


# Medieval grammars as non-literary source for syntax: The Wiki format for terminological analyses

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## RESEARCH ARTICLE

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## ABSTRACT

This paper aims at presenting the Wiki database of a current project and has a distinctly computational signature. It is a fitting complement to years of work in the study of linguistic variation, of non-classical forms of Latin, but also the infinite possibilities offered by this field of study in terms of historical linguistics and database implementation. In the specific case, we will use the metalinguistic term *constructio* as an example of the analytical potential offered by the WikiMedia of the SiRe project Parts of speech meet Rhetorics: Searching for syntax in the continuity between the Middle Ages and the Modern Age.

## KEYWORDS

medieval grammars, Latin syntax, metalinguistics databases

## 1. INTRODUCTION INTO DIGITAL LINGUISTIC RESOURCES: GRAMMATICAL AND LEXICAL TOOLS

The first part of our paper will serve to introduce in few words the different approaches to data collection and presentation in the context of database structuring. Certainly, the database of the

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Hungarian research group (<https://lldb.elte.hu/en/database/>) is the first choice for the analysis of epigraphic inscriptions. In a similar vein, the *SiRe* Wikimedia database we are building is intended to complement the large quantitative databases in a synergetic work, as demonstrated by the metalinguistic study of *constructio* presented in this paper.

In recent years, digital language resources have grown exponentially, making it increasingly easy for scholars from all disciplines to conduct in-depth research. As a matter of fact, a large number of Latin linguistic resources are now available digitally as the result of decades of work to convert paper-based textual and lexical data into machine-readable formats. Among the digital resources available, we can highlight some of them as fundamental elements for research, both in terms of the data they contain and their digital accessibility. One of them are the *Perseus Digital Library* and Samantha Schad's grammatical lexicon available on the *Brepols* (<https://www.brepols.net/>), which are milestones for linguistic research and historiography of linguistics, but which covers an earlier period. In particular, Samantha Schad's work<sup>1</sup> provides a useful resource on metalanguage from antiquity to Isidore of Seville, although its approach does not include relevant elements such as a thorough state of the art for the different metalinguistic elements considered. Plus, the *LiLa Knowledge Base* acts as a connector of linguistic resources for Latin (e.g. corpora, lexicons, dictionaries, thesauri). Although they may remain distributed, the resources included in *LiLa* interact via the Web by linking the word occurrences in the different corpora (and lexical entries) to a common lemmary. The function of the lemmary is to allow moving between resources, harmonising their different lemmatisations and exploiting the (meta)data they provide when extracting their (meta)linguistic information. To achieve interoperability between distributed resources, *LiLa* makes use of a number of Semantic Web and Linked Data standards and practices. These include ontologies for describing linguistic annotations, corpus annotations (NLP Interchange Format (NIF)) and lexical resources. Syntactic annotation is also still limited to a small set of texts. According to Passarotti,<sup>2</sup> there are currently four treebanks available for Latin. These are: (i) the *Index Thomisticus* Treebank (IT-TB) (which is one of the resources linked by *LiLa*), based on the works of Thomas Aquinas; (ii) the Latin Dependency Treebank (LDT) of Classical texts, now part of the Ancient Greek and Latin Dependency Treebank 2.0 under development at the University of Leipzig; (iii) the PROIEL corpus (*Pragmatic Resources in Old Indo-European Languages*) which contains the syntactic annotation of the oldest extant versions of the New Testament in Indo-European languages and Latin texts from both the Classical and Late periods; and finally (iv) the Late Latin Charter Treebank (LLCT), a syntactically annotated corpus of original 8<sup>th</sup> and 9<sup>th</sup> century charters from central Italy.<sup>3</sup>

### 1.1. Epigraphic databases

In recent decades, closed corpus languages such as Latin have been conceived and analysed as diasystems overcoming the view of language as a homogeneous entity. In this sense, we owe a

<sup>1</sup>SCHAD (2007).

<sup>2</sup>KORRIKANGAS (2020).

