A REVIEW OF METHODOLOGIES AND METHODS IN LINGUISTIC RESEARCH: DIACHRONIC AND SYNCHRONIC APPROACHES

UDC 81-11

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Abstract. This review of research methodologies and methods in linguistic science has a dual focus. Firstly, the paper provides some essential historical background to the development of the scientific study of language in general and individual languages, including contemporary linguistic inquiry. Secondly, the review attempts to outline the division of labour between linguistic disciplines and models, their respective research methodologies and methods. By including both diachronic and synchronic aspects of linguistic inquiry, the review aims to provide an analyst with a few preliminaries that can be used to situate a linguistic issue in the complex landscape of linguistic theories and research methodologies.

Key words: linguistic science, research, methodology, method, diachrony, synchrony

1. INTRODUCTION

Crystal (2008, 283–84) points out that the development of the academic subject of linguistics, the scientific study of language, "has been relatively recent and rapid, having become particularly widely known and taught in the 1960s". As Crystal notes, this is a relative statement, as, for example, it can also be claimed that linguistics was established as an academic discipline by August Schleischer and his generation of linguists in the nineteenth century (Honeybone 2005, 45). Namely, historical linguist Karl Brugmann found that linguistics, which he thought was sixty years old in 1878, was a relatively mature discipline (Honeybone, ibid.).

Actually, it is a well-known fact that language has been studied for a very long time. Campbell (2017, 97) highlights that early developments in linguistic inquiry were inseparable from other fields of study, such as "philosophy, rhetoric, logic, psychology, biology, pedagogy, poetics, and religion, making it difficult to separate the history of linguistics from intellectual
history in general”. This, furthermore, means that it is not possible to understand how linguistics developed without considering historical and cultural contexts (ibid.). Equally importantly, any linguistic research should take into consideration the issue of the ontological status of language. In other words, Allan (2003, 536–37; 553) notes, language can be studied as manifest in physical objects and physical events, as an abstract object, the object of knowledge and social behavior. With regard to the connection between linguistic science and a wide range of disciplines (which also aim to provide knowledge about language and languages) as well as the ontological status of language, it goes without saying that linguistics research can employ a variety of research methodologies and methods.

All these approaches can be subsumed under two major paradigms, qualitative and quantitative research, or in Allan’s (ibid. 538) terminology, phenomenological inductivism and hypothetico-deductivism. Creswell (2014, 12–13) states that qualitative design comes from anthropology, sociology, the humanities, and evaluation, and that this design became more clearly visible during the 1990s and into the twenty-first century. On the other hand, during the late nineteenth and in the twentieth century, quantitative research was related to the postpositivist1 worldview and originated mainly in psychology. Qualitative research is inductive, which means that theory is derived from the research results, whereas quantitative research is deductive, which involves forming and testing hypotheses (Rasinger 2013, 11). These two macro-approaches, however, are not mutually exclusive because, as Allan (ibid. 558) states, "the linguistic researcher must expect to go to and fro between them, reviewing the data to intuit hypotheses and then checking the hypotheses against the data". And not only that: research can rely on the mixed-methods approach, which integrates both qualitative and quantitative data and analyses to deal with more complex issues (Riazi 2016, 193).2

This paper provides some basic historical context relative to the development of linguistic science as well as some major characteristics of research methodologies and methods. It outlines major traditions in the history of linguistics, including both diachronic/historical/longitudinal and synchronic/non-historical/static aspects of linguistic inquiry. By doing so, the paper aims to highlight relevant differences, possible overlaps and expansions of research methodologies and lay out a few introductory guidelines on how to write an operational research proposal.

2. ESSENTIAL HISTORICAL BACKGROUND

Campbell (ibid. 97) notes that, although many "histories" of linguistics have been written in the last two hundred years, linguistic historiography itself has become a specialized subdomain since the 1970s. Section 2 is a review of the key developments and traditions in linguistics, mainly based on Allan’s (2016, 11–15) and Campbell’s (ibid. 97–118) overview of the history of linguistics. A comprehensive linguistic historiography is given in the three-volume book History of the Language Sciences/Geschichte der Sprachwissenschaften/Histoire des sciences du langage (eds. Auroux, Koerner, Niederehe and Versteegh, 2000; 2001; 2006). This three-volume encyclopedia describes the development of the language sciences from the beginnings to the present, taking into account both the historical and geographical contexts. In addition to discussing the traditions mentioned in this review, the book provides information about the Near

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1 The postpositivists identify and assess the causes that produce outcomes (Creswell 2014, 7).
2 See, for example, the Journal of Mixed Methods Research (JMMR) and the International Journal of Multiple Research Approaches.
East, Chinese, Korean, Japanese, Dravidian, Syriac, and other traditions, and about other topics relevant to the history of linguistic science.

