MARIA CHIARA PARISI

Curriculum Vitae

<u>m.c.parisi@uva.nl</u> <u>https://www.mariachiaraparisi.com/</u>

Affiliation

University of Amsterdam Faculty of Humanities Department of Philosophy Oude Turfmarkt 141 1012 GC Amsterdam The Netherlands

Institute of Logic, Language and Computation (ILLC)

Current Position

Ph.D. candidate at the University of Amsterdam Faculty of Humanities –
Institute for Logic, Language and Computation
Project: Mathematics & Scientific Explanation in Antiquity: A 'Slow Science' and 'Big Data' Study
Supervisor: Arianna Betti (UvA); Co-supervisor: Marije Martijn (VU

Amsterdam)

In my PhD project, I work on reconstructing the role of mathematics as science and its explanations in Antiquity, from Aristotle to Neoplatonism. I combine conceptual analysis (e.g. modelling of concepts) with quantitative and computational techniques (e.g. expanded term-search, extraction and annotation of paragraphs) on a 'big-data' ancient Greek corpus.

Research Areas

- Data-driven History of Philosophy & its Methodology
- Ancient Philosophy, specifically Metaphysics and Philosophy of Science
- Digital Humanities & Digital Classics

Research Experience

Research Assistant to the NWO VICI project *Ideas at Scale – Towards a Computational History of Ideas (e–Ideas)*

PI: Arianna Betti (University of Amsterdam)

I work with qualitative, quantitative and computational methods applied to the history of philosophy (e.g., building and annotating philosophical corpora for text-mining purposes). In particular, I focus on the use of digital tools in the analysis of philosophical texts in Classical Greek and (Neo-)Latin.

Research Assistant to the CLUE+ project *A case study in digital history of philosophy*

PI: Marije Martijn (VU Amsterdam)

I apply computational tools for topic modeling to a Greek philosophical corpus (~15 authors, 25 texts, 2M words) including Aristotle's *Organon* or logical works and its commentaries between the 2nd and 6th cent. CE.

Sep 2021 – now

Apr-July 2021

Aug 2019 – Aug 2021

Research Assistant to the CLUE+ project <i>A Digital History of Philosophy</i> PI: Marije Martijn (VU Amsterdam)	Oct – Dec 2020
I am researching digital tools for topic modeling ancient and mediaeval philosophy, especially for Classical Greek, Latin and Arabic corpora.	
Membership of Research Institution	
• Amsterdam Institute for Humanities Research (AIHR)	2021 – now
• OIKOS National Research School in Classical Studies	2021 – now
Education	
Visiting Ph.D. Student Department of Philosophy, New York University, United States Supervisor: Prof. Marko Malink	Jan – Mar 2024
Master of Arts. Philosophy (research) (8/10) Universiteit van Amsterdam, the Netherlands Defence Date: 28.06.2019 Thesis: On How Perspectival Hylomorphism Got the Facts Wrong. Supervisor: Prof. Arianna Betti	2016 – 2019
Bachelor of Arts. Philosophy (110 cum laude/110) Sapienza Università di Roma, Italy Defence Date: 15.07.2016 Thesis: <i>Objects and Substances: an Aristotelian Metaphysics of</i> <i>Particular</i> Ousiai. Supervisor: Prof. Tito Magri	2013 – 2016
Selected Relevant Coursework (35; 27 unlisted, complete list available here)	
 Metaphysics Gamma at NYU Philosophy OIKOS Course Late Antiquity History of Neoplatonism Programming in Python for Text Analysis Tutorial: Internship Concepts in Motion Epistemology and Philosophy of Science Theoretical Philosophy: Ontology & Metaphysics History of Ancient Philosophy: Aristotle's Prior and Posterior Analytics Physics 	s, Metaphysics,

Selected Relevant Workshops and Schools Attended (17; 10 unlisted, complete list available here)

- 1. Workshop Ancient Aesthetics between Philosophy and Rhetoric, Leiden University, June 15, 2022.
- 2. *HIPE (Identifying Historical People, Places, and other Entities)* Digital Workshop, CLEF 2020, September 14, 2020.
- 3. Transkribus for Advanced Use Digital Workshop, Huygens ING, May 19, 2020.

