The history of thought about language and thought

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0. Introduction

Linguistic relativism – the view that our way of thinking depends, at least partially, on the language we speak – is primarily associated with anthropological linguistics, as it was practised by American scholars like Franz Boas (1858-1942), Edward Sapir (1894-1939) and Benjamin Lee Whorf (1897-1941). The expressions 'Whorf hypothesis' and 'Sapir-Whorf hypothesis' are habitual ways of indicating linguistic relativism.¹

In linguistic historiography, there is a tradition of regarding Wilhelm von Humboldt (1767-1835) as an important predecessor of Sapir and Whorf. The picture of linguistic relativism in history is usually completed by Johann Gottfried Herder (1744-1803) and Johann Georg Hamann (1730-1788) as predecessors of Von Humboldt, and by the 19th-century 'Völkerpsychologie' of Heymann Steinthal (1823-1899) and Wilhelm Wundt (1832-1920), as well as by the 20th-century 'Inhaltbezogene Grammatik' of Leo Weisgerber (1899-1984) as continuations of Von Humboldt's approach.²

Recent historical research into linguistic relativity has elaborated this picture in various ways. Firstly, attempts were made to discover roots of linguistic relativism in works earlier than those of Herder and Hamann. Secondly, alleged historical links were scrutinized and explored, so that differences in importance became visible. Thirdly, the picture became more complete and differentiated. Names of -less prominent- relativists were added and details were revealed about historical relationships.³

I will attempt in this article to construct a different, and partially contrary elaboration of the picture. My main purpose is to give a clear idea of the *content* of the various views of linguistic relativity. I feel that this central aspect has been far too neglected, in favour of an almost philological inclination to discover

¹ Their most important publications containing views on language and thought are, respectively, Boas (1911), Sapir (1921) and Whorf (1956). I came across the alternative expression 'Whorf-Sapir hypothesis' in Cornelisse (1995).

See, respectively, Von Humboldt (1836), Herder (1772), Hamann (1821-42), Steinthal (1860), Wundt (1922⁴) and Weisgerber (1953/54).

Examples of ideas about earlier roots of linguistic relativism and about other defenders of this view are presented in Christmann (1966) and Penn (1972). Both works are discussed in section 2 of this article. Concrete details about historical links are presented in, for example, Koerner (1990). Mackert (1993) constitutes an example of a more differentiated approach to historical relationships.

'sources' for all ideas. In section 1, I will argue that this inclination has resulted in unjustifiable assumptions about the age of linguistic relativism. Contrary to claims about roots in antiquity, or – less extreme – in 16th-century Europe, I defend the view that linguistic relativism did not arise earlier than \pm 1750, and could not do so before then because of general trends in linguistic thought of earlier centuries. Earlier pseudo-discoveries of relativism-avant-la-lettre are based upon mistaken interpretations of the views at issue.

In section 2, I take a closer look at the respective contents of 19th-century and 20th-century views of linguistic relativity. Instead of stressing continuity, I will pay attention to the enormous differences that can be observed between the relativism of these two periods. These differences will turn out to be understandable enough if we take into account the revolutionary changes that took place at the turn of the century, in the general cultural climate of opinion as well as in linguistics and psychology.

When discussing adherents of 19th-century linguistic relativity, I will primarily pay attention to the most important representatives mentioned above. With respect to the transition from its 19th- to its 20th-century version, however, I will also pay attention to Georg von der Gabelentz (1840-1894), because of his interesting and revealing 'in between' viewpoint.

In section 3, the 20th-century views of Boas and Sapir will be discussed in more detail. They are interesting because they directly build upon the 19th-century heritage. Nevertheless, they will turn out to confirm the idea of a radically changed linguistic relativism.

1. Linguistic relativism in historical perspective

Hans Helmut Christmann's article Beiträge zur Geschichte der These vom Weltbild der Sprache (1966) and Julia Penn's booklet Linguistic Relativity and Innate Ideas (1972) both aim at laying bare the historical roots of linguistic relativism. Both want to go back into history as far as possible. Christmann does not go further than British empiricists like John Locke (1632-1704) and Francis Bacon (1561-1626), the latter being the earliest scholar mentioned. Penn, however, ventures upon another big step into the past, from Bacon to antiquity. Her conclusion is: 'It has been shown that Plato first advocated the notion that thought can be influenced by language. Aristotle took a position similar to Plato's on the relation of language to thought, but the idea that language influences thought can be found in Aristotle's writings only by implication' (p.44).