2.1. Grammatical traditions

As already mentioned, any linguistic historiography shows us that the history of linguistics is inseparable from the history of other disciplines interested in language issues. Linguistic thought, in fact, as Allan (ibid. 11) points out, dates back to prehistoric times. When writing systems developed, language could be recorded, which prompted further changes in linguistic inquiry. Allan (ibid. 11–12) highlights that some of the most important dates and developments are the following: the earliest evidence of linguistic analysis from the fifth millennium BCE in China, the logographic writing systems, bilingual Semitic word lists from the third millennium BCE, lists of equivalences between Sumerian and Akkadian words in the eighteenth century BCE, etc.

Campbell’s (ibid. 97–99) historical account starts from the grammatical traditions that include the Old Babylonian tradition, the Hindu tradition, the Greek grammatical tradition, Roman linguistics, the Arabic grammatical tradition, and Early Christian writers. As for the Old Babylonian tradition, the author refers to the development of the Akkadian tradition, which arose "by about 1900 BCE and lasted 2,500 years, so that Sumerian could be learned and these texts could continue to be read (ibid. 97)". It is further explained that some early texts were lists of Sumerian nouns and the Akkadian equivalents, and these lists were the basis for grammatical analysis which developed in the fifth and sixth centuries BCE. The Hindu tradition is connected with the Vedas, dating from ca. 1200 BCE, "the oldest of the Sanskrit memorized religious texts (ibid. 98)". This tradition is also famous for Pāṇini’s description from ca. 500 BCE, which comes from "comparisons between versions called padapāta (word-for-word recitation) and samhitapāta (continuous recitation, of divine origin, unalterable) of the same Vedic texts (ibid.)". The Greek grammatical tradition, as Campbell (ibid. 98) states, was developed by schoolmasters, but it is known from subsequent writings of philosophers. The themes discussed in this tradition, such as the origin of language, grammatical categories, the relation between thought and language, "nature" vs "convention" in relation to word meaning, have been present in the history of linguistics all along. Roman tradition followed Greek themes: for instance, with some notable exceptions, Roman grammarians, like their Greek colleagues, did not discuss syntax (they only discussed parts of speech). As regards the Arabic tradition, Campbell (ibid.) mentions connections with the Greek tradition(s), especially Aristotle. The Arabic grammarians regarded Arabic as sacred, and, in that sense, "the system of inflectional endings was believed to be proof of the symmetry and logicalness of the language (ibid.)." Furthermore, the author also explains, "the realization that the spoken Arabic of the eighth and ninth centuries was changing stimulated the development of Arabic grammatical study (ibid. 99)". The Hebrew tradition adopted descriptive methods from the Arabic linguistic tradition, and, between 900 and 1550, 145 works dealing with grammar were written (ibid.). Finally, Early Christian tradition revisited Aristotle and the Stoics. Priscian's Institutiones (ca. 830) gave rise to a new line of linguistic thinking, which later resulted in the speculative grammar of the thirteenth and fourteenth centuries.
2.2. Universal grammar

In the twelfth century, grammarians became interested in the ideas of universal scientific knowledge and universal grammar, and these considerations dominated the European scene for the next four centuries. The main topic was the expression of universal semantic concepts in individual languages (ibid. 99–100). Allan (ibid. 13–14) explains that the notion of a "universal" grammar was formulated by the speculative grammarians in the thirteenth century. The speculative grammarians supported Aristotle's belief that all humans have the same (or similar) experience, regardless of the language they speak. This would mean that what is signified is general, or universal, and the means for signifying are different in different languages. Later, at the end of the seventeenth and in the eighteenth century, the rationalist grammarians believed in the idea that people have similar experiences due to the nature of the human mind, not the nature of the world, or that there must be a "universal" grammar in the human mind. The rationalist grammarians influenced Chomsky, the twentieth century linguist who adopted the idea of a “universal” grammar in the human mind.