- 4. *CREATE* Digital History Workshop, University of Amsterdam, November 28, 2019.
- 5. International Congress of Logic, Methodology and Philosophy of Science and *Technology* (CLMPST), Institute of Philosophy of the Czech Academy of Sciences, Prague, August 5–10, 2019.
- 6. Summer School on Aristotle's Metaphysics Yesterday and Today, Università' della Svizzera Italiana & Universität Luzern, September 3–6, 2018 (selected participant).
- 7. MCMP Summer School in Mathematical Philosophy for Female Students, Ludwig-Maximilians-Universität München, July 15-21, 2018 (selected participant).

Honours, prizes, scholarships and grants

Amsterdam University Fund – Travel Grant for Ph.D. students (\in 1000) to support Ph.D. research visiting at NYU Philosophy	Dec 2023
OIKOS Travel grant (\in 500) to support presentation during Ph.D. research visiting at NYU Philosophy	Dec 2023
Fully funded attendance (€ 500) to Summer School on <i>Aristotle's Setaphysics</i> – <i>Yesterday and Today</i> , Università' della Svizzera Italiana & Universität Luzern.	Sept 3–6, 2018
Travel grant (€ 100) to attend <i>MCMP Summer School in Mathematical Philosophy for Female Students</i> , Ludwig-Maximilians-Universität München.	Jul 15–21, 2018
Merit-based Internship (\in 1300) at the Philosophy Library, Sapienza Università di Roma	2014 – 2016
Teaching Experience Courses	
Teaching Assistant in the course Metaphysics, BA Philosophy, University of Amsterdam	2023/2024
Teaching Assistant in the course Data-Driven History of Ideas, MA Philosophy, University of Amsterdam	2023/2024 2022/2023 2021/2022
Teaching Assistant in the course Ancient Philosophy, BA Ancient Studies, University of Amsterdam	2022/2023
Teaching Assistant in the course Logic and Philosophy, MA Philosophy, University of Amsterdam	2022/2023 2021/2022
Supervision	
PPE Honour Project on data-driven historiography of ancient Roman philosophy of science, BA PPE, VU Amsterdam (joint supervision with M. Martijn)	f Mar 2022– July 2023

Internship Concept in Motion, MA Philosophy, University of Amsterdam (individual supervision)	Mar –
MA Student: F. Eskens	Jul 2021
PPE Honour Course "A digital history of ideas", BA PPE, VU Amsterdam (joint supervision with M. Martijn)	Feb –
BA Student: L. Karreman	Jul 2021
MA Thesis Project <i>Creating a generalized framework to support the computational study of historical literature</i> , MA Computer Science, TU Eindhoven in collaboration with the University of Amsterdam (joint supervision as expert user and general feedback & support, with A. Salway and A. Betti)	Jan –
MA student: D. Kortleven	Jul 2021
Project <i>Computational Philosophy</i> , MA Philosophy, University of Amsterdam (joint supervision with Y. Oortwijn, F. Eskens, A. Betti, and A. Salway)	Jun
MA students: H. D'Arcy, E. Lissoni, I. Luden, F. Spencer-Piacentini	2021
Service to the Profession Committees & Boards	
ILLC Representative at PhD Council of the Faculty of Humanities, University of Amsterdam	Sep 2021 – now
Member of Hiring Committee PhD candidate for the ERC Starting Grant, "Generalisation into Sentence and Predicate Positions", 2023 – 2028, University of Amsterdam	June 2023
Member of Advisory Committee for Research Director of Faculty of Humanities (AIHR), University of Amsterdam	Oct 2022

Conferences & Events Organisation

1. Co-organiser for the 14th conference of the Academia Platonica Septima Monasteriensis, *Procli in Euclidis elementa commentarii prologus* (with Marije Martijn and Frans de Haas) Amsterdam, October 13-15, 2023.

Peer Review

• Umanistica Digitale

Research Output

PAPERS

Published

 Bloem, J., Parisi, M.C., Reynaert, M., Oortwijn Y., and Betti, A. Distributional Semantics for Neo-Latin. In *Proceedings of LT4HALA 2020 – 1st Workshop on Language Technologies for Historical and Ancient Languages* (pp. 84–93), LREC 2020. Marseille: European Language Resources Association (ELRA). [OA]

This paper applies distributional semantic models to a very small Neo-Latin corpus in order to discuss the problem of creating and evaluating quality Neo-Latin word embeddings for the purpose of philosophical research. Builds on [3] and [4].

