

# HISTORY OF LINGUISTICS 2015-16

(prof. Giorgio Graffi)

## Handout 2 – Linguistics in the first half of the 20<sup>th</sup> century

**N. B:** 1) Graffi 2006 = G. Graffi, "20th Century Linguistics: Overview of Trends", in Keith Brown (editor in chief), "Encyclopedia of Language and Linguistics", 2nd ed., Oxford, Elsevier, 2006, vol. 13, pp. 181-195; 2) Graffi 2013: "European Linguistics since Saussure", in *The Oxford Handbook of the History of Linguistics*, ed. by Keith Allan, Oxford, Oxford University Press, 2013, pp. 469-484. Details of all other bibliographical references can be found in Allan, ed., 2013.

### 1) 20th-Century Linguistics vs. 19th-Century Linguistics: Continuities and Breakthroughs

It is a widely held opinion that the 19th century has been 'the century of comparative and historical linguistics' and the 20th century that of 'general' or 'theoretical' linguistics. Such an opinion is certainly not ungrounded, but it needs some qualifications. [...] historical-comparative grammar was not the only subject investigated by 19<sup>th</sup> century linguists: as a matter of fact, many of them dealt with topics that one would certainly label, today, of 'general linguistics'. (Graffi 2006, p. 182).

- *Hermann Paul: 'descriptive grammar' vs. 'historical grammar'; 'individual linguistic activity' vs. 'linguistic usage'*

Die historische Grammatik ist aus der älteren bloss deskriptiven Grammatik hervorgegangen, und sie hat noch sehr vieles von derselben beibehalten. Wenigstens in der zusammenfassenden Darstellung hat sie durchaus die alte Form bewahrt. Sie hat nur eine Reihe von deskriptiven Grammatiken parallel aneinander gefügt. Das Vergleichen, nicht die Darlegung der Entwicklung ist zunächst als das eigentliche Charakteristikum der neuen Wissenschaft aufgefasst.[...] Die deskriptive Grammatik verzeichnet, was von grammatischen Formen und Verhältnissen innerhalb einer Sprachgenossenschaft zu einer gewissen Zeit üblich ist, was von einem jedem gebraucht werden kann, ohne vom andern missverstanden zu werden und ohne ihn fremdartig zu berühren. Ihr Inhalt sind nicht Tatsachen, sondern nur eine Abstraktion aus den beobachteten Tatsachen. (Paul 1880 [1920], pp. 23-4)	Historical Grammar took its rise from the older Descriptive Grammar, and retains even now much from its predecessor. It has maintained, at least in the system of its classification, absolutely the old form. It has merely laid down a series of descriptive grammars parallel to each other. In fact comparison, and not explanation of development, is regarded as in the first instance the proper characteristic of the new Science. [...] Descriptive Grammar has to register the grammatical forms and grammatical conditions in use at a given date within a certain community speaking a common language ; to take note, in fact, of all that can be used by any individual without his being misunderstood and without his utterances seeming to him unusual. Its contents consist not in facts, but merely in abstractions from observed facts. (transl. by H. A. Strong, 1891)
Aus der Vergleichung der einzelnen Sprachorganismen lässt sich ein gewisser Durchschnitt gewinnen, wodurch das eigentlich Normale in der Sprache, der Sprachusus bestimmt wird. (id., p. 29)	By comparing individual organisms of language, we obtain a certain average, by which the strictly normal part of language—namely, its usage—is defined.
Es ergibt sich demnach, dass sich die ganze Prinzipienlehre der Sprachgeschichte um die Frage konzentriert: wie verhält sich der Sprachusus zur individuellen Sprechfähigkeit? (id., p. 33)	The result of this is that all the doctrine of the principles of the history of language centres round the question. What is the relation between linguistic usage and individual linguistic activity?

- *Georg von der Gabelentz (1840–1893): three meanings of the term ‘language’ (Sprache)*

<p>Zunächst gilt die Sprache als Erscheinung, als jeweiliges Ausdrucksmittel für den jeweiligen Gedanken, d.h. als <i>Rede</i>. Zweitens gilt die Sprache als eine einheitliche Gesamtheit solcher Ausdrucksmitteln für jeden beliebigen Gedanken. In diesem Sinne reden wir von der Sprache eines Volkes, einer Berufsklassen, eines Schriftstellers u.s.w. [...] Endlich, drittens, nennt man die Sprache, ebenso wie das Recht und die Religion, ein Gemeingut des Menschen. Gemeint ist damit das <i>Sprachvermögen</i>, d.h. die allen Völkern innewohnende Gabe des Gedankenausdruckes durch Sprache (von der Gabelentz 1901, p. 3)</p>	<p>First, the language is considered as a phenomenon, as the respective means of expression for the respective thoughts, i.e. as discourse (or speech). Secondly, the language is regarded as a unified totality of such means of expression for any thoughts. In this sense we speak of the language of a people, of a professional group, of a writer, etc. [...] Finally, thirdly, we call language, as well as right and religion, a common property of the human being. This refers to the faculty of language, that is, the gift of expressing thoughts through language inherent to all nations.</p>
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## 2) Ferdinand de Saussure (1857-1913)

