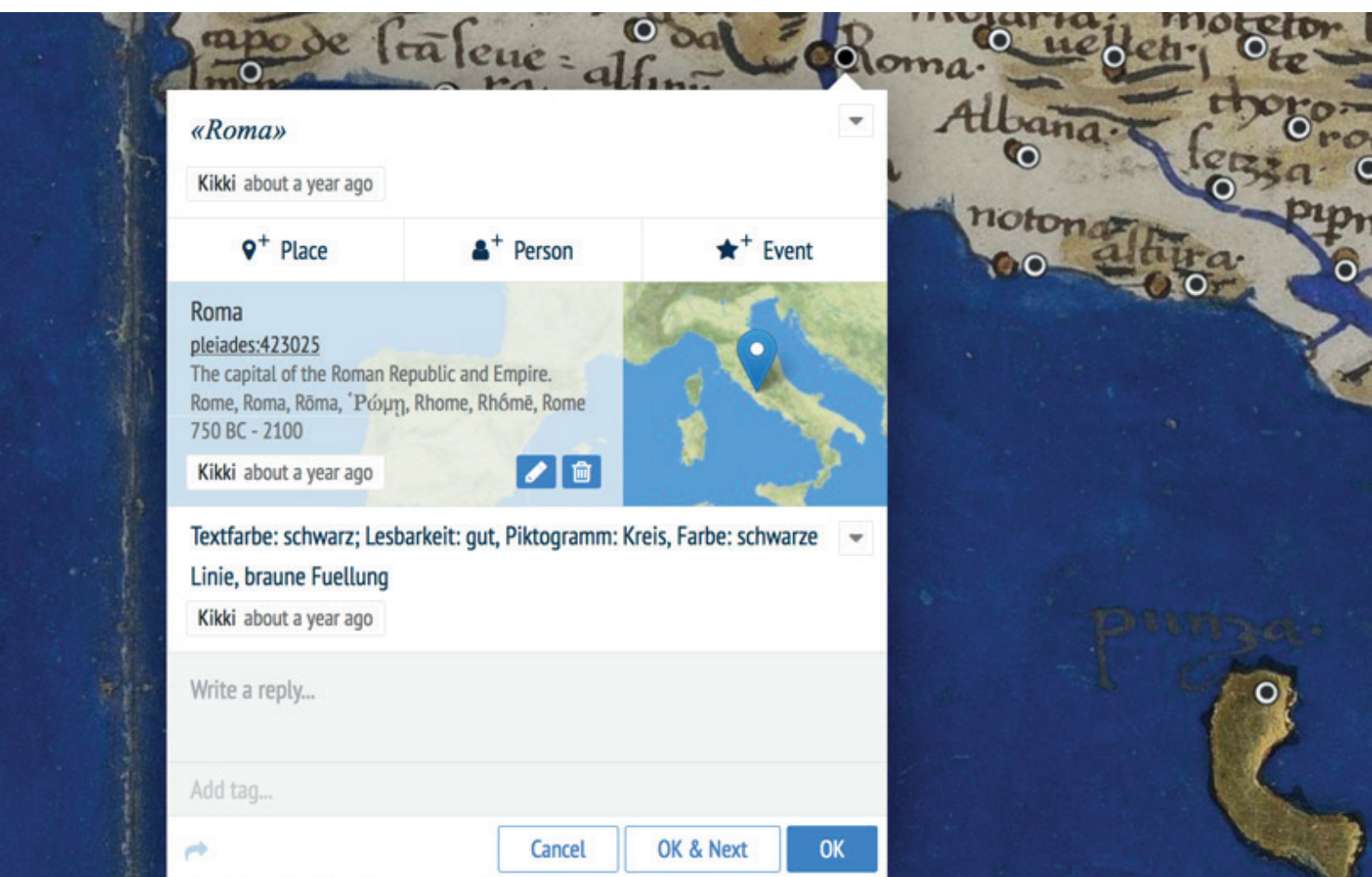


Walking Through History

An Interdisciplinary Approach to Flavio Biondo's Spaces in the "Italia illustrata"

Edited by Tanja Michalsky & Martin Thiering



BIBLIOTHECA HERTZIANA
MAX PLANCK INSTITUTE
FOR ART HISTORY



Hertziana Studies in Art History

Editors

Tanja Michalsky & Tristan Weddigen

Managing Editor

Elisa Bastianello

All articles of the present volume have undergone an anonymous scholarly peer-review by international experts to whom we are grateful for their generous support.

Graphic Project

Sergio Polano (2019)

Michele Elia (2023)

Page Layout

Michela Maguolo

ISBN | 978-3-949381-00-3

DOI | <https://doi.org/10.48431/hsah.0100>

Published online on 31 December 2022

© 2022 Bibliotheca Hertziana



Walking Through History

An Interdisciplinary Approach to Flavio Biondo's
Spaces in the "Italia Illustrata"

edited by

Tanja Michalsky & Martin Thiering

Contents

7

Tanja Michalsky & Martin Thiering (eds.)
Introduction

15

Günther Görz, Chiara Seidl, Martin Thiering
Linked Biondo: Generating and
Processing Research Data Based on
Geographical Feature Modeling

35

Kurt Guckelsberger, Klaus Geus
Measurements, Maps, and Other
Source Material in Biondo's *Italia
Illustrata*: The Example of Latium

53

Kurt Guckelsberger
Two Great Maps of Italy – A Comparison

79

Marc Laureys
'Illustrating' Italy: Biondo's
Concept of *Illustratio*

95

Nathalie Bouloux

L'usage des cartes dans l'*Italia
illustrata* de Biondo Flavio

109

Martin Thiering, Raphael Berthele

Some Thoughts on a Spatial Language
Analysis of Flavio Biondo's *Illustrated Italy*

127

Kai-Florian Richter
The Description of Places in Biondo's *Italia
Illustrata*: Outlining a Quantitative Analysis of
Their Granularity and Spatial Relationships

137

Francis Harvey
Challenges and Potentials in Connecting
Historical Meaning and Memory in
Maps: Considering Some (Un)certainities
in the Reading of *Italia Illustrata*

Abstract

Martin Thiering, Raphael Berthele
Some Thoughts on a Spatial Language
Analysis of Flavio Biondo's Illustrated Italy

keywords – Cognitive linguistics, Toponyms,
Cognitive maps, Historio-geographic analysis



This paper presents insights from a spatial text annotation based on cognitive semantic analytical parameters. The focus is on the spatial language in Flavio Biondo's Latium chapter in his Italia Illustrata. The analysis of spatial language is based on text annotations, semantically enriched by formal ontologies and based on cognitive semantic premises. The main assumption based in a cognitive linguistic background is that his textual elements are grounded in cognitive maps or mental models enabling the reader to mentally triangulate different spatial references and spatial relations that is, s/he is able to add missing information – cognitive contours – to form a coherent spatial gestalt. There are good reasons to believe that the analysis of historical texts spanning from antiquity to the early modern period and beyond improve the understanding of spatial cognition and its epistemological development. The present cognitive-semantic analysis discusses Biondo's spatial description of Latium based on fundamental cognitive parameters in the spatial arrangements. In contrast to previous research which mostly deals with textual criticism, biographical, literary and art-historical references, the goal here is to provide a cognitive linguistic analysis of what is referred to as 'construal', i.e., the linguistically triggered mental pathways and maps Biondo's readers reconstruct based on the text. The basis for the analyses presented here is a list of toponyms

and of the geographical vocabulary used by Biondo. To this list spatial role labels are applied, based on the cognitive-linguistic framework. The goal of this contribution is to discuss a selection of linguistic constructions of spaces as examples of different worldviews from which insights about the spatial organization of cultural practices are gained.

DOI | <https://doi.org/10.48431/hsah.0107>

Some Thoughts on a Spatial Language Analysis of Flavio Biondo's *Illustrated Italy*

Martin Thiering
Raphael Berthele

1. Introduction

This chapter presents insights from a spatial text annotation based on cognitive-semantic analytical parameters. The focus is on the spatial language in Flavio Biondo's Latium chapter in his *Italia Illustrata*. Our analysis of spatial language is based on text annotations, semantically enriched by formal ontologies and based on cognitive-semantic premises. Our main assumption rooted in a cognitive-linguistic background is that his textual elements are grounded in cognitive maps or mental models enabling the reader to mentally triangulate different spatial references and spatial relations, that is, s/he is able to add missing information – cognitive contours – to form a coherent gestalt.¹

We have good reason to believe that the analysis of historical texts spanning from antiquity to the early modern period and beyond improve our understanding of spatial cognition and its epistemological development.² In our cognitive-semantic analysis we discuss Biondo's spatial description of Latium. By doing so we also show some of the fundamental cognitive parameters in the spatial arrangements described in Biondo's text. These fundamentals lead to the basic matrix of a cognitive map built upon semantic cues embedded in a skillfully organized spatio-historical description. Flavio Biondo's (1392–1463) work *Italia Illustrata* (composed in the years around 1448 but published posthumously) serves as the case study.³ Our reason for working on the Biondo text is his groundbreaking description of contemporary Italy as the first prototypical detailed historical-topographic description.

