divisions’, ‘clauses’] and *membra* [‘members’ ≅ ‘clauses’]. For names cannot be known if the things they represent are unknown; but since we are wont to use words figuratively either to add charm or because of the poverty of the language, it happens in all arts that when we have to name something which had had no name because the thing itself was unknown, we are compelled to invent a new term or to use a metaphor.

(Hubbell's footnote *d* pp 482-483: The Latin words [*incisa* and *membra*] are literal translations of the Greek terms. *Incisa* is here used for the first time in this sense; *membrum* had already been used to translate the Greek κῶλον in Auct. *Ad Heren.* 4. 26 [the anonymous *Rhetorica ad Herennium*, once ascribed to Cicero]. He means that the long involved rhythmical [*sic*] period is to be abandoned for shorter sentences [when the former is not stylistically or communicatively appropriate].)

sermo. **I.** 1. *a speaking or talking with; conversation, discourse.* 2. Esp. *literary conversation, disputation, discussion.* 3. *the language of common life, conversation.* 4. *common talk, report, rumour.* **II.** Transf. *a mode of expression, language, style, diction, dialect, etc.,*
dictio. **I.** in Rhet. 1. *a speech, declamation;* 2. *a word, expression.*

oratio, *a speaking, speech, discourse, language, faculty of speech, use of language. A set speech, ..., a discourse, oration. Eloquence. Prose* [as opposed to poetry]. Cf *serta oratio*, connected speech.

In English Renaissance terminology, *speech, a speech* > *oratio* was used for what would now be called a *clause* or *sentence*. Cf Andrew Marvell (1621-1678): 'In one speech, two negatives affirm.' (From the rule of logic, *duplex negatio affirmat* 'double negation affirms'.)

sententia. **I.** 1. *a way of thinking; opinion, sentiment; a purpose, determination, decision, etc.* 2. [legal senses omitted]. 3. [used in the formula of an oath: *to the best of my knowledge and belief*]. **II.** Transf. of discourse, *sense, meaning, signification, etc.* 2. *a sentence, period.* 3. Esp. *a philosophical aphorism, an apophthegm, maxim, axiom.* — A statement. Later: The delivery of a legal, moral, or theological statement of doctrine. A doctrinal *obiter dictum*, as eg the collection of *Sentences* [of the Church Fathers] with objections and answers by Peter Lombard (c1100-1164).

sententiosus, *full of meaning, pithy, sententious.*

verbum. **I.** *a word;* plur. *words, expressions, language, discourse, conversation, etc.* **II.** *a saying, expression, phrase, sentence.* **III.** In gramm. *a verb:* Aristoteles orationis duas partes esse dixit, *vocabula et verba, ut homo et equus, et legit et currit.* [Attributed to Cicero, Varro, and Quintilian. 'Aristotle says that there are two parts of speech/of a sentence: *names* [*ie nouns*] and *verbs*, as *man* and *horse*, and *reads* and *runs*.' [See Quintilian Book I *loc cit infra* p 6, who adds *conjunctions*.]

nomen, *a name.* Many other senses and uses. [The idea seems to be that *nomen* stands for the *thing*, while *vocabulum* is what it is called,

its *appellation*. But there is no uniformity in this distinction, which is philosophical and not linguistic. DAR]

vocabulum, *an appellation, designation, name*. **II.** Esp. in grammar, *a substantive*, both in gen. and as an appellative noun, in contradistinction to *nomen*, as denoting a proper name.

See Quintilian-Butler, Volume I, Book I, iv, § 19 ff, pp 70/71 ff and Volume III, Book IX, iv, § 121 ff; pp 574/575 ff for an extensive discussion of these Latin terms for the parts of the ‘sentence’ or ‘period’.¹

Quintilian *aka* Marcus Fabius Quin(c)tilianus (c35-c100 AD/CE)

Nobis prima sit virtus perspicuitas, propria verba, rectus ordo, non in longum dilata conclusio, nihil neque desit neque superfluat; ita sermo et doctis probabilis et planus imperitis erit. Haec eloquendi observatio.

For my own part, clearness is the first essential of a good style: there must be propriety in our [choice of] words, their order must be straightforward, the conclusion of the period must not be long postponed. There must be nothing lacking and nothing superfluous. Thus our language will be approved by the learned and clear to the uneducated. That is the proper observation of [practice of] eloquence.

(Quintilian-Butler *op cit* in footnote 2 on this page, Volume III, Book VIII, ii, § 22, pp 208/209).

An alternative modern translation is:

Our primary goal should be lucidity, with the right words, straightforward order, a brisk conclusion, and nothing missing or

¹ Quintilian, *Institutio Oratoria. Principles of Oratory*. All references are to: *The Institutio Oratoria of Quintilian*. With an English Translation [and notes etc] by Harold Edgeworth Butler (1878-1951). Harvard, Massachusetts: Harvard University Press. London: William Heinemann Ltd. 1920-1922. Four Volumes. Loeb Classical Library 124-127. Referred to as ‘Quintilian-Butler’.

superfluous — making our discourse plausible for the expert and approachable for the uninitiated. This the way to eloquence.

Cf Swift's famous precept:

Proper Words in proper Places, makes the true definition of a Stile:
[*sic*].

Swift's definition looks like a memorial version of Quintilian's periodic sentence just quoted, with the irrelevant teleological observations omitted. The second half of Swift's quotation, on style, is his version of Quintilian's *conclusio*, which Dr Sheila Sneddon says is not a bad rendition.