### a) Saussure’s life and work - *The Cours de linguistique générale*

Ferdinand de Saussure (1857–1913), born and educated in Geneva, subsequently studied historical-comparative linguistics at the University of Leipzig, which in that epoch (the end of the 1870s) was the centre of the Neogrammarian school. He obtained his Ph.D in 1880, but his scientific activity had already started a couple of years earlier, with a book devoted to the Indo-European vowel system (de Saussure 1879, actually published in 1878). It was analysed in a way so innovative that the book came to be fully appreciated by the scientific community only much later. After ten years of teaching in Paris, in 1891 Saussure became professor for Sanskrit and Indo-European Languages at the University of Geneva, where he remained until his death. During his Geneva years, he became more and more uncertain about his ideas and his results, as is witnessed by the fact that his publications were increasingly rare. His fundamental aim was a reconsideration of the methods and the goals of linguistics: ‘montrer au linguiste ce qu’il fait’ (‘to show to the linguist what he is doing’), as he wrote in a letter of 4 January 1894 to his colleague and former student Antoine Meillet (1866–1936). Saussure first presented his ideas on such matters during three courses in general linguistics which he gave in the academic years 1906–7, 1908–9, and 1910–11. (Graffi 2013, pp. 469-70)

Saussure’s *Cours de linguistique générale* (Saussure 1922) was not directly written by him, but it was compiled by two former students, Charles Bally (1865-1947) and Albert Sechehaye (1870-1946), on the basis of the notes from class lectures given by Saussure in the academic years 1906-7, 1908-9 and 1910-11 at the University of Geneva. It is perhaps lesser known that neither Bally nor Sechehaye attended any of such lectures: they simply reworked and systematized the notes which some other people had passed to them. As a result, their reconstruction is often considered not quite faithful to the authentic Saussurean thought, especially after detailed studies of the handwritten notes by Godel (1957) and their edition by Engler (1967-74). Tullio De Mauro’s very detailed and insightful commentary on the *Cours* (published since 1972 together with Saussure’s original text) stresses many points of Saussure’s original thinking which were more or less modified by the editors. Today the exact knowledge of Saussure’s ideas cannot therefore be gained without the support of De Mauro’s commentary and/or the attentive reading of Engler’s edition. Nevertheless, since only the Bally-Sechehaye edition was available until the 1960s, it was this text which actually influenced the immediately subsequent linguists. (Graffi 2006, p. 182)

### b) The novelty of Saussure’s approach

[...] what distinguishes Saussure’s thought from that of the preceding scholars is its systemic approach: every linguistic unit can be defined only by virtue of the system of relations it has with the other units. Another characteristic feature of Saussure’s thought is his attempt at building an autonomous linguistics,

namely independent from psychology, sociology, or any other discipline, contrary to the methods of most linguists immediately preceding him. (Graffi 2013, pp. 470-1)

**c) Saussure’s dichotomies**

It is standard to summarize Saussure’s thought by resorting to his four ‘dichotomies,’ i.e. four pairs of concepts opposed to each other: (1) *langue* ‘language’ vs *parole* ‘speaking’; (2) *synchrony* vs *diachrony*; (3) *signifiant* ‘signifier’ vs *signifié* ‘signified’; (4) syntagmatic vs ‘associative’ (later called ‘paradigmatic’) relations. (Graffi 2103, p. 470)

- *Langue vs. parole*

<p>En séparant la langue de la parole, on sépare du même coup : 1° ce qui est social de ce qui est individuel ; 2° ce qui est essentiel de ce qui est accessoire et plus ou moins accidentel. La parole est au contraire un acte individuel de volonté et d’intelligence, dans lequel il convient de distinguer : 1° les combinaisons par lesquelles le sujet parlant utilise le code de la langue en vue d’exprimer sa pensée personnelle ; 2° le mécanisme psycho-physique qui lui permet d’extérioriser ces combinaisons. (de Saussure 1922, pp. 30-1)</p>	<p>In separating language from speaking we are at the same time separating: (1) what is social from what is individual; and (2) what is essential from what is accessory and more or less accidental. Speaking, on the contrary, is an individual act. It is wilful and intellectual. Within the act, we should distinguish between: (1) the combinations by which the speaker uses the language code for expressing his own thought; and (2) the psychophysical mechanism that allows him to exteriorize those combinations. (de Saussure 1959, p. 14)</p>
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The opposition between *langue* and *parole* as introduced in Saussure (1922) appears somewhat oversimplified with respect to its handwritten sources [...]. In his class lectures, Saussure actually distinguished not two concepts, but three (*langue*, *parole*, and *langage*): the last concept is not only presented as a purely ‘many sided and heterogeneous’ phenomenon but, in a more positive way, also as the faculty which allows humans to acquire any language; and Saussure also speaks of a *faculté de langage* ‘faculty of language,’ a concept which appears rather close to the homonymous Chomskyan one (see e.g. Chomsky 1975c). (Graffi 2013, p. 472)

- *Synchrony vs Diachrony*

<p><i>synchronie</i> et <i>diachronie</i> désigneront respectivement un état de langue et une phase d’évolution (de Saussure 1922, p. 117)</p>	<p>synchrony and diachrony designate respectively a language state and an evolutionary phase. (de Saussure 1959, p. 81)</p>
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In itself, this opposition was nothing new [...] The difference between Saussure and earlier linguists therefore lies in their respective views of the opposition between synchrony and diachrony. Traditional grammar almost totally ignored diachrony; nineteenth-century historical-comparative grammar [...] subordinated synchrony to diachrony, stating that only a diachronic study of language can be really scientific (cf. Paul 1920: 20). Saussure’s position is wholly opposite: (ibid.)