Are these ideas about early linguistic relativism tenable? I will answer this by discussing the alleged roots in antiquity and in British empiricism in separate subsections.

1.1 Plato and Aristotle. When we look at Penn's arguments for regarding Plato and Aristotle as relativists avant-la-lettre, we have to conclude that her statements are totally untrue. All that Penn shows us is that Plato's Kratylos contains the sentence 'Agreement and custom do contribute to the expression of that which we are thinking when we speak', and that Aristotle's Pèri hermeneías contains a passage that stresses the differences between languages, contrasting them with the similarity of the thoughts they symbolize (p.41). Penn bluntly rephrases Plato's words as 'the way we think is influenced by the language we speak'. Aristotle's passage is paraphrased in terms of the impossibility of translation and thus as an implicit acceptance of linguistic relativism. It is pointless to speculate about what precisely went wrong. The simple fact that neither passage mentions a correlation between language differences and thought differences justifies the conclusion that Penn does not demonstrate the existence of a Platonic or Aristotelian variety of linguistic relativism.

I would not have paid attention to these evident misinterpretations were they not – extreme – examples of a more general tendency of seeing relativism wherever some thought about language and thought is presented. Christmann's and Penn's incorporation of the English empiricist philosophers Francis Bacon and John Locke into the ranks of linguistic relativists also exemplifies this tendency, as I will show now.

1.2 Bacon and Locke. What are the linguistic-relativistic elements in the works of Bacon and Locke? With respect to Bacon, Christmann and Penn each mention one element. Christmann (1966:468) presents the following quotation as an evident signal of relativism, without further explanation: 'Men imagine that their minds have command of language: but it often happens that language bears rule over their minds'. Penn (1972:42) discusses a passage of Bacon's De dignitate et augmentis scientiarum, in which he correlates the cultures of the Greeks, Romans and Jews with their languages.⁴ She regards these correlations as antedating later relativism, although she concedes that they concern collective non-linguistic behaviour, not individual thought.

The latter point is important, more than Penn suggests. From very early days onwards, correlations – mostly very speculative – were assumed between characteristics of languages and *non-cognitive* characteristics of the people speaking them. Parallels between languages and their users with respect to, for example, anatomy, temperament, or the climate they live in, were popular issues to reflect upon.⁵

⁴ Penn's ideas about Bacon and Locke are based upon Weimann (1965).

⁵ Interesting examples of such parallels are presented in Von der Gabelentz (1901²). A late representative of this type of parallellism is the Dutch linguist Jac. van Ginneken (1877-1945).

Interesting as these parallels may be, they do not signify linguistic relativism. Linguistic relativism claims a direct relation between a language and the *cognitive* characteristics of all its individual users. It presupposes a non-universalistic view of concepts and grammar. Therefore, universalistic views of concepts (like Platonism or Cartesianism) and universalistic views of grammar (like 17th-century General Grammar and its successors) preclude linguistic relativism. Although Bacon was an early empiricist, he still adopted universalism in both respects. He believed in a general or philosophical grammar and in the possibility of developing an ideal language to represent reality in an unambiguous way. The very basis of linguistic relativism is thus absent from his general view of language.

Bacon's belief in the dependency of mind on language, mentioned by Christmann, is also compatible with his universalism. Belief in the guidance of cognition by language applies to universal features, as well as to particular ones. This point is often overlooked in discussions of this subject, so that relativism is assumed wherever statements are made recognizing that language is not a 'mere' reflection of thought, but also an active thought-structuring factor.⁷

With respect to Locke, Christmann does not mention arguments for his classification as a linguistic relativist, besides his influence upon the -relativistic-thoughts of Étienne Condillac (1714-1780). Penn discusses an alleged relativistic element in Locke's works, namely his rejection of innate ideas. What is innate is, of course, universal and cannot participate in linguistic relativity. But the reverse is not true: a minimum of innateness assumptions does not imply linguistic relativity. Firstly, universality is not necessarily caused by innateness; other (for example, sociological) factors may be relevant too. Secondly, even if a large conceptual variety is assumed, this does not imply that the conceptual variety correlates with differences between languages. Variety may be due exclusively to the rise of specific terms and concepts in relation to developments in areas like science, art and religion, and have nothing to do with differences between, say, Greek and English.