(Swift text is from his: *A Letter from a Lay-Patron to a Gentleman, Designing [ie intending] for Holy Orders*, Dublin, 1720.)

Later English writers treat *perspicuitas* as referring to syntax, *cf* the following from Blair below:

For syntax is no other than that arrangement of words, in a sentence, which renders the meaning of each word, and the relation of all the words to one another, most clear and intelligible.

Cf also Lowth, below, in his definition of 'Sentence'.

Hugh Blair (1718-1800)

I ADMIT, that no grammatical rules have sufficient authority to control the firm and established usage of Language. Established custom, in speaking and writing, is the standard to which we must at last resort for determining every controverted point in Language and Style. But it will not follow from this, that grammatical rules are superseded as useless. In every Language, which has been in any degree cultivated, there prevails a certain structure and analogy of parts, which is understood to give foundation to the most reputable usage of Speech; and which, in all cases, when usage is loose or dubious, possesses considerable authority. In every Language, there are rules of syntax which must be inviolably observed by all who would either write or speak with any propriety. **For syntax is no other than that arrangement of**

words, in a sentence, which renders the meaning of each word, and the relation of all the words to one another, most clear and intelligible.

ALL the rules of Latin syntax, it is true, cannot be applied to our Language. Many of those rules arose from the particular form of their Language, which occasioned verbs or prepositions to govern, some the genitive, some the dative, some the accusative or ablative case. But, abstracting from these peculiarities, it is to be always remembered, that the chief and fundamental rules of syntax are common to the English as well as the Latin Tongue; and, indeed, belong equally to all Languages. For, in all Languages, the parts which compose Speech are essentially the same; substantives, adjectives, verbs, and connecting particles: And wherever these parts of Speech are found, there are certain necessary relations among them, which regulate their syntax, or the place which they ought to possess in a sentence. Thus, in English, just as much as in Latin, the adjective must, by position, be made to agree with its substantive; and the verb must agree with its nominative in person and number; because, from the nature of things, a word, which expresses either a quality or an action, must correspond as closely as possible with the name of that thing whose quality, or whose action, it expresses. Two or more substantives, joined by a copulative, must always require the verbs or pronouns, to which they refer, to be placed in the plural number; otherwise, their common relation to these verbs or pronouns is not pointed out. An active verb must, in every Language, govern the accusative; that is, clearly point out some substantive noun, as the object to which its action is directed. A relative pronoun [includes personal pronouns] must, in every form of speech, agree with its antecedent in gender, number, and person; and conjunctions, or connecting particles, ought always to couple like cases and moods; that is, ought to join together words which are of the same form and state with each other. I mention these, as a few exemplifications of that fundamental regard to syntax, which, even in such a Language as ours, is absolutely requisite for writing or speaking with any propriety.

Hugh Blair (1718-1800), D.D. One of the Ministers of the High Church, and Professor of Rhetoric and Belles Lettres in the University of Edinburgh. 1783. *Lectures on Rhetoric and Belles Lettres*. In Two Volumes. London: Printed for W. Strahan; T. Cadell, in the Strand; and

W. Creech, in Edinburgh. Volume I, Lecture IX, Structure of Language: The English Language, pp 179-181.

Syntactic Exercise

nullius in verba — Motto of The Royal Society of London for the Improvement of Natural Knowledge (founded 1660), adopted 1663. From Horace *aka* Quintus Horatius Flaccus (65-8 BCE), *Epistles*, I, i, l 14.

nullius addictus iurare in verba magistri.

‘I am not bound by oath to swear allegiance to the dicta of any master.’

non addictus iurare in verba ullius magistri
[I am] not bound to-swear to dicta of-any master (gen.)

Samuel Johnson (1709-1784)²

Sentence: 4. A short paragraph; a period in writing.

Clause: 1. A sentence; a single part of a discourse; a subdivision of a larger sense; so much of a sentence as is to be construed together.

Period: 7. A complete sentence, from one full stop to another.

Member: 2. A part of a discourse or period; a head; a clause.

Constituent. That which makes anything what it is ; necessary to existence; elemental; essential; that of which any thing exists. 2. That which is necessary to the substance of any thing.

² 1773. *A Dictionary of the English Language: in which the Words are Deduced from their Originals, and Illustrated in their Different Significations by Examples from the Best Writers.* To which are prefixed, a History of the Language, and an English Grammar. In Two Volumes. The Fourth Edition. Revised by the Author. London: Printed by W. Strahan, for W. Strahan, J. & F. Rivington, T. Davies, J. Hinton [and 21 other London names]. First Edition 1755.

Robert Lowth (1710-1787)³

A SENTENCE is an assemblage of words, expressed in proper form, and ranged in proper order, and concurring to make a complete sense. (1762:94)

Glosses to Lowth's Definition of 'Sentence', from Johnson

Assemblage: '1. A collection: a number of individuals brought together.

Proper: 6. Exact; accurate; just.

To Range: 2. To be placed in order; to be ranked properly.

To Rank: 3. To arrange methodically.

To Concur: 2. To agree; to join in one action or opinion.

5. To be united with; to be conjoined.

6. To contribute to one common event with joint power.

Sense: 10. Meaning; import.

Lindley Murray (1745-1826)

1795. *English Grammar, Adapted to the Different Classes of Learners*. With an Appendix, containing rules and observations for promoting perspicuity in speaking and writing. York: Printed and Sold by Wilson, Spence, and Mawman. viii + 222 pp.