<p>il est évident que l’aspect synchronique prime l’autre, puisque pour la masse parlante il est la vraie et la seule réalité (voir p. 117). Il en est de même pour le linguiste : s’il se place dans la perspective diachronique, ce n’est plus la langue qu’il aperçoit, mais une série d’événements qui la modifient. (de Saussure 1922, p. 128)</p>	<p>it is evident that the synchronic point of view predominates, for it is the true and only reality to the community of speakers’ and if the linguist ‘takes the diachronic perspective, he no longer observes language (langue) but rather a series of events that modify it’ (de Saussure 1959, p. 90)</p>
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Saussure’s opposition between synchrony and diachrony can be condensed (as is standard) in the following way: synchronic facts are systematic and meaningful; diachronic facts are isolated and ateleological (i.e. without a goal). (ibid.)

- *Signifier vs Signified*

Le lien unissant le signifiant au signifié est arbitraire, ou encore, puisque nous entendons par signe le total résultant de l'association d'un signifiant à un signifié, nous pouvons dire plus simplement : <i>le signe linguistique est arbitraire.</i> (de Saussure 1922, p. 100)	The bond between the signifier and the signified is arbitrary. Since I mean by sign the whole that results from the associating of the signifier with the signified, I can simply say: <i>the linguistic sign is arbitrary</i> (original emphasis). (de Saussure 1959, p. 67)
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This is the so-called 'doctrine of the arbitrariness of the linguistic sign,' which has sometimes been misunderstood. First of all, it must be kept in mind that this doctrine not only states that the relationship between a given sequence of sounds (e.g. /buk/) on the one hand and a given object (a pile of printed sheets bound together) on the other has no natural basis, since it derives from a convention: such a 'conventionalist' conception of the linguistic sign can be found in many linguists before Saussure, and can be traced back at least to Aristotle's treatise *De interpretatione*. Saussure's conception is new and deeper: according to him, the relationship between the signifier and the signified is not, in the first place, a relationship between language and reality, but a relationship internal to language itself. (ibid.)

<i>Arbitraire et différentiel</i> sont deux qualités corrélatives. (de Saussure 1922, p. 163)	<i>Arbitrary and differential</i> are two correlative qualities (de Saussure 1959, p. 118)
[...] <i>dans la langue il n'y a que des différences</i> [...] des différences <i>sans termes positifs.</i> (id., p. 166)	In language there are only differences. [...] differences without positive terms. (id., p. 121; original emphasis)
Le français <i>mouton</i> peut avoir la même signification que l'anglais <i>sheep</i> , mais non la même valeur, et cela pour plusieurs raisons, en particulier parce qu'en parlant d'une pièce de viande apprêtée et servie sur la table, l'anglais dit <i>mutton</i> et non <i>sheep</i> . La différence de valeur entre <i>sheep</i> et <i>mouton</i> tient à ce que le premier a à côté de lui un second terme, ce qui n'est pas le cas pour le mot français. (Id., p. 160)	Modern French <i>mouton</i> can have the same signification as English <i>sheep</i> but not the same value, and this for several reasons, particularly because in speaking of a piece of meat ready to be served on the table, English uses <i>mutton</i> and not <i>sheep</i> . The difference in value between <i>sheep</i> and <i>mouton</i> is due to the fact that <i>sheep</i> has beside it a second term while the French word does not (id., pp. 116–17).

- *Syntagmatic vs Associative Relations*

D'une part, dans le discours, les mots contractent entre eux, en vertu de leur enchaînement, des rapports fondés sur le caractère linéaire de la langue, qui exclut la possibilité de prononcer deux éléments à la fois. [...] Ces combinaisons qui ont pour support l'étendue peuvent être appelées <i>syntagmes</i> . Le syntagme se compose donc toujours de deux ou plusieurs unités consécutives (par exemple : <i>re-lire</i> ; <i>contre tous</i> ; <i>la vie humaine</i> ; <i>Dieu est bon</i> ; <i>s'il fait beau temps, nous sortirons</i> , etc.). [...] D'autre part, en dehors du discours, les mots offrant quelque chose de commun s'associent dans la mémoire, et il se forme ainsi des groupes au sein desquels régissent des rapports très divers. Ainsi le mot <i>enseignement</i> fera surgir inconsciemment devant l'esprit une foule	In discourse, on the one hand, words acquire relations based on the linear nature of language because they are chained together. This rules out the possibility of pronouncing two elements simultaneously. [...] Combinations supported by linearity are <i>syntagms</i> . The syntagm is always composed of two or more consecutive units (e.g. French <i>re-lire</i> 're-read,' <i>contre tous</i> 'against everyone,' <i>la vie humaine</i> 'human life,' <i>Dieu est bon</i> 'God is good,' <i>s'il fait beau temps, nous sortirons</i> 'if the weather is nice, we'll go out,' etc.). [...] Outside discourse, on the other hand, words acquire relations of a different kind. Those that have something in common are associated in the memory, resulting in groups marked by diverse relations. For instance, the French word
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<p>d'autres mots (<i>enseigner, renseigner, etc.</i>, ou bien <i>armement, changement, etc.</i>, ou bien <i>éducation, apprentissage</i>) ; par un côté ou un autre, tous ont quelque chose de commun entre eux. On voit que ces coordinations sont d'une tout autre espèce que les premières. [...] Nous les appellerons <i>rappports associatifs</i>. (de Saussure 1922, pp. 170-1)</p>	<p><i>enseignement</i> 'teaching' will unconsciously call to mind a host of other words (<i>enseigner</i> 'teach,' <i>renseigner</i> 'acquaint,' etc.; or <i>armement</i> 'armament,' <i>changement</i> 'amendment,' etc.; or <i>education</i> 'education,' <i>apprentissage</i> 'apprenticeship,' etc.). All those words are related in some way. We see that the co-ordinations formed outside discourse differ strikingly from those formed inside discourse. [...] They are <i>associative relations</i>. (de Saussure 1959, p. 1239)</p>
<p>La phrase est le type par excellence du syntagme. Mais elle appartient à la parole, non à la langue. (de Saussure 1922, p. 172)</p>	<p>The sentence, which is the ideal type of syntagm,, belongs to speaking), not to language (de Saussure 1959: 124)</p>
<p>il faut attribuer à la langue, non à la parole, tous les types de syntagmes construits sur des formes régulières. (id., p. 173)</p>	<p>To language rather than to speaking belong the syntagmatic types that are built upon regular forms. (id., p. 125)</p>