<sup>3</sup>KORRIKANGAS–PASSAROTTI (2011).



debt of gratitude to the work of Herman<sup>4</sup> and Adams<sup>5</sup> and, more recently, to Adamik<sup>6</sup> and Marotta.<sup>7</sup> They have in fact continued the analysis of orthographic variation, also taking advantage of large epigraphic databases such as the *Epigraphische Datenbank Clauss-Slaby* (<http://www.manfredclaus.de/>).

On the one hand, data entry is standardised so that it is difficult to display phenomena such as the *Tau* Gallicum which remain the subject of specific studies based on the analysis of most direct sources. On the other hand, there are databases such as the DBLL and CLaSSES, which are based on the collection of instances of variation from the standard represented by the classical literary works.

The “Computerised Historical Linguistic Database of the Latin Inscriptions of the Imperial Age” project aims to create and digitally publish (at <http://lldb.elte.hu/>) a thorough computerised historical linguistic (LLDB database). It will contain and manage the Vulgar Latin content of the Latin inscriptions found in the regions of the Roman Empire (Illyricum, Gallia, Britannia, Germania, Hispania, Italia, Africa, Roma and the Eastern Provinces). This will allow for a more in-depth study of the geographical variation and differentiation of Imperial Latin in a broader sense, as well as a multi-layered visualisation of the newly revealed linguistic geography structures. Other corpora, such as CLaSSES and the Eagle Network, which links other databases, serve as a digital resource for academic research interested in variationist studies of the non-literary documentation of Latin. The LLDB database covers a very large area, both according to diachronic and diatopic parameters, which makes it a competitive tool compared to other available large digital epigraphic collections or to the current treebanks and lemmatizers. What is also remarkable about LLDB database is that each document is accompanied by bibliographical information, relevant contexts and material, graphic and linguistic elements. The transcription of the texts is of course also offered, and the entire document is accompanied by its presumed date of production and any brief commentary deemed necessary.

## 1.2. Functions of databases

The database mentioned above have different functions, but, in general, we can say that they all follow the logic of the quantitative approach. Some perhaps in a more refined and precise way than others, or emphasising some aspects more than others. It is very difficult to imagine being able to cover all linguistic aspects, but it is evident how epigraphic databases, such as LLDB computerised database, do not stop at the surface of the text, but plumb the metalinguistic, grapheme depths and the analysis of linguistic and orthographic variation. Creating a Database that reconstructs and analyses the metalinguistic terminology, however, cannot be based on the pure quantitative logic nor follows the model of databases in which the collected data are visible as a gemination instead of a simple consonant or a vowel syncope.

<sup>4</sup>HERMAN (1967, 1984, 1985a, b).

<sup>5</sup>ADAMS (2004, 2007, 2013).

<sup>6</sup>ADAMIK (2016, 2017, 2019, 2020, 2021 *ex multis*).

<sup>7</sup>MAROTTA (2015, 2017).



Databases in this framework of reference are already available. It is worth of mentioning the Digital library of late-antique Latin texts – digilibLT.<sup>8</sup> In fact, this database is entirely searchable and allows lexical and morphological queries, although it does not include many grammatical texts from the late antique period. Since its launch in 2010, DigilibLT collected nearly 400 texts and this number is on the rise, following different lines of expansion: Grammatical works and Roman Law. This work is in a similar vein of our project and face similar problems.

The aim of interrogating medieval grammatical and treatise texts, which are based on late antique ones, and which are partly still unpublished, presented us – and other database – with a twofold problem: on the one hand, the access to unpublished sources, which are often still unpublished and hidden behind the curtain of anonymity and schoolwork, forcing us to wait until the moment of their publication. On the other hand, the invaluable but eclectic collections of lemmatised texts included in the Brepols database, which is currently one of the few sites that allows searches on recurrences/attestations of lexemes from the ancient to the medieval period. The downside is that the searches are poorly filterable and unfocused and require a supplementary processing of the material for those with grammatical interests.