In this work, Biondo summarized nearly two thousand years of Italian history.⁴ As Ottavio Clavuot argues, Biondo also had to reconstruct ancient, and not just contemporary, topographical descriptions based on the historical-geographic and topographical literature available. Clavuot also argues that Biondo's main aim was to combine past and present knowledge in his description of Italy.⁵

Biondo's main goal was to provide a description that was not just accurate from the contemporary point of view, but that at the same time reconstructs and integrates the historic landscapes evoked in the texts of the classical authors who had described the same stretches of land.⁶ He draws on authors of Roman antiquity such as Livy, Virgil, Pliny the Elder, as well as Ptolemy, and, in the Latium chapter, a Latin translation of Strabo. Biondo also aimed at reconstructing toponyms and their changes throughout time.⁷ Places, towns, even whole cities had emerged, grown, and been destroyed. Some places simply vanished, others originated as new settlements. The *Italia Illustrata* is on the one hand a description of places, but on the other it is also the history of these places and their names.⁸

In contrast to previous research which mostly deals with textual criticism, biographical, literary, and art-historical references, our goal is to provide a linguistic analysis of what we refer to as 'construal', i.e., the linguistically triggered mental pathways and maps Biondo's readers reconstruct based on the text. The basis for the analyses presented in this chapter is a list of toponyms and the geographical vocabulary used by Biondo. To this list we applied spatial role

1 On mental triangulation, see Thiering 2015.

2 See Götz/Seidl/Thiering 2022, and also Richter 2022 in this volume.

3 On Flavio Biondo's work, see Clavuot 1990,

p. 46.

4 Clavuot 1990, p. 21.

5 Clavuot 1990, pp. 23, 30, 33.

6 Clavuot 1990, p. 26.

7 Clavuot 1990, p. 41.

8 Clavuot 1990, p. 43.

labels, based on a cognitive–linguistic framework, as briefly laid out below. In our analysis we included both the expression of static spatial relationships as well as dynamic pathways. The goal of this contribution is to discuss a selection of linguistic constructions of spaces as examples of different ‘worlds’ or worldviews from which insights about the spatial organization of cultural practices are gained.

Biondo’s text makes frequent reference to several different semiotic encoding systems such as texts and maps. Because many of the ancient places no longer existed at the time of his writing, Biondo had to reconstruct places in his narrative. And for this reason he refers to ancient authors and – arguably – maps.⁹

2. Cognitive Linguistics and Cognitive Semantics

This section briefly presents the methods of text analysis and, in somewhat more detail, the crucial meta–language applied from cognitive semantics onto historical texts. Two longer quotes from Ronald Langacker below provide insights into the general approach in the analysis of spatial language. The quotes also motivate the possibility of applying cognitive linguistics to historical text analysis.¹⁰

In cognitive semantics, meaning is identified as the conceptualization associated with linguistic expressions. This may seem obvious, but in fact it runs counter to standard doctrine. A conceptual view of meaning is usually rejected either as being insular – entailing isolation from the world as well as from other minds – or else as being non–empirical and unscientific. These objections are unfounded. Though it is a mental phenomenon, conceptualization is grounded in physical reality: it consists in activity of the brain, which functions as an integral part of the body, which functions as an integral part

of the world. Linguistic meanings are also grounded in social interaction, being negotiated by interlocutors based on mutual assessment of their knowledge, thoughts, and intentions. As a target of analysis, conceptualization is elusive and challenging, but it is not mysterious or beyond the scope of scientific inquiry. Cognitive semantics provides an array of tools allowing precise, explicit descriptions for essential aspects of conceptual structure. These descriptions are based on linguistic evidence and potentially subject to empirical verification.¹¹

Langacker furthermore argues that:

[A]nalyzing language from this perspective leads to remarkable conclusions about linguistic meaning and human cognition. Remarkable, first, is the extent to which an expression’s meaning depends on factors other than the situation described. On the one hand, it presupposes an elaborate conceptual substrate, including such matters as background knowledge and apprehension of the physical, social, and linguistic context. On the other hand, an expression imposes a particular construal, reflecting just one of the countless ways of conceiving and portraying the situation in question.¹²

We argue that our text analysis indeed shows the potential of a cognitive–linguistic analysis for a better understanding of the text under investigation. The idea of construals enables the detailed analysis of the various cultural–specific “ways of conceiving and portraying”, i.e., a spatial scenario as represented in Biondo’s work.

3. Spatial Language and Its Spatial Parameters

The following example was chosen for its spatial richness. It illustrates how different spatial attributes in Biondo’s text yield a map–like

⁹ Actually, we do argue that Biondo uses a number of different encoding systems rather than maps. In the whole of *Italia Illustrata* Biondo mentions maps only six times, i.e., Ptolemy, portolans, and the Petrarca (Petrarch) map. About the latter: scholars disagree whether it even existed at all (Pontari 2009a). We therefore believe that Biondo does indeed make use of other

sources to (re)construct Italy, e.g., reports of travels, land registry offices, etc. See Guckelsberger 2022.

¹⁰ Note that cognitive science is, by definition, meant to be a synchronic science, that is, we as cognitive linguists do ‘look’ into peoples’ minds by using different psycholinguistic or neurological test designs. The approach presented here indeed argues that the different

approaches can also be applied to rather diachronic questions of spatial concepts. Different empirical sources such as texts and maps help to reveal the intricacies of spatial cognition in a long-term perspective.

¹¹ Langacker 2008, p. 4.

¹² Langacker 2008, p. 4.

construal. The parts in italics are our own highlights denoting spatial entities and relations. These attributes are then analyzed with respect to cognitive–semantic construals:

Four miles above Faenza is Oriolo dei Fichi a town of the church of Ravenna set on a delightful hill. Beneath it the stream Marzeno flows down into the Lamone [Anemo], brushing the flanks of the ancient town of Modigliana, which Livy records (as Mutillum) at the beginning of the Macedonian War, as I mentioned in describing Ravenna. Five hundred years ago Modigliana belonged to the noble family of the Conti Guidi, who flourished in Flaminia and Tuscany. Above Faenza on the course of the Lamone is a well-populated valley of the same name as the river, where the castles of Brisighella, Rontana, S. Martino in Gattara, Castellina, and the villages of Marradi, Biforco, and (under the Apennines) Crespino are to be found.

After the Lamone, the river Senio flows into the marshes of Padusa. The town of Fusignano lies on the Senio, in the actual marshland and in a forest called the forest of Lugo. Five miles away is the populous town of Lugo itself, so named from a nearby wood. On the right bank of the Senio is the town of Cotignola, from where originated the powerful Attendola clan, the family of Sforza, now so famous among Italians. Hard by Lugo lies the castle of Zagonara, celebrated in history for the Florentine defeat in the war with Filippo Maria Visconti and for the capture of Carlo Malatesta in the battle [...]. Within two miles of Zagonara is the ruined town of Cunio on the banks of the Senio. (Book IV: 317–319).¹³

We use the English translation (in the above case Jeffrey White's) at this point because our semi-automatic brat annotation tool and most, if not all, annotation programs are currently unable to sufficiently process classical Latin texts. The corresponding Latin is shown for reference below:

Interius, quarto supra Faventiam miliario, Aureolum est oppidum Ecclesiae Ravennatis amoenissimo in colle situm, sub quo in Anomonem defluit Martianus torrens, qui latera abluit Mutilliana vetustissimi oppidi, cuius Mutilli tunc appellati Livius in principio belli Macedonici sicut in Ravenna ostendimus meminit, fuitque ante quingentos annos nobilis familiae comitum, qui Guido cognomine per Flaminiam et Etruriam floruerunt. (78) Supra Faventiam ad Anomonis fluentia convallis est, fluvii nomen retinens, populis frequentata, in qua Brasegella, Rontana, Gattaria, Castilionum castella, Marrate et Biforcus vici et, sub Apennino, Crispinus. (79) Post Anomonem Padusam paludem influit Sennius amnis, cui ipsa in palude et in silva, quam Lugi dicunt, adiacet Fusiganum oppidum, et quinto inde miliario abest Lugum, a luco cui adiacet appellatum, frequens populo oppidum. Et ad dexteram Sennii ripa Cutignola est oppidum, unde Attendula gens Sfortiorum familia fluxit in Italiam nunc clarissima. Adiacet Lugo Zagonaria castellum, acceptae a Florentino populo cladis in Philippensi bello et capti in eo, proelio Caroli Malatestae, quod in Historiis diffuse ostendimus, memoria celebratum. Et intra secundum inde miliarium ad Sennii ripam excisum est oppidum Cunium [...].¹⁴

Below we draw a list using some of the underscored spatial concepts from the passage to illustrate a taxonomy of spatial concepts, which form the first step of a cognitive–semantic analysis (see Table 3 for more examples and details).¹⁵

Individualizable Entities

- figure: the entity construed as being in motion (either self-propelled or caused motion);
- landmark, ground: hills, mountains, rivers, forests, place, city names, buildings, bridges, churches, fountains, walls, streets, squares, gates, memorial, region, sites, temples, etc.

¹³ Biondo 2005b, pp. 317–319.

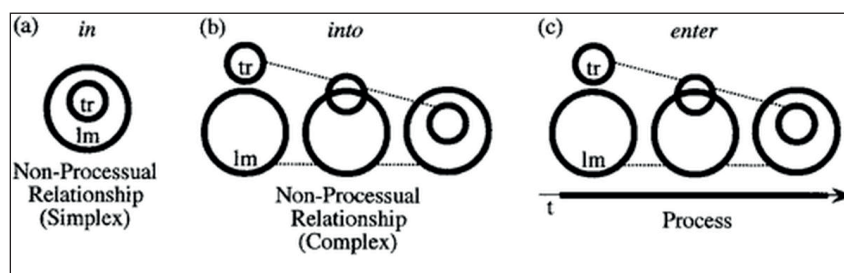
¹⁴ Biondo 2017, pp. 70–80.

¹⁵ A more detailed version of this list can be found in Table 3. Further examples are discussed in section 6; our definitions of the concepts are adapted from Talmy 2003 and

Thiering 2015. Note that it is not sufficient to single out lemmas only, that is, isolated lexical entries. For example, the motion event of “flowing into” always is a construction of something (e.g., an object) starting to move from a point of departure (source) to a goal

via a trajectory (or path). That is, X (source) moves to Y (goal) in a specific manner of motion (direction) and during the unfolding of perceived time.

Figure 1
Conceptual processing.



Spatial Relations

- static association: geometric-dimensional or topological association;
- dynamic association (path): path (away from source, toward goal, related to a milestone (over), into, out of, along, etc.);
- frame of reference: relative/deictic, intrinsic/geometrical, absolute/allocentric, proximal vs. distance;
- distances: scale, scope, size.

Events

- basic locative construction: figure, static spatial relation, ground;
- self-propelled motion construction: figure, dynamic spatial relation, ground;
- caused motion construction: cause of motion (mover), moving object (figure), association function, ground;
- co-event: manner of motion, manner of position (posture), orientation of figure at end of event (caused motion).

The different parameters show the rich topographical and spatial density in the cited text passage. Although the English translation is used at this point of the spatial analysis, the richness of the spatial cues is adequately indicative of the Latin original. Distances, geometrical relations, trajectories, landmarks, spatial frames of reference, perspectives (to name but a few factors) indicate the degree of specificity or ‘granularity’ (see also Richter in this volume) in which the text encodes spatial relations on different levels, that is, at the micro and macro level (e.g., geometric vs. landmark knowledge).

Our cognitive-linguistic analysis makes use of Langacker’s introduced diagrammatical schemas. English spatial locatives (and Latin case markers such as locative, ablative, allative),

also known as prepositions, can be sketched in the way shown in figure 1.

From a cognitive-semantic point of view, an English verb like to enter or to flow into is conceived as a verbal process, but it encodes a change of location.¹⁶ Arguably, these diagrams also represent the locative cases accusative and ablative in Latin. Hence, these are schematic depictions of spatial situations in which a trajector moves in a specific direction reaching or not reaching the goal. The main differences between a, b, and c are based on using +/- arrows (to indicate a process unfolding in time). The preposition into is semantically and schematically different from the verb to enter.

This cognitive-linguistic framework is our major theoretical fundament in analyzing the complexity of spatial cognition in texts (and to a lesser degree in maps). The English translational equivalents already reveal the degree of specificity of spatial cognition. There are a number of presumably universal spatial parameters underlying human spatial cognition. In very general terms, the fundamental spatial parameters given in the list above – constitutive also for cognitive maps – can be identified in spatial language data. These spatial parameters specify different spatial and topological relations, but also different perspectives and different levels of granularity (individual spatial referents or whole event construals involving several referents and at least one association function). They also indicate the complexity of different spatial encoding systems in a text, that is, geometric or rather topological relations, coordinate systems designated by the different spatial frames of reference, the variability of perspectives, trajectories in motion events, etc.

¹⁶ Langacker 2008, p. 117.

1.a	determiner	figure	existential verb	spatial preposition	determiner	ground
	the	horse-carriage	is	near	the	house

Table 1: Analysis of the sentence: The horse carriage is near the house.

1.b	determiner	figure	existential verb	spatial preposition	determiner	ground
	the	house	is	near	the	horse-carriage

Table 2: Analysis of the sentence: The house is near the horse-carriage.

The very general categorization pattern of spatial relations in visual perception is based on the gestalt theoretic figure-ground asymmetry adapted from cognitive linguistics, as suggested by Ronald Langacker and Leonard Talmy.¹⁷ This asymmetry is not only constitutive in visual perception, but also in components of linguistic meaning, hence, instead of clausal phrases such as subject and object, the theory uses figure and ground (or trajector and landmark). In this,

the figure is a moving or conceptually movable entity whose site, path, or orientation is conceived as a variable, the particular value of which is the relevant issue. The Ground is a reference entity, one that has a stationary setting relative to a reference frame, with respect to which the Figure's site, path, or orientation is characterized.¹⁸

The figure is construed based on visual perception processes as known from gestalt theory. Its qualities such as site, path, and orientation are related to a reference object, that is, the ground (see also Richter in this volume). These spatial parameters are fundamental in our text analysis since they directly link visual space and linguistic space.

For the time being, the conceptual parameters of figure and ground can be considered similar to the syntactic functions subject and object, but

this is not always the case. Beginning with the two gestalt-psychological terms of figure and ground, Talmy's understanding of figure and ground is quite specific.¹⁹ In comparison with gestalt psychology, where figure and ground are used to point to foregrounded versus backgrounded structures of perception, Talmy uses the terms to describe how components of linguistic meaning are distributed in a clause based on detailed geometrical qualities of the objects.

Talmy shows that arguably similar sentences such as the following examples Table 1–Table 2 are not semantically equivalent, despite having the same truth conditions (see above: instead of a horse-carriage, he uses a bike). These two sentences present two different (inverse) forms of a symmetric relation.²⁰

In Table 1, “the horse-carriage” is the figure and “the house” is the ground, whereas their relation is reversed in Table 2. Even though it might be more natural to consider the smaller object as the figure and the relational object as the ground, the situation, as such, might make the speaker refer to the bike as the reference object.

1a. The horse-carriage is near the house.

1b. The house is near the horse-carriage.²¹

The example shows the constructive function of language and its construal possibilities. Every so often, these construals go against the visual

¹⁷ Langacker 1987, Talmy 1978, Talmy 2003.

¹⁸ Talmy 2003, p. 184; see also Talmy 1978; and Talmy 1983.

¹⁹ Talmy 1983; see especially chap. 1,

“Relation from Grammar to Cognition”, chap. 3, “How Language Structures Space”, chap. 5, “Figure and Ground in Language”; Thiering 2015 gives an exhaustive definition of the

different spatial qualities.

²⁰ Talmy 2003, p. 314.

²¹ See Thiering 2015, p. 81.

prominent figure-ground ascription, that is, the physically larger object – the ground – is encoded as the figure.

Example Table 1 shows that an object is foregrounded – the horse-carriage – with respect to a reference object – the house.