Ongoing

2. Parisi, M.C., Aristotelian Scientific Demonstrations: Logical & Metaphysical Necessity in *Posterior Analytics* II.11. (Ongoing; target: *Phronesis*).

This paper disentangles Logical and Metaphysical Necessity in Aristotle's scientific demonstrations to clarify the relation between demonstrations and *aitiai*, and to shed some light on the controversial examples used by Aristotle in *Posterior Analytics* II.11.

3. Van den Berg, H., **Parisi**, M.C., Oortwijn, Y., and Betti, A., The Spread of the Mathematical Method in Eighteenth-Century Germany: A Quantitative Investigation. (Ongoing; first draft available <u>here</u>;; target: *Synthese*).

This paper assesses the influence of Wolff's 'Mathematical Method' in 18th-century Germany by applying a mixed (quantitative, qualitative, and computational) approach to a bilingual (German/Latin), multi-author 18th-century philosophy corpus of approximately 350 books. I annotated 160 books written in Latin.

4. Betti, A., Van den Berg, H., Oortwijn, Y., Parisi, M.C., Wang, S., Koopman, R., and Bloem, J.Historians and the 'Great Unread' A New Method for Objective Corpus Building in the History of Philosophy. (Ongoing; target: *British Journal for the History of Philosophy*).

This paper describes existing practices in source selection and corpus building and proposes a new method of corpus selection.

INVITED TALKS

- 5. Parisi, M.C., Mathematical Explanations and the Objects of Scientific Knowledge in Antiquity, Workshop *Practice and Theory: The Structures of Scientific and Technological Knowledge in the Ancient Near Eastern and Mediterranean Worlds*, VU Amsterdam, May 25, 2023. (international)
- 6. Parisi, M.C., "Mathematics & Scientific Explanation in Antiquity: A Slow Science and Big Data Study", Kolloquium Phänomenologie der Digital Humanities Freie Universität Berlin, online, February 1, 2023 (international)
- 7. Parisi, M.C., and Oortwijn, Y., "Distributional Semantics for Neo-Latin", Neo-Latin Studies and Digital Humanities, International Association for Neo-Latin Studies, online, April 15, 2021. (international)
- 8. Parisi, M.C., "Mathematics & Scientific Explanation in Antiquity: A Slow Science and Big Data Study", Workshop on Neoplatonism and the Sciences, Utrecht University, online, March 12, 2021. (international)
- 9. Betti, A. and Parisi, M.C., "Computational History of (ancient) Ideas", *Digital Classics* Workshop, OIKOS National Research School in Classical Studies, The Netherlands, online, March 1, 2021. (national)
- 10. Parisi, M.C., "Hylomorphism and The Principles of Extensionality", Workshop *Propositions, properties, sets, and other abstract objects*, Amsterdam, February 7–8, 2020. (international)

CONTRIBUTED TALKS WITH ABSTRACT SUBMISSION

- 11. Parisi, M.C., "On the Starting Points of Science: Disentangling Common Notions, Axioms, and Principles in Ancient Philosophy", at BerGSAS–OIKOS Seminar on Digital Classics, Berlin Graduate School of Ancient Studies & OIKOS National Research School in Classical Studies, May 13–14, 2024. (international)
- 12. Parisi, M.C., "Aristotle's on scientific demonstrations. Disentangling Logical and Metaphysical Necessity in *Posterior Analytics* II.11", OIKOS Work in Progress Day,

OIKOS National Research School in Classical Studies, University of Leiden, January 27, 2023. (national)

- 13. Parisi, M.C., "Aristotle's on scientific demonstrations. Disentangling Logical and Metaphysical Necessity in *Posterior Analytics* II.11", OZSW Course *The History of Philosophy and the Sciences*, University of Groningen, December 9–10, 2022. (national)
- Parisi, M.C., "Hylomorphism and The Principles of Extensionality", Spring School on Wholes and Their Parts. Mereology and Its History, CUSO, ISFI, SNSF-Project The Metaphysics of Quantum Objects, April 30-May 3, 2020. (postponed due to COVID-19). (international)
- Parisi, M.C., "The Problem of Material Constitution: identity and composition of ordinary objects", Summer School on Aristotle's Metaphysics – Yesterday and Today, Università della Svizzera Italiana & Universität Luzern, September 6, 2018. (international)