Our project investigates a well-defined part of grammatical linguistic vocabulary, linked to terms in the morpho-syntactic domain. For this reason, it was necessary to create a tool that, building on existing electronic resources and database, could be the place for the collection, processing and scientific study of metalinguistic terms that we capture in their history and evolution. In this way, it finally become possible to describe their meanings within the grammatical corpus in order to stabilise them and create a linguistic terminology. This approach is understood both as a graphematic work, of direct access to the text, and as an in-depth study of grammatical concepts in function of the elaboration of linguistic theories.

In the case of the metalanguage from the Middle Ages, the qualitative analysis is the only option available for different reasons. First of all, syntax was not a main topic within grammatical tradition – at least in an explicit way – until the XIII century, with the rise of Modistic thought. It is indeed possible to trace the beginnings of a metalinguistic and theoretical discussion on the phrase, starting with the treatises on the *Artes grammaticae*, through a constant renegotiation of the terminology and the identification of the different meanings attributed to the metalanguage in use. This metalinguistic reflection was later made more explicit, thanks to the work of the Modists, through the new definitions linked to the *modi significandi* and the newly introduced terminology. The metalinguistic terms and definitions found in Priscian's *Institutiones*, which elaborates the Greek tradition, are taken up in the commentaries, through which we see a development of the meanings associated with these terms, such as the example of *constructio*, which evolves to replace *ordinatio*.<sup>9</sup> The *SiRe* database promotes the study of grammatical terminology, which can help to overcome disruptions in linguistic analysis by offering a detailed analysis of metalinguistic terminology linking the grammatical theories from the late antiquity and the Modistic period, where the terminology coming from late Latin tradition evolves in the elaborate syntactic theory.

<sup>8</sup><https://digiliblt.uniupo.it/>

<sup>9</sup>See MENEGHEL 2019; COTTICELLI-KURRAS (2021) for a thorough investigation and for previous literature.



## 2. THE NEED FOR A METALINGUISTIC RESOURCE: THE CREATION OF THE WIKIMEDIA *SiRe*

Grammarians, however, did not exist in a single, narrow chronological period, but took turns from antiquity to the Middle Ages in discussing and renegotiating the terminology to be used. Amsler<sup>10</sup> illustrates the metalinguistic problem of ancient and later grammar, which accompanies reflections on the history of ideas and the definition of grammatical structures. The formation of the metalinguistic lexicon does not stop at the transition from Late Antiquity to the Middle Ages, but unfolds and continues throughout the history of Western linguistic thought where we can already see a progressive refinement of linguistic terminology and metalinguistic awareness from late antiquity onwards.

It should be noted that our linguistic terminology does not completely correspond to the grammatical terminology of antiquity and the Middle Ages, and for this reason the reworking of the various definitions and the compilation of a metalinguistic database require painstaking work.

In linguistic analysis and in general, clear terminology is essential. However, clear and analytical terminology is what is most lacking in the Middle Ages, since the development of a scientifically based terminology is a work in progress. We can reconstruct the subtle threads of scholarly discussion in antiquity and the Middle Ages, but we can do no more than provide a metalinguistic database along the lines of Samantha *Schad's* (2007), which stops at the earliest period but is rigorous in its collection of the various nuances and meanings of the terminology of the time.

In order to help understanding the intricacies of the qualitative analysis of metalanguage, with special reference to the late antiquity and Middle Ages, we are going to present the *WikiMedia SiRe* and how we are analysing metalinguistic data.

The *SiRe* project (Parts of speech meet Rhetorics: Searching for syntax in the continuity between the Middle Ages and the Modern Age) aims to fill the various gaps in the history of linguistics by investigating the dimension of syntax, which, contrary to the current history of the discipline, appears as early as the Middle Ages within the speculation on language, intertwining grammar, rhetoric and logic. The grammars of the national languages from the renaissance and the grammars of school of Port Royal are thus no longer the starting point of speculation on syntax, but rather a fundamental stage of it, including the results of the medieval tradition. The three research units (Verona, Macerata and Palermo) will focus their research synergistically on grammar, medieval treatises on language, glossary activity and, finally, the work of the Modists in evaluating the intraphrasal roles of the parts of speech. The ultimate aim of the project is therefore to establish an alternative position in the historiography of linguistics and rhetoric, which in no way detracts from the centrality that the study of syntax will assume in the later period and, in particular, in modern times.