This asymmetry can be described as being the prototypical relationship with respect to real objects in space. A house is an immobile reference point as opposed to the horse-carriage, which is movable. Example Table 2 reverses the spatial relationship depending on a different visual focus or anchorage. Now the movable object is the reference point and the immobile house is the figure. This example nicely shows the constructive function of language as a staged-meaning ascription. The above-introduced figure and ground asymmetry in a reference-framework adds the degree of specificity of the spatial relationships encoded by the constructions in the ‘event’ category in the list presented above.

In general terms, spatial ascriptions prototypically display an asymmetry between a profiled entity – the figure – in relation to a backgrounded entity – the ground. Talmy deploys a similar analysis by stating that a physical object is either located or moves with respect to another object, which serves as a reference point for the former.²² Similar to Langacker’s analysis, this is an asymmetry embedded in the processes – prototypically encoded in verbs – where specific aspects of a reference point represent the whole gestalt, which could be described as schematization processes.²³

The schematization mechanisms are based on a number of conceptual parameters as summarized

above, that is, a spatial configuration is specified by scale, scope, distance, frames of reference, etc.

4. Method: Work Units and Counts of Phenomena

As a prerequisite for the analysis and interpretation of Biondo’s text in the framework of cognitive semantics, we designed a workflow for text analysis which contains automatic and semi-automatic processing steps.²⁴ These steps were necessary to enable a large text-corpus analysis for textual comparison.

For the quantitative data presented in the next section, we primarily used AntConc for the English word list, concordance list, clusters, collocates, and frequencies, and Collatinus for Latin text analysis. The overall analysis is based on a Parts-of-Speech (Pos) description. We also used the Stanford Parser (548 sentences) producing dependency trees (the UD pipe also does this for Latin). The dependencies based on the Stanford Parser will be paralleled with the graphical rapid annotation tool (brat) for comparative purposes. This work is currently still in progress.

For the Latium chapter we have 3041 word types and 15,102 tokens (AntConc). The example below is the most frequent spatial lemma, “to” (for the full list, see Table 4 below). The spatial preposition “to” encodes a direction in a motion event.

lemma: to

prototypical function: Pp[DIRECTION: SOURCE-PATH/TRAJECTORY-GOAL=LM]

examples: To (THE)___LM: BORDER(2), LAND(1), GROUND(5), RIVER(4), SEA(3), TERRITORY(3);²⁵

To___TOP: Alba, Algidus, Anxur, Aricia, Bologna, Campania, Formia, Frosinone, Gabii, Gaeta, Genzano, Herculaneum,

²² Talmy 1978, p. 627; see also Talmy 1983; and Talmy 2003.

²³ Talmy 2003, p. 179; see also Johnson 1987; Sinha/Kuteva 1995, Langacker 1987.

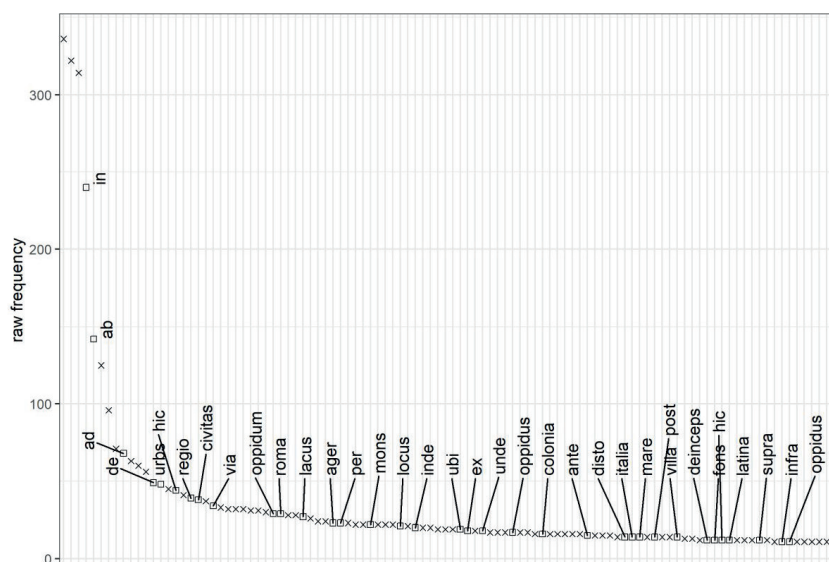
²⁴ Some remarks on the Latin text and the English translation. First of all, there are some fundamental issues regarding the available text sources. The textual transmission of Flavio Biondo’s *Italia Illustrata* is rather complex due to different available editions. The reason is that modern editions are based either on the extant manuscripts (Biondo 2011, Biondo 2014, Biondo 2017) or the first

printed edition (Biondo 1474), supervised by Gaspare Biondo and translated in this century by White (Biondo 2005b, Biondo 2016), or the “best-known, most-cited early printed edition” by Hieronymus Froben, Basel 1559; see Biondo 2005a. Our text aims at reconstructing Flavio Biondo’s ‘intended’ text from both the manuscripts and the editio princeps – transmitted in two versions, which are, contrary to the common belief, not identical – thus harmonizing, as far as necessary and sensible, orthography and punctuation. The reasons for providing a translation of our own

are grounded in textual deviations from White’s and Castner’s texts which already amount to more than one hundred just in the case of the Latium chapter. The second reason concerns our superordinate interest in Flavio Biondo’s ‘spatial language’. In order to analyze and evaluate it from a cognitive linguistic point of view, the English translation has had to be as uniform in diction and phraseology and as close to Biondo’s Latin as possible. In other words: we have aimed more for a literal interpretation rather than an elegant one.

²⁵ Abbreviations: Grammatical Functions:

Figure 2
Lemmas in the Latium chapter. Squares
represent spatial words.



Labici, Mentana, Monte Catillo, Palestrina, Rome, Sezze, Sinuessa, Terracina, Torre Astura, Valleria, Valomontone, Vesta.

The analysis shows that the most frequent instances for both English and Latin are prepositions. This is not surprising, given that the text input is a topographical description.

A direction “to [a place]” or “to [a landmark]” prototypically has a starting point (source), a path, and a goal. In addition, when applicable, we added subdomains like lemma + _____. The “to” entries add several toponyms specifically, beside the general parameters, like _____border, _____land, _____ground, _____river, _____sea, and _____territory. We hence analyzed the different constructions regarding the actual parameters encoded. The third column of Table 4 presents the actual English lemma in singular and plural. The fourth column shows the Latin translation based on the Collatinus tool and the related semantic field, where applicable.

In Table 4 we count the frequency for the Latin corpus and the different meanings or rather semantic networks associated with the lemma. Grammatical functions are also given, that is, preposition, case marking, adverbial, etc. The final column presents the frequency of the lemmas in their singular and plural distribution.

The general ranking follows top-down, from the most frequent to the least frequent lemmas. The Latin text has been searched for its various encoding patterns, that is, the English “from” (03/11/148) is distributed in the Latin corpus as a (or ab), de, ex, unde. This shows the polysemy of the preposition in Latin. In Latin, the preposition is followed by the ablative case, and hence the motion event away from the source is specified.

We performed an extended analysis of Biondo’s spatial references in the Latium chapter. In the following, we present a very coarse statistical analysis and a few selected language examples.

5. General Assessment of the Importance of Spatial Vocabulary in the Latium Chapter

We first present a simple Collatinus statistical account on the Latin original text. This gives us the ranking visualized in fig. 2.

Fig. 2 shows the typical Zipfian distribution with a long right tail, i.e., a relationship between frequency and rank involving very few lemmata with high frequency and many lemmata with lower frequencies. Unsurprisingly, the most frequent entries are sum and et, an existential verb and a conjunction. The third

ACC = ACCUSATIVE, ADJ = adjective, ADV = adverbial, DET = determiner (a, the), NP = noun phrase, PL = plural, PP = preposition; Cognitive Semantic Concepts/Spatial Role Labeling: DIR = directional, DIS = distance,

FOR = frames of reference [INTR = intrinsic, ABS = absolute, REL = relative], LM = landmark (ground object), LOC = locative, MAN = manner, REG = region, TOP = toponym; TR = trajectory (moving figure object)[...] =

ORDER KWIC/ANTCONC; TECHNICAL TERMS = [CAPITALIZED], LANGUAGE EXAMPLES = (language examples).

most frequent usage (255 occurrences) is the spatial preposition *in* plus accusative or ablative construction (English equivalents: into, about, in the midst of, according to, after (manner), for, to, among), the tenth (106 occurrences) is the preposition *ad* plus accusative construction (to, up to, toward, near, at, until, on, by, almost, according to). Both prepositions are typically used in the basic locative construction for static construals and in motion constructions when encoding a direction in space, fictive or real (see below for more details). They encode the spatial relation binding the figure and the ground together. The figure's trajectory is profiled from its source (starting point of motion event) via a specific path to a ground and goal.²⁶ The preposition *dē* + ablative (sixty-one occurrences) encodes down/away from, from, off. We will discuss some typical examples in more detail below.