2.3. Comparative method

Another approach is the comparative method of the nineteenth century. This method, also known as comparative philology, parted ways with the traditions in grammar that primarily studied morphological, syntactic and semantic categories (Allan 2007, 212–13). The aim of this approach was to find relations among languages, and, therefore, it focused on observable language data, rather than the issue of language universals, which are based on either the nature of things or character of human reason (ibid.). This method led to the development of language typology and historical linguistics. The former is "the classification of languages according to linguistic traits and the comparison of patterns (structures) across languages (Campbell, ibid. 113)". The latter "seeks to explain the causes and processes of language change (and the constraints of these) from all levels of language: phonological, lexical, morphological, syntactic, semantic, and pragmatic (Allan, ibid. 213)".

The main topic of the comparative method was discovering the family relations among Indo-European languages (Campbell, ibid. 101). "The family tree model" was established by pre-Neogrammarian Schleicher, who compared related forms of languages to establish parent forms and parent languages (Allan 2007, 209; Campbell, ibid. 105). Moreover, the Neogrammarians, led by Karl Brugmann (Honeybone 2005, 46), established "historical linguistics" as a discipline that is distinct from literary and philosophical studies (Burridge 2016, 346). The Neogrammarians' main assumption was that sound was regular and exceptional, therefore, sound changes were referred to as laws, which linked linguistics with other sciences based on laws (Campbell, ibid.). The focus was diachronic analysis of Indo-European languages; in addition, this systematic, empirical research methodology was adopted in the early twentieth century, and it was also applied to synchronic analyses of individual languages (Witkosky 2009, 57–58).
2.4. Modern linguistics

It can be claimed that historical linguistics/diachronic linguistics/linguistic diachrony of the nineteenth century paved the way for the development of rigorous methodology in linguistics since it relied on systematic empirical work that studied language change and the genetic relations between languages which were caused by language change (Burridge 2016, 346–47). When it comes to the early twentieth century, it was marked by the advent of structuralism, another linguistic tradition. Structuralist Ferdinand de Saussure (1916/1959) is known as the “father” of modern linguistics; the structuralists, who promoted the synchronic analysis of the language structure, displaced diachronic historical linguistics, “the darling of the nineteenth century (Robins 1999, 65)”. This meant that structuralism neglected the issues of historical development and the use of language, and “ignored precisely those speaker-oriented factors that held the key to understanding how and why linguistics changes take place (ibid. 347)”.

Despite the existence of many traditions in linguistic historiography, Allan (2007, 9–10; 2016, 11) gives three reasons to support the view that linguistic science is of very recent origin: 1) Linguistics is a human science, which developed rapidly in the late nineteenth and the twentieth centuries. 2) At the end of the nineteenth centuries, technologies made it possible to record and analyze spoken language. 3) The first university chairs that can be characterized as “linguistic” were founded in the nineteenth century, but the majority of university programmes in linguistics were established in the second half of the twentieth century. Furthermore, Bot (2015, 1) highlights that, while linguistics is a scientific domain with a long tradition, Applied Linguistics (AL) is fairly young.

3. RESEARCH METHODOLOGIES AND METHODS

The previous section presents some of the major concerns and turning points in the development of linguistic science. According to Heine and Narrog (2010, 5), all linguistic approaches can be divided into formalist and functionalist ones, nevertheless, as the authors suggests, this dichotomy does not seem to be that significant any more. One of the reasons for this claim is that there is a variety of methodologies within these two main approaches as well as overlaps between the two (ibid. 8). Similarly, although many authors believe in the division into quantitative and qualitative research strategies, this dichotomy has also been reconsidered. This is discussed in the next subsection.

3.1. Qualitative, quantitative and mixed-methods research

Every research has the following three components: 1) a question, problem or hypothesis; 2) data; and 3) analysis and interpretation of data (Nunan 1992, 3). In their discussion of quantitative and qualitative research methodologies, Reichardt and Cook (1979, 7–32) point out that many authors considered the two methodologies as two opposing perspectives (Nunan

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3 Historical linguistics is also known as comparative philology, but the latter name can be confused with “philology” as the scholarly study of literature (Burridge 2016, 346).