Grammar stands as a crossroads between linguistic, philosophical and philological interests and the study of the grammarians' teachings shows the emergence of different schools of thought. These cannot be necessarily represented as a single thought that developed in a linear progressive manner, with the main concept being enriched by the work of scholars over the

<sup>10</sup> AMSLER (1990).



course of generations. The various authors take up each other's work, quote each other more or less explicitly, and in some cases base their own *Ars* grammars on the stitching together of the authoritative thought of previous authors, thus creating a collage that in some cases differs from the original starting thought. This could be the example of Charisius and other authors such as Bede, who put together a patchwork of previous authors, in Bede's case combining elements of Diomedes and Isidore. Though the two main tradition represented by the Donat's and Priscian's grammars, their commentators discussed sometimes definitions of concepts from the viewpoint of both authors. The result is that in the law Middle Ages the two traditions and their scripts have melted in one thought, elaborated within the different schools. The method and theory behind systematic data collection need to be revised, particularly in the case of grammar teaching. In the field of epistemology, the traditional representation of scientific evolution has been overcome. This marks a definitive departure from traditional models that represent the process of metalanguage formation: 1) a cumulative model that sees scientific thought advancing by a linear accumulation of theories; 2) Kuhn's discontinuous model that sees an abrupt paradigm substitution of paradigms.<sup>11</sup> Both these models have been supplanted by a modular model of scientific thought evolution.<sup>12</sup>

1. The parts on which the modular design is based involve three different aspects (theoretical, sociological and practical) that, when applied to historical linguistics and grammarians, make it possible to construct a fundamental descriptive scheme within a qualitative analysis. Cultural-historical perspective: the data collected and analysed must be contextualised in their epistemological constellation, linking the author's linguistic theories to their technical-grammatical background.
2. Elaboration of a research method that allows us to "weigh" the data not necessarily and not exclusively on the basis of the number of occurrences, measuring its influence in its period of attestation and its magnitude. *ARCGis* is very useful here, as it allows us – as far as possible – to assess the areas of greatest diffusion of a metalinguistic term, identifying precise areas and authors.
3. Elaboration of an interdisciplinary approach: the plurality of views gathered within the study of grammar and in the transmission of linguistic thought requires that the analysis of data is not only carried out from a purely linguistic perspective but bases its exegesis on the incorporation of the various aspects underlying grammatical studies.

For this reason, our consideration of Latin grammarians has had to take into account various aspects, such as the identification, whenever possible, of different schools of thought and historical periods.

### 3. THE WIKIMEDIA OF THE *SIRE* PROJECT

For the aforementioned reasons, we aimed at modelling a Database system that heavily relies on the qualitative analysis of data, but that also incorporates the different perspectives of the

<sup>11</sup>KUHN (1962) 10 considered as "paradigm" universally recognised scientific achievements, which, over a period of time, provide a model of problems and solutions acceptable to those practising a certain field of research.

<sup>12</sup>AUROUX (1987) 23–26.