INVITED GUEST LECTURES

- 16. "What does a PhD researcher in the History of (ancient) Philosophy do?" in the course *History of Philosophy: Unresolved Issues*, MA course, VU Amsterdam, May 24, 2022. (national)
- 17. "Computational History of Ideas: preliminaries and corpus-building" in the course "Data-driven History of Ideas", MA course, Universiteit van Amsterdam, November 20, 2020. (national)
- "Computational History of Ideas: preliminaries and corpus-building" in the course "History of Ideas: Foundational Topics and Computational Applications", MA Philosophy, Università di Torino, May 19, 2020. (international)
- 19. "Aristotle's Mereology" in the course "Logic and Philosophy", MA course, Universiteit van Amsterdam, February 14, 2020. (national)

SEMINAR TALKS

- 20. Parisi, M.C., "On the Starting Points of Science: Disentangling Common Notions, Axioms, and Principles in Ancient Philosophy", at NYU Ancient Philosophy Work in Progress seminar, New York University, February 23, 2024. (international)
- 21. Parisi, M.C., "Tracing Mathematics in Ancient Philosophy: a data-driven investigation", at Concepts in Motions's *PhD-in-DaDriH Seminar Series*, Amsterdam, January 30, 2024. (international)
- 22. Parisi, M.C., "A Digital History of Philosophy", at *Agora* VU History of Philosophy seminar, Amsterdam, October 30, 2020. (national)
- 23. Parisi, M.C., and Salway, A., "Developing a database and associated tools for corpus building", at e-Ideas seminar, Amsterdam, October 27, 2020. (national)
- 24. Parisi, M.C., and Van den Berg, H., "Expert Annotations", at e-Ideas seminar, Zuidoostbeemster, February 11, 2020. (national)
- **RESOURCES:** Software, Data Models, User Scenarios, Corpora, Bibliographic (Meta)dataset Curation, Annotation Sets, Philosophical Models, Annotation Schemes & Workflows and Ground Truth Preparation. All resources publicly accessible by clicking on the underlined text.
- *Software:* Xml-to-col, Bibliobase, *Bibliographic Manager & Corpus Building Tool* (software prototype, data model & user scenarios)

- 25. Parisi, M. C., *Xml-to-col*. <u>https://github.com/mariachiaraparisi/xml-to-col</u>, Jul 2022 This is a Python script that converts lemmatised XML files into TSV files compliant with the Computational Natural Language Learning format (CoNLL). This conversion is one step of converting textual resources from XML to FoLia XML, a format including linguistic annotation at the token level.
- 26. Parisi, M.C., 'Bibliobase' (software prototype), Jan 2021.

This is a screenshot of a GUI-equipped tool prototype based on FileMaker that aims to help researchers to collect, store and annotate (collections of) books metadata, to sort/filter data easily, and to retrieve hierarchical relations among the digital copies and the works; it will also help researchers to access quickly the *best* digital copies of a work.

- 27. Parisi, M.C., and Betti, A., '<u>Bibliobase Data Model</u> 1.0', (data model), Oct 2020. This is version 1.0 of the Data Model for BiblioBase [25]. It draws on the FRBR (Functional Requirements for Bibliographic Records) conceptual entity-relationship model that explains relationships between entities appearing in records in a hierarchical structure. The Bibliobase Data Model has been optimised for corpus building procedures and to work with digital versions of texts.
- 28. Parisi, M.C., and Betti, A., 'FileMaker & Gbooks for User-Controlled Corpus Building User Scenarios', July – September 2020.

These are two user scenarios that describe how the use of FileMaker and gBooks can help researchers and improve the quality of corpus building procedures. FileMaker is the relational database software on which BiblioBase [25–26] is based.

Corpora

29. OGL LatinLit AllWorksLinguisticallyEnriched

This is the link to the ancient Greek corpus that I am using in my PhD project (975 documents and 26,149,775 word tokens). The corpus is in FoLia XML format and on AutoSearch, an environment developed by Clarin NL to search corpora. The corpus was built by converting the lemmatised XML files using as source the *Open Greek and Latin Project* textual data (see [24]).