6. Narrating Space: Biondo's Method

Biondo's text follows certain patterns that deploy the linguistic and conceptual tools described above. Reading and parsing his text leads to the construal of a complex spatial representation. In general, Biondo's method is a systematic staging of figure and landmarks/ground.

At the very beginning of the chapter, the city of Rome (reference point throughout the remainder of the chapter) is located in a region (topological relationship of containment); the region is labelled *Latium*. Thus, *regio Latina* is the ground in which the figure (Rome) is located. But in the remainder of the chapter, Rome is typically the ground relative to which the surroundings are associated. In the chapter analyzed, Biondo explicitly explains his default method of describing spatial configurations (numbers at the end of each quoted passage refer to the sentences in the chapter):

Hac autem describenda mediterranea regione modum hactenus in aliis servatum a fluviorum ostiis fontibusque et discursu servare nequibimus.

(In describing this inland region, we shall not be able to adhere to the method which we have used in other regions – starting with the mouths, sources, and courses of the rivers.) (175)

After having set the figure and the ground relationships for the general setup, Biondo thus uses mouths, sources, and courses of rivers as the ground, then locates the figure in specific parts of the landscape:

Reliqua ad fontem Liris proximius accedentia
(The remaining places which approach closer to the source of the Liris ...). (173)

Sometimes the rivers themselves need to be located in relation to another ground first:

Fluvium, qui proxime illabitur, Storacem Strabo, Plinius Nymphaeum vocat, super quo hi Formium fuisse dicunt oppidum.
(The river that flows by closely Strabo calls Storax and Pliny Nymphaeus; above this river they say was the town of Formium.) (93)

Not only is the river located in the proximity of the previously introduced ground (here: the town of Santa Felicitas), it is also metaphorically located in the historiographical discourse by reference to the historical alternative names used in the reference works by Strabo and Pliny. The example illustrates Biondo's pervasive method of locating places and events spatially and historically at the same time.

When rivers are not available, roads are used as ground elements or literally as paths, as here:

Sed alium certius facturum satis, qui in nulla reperitur alia Italiae regione, tenebimus, viis incedendo tribus: Appia, Latina, Tiburtina,

26 38 *civitas*, *atis*, f.: community/city/town/state; citizens; citizen rights/citizenship;
37 *mons*, *montis*, m.: mountain; huge rock; towering heap; there, to/toward that place; in that direction; to that object/point/stage;
34 *via*, *ae*, f.: way, road, street; journey; 33 *ex*, preposition + ablative: out of, from; by reason of; according to; because of, as a result of;
31 *lacus*, *us*, m.: basin/tank/tub; lake/pond;

reservoir/cistern/basin, trough; lime-hole; bin;
30 *regio*, *onis*, f.: area, region; neighborhood; district, country; direction; 27 *aqua*, *ae*, f.: water; sea, lake; river, stream; rain, rainfall (pl.), rainwater; spa; urine; 27 *primus*, *a*, *um*: first, foremost/best, chief, principal; nearest/next; 26 *ager*, *agri*, m.: field, ground; farm, land, estate, park; territory, country; terrain; soil; 24 *per*, preposition + accusative: through (space);

during (time); by, by means of; 21 *etiam*, *adv.*: – and also, besides/furthermore, in addition/as well; even, actually; yes/ – now too, as yet, still, even now; yet again; likewise; (particle); (etiam); 20 *propinquus*, *a*, *um*: near, neighboring; 20 *annus*, *i*, m.: year (astronomical/civil); age, time of life; year's produce; circuit, course.

quae inter se diversae ad Lirim amnem
et Sinuessam Caietamque perducunt.
(But we shall adopt another (method),
which will meet our needs better and
which cannot be applied to other regions of
Italy: by proceeding along the three roads
– Appia, Latina, and Tibertina – which
by different routes will lead to the river
Liris, and to Sinuessa, and Caieta.) (176)

The text takes the reader to different places as a route direction. The spatial arrangements of places and (past) events are described though a sequence of spatial clauses that locate the figure with respect to a ground. The connection between these clauses, in the chapter we analyze here, is made twelve times using the adverb *deinceps* (in the sense of “after which”), as here:

[D]einceps Antium est, Romana colonia
(... after which comes Antium,
a Roman colony). (23)
[D]einceps est Circeius mons
(... after which comes Mons Circeius). (82)

In the following paragraphs, we discuss several prototypical spatial constructions which are related to the relations, entities, and events listed above and in Table 3.

Basic Locative Construction

The core of spatial expressions is the spatial relation that is construed between the figure and the ground entities. Both motion and static configurations require such an association function in order to convey spatial meaning. The linguistic locus of the association function varies across languages, and it need not be merely expressed in one single linguistic item (morpheme). In Latin, as in other inflected languages such as German, spatial relations are expressed in particles (verbal prefixes, prepositions, adverbs) in combination with nominal case inflection. As shown in fig. 2, the most frequently used spatial word in our chapter is the preposition “in”:

[R]egionem in qua est Latinam
(... the region of Latium, in which it lies). (2)

At the very beginning of the chapter, the city of Rome (figure and also reference point

throughout the chapter) is located in a region (topological relationship of containment), and the region is labelled Latium. Then several theories regarding the geographical and mythical origin of the Latins are summarized, as here:

Et quidem Campaniam scimus dictam fuisse
a priscis regionem quae est circa Capuam
(We know, of course, that Campania
was named by the ancients for the
region around Capua ...). (9)

Again, a region and a reference point are given: Capua as the ground and Campania as the figure. An important linguistic feature of the Latin basic locative construction is the preposition that indicates the spatial association of the figure and the ground. The example just cited features the preposition *circa*. *Circa* is also used to denote the surroundings of a known place, as here:

[E]t alibi romanos accepisse lapides ad structuram ex fidenati agro circa urbem optimos (... and elsewhere he says that the Romans took the best stones for building from the territory of Fidenae near the city of Rome.) (412)

Using concordance software, all instances of specific word forms or lemmata can be displayed conveniently. Table 4 gives all instances where the preposition *circa* is used.

Concordance tables as the one shown below allow us to get a grasp of the meaning potential and the typical uses of a word form or lemma in the corpus. A glance at the table shows, for example, that the preposition *circa* can also construe a relatively vague area within a greater space, as in:

[C]irca hunc tractum campaniae colebatur
puer iuppiter (... around this area of Campania
Iuppiter was worshipped as a boy ...). (116)

Obviously, the root “circ” is also used for prefixing verbs, as in:

[M]ari circumdata (surrounded by the sea). (77)

This participial construction (see Table 6 for a full list of occurrences) allows us to provide two spatial relationships in one clause, one referring to the itinerary (with the adverb *deinceps*, see above), and an additional locative construction

in a noun phrase, locating the figure in its surroundings (typically water), as here:

Deinceps est Circeius mons, magna
parte mari circumdatus, in quo Circen
fabulae perhibent habitasse.

(Then comes Mons Circeius, largely
surrounded by sea, where, in myths,
Circe is supposed to have lived.) (82)

The basic locative constructions profile the inherent relation between objects, as in:

[D]extrorsumque est lacus Fundanus
(on the right is Lacus Fundanus). (149)

Posture verbs can enrich the basic locative construction by adding reference to the human body, as in: “Each man sits in his own place”, whereby “to sit” is based on the bodily posture.

Self-Propelled Motion (Actual and Fictive)

Given the focus on pathways, Biondo’s text is not only full of basic (static) locative constructions, but also features motion verb constructions, such as:

Deinceps Antium est, Romana colonia, de qua Livius [...]. (Then comes Antium, a Roman colony of which Livy writes). (23)

Deinceps a Velitris recto itinere instituto
distat XIV oppidum Sarmineta.