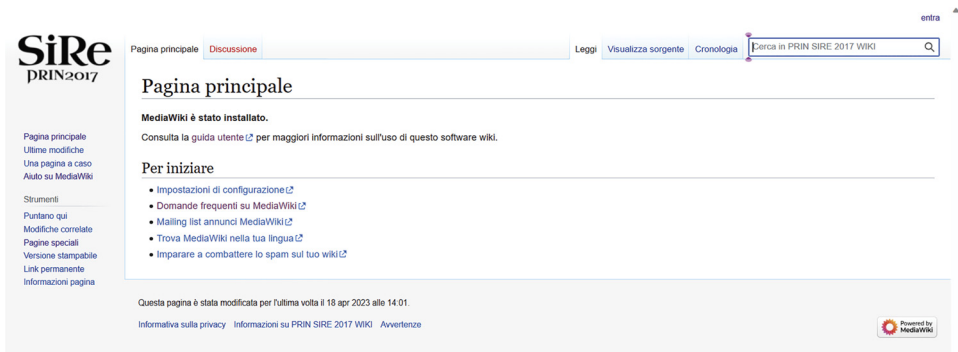


grammatical thought. In order to select the keywords for analysis, we drew on previous works from the extensive literature available that has dealt with the analysis of metalinguistic terminology.<sup>13</sup> In particular, we also referred to the work of [Colombat and Lauhossois \(2019\)](#) *Histoire des parties du discours*, which offers an extensive and valuable theoretical contribution based on the study of grammars from late antiquity to modern times. This work focuses mainly on Parts of Speech and their function within the clause. Also, the members of our Prin significantly contributes, with publish and forthcoming works, to the theoretical investigation of metalinguistic terminology.<sup>14</sup>

For building our Database, we relied on the Wikimedia system.<sup>15</sup> Wikimedia is a global movement whose mission is to bring free educational content to the world. It consists of several different projects, including the most well-known, Wikipedia, the free online encyclopaedia, allowing everyone to freely access knowledge. This type of Database allows the registered members to By and edit content, creating a vast and ever-growing resource of information that is available to everyone.

Starting from this, we modelled a Database that allows a quick and user-friendly navigation among the different sections available. The search bar (on the top right, see [Fig. 1](#)) allows searching keywords, extended research and the text of the Latin passages as well, used in the construction of the individual database entries). The database entries are also listed in a special section, available on the Wikimedia home page.

What we wanted was a real mapping process, both conceptually and geographically, so our different research units coordinated to select some keywords to be used for the population of our database. For this reason, we also implemented the [ArcGIS](#) technology, which is a powerful geographic information system (GIS) software suite developed by Esri (Environmental



**Fig. 1.** The homepage of the [Wikimedia SiRe](#)

<sup>13</sup>CHARPIN (1986); ROSIER (1983, 1992); COVINGTON (1984); LAW (1999); KELLEY (2002); KNEEPKENS (1990); PINBORG (1980); MARMO (1994); CINATO (2018).

<sup>14</sup>Cf. *ex multis* COTTICELLI-KURRAS (2021); COTTICELLI-KURRAS-COTUGNO (2023); COTUGNO (2023); SANTONI (2023); NIGRELLI (2023); MERLIN-RIZZA (2023).

<sup>15</sup><https://www.wikimedia.it/news/conoscere-meglio-le-comunita-wikimedia/>



Systems Research Institute), a leading company in the field of GIS technology. [ArcGIS](#) provides a wide range of tools and capabilities for collecting, managing, analysing, and visualizing geographic data.

The use of [ArcGIS](#) also allowed us to contextualise the data collected, as it is a tool capable of displaying a geographical distribution of the data, but also enriching the various points with the necessary meta-textual information. [ArcGIS](#) enables users to work with different types of data, such as satellite imagery, aerial photography, digital maps, and geospatial databases. It supports the integration of data from multiple sources, including GPS devices, survey equipment, and online data services. This allows users to combine various data sets and perform spatial analysis to gain insights, make informed decisions, and solve complex problems.

The *SiRe* Database includes a user-friendly interface that allows users to create visually appealing maps, perform geoprocessing tasks, and generate reports and charts. It also offers advanced geospatial analysis tools, such as spatial statistics, network analysis, and geocoding.

In addition to the desktop software, [ArcGIS](#) provides a suite of web-based applications, called [ArcGIS Online](#), which allows users to create and share maps and data online. This enables collaboration and facilitates the dissemination of geographic information within organizations or to the public.

For the creation of the Wikimedia, we have tried to synergize all our knowledge and experience from the major databases of sociolinguistic analysis, precisely because of the complex and intricate relationship between both quantitative and qualitative analysis, and the relationship between the language of use, non-classical forms and the theories of Latin grammarians. Databases such as LDBB implement geographical localisation support, which is crucial for understanding the distribution of a given phenomenon, at least from the point of view of diatopic analysis. For this reason, we have implemented [ArcGIS](#) technology in our database to provide a similar geolocation system.