#### d) Saussure's heritage

Saussure's view of language paved the way to what was later called structural linguistics. Even if neither 'structure' nor 'structural' (but just *système*) occur throughout Saussure's text in a technical sense, the systemic approach to language and the definition of linguistic notions and categories on a purely linguistic basis (i.e., without reference to psychological categories, and so on) became the starting points of structural linguistics. (Graffi 2006, p. 183)

### 3) European schools of structural linguistics: the schools of Geneva, Prague, and Copenhagen

#### a) Some common features

The schools of linguistics most directly influenced by Saussure's thought differ considerably from each other, and such a differentiation often occurs even among scholars belonging to the same school. However, they share some significant ideas about the nature of language and the aims and methods of linguistics, which are essentially a critical development of some Saussurean basic insights. One such idea is the conception of the language as a structure [...]. Another consistent development of Saussure's ideas by the European schools of structural linguistics, which marks their difference with respect to most preceding trends, is the abandonment of psychologism: according to such linguists, language has to be described only on the basis of its structure and its functions, without any reference to psychological entities or processes. This 'anti-psychologistic' attitude fully characterizes the Prague and Copenhagen schools, while some remnants of psychologism can still be detected among the Geneva scholars. (Graffi 2013, pp. 471-2)

#### b) Geneva school

- *Some names*

Charles Bally (1865–1947)

Albert Sechehaye (1870–1946)

Henri Frei (1899–1980)

- *Some ideas*

Bally's and Sechehaye's connection with pre-Saussurean linguistics is shown by their residual links to nineteenth-century psychologism.

A decidedly psychologistic attitude characterizes Sechehaye's first book, (Sechehaye 1908). [...]. After the appearance of Saussure's *Cours*, Sechehaye also turned to more general problems, such as the relationship between the social and the individual sides of language. Detaching himself from Saussure's concept of *langue*, intended as a common code shared by a community of speakers, he

denied the legitimacy of assuming an entity of 'a language in itself,' over and above the languages of the individuals (Sechehaye 1933: 65).

Bally's psychologism is especially to be found in the opposition between what he called the 'intellectual' and the 'affective' components of language. [...] Bally calls the discipline which has to deal with the combined effect of both the intellectual and the affective side of language 'stylistics.' In his sense, therefore, stylistics is not limited to the analysis of literary texts: e.g. to say John, I cannot bear him stylistically differs from I cannot bear John: the intellectual content is the same, but the affective element is stronger in the first sentence than in the second. [...]

Bally [...] reshapes the opposition between *langue* and *parole*: he defines *parole* as the 'actualization' of *langue*. All elements of *langue* are 'virtual,' and to be applied to the reality they have to be 'actualized': e.g. BOOK as an element of *langue* is a virtual concept, which becomes actualized by means of the 'actualizer' *this*, in a phrase such as *this book* (Bally 1965: §119). The phenomenon of actualization shows that *parole* follows *langue* from the point of view which Bally calls 'static.' From the 'genetic' point of view, however, this relationship is reversed: *parole* precedes *langue* in the genesis of language.

(Graffi 2013, pp. 474-5)

### c) Prague school

- *Some names*

Vilém Mathesius (1882–1945)

Sergej Karcevskij (1884–1955)

Nikolaj S. Trubetzkoy (1890–1938)

Roman Jakobson (1896–1982)

- *Mathesius' functionalism*

Mathesius opposed the 'actual' to the 'grammatical' analysis of the sentence. The latter is the traditional analysis into subject and predicate; the former subdivides the sentence into 'theme' and 'enunciation' (later called 'rheme'; see Mathesius 1929). Both analyses are necessary, in Mathesius' view, since they do not always coincide: e.g. the theme is not always identical with the grammatical subject, nor the rheme with the grammatical predicate. The differences are also cross-linguistic: Modern English tends to make the subject coincide with the theme much more than do languages like Czech. (Graffi 2013, p. 475)

This explains why one says *I like it* in today English, while in medieval English it was said *me liketh* ('like'). In Czech (and Italian), [...] the grammatical predicate, when it is the theme of the sentence (that is the topic which the sentence speaks about), can safely precede the subject: an English sentence as *at home, I am helped by my father*, in Czech would sound like Italian *a casa mi aiuta mio padre*. In the English sentence, the grammatical subject (*I*) precedes the grammatical predicate and is part of the theme, while in the corresponding Czech and Italian sentences the grammatical subject is *my father*, which is instead the rheme, namely what is said about the theme, in this case what answers the question *at home who helps you?* (from G. Graffi, *Due secoli di pensiero linguistico*, Roma, Carocci, 2010, p. 235)

- *The Prague school at 1928 International Congress of Linguists*

On that occasion, Prague scholars stressed the importance of Saussure's conception of *langue* 'as a system of reciprocal values,' hence on the structural conception of language. In their view, however, Saussure's limitation lay in restricting this systematic, structural perspective to synchronic linguistics: a 'teleological' and 'systematic' view of linguistic change had therefore to replace Saussure's 'atomistic' one (cf. Jakobson et al. 1929: 35–6). (Graffi 2013, p. 476)

- *The 'Theses of 1929'*

*First thesis*: not only does linguistic change show a systematic character, but also any linguistic stage contains some traces of the preceding ones.