(Fourteen miles away comes the
town of Sarmineta). (185)

This is a rather typical construction in the English translation of the chapter we have analyzed. It is rather consistently used to translate descriptions containing *deinceps* (see above) in the original text. In these examples, the figure and the ground are reversed, i.e., the moving entity is the deictic center of the verb to come and the immobile ground element is construed as the figure.²⁷ It allows rendering the traveler’s experience as a constant observer, in front of whom the landscape passes by. Interestingly, at first sight, the Latin original does not seem to use an analogous construction. The verb *venire* is used for actual motion without a figure–ground reversal, as here:

Postea, ubi venerunt tribuni, oppidum vetere
fortuna opulentum tres exercitus diripuerunt.

(Afterwards, when the tribunes arrived, the three armies sacked the town which was wealthy as a result of its ancient good fortune.) (113)

Such motion verb constructions (intransitive) are frequent. Typical self-propelled motion verbs are obviously *ire* (often with prefixes *ad-*, *ex-*, and so on) or *fluere*. For example:

[N]e Hannibal per viam Appiam in
agrum Romanum iret praedatum
(...so that Hannibal would not go along the Via
Appia to plunder the Roman territory.) (124)

Fictive motion is used when the motion described actually renders a static configuration dynamically, often motivated by a metonymic relationship within the figure element, as in, for instance:

[F]luvia Ufens [...] inter valles serpens
mare petat. (... the river [...] creeps between
the valleys toward the sea.) (118)

The river as a landmark or figure does not really move, but the water flowing down its bed obviously does, which then inspires the creeping motion event construal of the scene.

Caused Motion Verbs

Fictive motion can also be found in caused motion constructions, i.e., in constructions involving verbs denoting an agent causing a figure to move in space.²⁸ For example here:

[F]inis Etruriae ad Tiberim nos perducens
Romam (... the border of Etruria
taking us to the Tiber ...). (1)

The caused motion verb in the present participle (*perducere*) coerces a topographic landmark that would naturally represent the path to the motion event, whereby the writer is the figure and Rome the goal. A similar construal can be inferred from the next passage:

Alia, quae nos ad latinorum limites ducit, via
est Latina (Another road which takes us the
borders of the Latins is the Latina ...). (221)

²⁷ See Thiering 2011.

²⁸ For an analysis of caused motion events, see Berthele 2015, URL: <https://www.tandfonline.com/doi/full/10.1080/13670050.2015.1027147> (accessed 20.07.2020).

In all cases, tokens can be attributed to constructions and then be counted, compared, and in many cases related to actual cartographic material.

7. Conclusion

Biondo presents a number of different spaces, as presented above by the list of cognitive parameters applied in his (re)construction of Italy and, in turn, our (re)construction of his *Italia Illustrata*. Our main aim was to analyze spatial language, but in particular the spatial encodings from a cognitive-semantic point of view. These are examples of collective versions of 'worlds' (Weltansichten). These examples represent concepts about the spatial organization of cultural practices such as using a map or a GPS system.²⁹ Recent literature of spatial cognition, cognitive maps, and mental models especially show that, although rather cultural-specific, such practices are based on fundamental if not universal cognitive parameters, such as the concepts introduced above.

Furthermore, we have shown that Biondo's text makes frequent reference to the naming of places, landmarks, toponyms, and spatial relations. The text also refers to a number of different semiotic encodings, such as other texts and maps.

Our systematic analysis of an exemplary chapter sheds light on the different forms of knowledge represented and activated by the text in terms of spatial relations and spatial perception. With respect to the interaction, we have shown that linguistic encoding patterns point to different cognitive parameters, which in turn motivate different cognitive maps.

Interestingly, the text corpus indicates a mixture of spatial frames of reference. That is, the relative frame of reference (as in right/left) does indeed occur, but the absolute frame of reference nevertheless occurs more often, depending on environmental landmarks such as rivers, lakes, shores, mountains, and ancient roads. To a lesser degree we also find the intrinsic frame of reference, that is, a house, doorway, gate, entrance serve as a spatial anchor, independent of the reader's perspective. This observation aligns nicely with current research on spatial frames of reference indicating the cultural-specific – and hence not universal – encoding mechanisms of spatial anchors.

Not surprisingly, Biondo refers to a number of towns and villages that are lined up along the three main roads he has used as a spatial grid. These roads indeed serve as the major spatial guiding points in the text. The data also indicate a number of geometric alignments such as vertical extension (e.g., from above), inclusion (in, inside), and region (territory).

To conclude, we come back to our main hypothesis stated above: Biondo's text is based on cognitive maps and mental models. We have applied such notions to a historical source. Hence, we take a rather synchronic research theme – cognitive psychology and cognitive linguistics dealing with synchronic data and speakers – to analyze a historical source text (in short, a panchronic approach). These cognitive maps enable the reader to mentally (re)construct different spatial references or rather a spatial grid. This should come as no surprise regarding the constructive function of cognitive maps.

²⁹ Thiering 2018.

³⁰ Slobin 1996.

Appendix: Tables

Basic Spatial Parameters

Granularity partial concept	Type	Referents and dimensions [] = optional concepts	Typical linguistic instantiation	Examples from Biondo's text
individualizable entity	landmark, ground	hills, mountains, rivers, forests toponyms: place and city names, buildings, bridges, churches, fountains, walls, streets, squares, gates, memorial, region, sites, temples, etc.	noun phrases (+ modifiers), toponyms	Oriolo dei Fichi, church of Ravenna, town of Modigliana, castle of Zagonara, town of Fusignano, Cotignola, lies on the Senio, Cunio, Brisighella, Rontana, S. Martino in Gattara, Castellina, (and the villages of) Marradi, Biforco, the Apennines, Crespino // <i>Aureolum, ecclesiae Ravennatis, Mutiliana vetustissimi oppidi, Zagonaria castellum, oppidum Cunium, Braggella, Rontana, Gattaria, Castilionum castella, Marratae et Bifurcus vici, Crispinus</i> hydronyms: Marzeno, Lamone, Senio // <i>Martianus, Anemo, Sennius</i>
individualizable entity	figure	the entity construed as being in motion (either self-propelled or caused motion)	noun phrase	the river Senio, the town of Fusignano, travelers, Hannibal
spatial relation	static association	geometric-dimensional or topological association	adposition, prefix	above // <i>supra</i> ; in // in; circa, in (<i>bis</i>), on (lies on = posture verb plus locative), under // in (<i>bis</i>), <i>adiexit, sub</i>
spatial relation	frame of reference	relative/deictic, intrinsic/geometrical, absolute/allocentric	adverbial	right bank (relative frame), nearby, brushing the flanks of // <i>ad dexteram, adiecit, latera abluit</i> beneath it (bird's eye view) // <i>sub quo</i> north of/south of in front of/behind
spatial relation	proximal vs. distance	distances: scale, scope, size; encoded in adjectives, adverbs, verbs but mostly in adpositions and case systems (especially relevant for Latin)	adverbial	four miles, five miles away, within two miles // <i>quarto [...]</i> <i>miliario, quinto inde miliario, intra secundum [...]</i> <i>miliarium</i> ; near/far
spatial relation	dynamic association (path)	path (away from source, toward goal, related to a milestone [over], into, out of, along, etc.)	adposition	in, into // <i>in, in</i>
co-event	manner or posture	manner of motion, manner of position (posture), orientation of figure at end of event (caused motion)	verbs, gerunds	lies (<i>bis</i>) // <i>situm, est</i> ; flow (down into) // <i>defluit</i>
event	basic locative construction	gestalt principles of figure (F)[trajectory]-ground(G) [landmark] asymmetries (thema-rhema); trajectory/path of F and G	simple cause (NP figure + V static + relation + NP ground	<i>regionem in qua [urbem] est Latinam</i> ; <i>Supra eam civitatem montes sunt [ardui et late diffusi]</i>
event	self-propelled motion construction	motion events: see also satellite-frame vs. verb-frame languages ³⁰	flow down into (Lamone, marshes) // <i>paludem influit</i>	
event	caused motion construction	cause of motion (mover), moving object (figure), [manner of position] association function, ground	NP Cause + V cause d.motion + Figure + Relation + NP ground	<i>Finis Etruriae ad Tiberim nos perducens Romam ordine describendam offerebat</i>
event	fictive motion construction	figure, [manner of] motion, association function, ground	NP Figure + Vmotion + Relation + NPground	the river [...] creeps between the valleys toward the sea

Table 3
Spatial Parameters. This table uses terms adapted from Levinson 2003, Talmy 2003, Thiering 2015, Thiering 2018, and Slobin 1996.