For Locke, as an empiricist philosopher, conceptual variety is largely of the 'scientific' type. His works do not reveal that he has views on linguistic relativity. Therefore, by creating an improper opposition between linguistic relativity and innate ideas, Penn – see the title of her book – draws conclusions about Locke that are not only invalid but also factually untrue.

⁶ See Eco (1995) for the history of the idea and practice of creating a perfect language. Eco clearly demonstrates the incompatibility of the perfect language ideal and linguistic relativism (Eco 1995: 111-113).

⁷ For example, the work of Lev Vygotsky (1896-1934) is sometimes unjustifiably interpreted as relativistic, because of his ideas about the role of language in the development of thought in children (cf. Adams 1970 and Innis 1982).

We observed various types of reasoning leading up to unjustified attributions of linguistic relativism. Although in all cases reference is made to language-thought issues more or less related to relativism, cogent arguments for relativism are lacking, resulting in too early ascriptions of linguistic relativism. Generally speaking, linguistic relativism presupposes conceptual variability, related to particular lexical and/or grammatical variability. Neither appears until after ± 1750 . French 'Idéologues', such as Condillac, combined Locke's epistemological relativism with their own encyclopedic interest in society and history. Universalism in concepts, vocabulary and grammar was rejected. Thus, for the first time, correspondences between languages and the cognition of their individual speakers were assumed.

Somewhat later, Herder (who was familiar with Condillac's work) developed similar ideas, partially inspired by the views of Hamann. But only when linguistic relativism was passed on by the philosophers Herder and Hamann to the polyglot Von Humboldt, could it develop into a large cluster of alleged language-thought correlations relating to numerous languages from all over the world. With Von Humboldt began the heyday of 19th-century linguistic relativism.

2. Linguistic relativism before and after 1900

It is, of course, ridiculous to localize a large-scale change in thought about language and thought exactly at the turn of a century. In our case this is even more so, because actually *three* large-scale changes are at issue, one cultural, one linguistic and one psychological. There are, moreover, few relationships between the changes, and each of the changes constitutes a long and intricate process. Still, with only a few exceptions, 19th-century linguistic relativism radically differs from that of the 20th century, so that although our temporal boundary is artificial, it is not entirely unrealistic.

I will deal with the three changes in separate subsections, and discuss the implications for linguistic relativity of each change. I will illustrate two of these implications (the cultural and the linguistic one) using the work of Von der Gabelentz, which is very instructive because of its ambivalent position between 19th- and 20th-century thought. The third issue, the psychological one, will be illustrated by comparing Von der Gabelentz' views, in this respect retaining the 19th-century character, with those of the 20th-century psychologist Karl Bühler (1879-1963).

2.1 Cultural changes. The cultural changes relevant to linguistic relativism belong to many areas: anthropology, biology, politics, ethics. I will confine myself to giving some short indications of the most important points.

Linguistic relativity, as conceived by 19th-century scholars like Von Humboldt and Steinthal, was always closely connected with the *evaluation* of languages in terms of their degree of primitiveness or civilization. Not surprisingly, Western European languages were valued most highly in the resulting hierarchy of languages.

Linguists, rejecting universal grammar, gradually developed a worldwide view of language variety. Systematic insights were gained into the enormous wealth of morphological and syntactical means of which languages make use. Impressive bodies of material were gathered and attempts at typologies made. Von Humboldt, for example, developed the well-known classification of languages into isolating, agglutinating, inflecting and incorporating languages, dependent on the grammatical means adopted for identifying the constituent parts of a sentence and their relationships.

Language had always been considered a direct mirror of thought. Earlier General Grammar assumed thought processes to be in strict conformity to the assumed structures of sentences. After abandoning universalism, linguists continued their belief in a strict language-thought parallelism, but in a new way. Linguistic relativism was a natural result of this approach.

Bias in favour of European languages was strengthened by a real lack of insight into the structure of more 'exotic' languages. Only gradually was a universally applicable grammatical apparatus developed. Nineteenth-century description still favoured the well-known European categories, so that languages lacking them could be called 'formless'. But there were also negative evaluations of languages, due to a too superficial observation of the linguistic facts, and to an inconsistent application of criteria.