*Second thesis:* distinction between the sound considered as ‘an objective physical fact’ and as ‘an element of a functional system’.

*Third thesis:* the different functions of language: the Prague linguists maintain that the study of language, on both the synchronic and the diachronic plane, cannot be adequate if the different linguistic functions (communicative, referential, poetic, etc.) are not taken into account (the problem of the different functions of language and of their definition was returned to by Jakobson some decades later; see Jakobson 1960).

- *Phonetics vs. phonology*

We designate the study of sound pertaining to the act of speech by the term *phonetics*, the study of sound pertaining to the system of language by the term *phonology*. (Trubetzkoy 1969 [1939], p. 4)

**Not all is said by defining phonology as the study of sound pertaining to the system of language, and phonetics as the study of sound pertaining to the act of speech. The difference between the two sciences must be shown in greater detail.**

**Since the signifier of the act of speech is a nonrecurring natural phenomenon, that is, a flow of sounds, the science in which it is studied must use the methods of the natural sciences. Depending on whether the object of study is the constitution or the production of sounds—though actually both aspects must be studied simultaneously—either the purely physical, acoustic aspect or the physiological articulatory aspect of the sound flow can be studied.**

(id., p. 9)

**Phonetics may therefore be defined as the *science concerned with the material aspect (of sounds) of human speech.***

(id., p. 10)

**The speech sounds that must be studied in phonetics possess a large number of acoustic and articulatory properties. All of these are important for the phonetician since it is possible to answer correctly the question of how a specific sound is produced only if all of these properties are taken into consideration. Yet most of these properties are quite unimportant for the phonologist. The latter needs to consider only *that aspect of sound which fulfills a specific function in the system of language.***

(id., p. 11)

Hence phonetics only investigates ‘the material side’ of the linguistic sounds, their acoustic and articulatory properties, which instead concern phonology only insofar as they have a ‘distinctive function’ (they distinguish meanings). This distinctive function differs across languages: some different sounds which bring about a meaning difference in a given language do not produce it in another. (Graffi 2013, p. 477)

- *The notion of ‘phoneme’*

Phonological units that, from the standpoint of a given language, cannot be analyzed into still smaller successive distinctive units are phonemes.<sup>4</sup> Accordingly the phoneme is the smallest distinctive unit of a given language. The signifier aspect of every word in the system of language can be analyzed into phonemes, that is, it can be represented by a particular sequence of phonemes.

(Trubetzkoy 1969 [1939], p. 35)

- *Rules for the discovery of phonemes*

Trubetzkoy (1969: 46–65) works out several rules to discover the phonemes of a given language. Their effect can be summarized as follows: two sounds of a given language realize two different phonemes if (a) they occur in the same position; (b) they bring about a meaning change. So, for example, English /p/ and /f/ realize two different phonemes, since they distinguish at least two meanings: e.g. pat vs fat (a ‘minimal pair,’ it will later be called). Phonemes are always defined with respect to a given language, since some sounds can be distinctive in one language but not in another. [...] Think e.g. of velar nasal consonants, like the final sound in English sing which distinguishes it from sin, with a final alveolar nasal. Velar nasal consonants also occur in Italian (e.g. in a word like sangue, ‘blood’), but in this language there is no minimal pair brought about by the contrast between velar nasal vs alveolar nasal, like the English case just cited. Therefore the velar and the alveolar nasal consonants, in Italian, are not phonemes but, in Trubetzkoy’s terms, ‘variants’ of the same phoneme: more exactly, they are called ‘combinatory variants’ (allophones, in American structural linguistics). The other kind of variants are ‘optional variants’: they do not differ according to the phonetic context in which they appear (like the Italian velar or alveolar nasals, which occur before velar or alveolar stops, respectively), but they are different sounds which may occur in the same position. One example of optional variants is Italian /r/: its standard realization is as an alveolar sound, but several Italian dialects realize it as a uvular phone (like in Parisian French). (Graffi 2013, pp. 477-8)

#### d) Copenhagen school

- *Some names*

Viggo Brøndal (1887–1942)

Louis Hjelmslev (1899–1965)

- *Hjelmslev’s linguistic theory (‘glossematics’): ‘transcendent’ vs. ‘immanent’ linguistics*

*mas.* **To establish a true linguistics, which cannot be a mere ancillary or derivative science, something else must be done. Linguistics must attempt to grasp language, not as a conglomerate**

**of non-linguistic (e.g., physical, physiological, psychological, logical, sociological) phenomena, but as a self-sufficient totality, a structure *sui generis*. Only in this way can language in itself be subjected to scientific treatment without again disappointing its investigators and escaping their view.**

(Hjelmslev 1961 [1943], pp. 6-7)

- *Hjelmslev’s ‘functions’*

The aim of linguistic theory, according to Hjelmslev, is the analysis of the system of dependences which form the structure of a given language (cf. pp. 21–8). Such dependences are called ‘functions’ (p. 33). As can be seen, this term is identical with that employed by Prague linguists, but its meaning is quite different for the two schools: for the Prague linguists, it designates something external to the structure of language (e.g. its poetic, or its communicative, function); in Hjelmslev’s framework it denotes the internal dependencies which constitute the structure itself. (Graffi 2013, p. 479)

- *The sign function: expression and content*

Up to this point we have intentionally adhered to the old tradition according to which a sign is first and foremost a sign *for* something. In this we are certainly in agreement with the popular conception and, moreover, with a conception widely held by epistemologists and logicians. But it remains for us to show that their conception is linguistically untenable, and here we are in agreement with recent linguistic thinking.