Parts-of-Speech Analysis

Rank	Prototypical function	Lemma	Latin (Collatinus frequency)	Frequency
01[4]	pp[direction: source-path/trajectory-goal=lm] to (the) __lm: border(2), land(1), ground(5), river(4), sea(3), territory(3); to __top: Alba, Algidus, Anxur, Aricia, Bologna, Campania, Formia, Frosinone, Gabii, Gaeta, Genzano, Herculaneum, Labici, Mentana, Monte Catillo, Palestrina, Rome, Sezze, Sinuessa, Terracina, Torre Astura, Valleria, Valomontone, Vesta	to		369
02[5]	pp[container-region]: source-trajectory[=loc]-goal[lm] in __container: book(61), the coastal region, __ district[bounded region], __forests, __lake[bounded region], __ marshes[unbounded region], __mountains, __place, __region, __sea[unbounded region], __territory, __tree[unbounded region]s, __vicinity, __woods [bounded region]	in	in (255) pp+acc: into, about, in the midst of, according to, after (manner), for, to, among [in pp+abl: in, on]	343
03[11]	pp[source[dis-dir]-goal[lm+top]] __from __region+trajectory flowing down __, come __ __distance extend __, stades(5)/miles(23) __	from	de (61) pp+abl: down/away from, from, off, about, of, concerning, according to, with regard to; ab (44) pp+abl: by (agent), from (departure, cause, remote origin/time), after (reference); unde (18) adv+inter: from where, whence, from what or which place, from which; from whom	148
04[13]	pp[+contact/horizontal/+support/contiguous] adv: on the other hand (2); further on(7); later on(1)/adj: depending on (1)	on		139
05[14]	pp(by + det (51)	by	apud (13) pp+acc: at, by, near, among, at the house of, before, in the presence/writings/ view of,	122
06[18]	pp[+contact, +vertical, + region] Rule system: ³¹ at (x,y) =a referent x is at a relatum y if and only if: (i) INCLUSION(x, REGION(y)) (ii) ≠ (INCLUSION(y, REGION(x)) __top[bounded region]: Anagni, Anzio, Astura, Formia, Fumone, Fregellae, Gaeta, Lavinium, Ostia, Rome, Sinuessa, Terracina	at	to ut (68) conj+ind+ind: to (+ subjunctive), in order that/to, how, as, when, while, even if	86

Table 4

Excerpt from Our Parts-of-Speech English-Latin Analysis.

The first column (ranking) presents in parentheses the table numbering; the square brackets are the actual rankings (AntConc). We have only included entries that encode spatial information, thereby disregarding several other more frequent entries. The second column presents prototypical functions of the relevant lemma. The spatial preposition to (01/4), for example, encodes a direction in a motion event.

³¹ FIG is near or in GND, with the constraint that FIG is portable relative to GND; FIG = contiguous to the place of GND, where the dimensionality of GND is not significant.

Abbreviations

Grammatical Functions:

ACC = accusative
 ADJ = adjective
 ADV = adverbial
 DET = determiner (a, the)
 NP = noun phrase
 PL = plural
 PP = preposition

Cognitive Semantic Concepts/Spatial Role Labeling:

DIR = directional
 DIS = distance
 FOR = frames of reference [INTR = intrinsic, ABS = absolute, REL = relative]
 LM = landmark (ground object)
 LOC = locative
 MAN = manner
 REG = region
 TOP = toponym
 TR = trajector (moving figure object)[...] = ORDER KWIC/
 ANTCONC
 TECHNICAL TERMS = [CAPITALIZED], LANGUAGE EXAMPLES = (language examples)

Collatinus Analysis

The list below is the result of a simple Collatinus statistical account on the Latin original text. It lists the first 25 entries bottom down; the numbers in parenthesis show: a) grammatical forms of this lemma in the corpus, b) polysemous meanings, c) probable number polysemous meanings related to the lemma.

- 356 (326, 33, 30) sūm, es, esse, fui: to be, exist (also used to form verb perfect passive tenses with NOM PERF PPL);
- 335 (335, 0, 0) ēt, conj.: and, and even, also, even (et ... et = both ... and);
- 255 (255, 0, 0) īn (prep. acc. or abl.): into, about, in the mist of, according to, after (manner), for, to, among;
- 228 (0, 409, 228) quī, quae, quod: how?, how so?, in what way?, by what/which means?, whereby, at whatever price;
- 167 (0, 362, 167) quīs, quae, quid: who?, which?, what?, what man?;
- 126 (106, 22, 20) dīco, is, ere, dixi, dictum: to say, declare, state, allege, declare positively, assert, plead (case), to mean;
- 124 (63, 87, 61) īs, ea, id: he/she/it/they (by GENDER/NUMBER); DEMONST: that, he/she/it, they/them;
- 122 (122, 0, 0) ā (preposition + ablative): Ah!, (distress/regret/pity, appeal/entreaty, surprise/joy, objection/contempt);
- 106 (106, 0, 0) ād (preposition + accusative): to, up to, toward, near, at, until, on, by, almost, according to, about (w/NUMBER);
- 82 (82, 0, 0) Rōmānus, a, um: Roman (Romanus, i, m.: Roman, a Roman);
- 74 (74, 0, 0) urbs, urbis, f.: city, City of Rome;
- 73 (72, 1, 1) hābēo, es, ere, -bui, -bitum: to have, hold, consider, think, reason, to manage, keep, spend/pass (time);
- 69 (64, 5, 5) oppīdum, i, n.: town;
- 68 (68, 0, 0) ūt (conj. + ind.: + ind.: to + subjunctive): in order that/to, how, as, when, while, even if;
- 62 (62, 0, 0) nunc (adverb): now, today, at present;
- 61 (61, 0, 0) dē (preposition + ablative): down/away from, from, off, about, of, concerning, according to, with regard to;
- 56 (56, 0, 0) cum (inv.): with, together/jointly/along/simultaneous with, amid, supporting, attached;
- 55 (53, 2, 2) hīc, haec, hoc: this, these;
- 47 (47, 0, 0) Līvius, i, m.: Livy;
- 44 (44, 0, 0) āb (preposition + ablative): by (agent), from (departure, cause, remote origin/time), after (reference);
- 43 (43, 0, 0) Strābo, onis, m.: a Greco-Roman surname;
- 42 (42, 0, 0) scrībo, is, ere, scripsi, scriptum: to write, compose;
- 41 (41, 0, 0) Rōma, ae, f.: Rome;
- 41 (31, 11, 10) magnus, a, um: large/great/big/vast/huge, much, powerful, tall/long/broad, extensive/ – great (achievement), mighty, distinguished, skilled, bold/confident, proud;
- 40 (40, 0, 0) nōn, neg.: not, by no means, no; (non modo ... sed etiam => not only ... but also).

Concordances

left context	circa	right context
quidem campaniam scimus dictam fuisse a priscis regionem quae est	circa	capuam scimusque latii appellationem a principio pauciora angustiora complexam fuisse
in vergilii vii dicit exitum tiberis naturalem non esse nisi	circa	ostiam ubi primum aeneas castra constituit cum postea in agro
116 et servius septimo vergilii super verbo circeiumque iugum dicit	circa	hunc tractum campaniae colebatur puer iuppiter qui anxurus dicebatur a
novacula interpretatur quia barbam numquam rasisset 117 est autem fons	circa	terracinam qui aliquando dictus est anxur 118 et infra servius
mare sic indicat nullam vare sacra vite prius severis arborem	circa	mite solum tiburis et moenia catili 269 sunt tiburis propinqua
colchis iasonem secuta est ad italiam pervenisse et populos quosdam	circa	fucinum ingentem lacum habitantes propter paludis magnitudinem docuisse remedia contra
superiori edito in colle rocha papae prosperi columnae cardinalis oppida	circa	quae duobus aut tribus a tusculo milibus distantia agri fertilitatem
et alibi romanos accepisse lapides ad structuram ex fidenati agro	circa	urbem optimos 413 et supra diximus tiberim dividere agrum veientem

Table 5

Table of Concordance for the Preposition 'Circa' in the Chapter Analyzed. The table always shows 10 words on the left and on the right of the preposition.

left context	circ-	right context
post antium est quinto miliario astura antonii columnae arx mari	circumdata	prope quam astures fuere vetustissimi de quibus vergilius astur equo
est percussus 82 deinceps est circeius mons magna parte mari	circumdatus	in quo circen fabulae perhibent habitasse 83 habuit vero is
post primam scaturiginem passu molas versat plurimas vico celebri pulcherrimoque	circumdatas	156 per quae loca scipionem laeliumque conchas et umbilicos legisse
q sulpitius priscus dictator captis direptisque illorum castris oppidum corona	circumdatum	scalis captum diripuit censuitque senatus frequentem coloniam labivos deducendam 253
vetustatis indagator curiosissimus quid magnae naves parvo et altissimis undique	circumdato	montibus in lacu ibi induissent nosse animum adiecit nosterque leo
hannibalis a capua tunc a romanis obsessa et triplici vallo	circumdata	ad urbis romae moenia quare libet ordine viam repetere qua

Table 6

Participial Constructions with the Prefixed Verb Circumdare. The table always shows 10 words on the left and on the right of the preposition.