It is these mistakes that are vehemently criticized by Von der Gabelentz. His standard work *Die Sprachwissenschaft. Ihre Aufgaben, Methoden und bisherige Ergebnisse* (1891) is an early attempt to integrate all types of linguistic research diachronic, synchronic, language-specific and general- into one umbrella discipline. One important element of this discipline is 'Sprachwürderung', discussed in a voluminous final chapter.

Nearly all negative evaluations by others are criticized by Von der Gabelentz. Too hastily reached conclusions of formlessness or illogicality are attributed to a lack of effort, leading to a too superficial investigation, which leaves the less 'visible' forms and internal logic hidden from the linguist. Numerous negative judgements are also denounced as selective applications of criteria: the same features responsible for condemnations of languages as 'primitive' are praised

Nowak (1994) shows that much empirical knowledge of 'exotic' languages was gathered during the 18th century already. General grammar, however, disregarded this knowledge, precisely because of its universalism.

when showing up in, for example, German. One example of this is Von der Gabelentz' remark about vocabulary comparison:

Da wird leicht (...) mit zweierlei Mass gemessen: jetzt rühmen wir uns unsres Abstractionsvermogens un der generellen Begriffe, die unsre Sprachen zu benennen wissen, während die armen Barbaren und Halbbarbaren 'im Besonderen stecken geblieben sind', – und dann, wenn die Rollen vertauscht sind, lobt man die feinen Unterschiede, die wir machen, und tadelt jene wegen der "Unbestimmtheit" ihrer Vorstellungen (Von der Gabelentz 1901²: 393).

Von der Gabelentz' style of adopting linguistic relativism seems to pave the way for 20th-century relativism. The egalitarian view of languages and the disbelief in 'formless' languages, incidentally demonstrated by him, will be adopted as principles by 20th-century linguistic relativists.

2.2 Linguistic changes. As is well known, linguistics underwent some radical changes in the first decades of the 20th century, the Cours de linguistique générale (1916) of Ferdinand de Saussure (1857-1913) being an important milestone in this development. Two aspects are directly relevant to linguistic relativism. Firstly, the separation of synchronic and diachronic linguistics casted doubt upon the relevance of etymology to – synchronic – views about language and thought. The view that the etymology of a word (for example, the English 'handkerchief' vs the Dutch 'zakdoek' ('pocket cloth')) reveals the way we conceive of its referents at the moment, loses its matter-of-course character. During the whole of the 19th century, this type of language-thought relationship had constituted an important source for linguistic-relativistic arguments; now its invalidity became clear.

Secondly, the view of languages as systems of oppositions runs counter to 19th-century linguistic relativism in three ways. On the most general level, it stimulated a'completeness' view of language. On the next general level, it stimulates the search for 'compensating mechanisms'. The absence of a case-system is, for example, expected to be compensated by other elements of the language system in question. On the most concrete level, a view of the lexicon is stimulated that allows various lexical divisions of the same 'semantic space'. If languages 'choose', for example, different prepositions to express the same relationship (e.g. English 'by train' vs Dutch 'with the train'), this does not necessarily reveal a difference in the conception of the relationship at issue. We can content ourselves by stating that part of the semantic space of Dutch 'with' is occupied, in English, by 'by'.

All these considerations render linguistic relativism less probable and thus less attractive. It is, therefore, not surprising that De Saussure rejects all types of relativism. But also Von der Gabelentz' *Sprachwissenschaft* is remarkably modern in these respects. With respect to etymology, his opinion is that

die Etymologie im günstigsten Falle nur nachweist, wie sich im Geiste der Urahnen die Vorstellungen und Begriffe gestaltet und verknüpft haben (...). Mit der Zeit aber hat sich in den Völkern das etymologische Bewusstsein verdunkelt (...), und, wie der Dichter sagt, der Lebende hat Recht. Beurteilt man die Griechische Sprache unter dem Gesichtspunkte der indogermanischen Etymologie, so läuft man Gefähr, arge Anachronismen zu begehen und dem Sprachgefühle Dinge anzurechnen die schon längst in ihm erstorben sind (p.396).

With respect to a language saying things like 'I see cold, hunger, fear', etc. Von der Gabelentz refuses to draw conclusion about the thought patterns of its speakers. His conclusion is: 'So hat offenbar das Sehen hier die weitere Bedeutung des Empfindens angenommen' (p.397).