While, according to the first view, the sign is an *expression* that points to a *content* outside the sign itself, according to the second view (which is put forth in particular by Saussure and, following him, by Weisgerber<sup>10</sup>) the sign is an entity generated by the connexion between an expression and a content.

(Hjelmslev 1961 [1943], p. 47)

Thus there is also solidarity between the sign function and its two functives, expression and content. There will never be a sign function without the simultaneous presence of both these functives; and an expression and its content, or a content and its expression, will never appear together without the sign function’s also being present between them.

(Hjelmslev 1961 [1943], p. 48)

On the other hand, it would seem to be a justifiable experiment to compare different languages and then extract, or subtract, the factor that is common to them and that remains common to all languages, however many languages are drawn into the comparison. This factor—if we exclude the structural principle that involves the sign function and all functions deducible therefrom, a principle that is naturally common *qua* principle to all languages, but one whose execution is peculiar to each individual language—this factor will be an entity defined only by its having function to the structural principle of language and to all the factors that make languages different from one another. This common factor we call *purport*. *ambiguitas*

(id., p. 50)

[...] the same ‘factor common to all languages’ [...] can be differently shaped across languages, because of the different form that the sign function has in each of them. Let us give an example both for expression and for content. On the expression plane, the articulatory space of the nasal consonants is differently partitioned in English vs Italian: English opposes three nasal phonemes /m/, /n/, /ŋ/, Italian only two /m/, /n/. On the content plane, consider the way in which some different languages denote the purport of matters to do with the trees: (Graffi 2013, p. 479)

50] This incongruence within one and the same zone of purport turns up everywhere. Compare also, for example, the following correspondences between Danish, German, and French:

<i>træ</i>	<i>Baum</i>	<i>arbre</i>
	<i>Holz</i>	<i>bois</i>
<i>skov</i>	<i>Wald</i>	<i>forêt</i>

(Hjelmslev 1961 [1943], p. 54)

- ‘Figuræ’ of content and expression; ‘semiotics’ vs. ‘symbolic systems’

Both planes [i.e., expression and content] are analyzable, according to Hjelmslev, into smallest units, which are limited in number, that he called figuræ: expression figuræ are phonemes, content figuræ are semantic units from which larger semantic units can be constructed (e.g., man would be formed by the content figuræ ‘human,’ ‘male,’ ‘adult’). Content figuræ and expression figuræ are not in one-to-one correspondence: this is the reason why two planes are postulated (otherwise, such a postulation would be superfluous and the theory would violate the simplicity requirement). Any structure that has an expression plane and a content plane is named by Hjelmslev a semiotic, whereas structures with one plane only are ‘symbolic systems.’ Each plane can in its turn be constituted by a semiotic, and so on. (Graffi 2006, p. 185)

## e) Developments of European Structuralism after the Second World War: Jakobson's Binarism, Martinet, Benveniste

- *Jakobson's binarism*

Since the late 1940s, Jakobson remarked that phonemes are not the 'smallest distinctive units,' but they are actually constituted by even smaller entities, the distinctive features. For example, /d/ differs from /n/ (cf. *dine* vs. *nine*) because of the feature 'nasality'; and it differs from /t/ (cf. *do* vs. *to*) because of the feature 'tensedness.' During the 1950s, Jakobson, together with Morris Halle (b. 1923) further worked out his theory: any phoneme of any language is analyzed as containing or not containing a given feature from a universally fixed set of 12 (later 14) features, whose values are + or -; (binary value, hence the label of binarism given to the theory). For example, English /t/ would have the following features: [-vocalic], [+consonantal], [-compact], [-grave], [-nasal],[+tense], [-continuous] (for the meaning of these terms, see Jakobson and Halle, 1956). Both consonants and vowels are defined on the basis of the same features, and all languages have only this inventory of features at their disposal (but some languages exploit only some of them). Jakobson's binarism was adopted (with some modifications) also by generative phonology (see discussion under Generative Phonology Section). (Graffi 2006, p. 184)

According to binary theory, any phonemic opposition is to be represented as an opposition of features values: e.g., /p/ and /t/ are both [-compact], and such feature opposes them to /k/, which is [+compact], while they are different from each other since /p/ is [+grave] and /t/ [-grave]. These binary features (twelve in the earlier formulations of theory, fourteen in the final ones) are the same both for vowels and consonants and they are assumed to be universal. In other words, the phonemes of any language cannot be constituted but by these features: cross-linguistic differences are accounted for by the fact that not all features occur in all languages, and that some phonemes can have a positive value in one language and the opposite value in another (e.g., /l/ is [+vocalic] in Czech, but [-vocalic] in Italian).

Binarism was fiercely opposed by Martinet. (Graffi 2013, p. 480)

- *André Martinet (1908-1999)*

Martinet [...] was in the 1930s a foreign member of Prague linguistic circle; he consistently developed that 'functional view' of language explicitly stressed by the Prague theses (see Prague School section). Natural languages, in Martinet's view, have three features in common: (a) their communicative function, (b) their use of vocal utterances (i.e., natural language is essentially and primarily a vocal phenomenon, and only derivatively a written one), and (c) the double articulation, i.e., a first articulation into significant units [...], which are in their turn articulated into distinctive units ('phonemes'). (Graffi 2006, p. 185)

- *Émile Benveniste (1902-1976)*

Benveniste [...] combined his experience in the field of historical-comparative grammar of Indo-European languages with a particular skillfulness in the analysis of linguistic facts. (Graffi 2013, p. 185).