4 Bot (2015, 34) adheres to the definition that applied linguistics (AL) comes closest to Second Language Acquisition (SLA). Crystal (2008, 31) defines AL as “A branch of linguistics where the primary concern is the application of linguistic theories, methods and findings to the elucidation of language problems which have arisen in other areas of experience”. For instance, AL includes the teaching and learning of foreign languages, clinical linguistics, educational linguistics, developments in lexicography, translation, stylistics, applied psycholinguistics, etc.
1992, 3–4). Some of the main characteristics of the two perspectives are: the quantitative approach is objective, generalisable, and it assumes the existence of "facts" outside of the independent researcher. On the other hand, the qualitative approach is holisitic and ungeneralisable (ibid. 3). In relation to this, the quantitative approach is also characterized by the following attributes: it uses unobtrusive and controlled measurement; it relies on the "outsider" perspective; it is outcome-oriented; it assumes a stable reality, etc. Conversely, the qualitative approach focuses on understanding human behavior from the actor’s own frame of reference; it relies on naturalistic and uncontrolled observation; it takes the "insider" perspective; it is process-oriented; it assumes a dynamic reality, etc. (ibid. 4). Nunan (1992, 10) suggests that one of the reasons for the belief in the incompatibility between the two approaches is grounded in the idea that they represent different ways of understanding the world around us.

However, qualitative and quantitative categories should not be viewed as distinct categories; instead, research should be viewed as more quantitative or more qualitative (Creswell 2014, 3). In addition, researchers now also use the so-called mixed-methods research in different academic disciplines (Riazi 2016, 193), which can be regarded as the middle of the continuum between quantitative and qualitative research (Creswell ibid.). This means that the distinction between qualitative and quantitative approaches has been replaced with a new, three-member classification: quantitative, qualitative and mixed-methods research (MMR) strategies. Creswell (ibid. 217) notes that the term mixed-method research can be used synonymously with the terms synthesis, integrating, quantitative and qualitative methods, multimethod, and mixed methodology, but the term mixed methods seems to prevail in recent literature. Nonetheless, some of these terms may not always be regarded as synonyms; for example, Riazi (2016, 193) states that a distinction should be made between mixed-methods research (MMR) and multimethod analysis. The former denotes an approach in which both qualitative and quantitative data and analyses are integrated to deal with more complex research issues, whereas the latter denotes an approach which combines several methods from one research paradigm.

With respect to data collection methods within those three strategies, they can be classified by their degree of predetermined nature, the use of closed-ended versus open-ended questioning, and the focus on numeric versus nonnumeric data analysis (Creswell 2014, 16–17). Quantitative methods include the following: pre-determined methods, instrument based questions, performance, attitude, observational and census data, statistical analysis and statistical interpretation. Qualitative methods include emerging methods, open-ended questions, interview, observation, document and audiovisual data, text and image analysis as well as themes, patterns and interpretation. Mixed methods include both predetermined and emerging methods, both open-ended and closed-ended questions, multiple forms of data based on all possibilities, statistical and text analysis and across databases interpretation (ibid. 17). MMR can have two, i.e. quantitative and qualitative phases, which depends on the scope and design of the study. As for data collection of the two phases, they can be simultaneous or sequential (Riazi, ibid.).

Finally, Creswell (ibid. 218–19) underlines some advantages and disadvantages of MMR. The advantages can be seen at three levels: general, practical and procedural. Firstly, MMR overcomes the limitations of quantitative and qualitative research. Secondly, this is a sophisticated approach that allows new research procedures. Thirdly, it provides a more comprehensive understanding of an issue. As far as disadvantages of the MMR strategy are concerned, these can be the following: the need for collecting extensive data, the time-consuming nature of analyzing both quantitative and qualitative data and the need to have the know-how to conduct this type of research.
3.2. Diachronic and synchronic approaches

Crystal (2008, 142; 469) states that the earlier study of language, known as comparative philology, is not different from diachronic linguistics in subject matter, but in aim and method (which means that, when methodology is changed, language is analyzed from a different point of view). Namely, more attention is paid to the use of synchronic description in diachronic linguistics as a preliminary to historical analysis as well as to the implications of historical work for linguistic theory in general. This suggests that synchronic and diachronic descriptions are connected. In relation to this, Culler (1976, 37) highlights that Saussure himself, who insisted on the difference between synchronic and diachronic viewpoints and the primacy of synchronic description, was aware that language does not exist "as a serious of totally homogeneous synchronic states". Some more overlaps between synchrony and diachrony that are described in literature are given below.

Cognitive grammarian\(^{5}\) Langacker (1972, 14) contends that diachronic examination presupposes synchronic examination, and the reverse need not always be the case. It is necessary to know and compare the structure of a linguistic system at different points in time in order to fully understand the historical changes that affect the system. Langacker (2010, 105) also states that "there is never a sharp distinction between synchrony and diachrony". As the author explains, language is never static, therefore, a speaker's "knowledge" of a language can be preserved only through use. When conventional units of language are used, they are further entrenched, but, at the same time, usage leads to modification. If certain developments are widespread in a speech community, they are conventionalized. As entrenchment and conventionality are matters of degree, there is never a clear-cut distinction between synchrony and diachrony.