The view of language as a system of oppositions is not systematically present in Van der Gabelentz' book. However, a few passages do bear witness to this view, including its implications for linguistic relativism. For example, Von Humboldt and Steinthal are criticized because of their evaluations of languages on the basis of isolated examples. Instead, 'man soll eine Sprache, um sie zu beurteilen, nicht in ihre einzelne Merkmale zerpflücken, sondern sie als Ganzes nehmen' (p. 394).

2.3 Psychological changes. At the end of the 19th century, academic psychology began to abandon its associationist and representationist basis, still favoured in the works of Steinthal and Wundt. For the study of language, which had leaned heavily upon this type of psychology during the entire 19th century, this implied that words and sentences were no longer conceived as directly reflecting mental processes consisting of concatenations of representations, corresponding with the sequence of sentence elements. Instead, as a result of the development of 'Akt-psychologie' by Franz Brentano (1838-1917) and his pupils, as well as of the experiments of the Würzburger 'Denkpsychologen', linguistic structures became to be conceived as abstract elements of contents of intentional psychological 'acts' (e.g. of judging).

Although the process by which this change came about and penetrated linguistics was long and intricate, its eventual impact upon linguistic thought, including linguistic relativism, is unmistakable. For example, earlier relativists did not hesitate to interpret patterns of word order in terms of patterns of thought processes. Word order differences between languages are therefore indicative of different mental processes of their speakers. With respect to this subject, Von der Gabelentz follows the traditional trend. He introduces the notions 'psychological subject' and 'psychological predicate' in order to account for earlier and later elements of thought and speech, in accordance with the usual trend of reconstruc-

ting grammatical notions in terms of sequential elements in the speaker's thought process.⁹

The effect of the change in psychology described above becomes clear when we contrast these views with those of the psychologist Bühler. In his *Sprachtheorie* (1934) Bühler exclusively discusses linguistic relativity in terms of relations between linguistic phenomena and preferences for thought *contents*. His conceptual distinction between 'Sprachhandlung' and 'Sprachwerk', as well as his experimental refutation of the view of thinking/speaking as concatenating representations/words, precludes any link with thought processes. When discussing Chinese, Von der Gabelentz' main question is 'Was geht im Bewusstsein des Chinesen vor?' Bühler, however, pays attention to worldview issues, suggesting a Chinese preference for 'das dinglich Individuelle'. Subject-predicate structure, for Von der Gabelentz conceived in terms of thought processes, is discussed by Bühler as a symbolization of the Indogermanic act-like way of structuring linguistic content (cf. Bühler 1934: 152 and 370).

3. The 20th century; Boas and Sapir

The changes discussed in the last section affected not only the content of linguistic relativism, but also its prominence. The disappearance of naive anthropology and romantic nationalism, the greater sophistication of linguistics as well as of psychology, all helped to put an end to 'Völkerpsychologie'. Von der Gabelentz' *Sprachwissenschaft* is, as far as I know, the last general linguistic handbook containing a 'Völkerpsychological' chapter. In general, 20th-century structuralism emphasized the autonomy of linguistics as a separate discipline, independent of psychology.

For linguistic relativism, all this implied, apart from a shift of its content, a shift of its position in the scientific field. It used to be a natural element of linguistic thought, but now it became a subject for specialists in anthropological linguistics. Cognitive correlates of linguistic phenomena, once thought deducible from almost any feature of language, became restricted to specific lexical and grammatical phenomena.¹⁰

The work of the American anthropological-linguists Boas and Sapir illustrates these developments very well. Recent historiography pays ample attention to their roots in the European linguistic relativism of Herder, Von Humboldt and Steinthal, thereby neglecting the enormous intellectual distance between Boas and Sapir

⁹ See Von der Gabelentz (1901²: 360-365). See Elffers (1991) for details about the general development of the distinction between grammatical and psychological subject and predicate.

Weisgerber's 'Inhaltbezogene Grammatik' constitutes as exception by largely continuing the older approach. The term 'Neo-Humboldtianism', which is also used to indicate this approach, is very appropriate.

and these predecessors, caused by the changes discussed above. This distance will become more apparent during a short discussion of their respective views, to which I turn now.