THE third part of grammar is Syntax, which shews the agreement and right disposition of words in a sentence.

A sentence is an assemblage of words, expressed in proper form, and ranged in proper order, and concurring to make a complete sense. ('Syntax', p 86)

This was inexplicably altered in the Thirteenth Edition (1806:137) and in all subsequent editions to read: 'A sentence is an assemblage of words, forming a complete sense.' — Murray on 'Strict Construction':

³ 1762. *A Short Introduction to English Grammar: With Critical Notes*. London: Printed by J. Hughes; For A. Millar in the Strand; and R. and J. Dodsley in Pall-mall. [Epigraph from Cicero on title-page omitted.] All quoted text cited from: A New Edition, Corrected, 1767.

RULE XXII.

All the parts of a sentence should correspond with each other, and a regular and dependent construction, throughout, be carefully preserved.

The following sentences are violations of this rule. “This dedication may serve for almost any book that has, is, or shall be published.” It ought to be, “that has been, or shall be published.” “He was more beloved, but not so much admired, as Cinthio:” “*more*” requires “*than*” after it, which is nowhere found in this sentence: It should be, “He was more beloved than Cinthio, but not so much admired.”

This rule may be considered as comprehending all the preceding ones; and it will also apply to such forms of sentences as none of those rules can be brought to bear upon. Its generality may seem to render it nugatory; but when a number of varied examples are ranged under it, perhaps it will afford some useful direction, and serve as a principle to test the propriety of many modes of expression, which cannot be determined by any of the less general rules. [Two pp of illustrative examples of improper construction omitted.]

This, the final ‘Rule’ of the ‘Syntax’ of Murray’s *English Grammar* (1795:137-138), is original with Murray, and is not found in his primary sources, including Lowth 1762.

Cf Hugh Blair on the concept of ‘concurrence’ and another manifestation of the ‘shared-constituent construction’, *aka* ‘right-node raising’.

WHAT is called splitting of particles, or separating a preposition from the noun which it governs, is always to be avoided. As if I should say, “Though virtue borrows no assistance from, yet it may often be accompanied by, the advantages of fortune.” In such instances, we feel a sort of pain, from the revulsion, or violent separation of two things, which, by their nature, should be closely united. We are put to a stand in thought; being obliged to rest for a little on the preposition by itself, which, at the same time, carries no significancy, till it is joined to its proper substantive noun. (Blair 1783. I. Lecture XII. Structure of Sentences, p 228)

Edward Adolph Sonnenschein (1851-1929)

[Edward Adolph Sonnenschein, Chairman, *et 24 al*]. 1911. *On the Terminology of Grammar*. Being the Report of the Joint Committee [of representatives of eight professional teaching associations] On Grammatical Terminology. Revised 1911. Being a revised and extended issue of the Interim Report presented in December 1909. London: John Murray. 39 pp.

RECOMMENDATIONS

The corresponding German and French terms are given after each of the recommendations.

I. [Terms of Analysis] That the first stage in the analysis of a sentence be to divide it into two parts, to be called the *Subject* and the *Predicate*, the *Subject* being the group of words or the single word which denotes the person or thing of which the *Predicate* is said, and the *Predicate* being all that is said of the person or thing denoted by the *Subject*.

<i>Subject</i>	<i>Subjekt</i>	<i>Sujet</i>
<i>Predicate</i>	<i>Prädikat</i>	<i>Prédictat</i>

In the following examples the *Predicate* is distinguished from the *Subject* by heavy type:—

The merciful man **is merciful to his beast.**
Uneasy **lies** the head that **wears a crown.**
How sweet the moonlight **sleeps upon this bank!**
[*The Merchant of Venice* Act 5 Scene 1 l 54]
Long live the king!
Hätte ich es doch nicht gesagt!
Quid mihi Celsus agit? [Horace, *Epistles* I. 3. 15:
[‘What, pray, is Celsus doing?’ (LCL)]
Cinq étrangers sur dix **savent notre langue.**
[Greek example omitted.] (p [1])

Interlude: The American Structural Descriptive Linguists

Leonard Bloomfield (1887-1949)

1933. *Language*. New York: Henry Holt and Company, Inc., At the beginning of Chapter 11, Sentence Types, p 130. Revised British edition 1935.

It is evident that the sentences in any utterance are marked off by the mere fact that each sentence is an independent linguistic form, not included by virtue of any grammatical construction in any larger linguistic form.

1955. 'Linguistic Aspects of Science.' In Volume I, Part 1 of: Otto Neurath (1882-1945); Rudolf Carnap (1891-1970); Charles William Morris (1901-1979), edited by. *International Encyclopedia of the Unified Science*. Chicago, Illinois: The University of Chicago Press. One Volume in Two Parts. Volume I. Part 1:215-277; § 18. The Sentence. p 245. This is the collected compilation of individual contributions published earlier separately.

In any utterance a form which, in this utterance, is not a constituent of any larger form is a *sentence*. By definition, any free form and no bound form can occur as a sentence.

Bernard Bloch (1907-1965); George Leonard Trager (1906-1992)

1942. *Outline of Linguistic Analysis*. Baltimore. Maryland: Linguistic Society of America. Special Publications of the Linguistic Society of America Chapter 5. Syntax, §5.4, pp 74-75.