We have also taken inspiration from other databases, such as *Brepols' CrossSearchTool*, in order to make the collected texts usable and immediately link them to the different keywords to which they refer. This is made possible by a very fast and intuitive search system that allows you to search for any type of text in the database. Therefore, all the citations from the different authors come from the [Brepols Database](#).

### 3.2. A case study: *constructio*

In this paragraph, we aim at exemplifying, also according to the different perspectives mentioned in §1, 1.2, how we collected data for the metalinguistic analysis. We decided to opt for *constructio* that has been already analysed by Schad and interpreted it as a 'syntactic construction'.<sup>16</sup> However, Schad covers the analysis up to Isidore of Seville and we are covering the subsequent period. Also, we should emphasise that the meanings and attestation of *constructio* are far more complex than a plain translation can show. According to Kneepkens<sup>17</sup> it may indicate the relationship that exists between two constituents (in speculative grammar), or the constituents themselves (in nominalist grammar). In order to explain the complexity of this keyword, first of all, we have created a disambiguation page from which it is possible to

<sup>16</sup>SCHAD (2007).

<sup>17</sup>KNEEPKENS (1990)





evaluate the different nuances of the term: we then have the possibility of studying its mainly grammatical, rhetorical or logical meanings. Once we have gone to the page of our interest, in this case the grammatical meaning, we are presented with a real Wikipedia page.

In collaboration with the various research units, we have developed a common template to help us write the various entries.

Firstly, for each entry, we will provide a basic description, including references to other databases such as Schad's, and secondly, we will report on the earliest specialised uses of this terminology. In the case of *constructio*, the earliest specialised uses of the term are already attested in the Carolingian period with the *Glossae* (9<sup>th</sup>–10<sup>th</sup> century) and the commentary on Donatus by the Irish grammarian Murethach. The *Glossae biblicae in codice Sangallensi* (9<sup>th</sup>–10<sup>th</sup> c.) are particularly relevant for the linguistic and metalinguistic processes underlying the evolution of the grammatical thought in the Middle Ages. In Murethach, the use of *constructio* is compared to that of *compositio*, showing another element of the metalinguistic process and progress towards the elaboration of *Grammatica* as an independent discipline.<sup>18</sup> *Constructio* has a number of very complex and articulated meanings that have become established over time, thanks largely to the work of Abelard. For all of the different attestations collected, we provided excerpt of the different works in order to contextualise the different occurrences. As emphasised by Cotticelli-Kurras, the term *constructio* was adopted also to denote syntactical relations between words. The idea of 'dependency' comes from late Latin tradition and is a stepping stone towards the Modistae's syntactic theory that is also related to new concepts denoting syntactic unit such as *constructibile* and *constructibilia*.<sup>19</sup> The evolution of this term is not linear, nor discontinued, but as aforementioned it involves many modules that tackle different meanings ranging not only the linguistic (and syntactical) level but also rhetorics and logic. We should not expect that these modules have stark borders. The influence between them smudges the edges and allows a synergic collaboration between the different disciplines.

Taking into account the entry *constructio* we listed different meanings that developed and evolved during the Middle Ages.

- 2.1 *Constructio* in combination with *litterae* and with the meaning of "grammatical form" or "word value". The form, used mainly by Abelard to whom the evolution of *constructio* is particularly indebted, probably points out to the grammatical form or value of the words.
- 2.2 *Constructio* with the sense of "structure of the utterance". In this case, Abelard again points out that in describing the sentence function, different categories may be involved.
- 2.3 *Constructio* in the description of the functions of the utterance
- 2.4 *Constructio* as a synonym for *sententia orationis*. In his work *Dialectica* (I 3, *De uerbo* 136), Abelard clarifies that *sententia orationis* and *sententia constructionis* can be used as synonyms and defining one of Abelard's milestones that sees that "a sentence with a complete meaning cannot be constructed if the rules of word construction are not respected."<sup>20</sup>
- 2.5 In relation to *vox* and *constructio vocum*. Under this entry, we see Abelard tackling the concept of *vox* and arguing a strong relationship between these two elements.