His first important contribution to general linguistics was an essay devoted to Saussure's doctrine of the linguistic sign (Benveniste 1939; reprinted as Benveniste 1966: ch. 4), where he states that it is the relationship between the linguistic sign and the reality which is arbitrary, while that between the signifier and the signified is necessary. In this way, Benveniste contributed to the clarification of some issues which appeared somewhat obscure in the Saussure 1922 text edited by Bally and Sechehaye; today, on the basis of the handwritten sources (§ 20.1.1), it is possible to say that Saussure's authentic thought was close to Benveniste's interpretation. (Graffi 2013, p. 481)

## 4) Other European schools of structural linguistics

### a) Guillaume and Tesnière

- *Gustave Guillaume (1883-1960)*

Guillaume [...] attempts to build a new theory of language which relates the notion of system to his own notion of time (possibly connected to that worked out by the French philosopher Henri Bergson): this theory is called by Guillaume ‘psychomechanics.’ Guillaume also reshapes the opposition between *langue* and *parole*: *langue* is ‘potential,’ while *parole* (which Guillaume proposes to replace with *discours*, ‘speech’) is ‘actual.’ [...] Guillaume investigates not only intra-sentential syntactic phenomena but also inter-sentential relations: e.g. he opposes two sentences such as *I spoke to Peter* and *It is Peter I spoke to* as a ‘basic sentence’ vs a ‘new expressive sentence’ (Guillaume 1971–2010: iii. 175). This inter-sentential relationship is an example of what Guillaume names ‘genetic syntax’: to that, he opposes the ‘syntax of result,’ namely linear word order. (Graffi 2013, p. 482)

- *Lucien Tesnière (1893-1954)*

Tesnière is not particularly interested in developing a general doctrine of language, but in building a new system of syntactic analysis, which is characterized by a fundamental opposition: that between ‘structural order’ and ‘linear order.’ The latter consists of the linear sequence of words; the former derives from what Tesnière calls ‘connection.’ Connection is essentially a hierarchic fact [...] For example, in a sentence like *John speaks*, ‘speaks’ is the governing element and ‘John’ the subordinate one (Tesnière 1959: ch 2, § 7). The hierarchic relations deriving from connection are represented by Tesnière in the format of tree diagrams (called by him ‘stemmas’), the highest node of which is always the main verb. The verb is therefore the central category of syntax, according to Tesnière: and his classification of verbs according to the number of participant roles (*actants*) they can take is his best-known contribution to syntactic theory, his so called ‘valency grammar.’ So there are ‘0-valency verbs’ (such as the meteorological ones), ‘1-valency verbs’ (the traditional intransitives), ‘2-valency verbs’ (the traditional transitives), and ‘3-valency verbs’ (such as the verbs of telling and giving). (Graffi 2013, p. 482)

## b) London school

- *Some names*

Daniel Jones (1881–1967)  
John R. Firth (1890–1960)  
M. A. K. Halliday (b. 1925)

- *Jones’ definition of phoneme*

a family of uttered sounds [ . . . ] in a particular language which count for practical purposes as if they were one and the same (Jones 1957: 22)

- *Firth’s view of language*

Firth’s view of language is characterized by the key role it assigned to the notion of context. He defined ‘meaning’ as ‘function in context’: not only words and sentences, but even phonetic units have meaning. (Graffi 2013, p. 483).

It is therefore not surprising that Firth’s most original contributions, in the fields both of phonology and of syntax, are related to the notion of context. According to Firth, Prague phonology restricted itself to a ‘paradigmatic’ approach, namely to the delimitation and classification of sounds and phonemes, while a ‘syntagmatic’ approach is also necessary, namely the analysis of the context where the sounds occur. ‘Prosodies’ are therefore to be added to phonemic entities (and actually Firth’s model of phonology is named ‘prosodic phonology’): by ‘prosody,’ Firth does not only mean accents, tones, or intonation, but also any other entity defined on the basis of its function within the spoken chain. For example, the English central vowel schwa (which occurs in words as *can* and *was* when they are unstressed) is not a phoneme but a prosody, the occurrence of which is determined by the rules of English syllabic structure. (Graffi 2013, pp. 483-4)

## 5) American Linguistics from 1920s through 1960s

## a) Sapir and his Heritage

- *Edward Sapir (1884-1939): his view of language*

The lungs developed, roughly speaking, in connection with the necessary biological function known as breathing; the nose, as an organ of smell; the teeth, as organs useful in breaking up food before it was ready for digestion. If, then, these and other organs are being constantly utilized in speech, it is only because any organ, once existent and in so far as it is subject to voluntary control, can be utilized by man for secondary purposes. Physiologically, speech is an overlaid function, or, to be more precise, a group of overlaid functions. It gets what service it can out of organs and functions, nervous and muscular, that have come into being and are maintained for very different ends than its own. (Sapir 1921, pp. 7-8)

- *Sapir's classification of grammatical concepts*

Let us begin with a simple sentence that involves various kinds of concepts — *the farmer kills the duckling*. (Sapir 1921, p. 86)

I. *Basic (Concrete) Concepts* (such as objects, actions, qualities) : normally expressed by independent words or radical elements ; involve no relation as such