Let us look briefly at the English actor-action construction. The most striking thing about it is its universality: It is the FAVORITE SENTENCE TYPE of English. In any given utterance, an expression which is not in a construction with any other part of the utterance is a SENTENCE. Some utterances consist of only one sentence: *Fire!* or *John ran away*; others consist of more than one sentence: *There was a fire last night. Our horses ran away*. Very commonly, an expression which is [*sic; sc* in] one utterance figures as a sentence will appear, in other utterances, as part of longer sentences: *When John ran away, I followed him; We are late because our horses stumbled*. Now, in English, a sentence which consists of an actor-action phrase (or of several [phrases] in coordination, see §5.5) has a feature of meaning which we can state roughly as 'complete utterance': it is one of the types of FULL SENTENCE. Contrast it with MINOR SENTENCES, which have not this

meaning: exclamations, such as *Fire!*, and answers, hints, and namings, such as *Four o'clock, If I can, Mr. Smith—Mr. Jones*. There are only two other types of full sentence in English: COMMANDS, such as *Drink some milk* or *Don't run away*, and an archaic type of COLLOCATIONS, such as *The more the merrier*.

Rulon S. Wells (1919-2008)

1957. Immediate Constituent Analysis. *Language*. Journal of the Linguistic Society of America. Volume 23. Number 1. March, pp 81-117. Reprinted in Martin Joos (1907-1978). 1957. Edited for the Committee on the Language Program by. *Readings in Linguistics. The development of descriptive linguistics in America since 1925*. Washington [DC]: American Council of Learned Societies. pp 186-207. Later published by The University of Chicago Press as: *Readings in Linguistics I*.

We aim in this paper [...] to replace by a unified, systematic theory the heterogeneous and incomplete methods hitherto offered for determining IMMEDIATE CONSTITUENTS (hereafter abbreviated IC, plural ICs). The unifying basis is furnished by the famous concept of patterning, applied repeatedly and in divers special forms. (Abstract, p [81])

I. Expansion

§1. Zellig S. Harris (1909-1992), in his article 'From Morpheme to Utterance' [*Language* 22:161-183 (1946)], makes explicit an operation of substituting one sequence of morphemes for another; by somewhat elaborating this operation, and defining some auxiliary terms, we arrive at a concept of EXPANSION. This characterizes one special variety of patterning: two sequences of morphemes, insofar as one is an expansion of the other, pattern alike. (p [81])

§2. Morphemes are assigned to MORPHEME-CLASSES on the basis of the environments in which they occur. Each environment determines one and only one morpheme-class, namely the class of all morphemes occurring in that environment. [...] A morpheme A belongs to the morpheme-class determined by the environment ()X if AX is either an utterance or occurs as part of some utterance, ... (pp [81]-82) [All discussion and illustrative examples with analysis omitted.]

§3. Besides morpheme-classes, the grammarian sets up classes of other expressions; we will call these SEQUENCE-CLASSES, since every expression is a sequence of one or more morphemes. Given a sequence S, a sequence-class to which S belongs is defined as the class of all sequences whose first morpheme belongs to the same morpheme-class as the first morpheme of S, whose second morpheme belongs to the same morpheme-class as the second morpheme of S, and so on; it follows that all members of a given sequence-class contain the same number of morphemes. (p 82) [Further discussion of types of sequence-class omitted.]

§4. Now the simple but significant fact of grammar on which we base our whole theory of ICs is this: that a sequence belonging to one sequence-class A is often substitutable for a sequence belonging to an entirely different sequence-class B. By calling the class B ‘entirely different’ from the class A we mean to say that A is not included in B, and B is not included in A; they have no member sequences in common, or else only a relatively few—the latter situation being called ‘class-cleavage’. (pp 82-83) [Illustrative examples involving the substitutability of the pronoun *they* for the noun-phrase *Tom and Dick* omitted.]

We may roughly express the fact under discussion by saying that sometimes two sequences occur in the same environments even though they have different internal structures. When one of the sequences is at least as long as the other (contains at least as many morphemes) and is structurally diverse from it (does not belong to all the same sequence-classes as the other), we call it an EXPANSION of that other sequence, and the other sequence itself we call a MODEL. If A is an expansion of B, B is a model of A. The leading idea of the theory of ICs here developed is to analyze each sequence, so far as possible, into parts which are expansions; these parts will be the constituents of the sequence. The problem is to develop this general idea into a definite code or recipe, and to work out the necessary qualifications required by the long-range implications of each analysis of a sequence into constituents. (p 83)

§5. A preliminary example will give an inkling of how the method works. *The king of England opened Parliament* is a complete sentence, to be analyzed into its constituent parts; we ignore for the time being its features of intonation. It is an expansion of *John*, for *John* occurs as a complete sentence. But it is an expansion of *John* only in this special environment, the zero environment—not in such an environment as () *worked (John*

worked). It helps the IC-analysis to show that the sequence being analyzed is an expansion, but only if it is an expansion of the same shorter sequence in all, or a large proportion, of the environments where the shorter sequence occurs. For the sequence taken as an example, *The king opened*, or *The king waited*, or *John worked* will serve as shorter sequences. (p 83) [Further explication of the notion ‘expansion’ omitted.]