<sup>18</sup>COTTICELLI-KURRAS (2021) 98.

<sup>19</sup>LAW (1999) 290; COTTICELLI-KURRAS (2021) 96.

<sup>20</sup>COTTICELLI-KURRAS (2021) 100.



- 2.6 *Constructio* as a synonym of *ordinatio*: this synonym shows the close relationship between grammatical and rhetorical tradition.
- 2.7 Definition of *constructio* as the reason in construction of the words is a specialised use attested in the *Grammatica Porretani* (60) of Gilbert of Poitiers.
- 2.8 With reference to word order and the formation of *constructio perfecta*, especially when made up of noun and predicate. This meaning has a sort of double nature, as it is also particularly relevant in the works of Hugh of St. Victor and in other grammatical treatises (as in Bono from Lucca or Eberhard of Béthune), but it is also attested within the rhetorical framework, like the *Ars Dictaminis* (84) of Guido Faba. The diffusion of this particular meaning of *constructio* is indicative of the evolution of Grammar as an independent discipline, autonomous from Rhetorics, which will keep nonetheless a paramount influence in the development of Grammatical thought.
- 2.9 *Constructio* as a synonym for *oratio*. This meaning is attested in the *Glosa super 'Graecismum'* of Eberhard of Béthune (*Appendix, prologus* I 6. 1. 1. 1, 231) and in Robert Kilwardby (f. 59rvt). *Constructio* as a synonym of *oratio* is particularly relevant as there is sometimes confusion among scholars between *oratio* and *constructio*. As emphasized by Kneepkens<sup>21</sup> and later on by Cotticelli-Kurras, *constructio* was originally intermingled with *oratio*, and only in a second moment, its meaning developed as a separate grammatical notion. Cotticelli-Kurras<sup>22</sup> also noted that this confusion lasted for some considerable time and probably depended on the context in which these terms occurred and the sources that are commented by the scholars themselves. Kneepkens<sup>23</sup> in the *Glosulae* have spotted one of the most striking case where the terms *constructio* and *oratio* are employed as synonyms.

It is also worth noting that *constructio* has long been associated with *oratio* (sentence), until Petrus Hispanicus first attempted to distinguish between *constructio*, *locutio* and *ordinatio* by dissociating their concepts. Kilwardby uses both without a proper distinction besides using *ordinatio/ordinare* to indicate the linear structure of a sentence whereas *constructio/construere* indicates the type of construction that is the transitive or intransitive combination of words.<sup>24</sup> According to this perspective, metalinguistic terms such as *constructio* have their own *ordinatio*. The *ordinatio* constructions is grounded on the ideal or basic syntactic structure of a sentence, whereas the *ordinatio locutionis* deals with the actual meaning of the utterance.<sup>25</sup> The Latin of late antiquity and Medieval Latin are certainly not the same. This implies that even the order of constituents in medieval times was no longer the same as in the age of Priscianus as was the actual sentence structure with its specific components and the rules for their combinability. A series of (metalinguistic) parameters necessary to establish a grammatical sentence come into play and terms such as *perfectio* and *congruitas* are used. In this perspective, the term *constructio* also becomes part of the rules that operate within the sentence.

<sup>21</sup>KNEEPKENS (1990).

<sup>22</sup>COTTICELLI-KURRAS (2021) 101–102.

<sup>23</sup>KNEEPKENS (1990).

<sup>24</sup>KNEEPKENS (1990) 156.

<sup>25</sup>KNEEPKENS (1990) 151–152.





Fig. 2. ARCGis map of the meanings of *constructio* according to its traditions

The use of ArcGIS has allowed us to see quite immediately how the first studies of the term and the first specialised reflections on the term were concentrated, at least initially, in France and in Paris in particular, acting as a vector for the dissemination of scholarly reflections (see Fig. 2).