- 30. OGL GreekLit AllWorksLinguisticallyEnriched This is the link to the Latin corpus that I am using in my PhD project (775 documents and 18,167,965 word tokens). The corpus is in FoLia XML format and on AutoSearch, an environment developed by Clarin NL to search corpora. The corpus was built by converting the lemmatised XML files using as source the Open Greek and Latin Project textual data (see [21]).
- 31. <u>The Spread of the Mathematical Method Latin Corpus (PDFs)</u>
- 32. The Spread of the Mathematical Method German Corpus (PDFs)

These folders contain all the Latin and German texts in pdf with an OCR layer downloaded. We have two distinct corpora: one for the specific purpose of the philosophical research for [3] (164 texts) and the other for other purposes, e.g. (computational) linguistic research (195 texts). For e.g. linguistic purposes it is not relevant whether a text meets the criteria specified in [3], so texts that do not strictly fall under these criteria are included.

Bibliographic Datasets & Corpora Metadata Curation

- 33. Parisi, M.C., and Van den Berg, H., '<u>The Spread of the Mathematical Method Latin</u> corpus for Linguistic Analysis', November 2020.
- 34. Parisi, M.C., and Van den Berg, H., '<u>The Spread of the Mathematical Method German corpus for Linguistic Analysis</u>', November 2020. These spreadsheets contain the bibliographic metadata of the Latin and German corpora for <u>linguistic analysis</u>. The records are chronologically ordered according to the correct year of publication. Each record is associated with a URL link to the full-text.
- 35. Parisi, M.C., and Van den Berg, H., '<u>MM18th German corpus for Philosophical</u> <u>Analysis</u>, November 2020
- 36. Parisi, M.C., and Van den Berg, H.,<u>MM18th Latin corpus for Philosophical Analysis</u>', November 2020 These spreadsheets contain the bibliographic metadata of the Latin and German corpora, built as described in [3], for the <u>philosophical analysis</u> of [2]. Each of them includes a first worksheet that

contains also excluded texts and duplicates, and a second worksheet that is the final corpus containing

records of texts published between 1720 and 1790 in Germany. The records are chronologically ordered according to the correct year of publication and the year of their first edition is specified. Each record is associated with a URL link to the full-text.

- 37. Van den Berg, H., Parisi, M.C., Wang, S., and Oortwijn, Y., 'Expert Metadata Corpus Based on Risse Spread of the Mathematical Method – Phase II.', February 2020. This document contains several versions of the corpus used for [3]. The description of the corpus building procedure can be found in [3] and [4].
- 38. Parisi, M.C., and Martijn, M., 'Digital History of Philosophy Curated Directory of Corpora', (dynamic), Dec 2020. This spreadsheet is a dataset of Ancient Greek, Latin and Arabic corpora and library databases that are relevant for the A Digital History of Philosophy project.
- 39. Parisi, M.C., and Reynaert, M., <u>'The Spread of the Mathematical Method Latin</u> <u>Background Corpora</u>', July 2020.

This spreadsheet represents a dataset of background corpora and library catalogues that are relevant for a follow-up we plan to [2], namely we plan to build an OCR-ed and postcorrected (by using corpus-induced post-correction), enriched and segmented corpus from the pdfs of 164 texts.

40. Parisi, M.C., 'EvaLatin – Neo-Latin Dataset for Nonce2Vec', February 2020 This dataset is the Neo-Latin corpus used in [1] and consists of a small, manually-typed and manually-checked set of 30 target terms and, for each term, three sentences in which the term occurs. The target term is replaced in the snippets with '___'. This corpus was a very small, but sufficient set of data to test the consistency of Neo-Latin word embeddings.

Annotation Sets

- 41. Van den Berg, H., Parisi, M.C., Oortwijn, Y., Koopman, R., and Wang, S., '<u>Annotation Expert Metadata Spread of the Mathematical Method Phase II.</u>', November 2020. This document contains all the annotation results for [3], for which I was one of the two annotators, and an earlier version of the corpus for that paper.
- 42. Van den Berg, H., Parisi, M.C., and Oortwijn, Y., '<u>Annotation Expert Metadata Spread</u> of the Mathematical Method – Phase I.', December 2019. This document contains a deprecated version of the annotation results for [3], for which I was one of the two annotators, and an earlier version of the corpus metadata for that paper.