§6. Our general principle of IC-analysis is not only to view a sequence, when possible, as an expansion of a shorter sequence, but also to break it up into parts of which some or all are themselves expansions. Thus in our example it is valuable to view *The king of England opened Parliament* as an expansion of *John worked* because *the king of England* is an expansion of *John* and *opened Parliament* as expansion of *worked*. On this basis, we regard the ICs of *The king of England opened Parliament* as *the King of England* and *opened Parliament*. [Details of the analysis of the two halves of the sentence omitted. See § 7 below for the results.] The choice between [the two proposed] analyses is dictated not [only] by the principle of expansions as stated and exemplified above but by two other principles of patterning, equally fundamental for English and very probably for other languages: the principle of choosing ICs that will be as independent of each other in their distribution as possible, and the principle that word divisions should be respected. [Explications of these principles are given later in the article.]

§7. Let us call the ICs of a sentence, and the ICs of those ICs, and so on down to the morphemes, the CONSTITUENTS of the sentence; and conversely whatever sequence is constituted by two or more ICs let us call a CONSTITUTE. Assuming that the ICs of *The king of England opened Parliament* are *the king of England* and *opened Parliament*, that those of the former are *the* and *king of England* and those of the latter are *opened* and *Parliament*, and that *king of England* is divided into *king* and *of England*, *of England* is divided into the morphemes *of* and *England*, and *opened* is divided into *open* and *-ed*—all of which facts may be thus diagrammed: *the* || *king* ||| *of* |||| *England* | *open* ||| *ed* [*sic*] || *Parliament*—then there are twelve constituents of the sentence: (1) *the king of England*, (2) *the*, (3) *king of England*, (4) *king*, (5) *of England*, (6) *of*, (7) *England*, (8) *opened Parliament*, (9) *opened*, (10) *open*, (11) *-ed*, (12) *Parliament*. And the six constitutes in the above sentence are those five of the constituents (nos. 1, 3, 5, 8, 9) that are not morphemes, plus the sentence itself.

According to this analysis the sequence *the king of*, for instance, or *England opened*, is in this sentence neither a constituent nor a constitute. And in terms of this nomenclature the principle relating words to IC-analysis may be stated: every word is a constituent (unless it is a sentence by itself), and also a constitute (unless it is a single morpheme). But if *opened Parliament* were analyzed into *open* and *-ed Parliament*, the word *opened* would be neither a constituent nor a constitute. (p 84)

§8. What we view as the correct analysis of *The king of England opened Parliament* has now been stated, but it remains to consider why other analyses of it were rejected. (p 84) [Further discussion omitted.]

Bernard Bloch (1907-1965)

1949. 'A Set of Postulates for Phonemic Analysis.' *Language*. Journal of the Linguistic Society of America. Volume 24, No 1, p 7.

I. DIALECT

1.1 Postulate. There are communities of human beings who interact partly by the use of conventional auditory signs. (p 6) [Discussion of the difference between his approach and that of Bloomfield omitted.]

1.2. Definition. Such a community is a *speech-community*.

1.3. Definition. The totality of the conventional auditory signs by which the members of a speech-community interact is the *language* of the community.

1.4. Definition. A member of a speech-community is a *speaker* of the language.

1.5. Definition. The activity of a speaker in using a language or some part of it to interact with other members of a speech-community is *speech*.

1.6. Definition. A single instance of speech is an *utterance*.

It is true that this definition, like Bloomfield's,¹⁰ leaves the limits of an utterance completely vague, and therefore fails to tell us just how much of speech an utterance is supposed to include. For our purpose [phonemic analysis], however, the length or inclusiveness of utterances can be ignored. It makes no difference here whether the term 'utterance' is taken to cover only the speech activity carried on between two respirations of a speaker, or the total speech activity carried on in the course of a day. We require

only that an utterance include less than ALL the speech activity of a given speaker; and so much at least is implied in our definition.

1.7. Definition. The totality of the possible utterances of one speaker at one time in using a language to interact with one other speaker is an *idiolect*.

As Bloomfield says in a similar connection (*Language* 2.155, 1926, §4), we are obliged to predict; hence the word ‘possible’. An idiolect is not merely what a speaker says at one time: it is everything that he COULD say in a given language. As for the words ‘at one time’, their interpretation may safely vary within wide limits: they may mean ‘at one particular moment’ or ‘on one particular day’ or ‘during one particular year’; they are included in the definition only because we must provide for the fact that a speaker’s manner of speaking changes during his life-time. The phrase ‘with one other speaker’ is intended to exclude the possibility that an idiolect might embrace more than one STYLE of speaking: it is at least unlikely that a given speaker will use two or more different styles in addressing a single person.

Our definition implies (a) that an idiolect is peculiar to one speaker, (b) that a given speaker may have different idiolects at successive stages of his career, and (c) that he may have two or more different idiolects at the same time.

2.1. Postulate 2. The utterances of an idiolect are various arrangements of different auditory fractions, whose number is less than the number of utterances.

By an auditory fraction we mean any segment or stretch of sound that occurs as part of an utterance. (p 7)

[Footnote 10 p 7:] ¹⁰ ‘An act of speech is an *utterance*.’ Leonard Bloomfield, ‘A set of postulates for the science of language. *Language* 2:153-164, 1926, §1, p 154.) Here [Bloch says] the term ‘speech’ is used without a definition.

Noam Chomsky on the Ideal Speaker-Listener

1965. *Aspects of the Theory of Syntax*. Cambridge, Massachusetts: The MIT Press. Chapter 1. Methodological Preliminaries; § 1, Generative Grammars as Theories of Linguistic Competence, p 3.