It may also be the case that a synchronic study is designed in such a way as to infer diachronic development, that is, without repeating synchronic studies over a long period of time (Rasinger 2013, 40). Namely, a problem sociolinguists face is how to determine whether an instance of synchronic language variation is evidence of long-term change. As a matter of fact, only real-time data can definitely answer the question of whether a synchronic variation is an indication of diachronic change. However, when real-time data cannot be collected, sociolinguists use the apparent time construct to analyze the change in progress (Ravindranadth and Wagner 2016, 265–266). This, in other words, means that the focus is not on how language is changing, but how it has already changed (Rasinger 2013, 40).

Furthermore, the distinction between diachronic and synchronic perspectives allows a convenient division of labour between linguistic fields of research. To illustrate, Huang (2016, 216) defines historical sociopragmatics as a discipline that draws on historical pragmatics and sociopragmatics. As the author further notes, some scholars think that historical sociopragmatics is more closely related to the pragmaphilology research approach in historical pragmatics. Historical sociopragmatics studies the relation between social context and particular historical language uses that create pragmatic meaning. Therefore, historical sociopragmatics can be synchronous or diachronic: the former examines how language use affects and is affected by social context at a given time in the past, whereas diachronic historical sociopragmatics studies how changes in language use affect social context, how changes in social context affect language use and/or how changes happen with regard to the relationship between language use and social context.

\(^{5}\) Cognitive Linguistics (CL) is associated with the second generation of cognitive science as a highly interdisciplinary approach in linguistics (Sinha 2021, 387).
4. CONCLUSION

The review illustrates that the division between diachronic and synchronic linguistics is not that rigid, and that it may not even apply in certain cases. Thus, Heine and Narrog (2010, 22) point out that synchronic grammatical descriptions are achronic, rather than synchronic. This can be related to the Saussurean Paradox, the puzzle related to the possibility for a language to change without disrupting the system (Burridge 2016, 347). Burridge (ibid.) maintains that this need not be a problem if variation in the use of language is seen as part of the system, and, not only that, even variability can be analyzed in a systematic way. Moreover, the idea that variation and change are the two sides of the same coin, i.e. that variation is the synchronic aspect of change and change is the diachronic aspect of variation strongly suggests that the studies of diachrony and synchrony can complement each other.

The foregoing discussion of linguistic traditions, models, and research methodologies shows that, despite the view that it is of recent origin, linguistic science has a long historical background and many connections with other disciplines that analyze language. Today, there are many interdisciplinary projects which study these connections. Sinha (2021, 394), for instance, states that "Researching language, cognition, and culture depends on combining and comparing empirical findings obtained by using different methods, developed in different disciplinary contexts". The author also suggests that, albeit not without challenges, research can rely on mixing methodologies and using modern technologies for data collection and analysis. To sum up, in addition to providing a brief introduction to linguistic historiography and research methodology, this review gives further sources for a more detailed and in-depth review and examination of topics, issues and controversies in linguistic science.

Acknowledgement: The paper is a part of the project Scientific publications in teaching English Linguistics and Anglo-American Literature and Culture, conducted at the University of Niš – Faculty of Philosophy (No.300/1–14–1–01).

REFERENCES

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International Journal of Multiple Research Approaches. https://www.tandfonline.com/toc/rmra20/current

Journal of Mixed Methods Research (JMMR). https://journals.sagepub.com/home/mmr


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**PREGLED METODOLOGIJA I METODA U LINGVISTIČKIM ISTRAŽIVANJIMA:**

**DIJAHRONIJSKI I SINHRONIJSKI ASPEKTI**

Ovaj pregled metodologija i metoda u lingvističkim istraživanjima ima dva fokusa. Kao prvo, predstavljen je opšti istorijski kontekst razvoja nauke o jeziku, kao i savremeni kontekst istraživanja u lingvistici. Takođe, predstavljene su i osnovne razlike između lingvističkih disciplina i modela kao i metodologija i metoda koje se mogu koristiti u lingvističkim istraživanjima. Uzimajući u obzir i dijahanonske i sinhronijske aspekte analize jezika, pregled ima za cilj da pruži osnovne smernice za povezivanje lingvističkih istraživačkih pitanja sa odgovarajućim teorijama i metodologijama.

Ključne reči: lingvistika, istraživanje, metodologija, metod, dijahanon, sinhronon