#### 4. CONCLUSIONS

In this paper we showed how the apparent lack of metalinguistic terminology in the Middle Ages should be re-interpreted in terms of explicit and implicit terminology. It is generally accepted that Latin grammar before Priscian's *Institutiones* excluded the syntactic dimension and Priscian represented an exception of late antiquity artigraphic tradition. On the one hand, in the massive *Institutiones* two books (XVII and XVIII) are devoted to the specific treatment of the combination of morphological units in speech (*constructio orationis*) and Priscian merges the grammatical roman doctrine with Apollonius Dyscolus' *techne* on syntactical topics; on the other, there is an apparent lack of information concerning syntactical considerations in late antiquity

and Middle Ages. As emphasized by Cotticelli-Kurras,<sup>26</sup> Priscian did not offer a definition of *constructio*, but it is nonetheless available within the definition *ordinatio*, in the sense of the Gr. term σύνταξις as used by Apollonius Dyscolus.

The apparent lack of syntactical considerations and metalanguage, however, does not mean that Priscian was completely unknown, nor that grammarians were not able to develop it. Moving towards the Middle Ages, the scholarly interest on spoken language dramatically decreased.<sup>27</sup> Also, the grammarians' interest on word combination within the syntagmatic word-chain is mainly based on Stoic logic, unquestionably inspired by a semantic dimension.<sup>28</sup> The lack of specific terminology, intended to cover the syntactical theoretical space, could not go unnoticed, for interpretations between the lines of what is written by different grammarians. The first specialised uses of *constructio* are initially attested in the Glossae from St. Gall and in Murethach and eventually clustered in France, with special reference to Paris, thanks to Gilbert of Poitiers, Hugh of St. Victor and Eberhard of Béthune. Other attestations were available in Oxford, thanks to Robert Kilwardby, who studied in Paris and exported this term oversea. As aforementioned, the diffusion of many meanings and nuances of meaning of *constructio* are indebted to Petrus Abelandus' works, where it is noticeable a first separation between Logic and Dialectic and where he uses this term with different meanings depending on the work and textual type used. In conclusion, we have had the opportunity to highlight the possibilities offered by the use of databases. As a matter of facts, *constructio* has a very long history within grammatical literature. *SiRe* database is a valuable tool for sketching the slow changes in its use and meaning, the different polysemic nuances and uses, both technical and in a broader sense, albeit scientific, (as in the case of the 9<sup>th</sup>–10<sup>th</sup> c. *Glosulae* and in Murethach). The multifarious synonymous uses underline its development into a specialised and technical term. Understanding the evolution of this terminology as a modular process that involves linguistics and extra-linguistics factors allows us to rethread a syntactical terminology far before the rise of the Modistae.

The considerations of the grammarians, even if they sometimes are based on a *inter lineas* reading, as in the case of Priscian definition of *constructio*, can also show us that the separation between the Latin of the language of use and everyday life and the prescriptions of the grammarians often has a blurred contour and is not a binary dichotomy in opposition.

In fact, language change was a relevant topic for grammarians at the time when the non-literary documents were written, and it continued into the Middle Ages, creating the need for a grammatical terminology and an increasingly refined metalinguistic awareness. Since our linguistic terminology does not correspond to the grammatical terminology of antiquity and the Middle Ages, we want to rethread the different definitions through the creation of the [Wikimedia SiRe](#). Compared to other linguistic database, such as LLDB or [CLaSSES](#), it is clear a different scope of analysis and that they have different aims. The *SiRe* Wikimedia have a different slant and emphasise a linguistic aspect based on the concept of (metalinguistic) vocabulary, which integrates well with databases with other purposes, but which are less useful for metalinguistic comments. As shown, The *SiRe* Wikimedia allows describing the metalinguistic terminology in their historical, geographical and linguistic contexts, pinpointing how the

<sup>26</sup>COTTICELLI-KURRAS (2021) 94–95.

<sup>27</sup>MARROU (1948) 33.

<sup>28</sup>CHARPIN (1986) 133–134.



evolution of the term does not move in a strict chronological order. The theoretical basis for the analysis of the rich and varied metalinguistic terminology available in the Middle Ages (and beyond) is based on Auroux' (1987) modular vision of the evolution of scientific thought where different disciplines must be taken into account in order to explain how a metalanguage evolved among the different grammarians in the Middle Ages.

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