Linguistic theory is concerned primarily with an ideal speaker-listener, in a completely homogeneous speech-community, who knows its language perfectly and is unaffected by such grammatically irrelevant conditions as memory limitations,

distractions, shifts of attention and interest, and errors (random or characteristic) in applying his knowledge of the language in actual performance. This seems to me to have been the position of the founders of modern general linguistics, and no cogent reason for modifying it has been offered. To study actual linguistic performance, we must consider the interaction of a variety of factors, of which the underlying competence of the speaker-hearer is only one. In this respect, study of language is no different from empirical investigation of other complex phenomena.

We thus make a fundamental distinction between *competence* (the speaker-hearer's knowledge of his language) and *performance* (the actual use of language in concrete situations). Only under the idealization set forth in the preceding paragraph is performance a direct reflection of competence. In actual fact, it obviously could not directly reflect competence. A record of natural speech will show numerous false starts, deviations from rules, changes of plan in mid-course, and so on. The problem for the linguist, as well as for the child learning the language, is to determine from the data of performance the underlying system of rules that has been mastered by the speaker-hearer and that he puts to use in actual performance. Hence, in the technical sense, linguistic theory is mentalistic, since it is concerned with discovering a mental reality underlying actual behavior. Observed use of language or hypothesized dispositions to respond, habits, and so on, may provide evidence as to the nature of this mental reality, but surely cannot constitute the actual subject matter of linguistics, if this is to be a serious discipline.

Charles Carpenter Fries (1887-1957)

1952. *The Structure of English. An Introduction to the Construction of English Sentences*. New York: Harcourt Brace & World, Inc.

Chapter II, What is a Sentence?, is a useful accessible starting point for any historical investigation of this topic.

I. 'Traditional' Classifications of Sentence-Types

... Two kinds of classification [of sentences] usually appear in those grammars [scholarly-empirical, such as Jespersen, Curme *et al*, or school grammars, such as Aiken 1932 *qv infra*], both based upon definitions attempting to state *the characteristic meaning content of each class*.

Typical of the first kind of classification into simple, compound, complex, and compound-complex sentences are the following statements [one only of three given here].

According to their form sentences are classified as simple, complex, and compound. The first contains one independent clause only, with no dependent clause; the second contains in addition one or more dependent clauses; the third contains more than one independent clause. The complex and compound types may combine in the same sentence....

The clause is a syntactical unit consisting of a combination of subject, verb, and complement, or any two of these three....

It will easily be seen that the terms sentence and independent clause are closely allied in meaning, and the latter might be dispensed with except that it is often convenient to use in describing the “sentence part” of a sentence. (Janet Rankin Aiken (1892-1944), *A New Plan of English Grammar*. New York: Henry Holt & Co., 1932:15, 16, 31)

These definitions provide no practical means of sorting out the single free utterances from other utterances presented in the recorded conversations. ... (Chapter III. Kinds of Sentences, pp 30-31)

Typical of the second kind of classification are the following quotations: [one only of given here]

According to their idea or content English sentences are classified as declarative, interrogative, imperative, or exclamatory. The first makes a statement, the second asks a question, the third makes a request or command, and the fourth expresses strong emotion. (Aiken, *op cit*, p 15)

Again the definitions furnish no practical help in sorting out our utterances. ... No real gain derives from simply attaching technical names to the meanings “asks a question,” “gives a command,” “makes a statement.” ... (Chapter III. Kinds of Sentences, pp 31-32)

II. Empirical Delineation of Utterance-Types

In this book we shall accept as our general definition of the sentence —our starting point—the words of Bloomfield [1933:245 quoted above] ... (Fries 1962, Chapter II, What is a Sentence? p 21)

Because the recorded materials were all of practical conversations, not lectures, nor sustained narratives, the utterance units marked by a shift of speaker were limited in length.⁴ Even so, it could not be assumed that each of these utterance units contained only one unit that could stand alone. We could not take for granted that these utterance units contained only a single free utterance, nor that they were minimum free utterances. We could assume, however, that each utterance unit if not interrupted must be one of the following:

1. A single minimum free utterance.
2. A single free utterance, but expanded, not minimum.
3. A sequence of two or more free utterances.

We start then with the assumption that a sentence (the particular unit of language that is the object of this investigation) is a single free utterance, minimum or expanded; i.e., that it is “free” in the sense that it is not included in any larger structure by means of any grammatical device.

Our immediate task will be to identify and to classify the single the free utterances, the *sentences*, that appear in our materials. The Procedures²⁸ for that task and the resulting classification constitute the subject matter of the next chapter [Chapter III. Kinds of Sentences].

[Footnote p 26:]²⁸ It is not my intention to burden the reader with all the details of each of the procedures used in this investigation. Throughout the book, attention should center primarily upon the description of the results of the study—the characteristics of the sentence units revealed by this examination of a large body of English utterances. Occasionally, however, it has seemed necessary to explain at some length some features of

⁴ The ‘recorded materials’ referred to are the surreptitious recordings made on 16" 33 1/3 rpm acetate disks of telephone conversations passing through the University of Michigan switchboard, what would still today be not only unethical, but which was even then illegal.

the procedures used, in order that the reader might understand more fully the statements of the results and evaluate their soundness. This more complete statement seemed especially necessary at the beginning to show the methods I used to determine the units to be examined. Sometimes, however, it has seemed unnecessary to do more than to make a brief general statement of the method employed. (Chapter II. What is a Sentence?, pp 25-26).