II. *Derivational Concepts* (less concrete, as a rule, than I, more so than III) : normally expressed by affixing non-radical elements to radical elements or by inner modification of these; differ from type I in defining ideas that are irrelevant to the proposition as a whole but that give a radical element a particular increment of significance and that are thus inherently related in a specific way to concepts of type I

III. *Concrete Relational Concepts* (still more abstract, yet not entirely devoid of a measure of concreteness) : normally expressed by affixing non-radical elements to radical elements, but generally at a greater remove from these than is the case with elements of type II, or by inner modification of radical elements; differ fundamentally from type II in indicating or implying relations that transcend the particular word to which they are immediately attached, thus leading over to

IV. *Pure Relational Concepts* (purely abstract) : normally expressed by affixing non-radical elements to radical elements (in which case these concepts are frequently intertwined with those of type III) or by their inner modification, by independent words, or by position ; serve to relate the concrete elements of the proposition to each other, thus giving it definite syntactic form. (Sapir 1921, pp. 106-7)

- *Sapir's typological classification of languages*

The possible combinations of the four groups of concepts brings about Sapir's classification of languages into four 'conceptual types.' Type (A) languages only contain concepts (1a) and (2b) [*i.e., concepts of groups I and IV, in Sapir's quotation, above*]; those of type (B), concepts (1a), (1b) and (2b) [*i.e., of groups I, II and IV*]; those of type (C), concepts (1a), (2a) and (2b) [*i.e., of groups I, III and IV*]; those of type (D), all four kinds of concepts. (Graffi 2006, p. 187, *with some additions in italics*).

- *Some followers of Sapir; the "Sapir-Whorf" hypothesis*

We are thus introduced to a new principle of relativity, which holds that all observers are not led by the same physical evidence to the same picture of the universe, unless their linguistic backgrounds are similar, or can in some way be calibrated. (Whorf 1956, p. 214)

## b) Bloomfield

- *Leonard Bloomfield's (1887-1949) behavioristic approach*

Suppose that Jack and Jill are walking down a lane. Jill is hungry. She sees an apple in a tree. She makes a noise with her larynx, tongue, and lips. Jack vaults the fence, climbs the tree, takes the apple, brings it to Jill, and places it in her hand, Jill eats the apple. (Bloomfield 1933, p. 22)

It is evident that the connection between Jill's vocal movements [...] and Jack's hearing [...] is subject to very little uncertainty or variation, since it is merely a matter of sound-waves passing through the air [...]. If we represent this connection by a dotted line, then we can symbolize the two human ways of responding to a stimulus by these two diagrams:

speechless reaction: S→ R

reaction mediated by speech : S→r .....s→ R. (Bloomfield 1933, p. 26)

- *Immediate Constituent (IC) Analysis*

[...] every complex form is entirely made up, so far as its phonetically definable constituents are concerned, of morphemes. The number of these ultimate constituents may run very high. The form *Poor John ran away* contains five morphemes: *poor*, *John*, *ran*, *a-* [...] and *way*. However, the structure of complex forms is by no means as simple as this; we could not understand the forms of a language if we merely reduced all the complex forms to their ultimate constituents. Any English speaking person who concerns himself with this matter, is sure to tell us that the immediate constituents of *Poor John ran away* are the two forms *poor John* and *ran away*; that each of these is, in turn, a complex form ; that the immediate constituents of *ran away* are *ran*, a morpheme, and *away*, a complex form, whose constituents are the morphemes *a-* and *way*; and that the constituents of *poor John* are the morphemes *poor* and *John*. Only in this way will a proper analysis (that is, one which takes account of the meanings) lead to the ultimately constituent morphemes. (Bloomfield 1933, p. 161)

### c) Post-Bloomfieldian Structuralism

- *Some names*

Bernard Bloch (1907–1965)

Eugene Nida (1914-2011)

Charles F. Hockett (1916–2000)

Zellig S. Harris (1909–1992)

- *Harris' notion of 'transformation'*

In Harris's framework, a transformation is seen as an equivalence relation between two different sentence-forms: e.g., *Casals play the cello* and *The cello is played by Casals*, or *he met us* and *his meeting us* are 'transforms' of each other. The notion of transformation (with important modifications) was to become a cornerstone of generative grammar, especially in its first phases (see later discussion). (ibid.)

### d) The beginnings of typological linguistics

- *Joseph Greenberg's (1915-2001) syntactic typology*

In Greenberg's perspective (see Greenberg, 1966), a close link is assumed between typology on the one hand and universals on the other. Language universals are no longer exclusively conceived as features that every language *must* possess: to such universals, named by Greenberg 'unrestricted' universals, also implicational universals and statistical correlations have to be added. The most well known instances of implicational universals concern the linear ordering of elements. Greenberg assumed as the bases of his language classification three possible choices: (1) whether a language has prepositions or postpositions ('prepositional' vs. 'postpositional' languages). (2) The position of the verb (V) with respect to the subject (S) and to the object (O). Of the six theoretically possible positions, only three normally occur: VSO, SVO, and SOV. (3) The order of the adjective with respect to the noun it modifies: A (=AN) vs. N (=NA). Such choices are systematically correlated with each other in an implicational way: this implication can be exceptionless or only statistically significant. An instance of the first case is the statement that if a language shows VSO order, it is *always* prepositional (Greenberg's Universal 3). On the other hand, Greenberg's universal 4 is an example of 'statistical correlation': if a language has a normal SOV order, it is postpositional "with overwhelmingly more than chance frequency." (Graffi 2006, p. 188)