Philosophical Models, Annotation Schemes & Workflows and Ground Truth Preparation

- 43. Betti, A., Parisi, M.C., Oortwijn, Y., and Van den Berg, H., '<u>Interpretative Framework</u> (<u>Model</u>) for <u>Mathematical Method</u>', July 2020. This document contains the interpretive conceptual framework or model of (Wolff's) Mathematical Method that has been used to analyse the Latin and German corpora for [3].
- 44. Betti, A., Parisi, M.C., Oortwijn, Y., and Van den Berg, H., '<u>The Spread of the Mathematical Method Annotation Scheme</u>', July 2020.
- This document reports (i) the conditions of the model for (Wolff's) Mathematical Method and (ii) the annotation scheme according to which every condition of the model has been annotated, including the sub-questions that were answered for each condition during the annotations for [3].
- 45. Parisi, M.C., '<u>MM18th Keywords Searched (Latin</u>)', July 2020. This document contains the lists of the searched Latin words divided according to the criteria of the model of Mathematical Method [34]. This list of words was used to search the relevant passages during the annotations for [2].
- 46. Parisi, M.C., and Van den Berg, H., '<u>The Spread of the Mathematical Method Relevant</u> <u>Documents + Link&Descriptions</u>', June 2020.

This document contains all the relevant documents/folders for [3], their descriptions, and their links. The document is divided into what concerns (i) annotations, (ii) the model, and (iii) the corpus.

Annotation Workflow Descriptions

47. Parisi, M.C., and Van den Berg, H., '<u>The Spread of the Mathematical Method – Post</u> <u>Annotation Report</u>', June 2020.

This report describes what has been done during the annotations for [3]. The report is divided into what concerns (i) annotations, (ii) the model, and (iii) the corpus.

48. Parisi, M.C., and Van den Berg, H., '<u>Expert Annotations Workflow</u>', February 2020. This document describes the annotation's workflow step-by-step for each of the two annotators (Maria Chiara Parisi and Hein van den Berg).

Pilot Studies for Ground Truths

49. Betti, A., Parisi, M. C., and Van den Berg, H., '<u>Conceptual Network Data The Spread of</u> <u>Mathematical Method</u>', Ongoing.

This document contains a conceptual network of relevant terms collected during the annotations for [3]. It has 8 worksheets, each corresponding to one of the seven criteria of the interpretative framework (Model) for the concept of *mathematical method* (except for the third worksheet *Sciences in B*, which is a list of sciences that could adopt the mathematical method in 18th–century, built on the basis of the annotations results). We listed a Latin term (or its translation), a related concept (in English), and a German term (or its translation) on the same row to show that the two terms relate to the same concept. We then scored the relevance of the concept to the criterion of the Model considered in the worksheet on a scale from 1 (slightly relevant) to 3 (very relevant). The data is meant as a preparation for the construction of an expert ground truth in the sense of Betti et al. 2020. "Expert Concept–Modeling Ground Truth Construction For Word Embeddings Evaluation in Concept–Focused Domains." COLING2020.

Other

Languages

Italian (mother tongue), English (Proficient, C1), French (Intermediate, B1), Latin and Classical Greek (reading and translating)

Computer Skills

SQL, Python, HTML, Shell Scripting

Professional Training

- 1. *Abstract* Seminar, OIKOS National Research School in Classical Studies, Nov-Dec 2023.
- 2. Career Development, Universiteit van Amsterdam, Oct Dec 2023.
- 3. Academic Integrity, Universiteit van Amsterdam, May 2023.
- 4. Speaking Science course (presentation skills), Universiteit van Amsterdam, Mar-Apr 2023.
- 5. Research Skills: *Library* Workshop, Universiteit van Amsterdam, Mar 2023.
- 6. Academic Writing course, Stanford University, online, Jan Feb 2023.
- 7. *Mastering your PhD* course (time management, problem-solving strategies, communication and networking), Universiteit van Amsterdam, Feb-Mar 2022.
- 8. Research Data Management course, Universiteit van Amsterdam, Nov 2021.
- 9. *Effective Project Writing* Workshop, 2018 OZSW Research Master Winter School, Universiteit van Amsterdam, Jan 9–11, 2018.

Administrative Skills

Conferences, workshops, and BA and MA courses organisation and administration

General assistance to large project coordination and management (spreadsheeting, communication, financial paperwork)