George Leonard Trager (1906-1992)
Henry Lee Smith, Jr. [aka Haxie] (1913-1972)

1951. *An Outline of English Structure. Studies in Linguistics.* Occasional Papers 3. Norman, Oklahoma: The Battenburg Press. Second printing, 1956, with 'expanded ... treatment of syntax and metalinguistics'. (Foreword to Sixth Printing, 1957, p [2]). Reprinted Washington, DC: American Council of Learned Societies, 1965.

2.14. ... Once we have stated the above definitions of words and phrases and clauses on the morphemic level, and have established allologs, thus taking into consideration both phonemic and morphemic structure, but independently, we have substantiated the sharp delimitation of the fields of morphology (word-structure) and syntax (phrase-structure) in English. (Part II. Morphemics. Allologs, 59)⁵

[*Allolog*: All such special phrase alternants [eg 'the so-called weak forms of auxiliaries, personal pronouns, prepositions, and

⁵ *Allolog*, the term used here for morphs or forms that are alternatives to their cognate full forms, is an instance of the American Structural Descriptive Linguistics practice of finding new technical terms for already existing concepts and their terms in so-called 'traditional grammar', on the grounds that the older, original concepts and terms are misleading and based on false theory and unscientific methodology eg the positing of 'understood' elements in truncated constructions.

The term *contraction*, with its mentalistic suggestion of a process governed by a putative rule of elision, is inadmissible on the grounds that it has recourse to assumptions of the existence of an unverifiable unknowable mental process.

others’; ‘special contractions or portmanteau forms’] involve more than simple allomorphic alternation, and are to be considered as results of alternation of the already fully constituted morphemic word. We call such alternants of words ALLOLOGS, and consider them more fully in 4ff. (Part II. Morphemics. 2.14. Allologs, p 59)]⁶

4. The scope of syntax has been indicated above in 2 and 2.14. In the present tentative discussion, an attempt is made to set forth some of the procedures by which we believe syntax will come to be done, and to illustrate certain selected portions of English syntax. The treatment will necessarily be uneven and inadequate. But it will show the ineffectiveness of much of what has been called syntactic analysis hitherto, and may indicate the problems yet to be resolved.

The procedures for syntactic analysis do not differ essentially from those already used. With the phonology completely established, and the morphological analysis completed, the syntax of a language like English can be constructed objectively, without the intervention of translation meaning or any resort to metalinguistic phenomena.

Utterances are analyzed syntactically about as follows: A phonemic transcription is made first; this determines the portions of utterance that can be separated out and treated as units, namely the phonemic clauses. The units thus determined are the first [hierarchically lowest] IMMEDIATE CONSTITUENTS. Then, within each

⁶ [However we today would call *Allologs* contracted or enclitic forms as in *I d’ve gone out but it was raining*. (Mo Hayder, *Pig Island*. London: Bantam Books, 2006. This item is due to Rob White.) The already fully constituted morphemic words, *would have*, have the allologs ’d and ’ve, respectively, in the context [XP ____].

[*Portmanteau forms* are as in French *au* for *à le, or AAE *mo* > *am going to* (future marker); cf also Standard Colloquial AE *gonna* < *going to*; or *áhmonna* < *I am going to*: all in the context [____Aux/V]. Cf Humpty Dumpty in *Through the Looking-Glass, and What Alice Found There* (1871) Chapter 6, Humpty Dumpty, where he explains to Alice the meanings of the mysterious terms in the poem, *Jabberwocky* (Chapter 1, Looking-Glass House). Of *slithy*, a combination of *lithe* and *slimy*, he says: ‘You see it’s like a portmanteau—there are two meanings packed up into one word.’ DAR]

phonemic clause the intonation patterns are separated from the phonemic phrases and within each phonemic phrase the constituents delimited by plus-juncture ['+'] are noted, and a hierarchy in terms of the stresses (primary, secondary, tertiary [all strong]; weak) is established. This leads to the separation of the superfix ['patterns of stress', § 2.21, p 56] for each phrase, leaving a set of phrase fractions, including portmanteau items. Attention now turns to the phrase fractions, which are examined in the light of the already available morphemic analysis, and their constituents are determined. When all the allologs and words are established, we then resort to the usual substitution techniques. After that, statements can be made describing the constructions that occur, in terms of classes of words, allologic changes in the presence of phrase superfixes, classes of superfixes, intonational patterns, and order and concord. It is emphasized that all this is done without the use of 'meaning': it is formal analysis of formal units. In fact, it becomes evident that any real approach to meaning must be based upon the existence of such an objective syntax, rather than the other way round (cf. 5.1). (pp 67-68)

5.1. The statement has been made many times that the rigid techniques followed for the analysis of linguistic systems should not be extended to include considerations of the meaning of the elements classified. Considerations of this nature have generally been relegated to the sociologist, the ethnologist, or the philologist. At the same time, however, linguists have based various elementary definitions on meaning, and have usually used meaning to a greater or less extent in all linguistic procedures. Thus, the morpheme has been defined hitherto in terms of meaning, and all the work done to date in syntax could be termed 'meaning syntax'. The procedure followed in this *Outline* has endeavored to use the meaning of recurring partials only as a short cut to the establishing of contrasting structural features, as pointed out in 4, and to go forward on the assumption that microlinguistic analysis can and must deal with statements about the distributions of the elements rigidly observed on ascending levels of complexity of organization. (Part III. Metalinguistics p 81)

Charles Francis Hockett (1916-2000)

1958. *A Course in Modern Linguistics*. New York: The Macmillan Company. xi + 621 pp. Chapter 23, Sentences and Clauses.