3.1 Boas. Boas' study of Amerindian languages initially followed Steinthal's approach, apart from the evaluative aspect. In a lecture, he explicitly stated: 'At the time of Humboldt and Steinthal the evaluation of languages was one of the main objectives of research. Today, this problem does not interest us, but we are attracted to psychological problems' (see Mackert 1993: 339). This different motivation, but also his extensive involvement in language description, induced more and more deviations from the Steinthalian model of description.

For example, Steinthal's way of dealing with the notion 'form' was severely criticized for not applying to Amerindian languages. Often, therefore, conclusions about 'formless' languages were invalid. In general, Steinthal was accused of leaning too heavily upon grammatical notions borrowed from European languages. Boas took the task of describing languages 'in their own terms' very seriously, and developed a sophisticated descriptive apparatus in an attempt to avoid any bias towards specific types of language. Independently of De Saussure, Boas thus created the beginnings of the American variant of structuralism. As in European structuralism, synchrony and diachrony are clearly distinguished. Boas accordingly rejected linguistic-relativistic conclusions based upon etymology.

Psychologically, Boas stressed the 'unity of mankind'. He assumed universal characteristics of the human mind, criticizing the earlier idea (of, among others, Wundt) that 'primitive' people are not capable of abstract thought. All human beings are assumed to conceptualize abstract categories on the basis of experience. Linguistic relativistic thought comes in where, because of different experiences and cultural differences, these categories become very different, both in character and in degree of prominence. According to Boas, these differences are reflected in languages, mainly in their vocabulary, but also in grammar.¹¹

Although Boas' psychological theory is still associationistic, this view is not activated in his linguistic-relativistic ideas. The linguistic relativity adopted by him, exclusively concerns cognitive content, not cognitive processes.

3.2 Sapir. As a pupil of Boas, Sapir focused on Amerindian languages. As in Boas' work, concrete description was combined with the further development of the descriptive apparatus. In this respect, Sapir continued the trend of deviating from earlier and too Europe-centric concepts. As a general linguist, Sapir also criticized the Humboldtian typology of languages in terms like 'inflectional',

For example, Boas introduced the famous case of Eskimo 'snow' terminology, which has been often exaggerated and misrepresented (up to the maximum of 200 words for various types of snow. Boas distinguishes four terms, contemporary linguists two.

'agglutinative', etc. as being too absolute and too superficial. Evaluative implications as to the 'formlessness' of languages were accordingly rejected. In any case, Sapir regarded as spurious the distinction between those languages that have form and those that do not.

In his book *Language* (1921), Sapir devotes a chapter to alleged relationships between race, culture and language, denying them all. By referring to simple historical facts indicating non-correspondence between peoples and languages, and cultural differences within linguistic communities, all naive 19th-century myths are refuted:

... all attempts to connect particular types of morphology with certain correlated stages of cultural development are vain. Rightly understood, such correlations are rubbish. The merest *coup d'oeil* verifies our theoretical argument on this point. Both simple and complex types of language of an indefinite number of varieties may be found spoken at any desired level of cultural advance. When it comes to linguistic form, Plato walks with the Macedonian swineherd, Confucius with the head-hunting savage of Assam (p.219)

Exception is made for the vocabularies of languages, and some grammatical distinctions of the aspectual or, for example, the 'animate-inanimate' type. These features are supposed to reflect cultural needs. By this culture-ladenness, language learning implies the formation of a worldview. Our world is 'to a large extent built up on the language habits of the group' (*Selected Writings*, ed. Mandelbaum: 216).

Remarkably enough, Sapir also adopts an almost tautological type of correspondence between language and thought-processes, by stating that 'language and thought-grooves are inextricably interrelated, are, in a sense, the same', and by identifying 'the infinite variability of linguistic form' with 'the infinite variability of the actual processes of thought', and morphology with 'a collective *art* of thought'. But by subsequently stressing that culture relates to thought *content* (the 'what'; not, as with the 'art of thought', the 'how'), Sapir makes clear that this view does not imply any type of 19th-century 'substantial' linguistic relativism (Sapir 1921: 217-18).

4. Conclusion

The history of linguistic relativism exhibits a very clear continuity. Ideas of 20th-century linguistic relativists can be *partially* explained by reference to their 19th-century predecessors. They also deviate from their predecessors to a considerable degree. These deviations can be explained if general developments in the climate of thought, in linguistics and in psychology are taken into account.

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