References

- Berthele 2015
Raphael Berthele, "Convergence in the Domains of Static Spatial Relations and Events of putting and Taking: Evidence from Bilingual Speakers of Romansh and German", *International Journal of Bilingual Education and Bilingualism*, vol. 18, 5, (2015), pp. 624–642.
- Biondo 1474
Flavio Biondo, *Italia illustrata*, Johannes Philippus de Lignamine, Roma, 1474. <http://resolver.staatsbibliothek-berlin.de/SBB00028B4F00000000>.
- Biondo 2005a
Flavio Biondo, *Italy Illuminated: Volume I. Books I-IV*, ed. and trans. Jeffrey A. White, Harvard University Press, Cambridge, Mass., 2005 (I Tatti Renaissance Library 20).
- Biondo 2005b
Flavio Biondo, *Biondo Flavio's Italia Illustrata: Text, Translation, and Commentary*, ed. and trans. Catherine J. Castner, 2 vols., Global Academic Publishing Binghamton University, Binghamton, N.Y., 2005–2010, vol. 1: Northern Italy, 2005.
- Biondo 2011
Flavio Biondo, *Italia Illustrata*, ed. Paolo Pontari, 3 vols., Edizione nazionale delle opere di Biondo Flavio Istituto storico italiano per il Medio Evo, Roma, 2011– 2017, vol.1, 2011.
- Biondo 2014
Flavio Biondo, *Italia Illustrata*, ed. Paolo Pontari, 3 vols., Edizione nazionale delle opere di Biondo Flavio Istituto storico italiano per il Medio Evo, Roma, 2011– 2017, vol. 2, 2014.
- Biondo 2016
Flavio Biondo, *Italy illuminated: 2. Books V-VIII*, ed. and trans. Jeffrey A. White, Harvard University Press, Cambridge, Mass., 2016 (I Tatti Renaissance Library 75).
- Biondo 2017
Flavio Biondo, *Italia Illustrata*, ed. Paolo Pontari, 3 vols., Edizione nazionale delle opere di Biondo Flavio Istituto storico italiano per il Medio Evo, Roma, 2011– 2017, vol. 3, 2017.
- Clavuot 1990
Ottavio Clavuot, *Biondos "Italia illustrata" - Summa oder Neuschöpfung: Über die Arbeitsmethoden eines Humanisten*, Bibliothek des Deutschen Historischen Instituts in Rom, Niemeyer, Tübingen, vol. 69, 1990.
- Görz/Seidl/Thiering 2022
Günther Görz, Chiara Seidl, and Martin Thiering, "Linked Biondo: Generating and Processing Research Data Based on Geographical Feature Modeling", in *Walking Through History. An Interdisciplinary Approach to Flavio Biondo's Spaces in the "Italia Illustrata"*, ed. Tanja Michalsky and Martin Thiering, Bibliotheca Hertziana - Max Planck Institute for Art History 2022. <https://doi.org/10.48431/hsah.0102>.
- Guckelsberger 2022
Kurt Guckelsberger, "Two Great Maps of Italy – a Comparison", in *Walking Through History. An Interdisciplinary Approach to Flavio Biondo's Spaces in the "Italia Illustrata"* ed. Tanja Michalsky and Martin Thiering, Bibliotheca Hertziana - Max Planck Institute for Art History 2022, <https://doi.org/10.48431/hsah.0104>.
- Johnson 1987
Mark Johnson, *The Body in the Mind: The Bodily Basis of Meaning, Imagination, and Reason*, University of Chicago Press, Chicago and London, 1987.
- Langacker 1987
Ronald W. Langacker, *Foundations of Cognitive Grammar: Theoretical Prerequisites*, Stanford University Press, Stanford, vol. 1, 1987.
- Langacker 2008
Ronald W. Langacker *Cognitive Grammar: A Basic Introduction*, Oxford University Press, Oxford, 2008. <https://doi.org/10.1093/acprof:oso/9780195331967.001.0001>.
- Levinson 2003
Stephen C. Levinson, *Space in Language and Cognition: Explorations in Cognitive Diversity, Language Culture and Cognition*, Cambridge University Press, Cambridge, vol. 5, 2003.
- Pontari 2009
Paolo Pontari, "Pictura latens: La dispersa carta geografica d'Italia di Petrarca e Roberto d'Angiò", *Rinascimento*, 49, (2009), pp. 211–244.
- Gumperz/Levinson 1996
John Joseph Gumperz and Stephen C. Levinson, *Studies in the social and cultural foundations of language*, Cambridge University Press, Cambridge and New York NY USA, vol. no. 17, 1996.
- Richter 2022
Kai-Florian Richter, "The Description of Places in Biondo's Italia Illustrata: Outlining a Quantitative Analysis of their Granularity and Spatial Relationships", in *Walking Through History. An Interdisciplinary Approach to Flavio Biondo's Spaces in the "Italia Illustrata"*, ed. Tanja Michalsky and Martin Thiering, Bibliotheca Hertziana - Max Planck Institute for Art History 2022, <https://doi.org/10.48431/hsah.0108>.
- Sinha/Kuteva 1995
Chris Sinha, and Tanja Kuteva, "Distributed Spatial Semantics", *Nordic Journal of Linguistics*, vol. 18, 2, (1995), pp. 167–199.
- Slobin 1996
Dan Isaac Slobin, "From 'Thought and Language' to 'Thinking for Speaking'", in *Rethinking linguistic relativity*, ed. John Joseph Gumperz and Stephen C. Levinson, Cambridge University Press, Cambridge and New York NY USA, 1996, pp. 70–96. URL: <https://philarchive.org/archive/SLOFTA>.
- Talmy 1983
Leonard Talmy, "How language structures space", in *Spatial orientation: Theory, research, and application*, ed. Herbert L. Pick Jr. and Linda P. Acredolo, Plenum Press, New York, 1983, pp. 225–282.
- Talmy 1978
Leonard Talmy, "Figure and Ground in Complex Sentences", in *Universals of human language*, ed. Joseph Greenberg, Charles Ferguson and Edith Moravcsik, Stanford University Press, Stanford, 1978, pp. 627–649.
- Talmy 2003
Leonard Talmy, *Toward a Cognitive Semantics*, 2 vols., The MIT Press, Cambridge, Mass., 2000, vol. 2: Typology and Process in Concept Structuring, 2000, 2nd ed. 2003.
- Thiering 2015
Martin Thiering, *Spatial Semiotics and Spatial Mental Models: Figure-Ground Asymmetries in Language*, De Gruyter, Berlin; Boston, 2015. <https://doi.org/10.1515/9783110356878>.
- Thiering 2018
Martin Thiering, *Kognitive Semantik und Kognitive Anthropologie: Eine Einführung*, De Gruyter, Berlin and Boston, 2018. <https://doi.org/10.1515/9783110445169>.
- Thiering 2011
Martin Thiering, "Figure-ground

Reversals in Language", *Gestalt Theory*, vol. 33, (2011), pp. 245–276.

Vasardani et al. 2013
Maria Vasardani, Timpf, Sabine, Timpf, Stephan Winter, and Martin Tomko, "From Descriptions to Depictions: A Conceptual Framework", in *Spatial Information Theory: 11th International Conference, COSIT 2013, Scarborough, UK, September 2-6, 2013*, ed. Thora Tenbrink, John Stell, Antony Galton and Zena Wood, Springer, Heidelberg and New York, 2013, pp. 299–319.

Vieu 1997
Laure Vieu, "Spatial Representation and Reasoning in Artificial Intelligence", in *Spatial and Temporal Reasoning*, ed. Oliviero Stock, Springer Netherlands, Dordrecht, 1997, pp. 5–41.

Woodward 2007
The History of Cartography, ed. David Woodward, University of Chicago Press, Chicago, vol. 3.1: Cartography in the European Renaissance, 2007.