23.1. Sentences. The third major type of exocentric construction [see Chapter 22, Exocentric Construction Types, § 22.1. Major Exocentric Types, p 191] is the predicative type. In order to deal properly with predicative constructions we must first discuss sentences.

A *sentence* is a grammatical form which is not in construction with any other grammatical form: a constituent which is not a constituent. ... (p 199)

23.3. Clauses. ... A simple English sentence (*Birds sing*) consists, apart from intonation, of a single *clause*. A compound sentences consists of two or more clauses; a complex sentence has a clause as a head and often has a clause included as an attribute. (pp 203-204)

Noam Chomsky

1957. *Syntactic Structures*. 's-Gravenhage: Mouton & Co., Publishers. Janua Linguarum. Series Minor, Nr. IV. Chapter 4. Phrase Structure. p 26.

As a simple example of the new form for grammars associated with constituent analysis consider the following:

13) (i) *Sentence* → *NP+VP*

The following item puts the publication of *Syntactic Structures* into historical perspective.

Lees, Robert B (1922-1996). 1957. Review of **Syntactic Structures**. By Noam Chomsky. *Language. Journal of the Linguistic Society of America*. Volume 33, Number 3 (Part 1). July-September 1957:375-408. Reprinted in: Gilbert Harman. 1974. *Noam Chomsky: Critical Essays*. Garden City, New York: Anchor Press/Doubleday. Anchor Books Modern Studies in Philosophy, pp 34-79.

For a discussion of whether Chomsky's theory of generative transformational grammar was a revolutionary change of paradigm, see:

W. Keith Percival. 1976. The applicability of Kuhn's paradigms to the history of linguistics. *Language. Journal of the Linguistic Society of America*, Volume 52, Number 2. June 1976:285-294.

The reference is to Thomas Kuhn's writings on the history of science, of which the following is probably best known; see Percival's bibliography for other literature.

Thomas Samuel Kuhn (1922-1996). 1970. The structure of scientific revolutions. In: *International Encyclopedia of the Unified Sciences*. Vol 2, part 2. 2nd edition. Chicago: University of Chicago Press.

Percival's conclusion is that while, like changes in art, politics, manners and morals, and fashions, generative grammar might represent a revolution, it lacks important criterial features for one to be able to say that it constitutes a change of paradigm. In particular, it lacks universal acceptance.

The following is the first large-scale accessible treatment of English grammar using Chomsky's original theory and method of syntactic analysis.

Noam Chomsky. 1962. 'A transformational approach to syntax.' In: Archibald A. Hill (1902-1992), ed. *Proceedings of the Third Texas Conference on Problems of Linguistic Analysis of English, 1958*. Austin, Texas: The University of Texas Press, pp 124-158. Reprinted in: Jerry Alan Fodor (b 1935); Jerrold J. Katz (1932-2002), eds. 1964. *The Structure of Language. Readings in the Philosophy of Language*. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., pp 211-245.

Appendix: Syntactic Deconstruction of a PDE Periodic Sentence

Shortly after the Royal Commission of Enquiry into Whisky and Other Potable Spirits (established 1908) reported in 1909, Colonel George Smith Grant (1845-1911), then proprietor of the Glenlivet distillery, was presented with his portrait at a large gathering of friends. The Duke of Richmond and Gordon (1845-1928), in the course of his speech delivered in making the presentation, expressed the feelings of his audience on the Commission's report.

Original Text. Quite recently a public enquiry has taken upon itself to decide—What is whisky? [*laughter*] And I regret to say that apparently anything that is made in Scotland, whatever its combination, is to be called Scots whisky. But for my part, I should prefer, and I think most of those whom I am addressing now would prefer, to trust to

their own palates rather than to the dogma of chemists, and to be satisfied with the whisky that is produced in Glenlivet [*'Hear, hear!'*] as against any other quality that is produced in Scotland.

Syntactic Deconstruction

Only depth of subordination is shown by the increasing degrees of indentation. Constituent structure and syntactic dependence can be shown by labelled bracketing; eg, **a** is a sentence adverb dependent on **b** + **c** + **d**. **s** is a relative clause dependent on the NP *the whisky* in **r**, while **t** is an adverbial adjunct dependent on the whole VP of **r**, which includes **s**.

- a.** Quite recently
- b.** a public enquiry has taken upon itself
- c.** to decide—
- d.** What is whisky?
- e.** And I regret to say
- f.** that apparently anything
- g.** that is made in Scotland,
- h.** whatever its combination,
- i.** is to be called Scots whisky.

- j.** But for my part,
- k.** I should prefer
- l.** and I think
- m.** [that] most of those
- n.** whom I am addressing now
- o.** would prefer,
- p.** to trust to their own palates
- q.** rather than to the dogma of chemists,
- r.** and to be satisfied with the whisky
- s.** that is produced in Glenlivet
- t.** as against any other quality
- u.** that is produced in Scotland.

David Daiches (1912-2005), *Scotch Whisky. Its Past and Present*. London: André Deutsch Limited, 1969. Chapter Three, The Patent Still and its Consequences [development of grain and malt blends that eclipsed the hegemony of the single malt], p 76.