

**The Business of Commemoration: A Comparative Study of Italian Catacombs**

by

Jenny R. Kreiger

A dissertation submitted in partial fulfillment  
of the requirements for the degree of  
Doctor of Philosophy  
(Classical Art and Archaeology)  
in The University of Michigan  
2017

Doctoral Committee:

Professor Elaine K. Gazda, Co-Chair  
Professor Elizabeth L. Sears, Co-Chair  
Professor Margaret Cool Root  
Professor T. G. Wilfong

Jenny R. Kreiger

[jkreiger@umich.edu](mailto:jkreiger@umich.edu)

ORCID iD: [0000-0002-3981-4760](https://orcid.org/0000-0002-3981-4760)

© Jenny R. Kreiger 2017

**DEDICATION**

To my family  
*DMS*

## ACKNOWLEDGEMENTS

This project would not have been possible without the generous assistance of numerous individuals and organizations. Above all, I must thank my committee for their unflagging support over the life of this project. They have been my most thoughtful editors and my most stalwart advocates, and I am very grateful to them. I also owe thanks to many at the University of Michigan: to my fellow IPCAA students, for being great teachers and friends; to Alex Zwinak, for his unfailing cheer and ready assistance; to the fine people of the Museum Studies Program, for broadening my horizons; and to the staff of the Kelsey Museum, for giving me a home away from home.

During my three years in Italy, I received crucial support from several quarters. The US-Italy Fulbright Commission and the American Academy in Rome gave me opportunities not only to do better research, but also to live a richer life. In particular, I thank Dr. Kimberly Bowes, Prof. Federico Marazzi, Dott.ssa Claudia Lega, Dott. Alessandro Vella, Dott.ssa Angela Maria Manenti, Dott.ssa Barbara Mazzei, and Prof. Carlo Ebanista for their assistance at various stages of the project. In Rome, Prof. Vincenzo Ficchi Nicolai and the Pontificio Istituto di Archeologia Cristiana gave me the extraordinary opportunity to learn onsite. In Naples, Don Antonio Loffredo and the young people of the Cooperativo Sociale “La Paranza” deserve my deepest gratitude for their generous *disponibilità*, as well as my highest praise for their efforts to care for their cultural heritage while bringing positive change to their community.

Finally, I thank those whose friendship and faith carried me through the challenges of this endeavor: Anna Gesualdi, Giovanni Trono, and the “People of Alto Fest,” who welcomed me as a stranger in a strange land; Dr. Susan T. Stevens and Dr. Amy R. Cohen, who set me on this path; my family, whose belief in me has often surpassed my own; and Kevin Dicus, who has witnessed every success and struggle of the last seven years, and whose humor, patience, generosity, and affection buoyed me through it all.

## TABLE OF CONTENTS

|                          |      |
|--------------------------|------|
| DEDICATION .....         | ii   |
| ACKNOWLEDGEMENTS .....   | iii  |
| LIST OF TABLES .....     | viii |
| LIST OF FIGURES .....    | ix   |
| LIST OF APPENDICES ..... | xv   |
| ABSTRACT .....           | xvi  |

### CHAPTER

|  |          |
|--|----------|
| <b>1. Working in the dark: Approaches to funerary labor.....</b> | <b>1</b> |
| Guiding premises .....   | 3        |
| Premise 1 .....  | 3        |
| Premise 2 .....  | 4        |
| Premise 3 .....  | 5        |
| Premise 4 .....  | 6        |
| Premise 5 .....  | 7        |
| A note on worker demographics.....                               | 10       |
| Historiographic overview .....                                   | 11       |
| On catacombs .....   | 11       |
| On Roman economy and manual labor .....                          | 13       |
| On funerary labor .....  | 15       |
| Problems of preservation, publication, and access .....          | 16       |
| Datasets.....  | 20       |
| Catacomb of Domitilla, Rome.....                                 | 20       |
| Catacomb of San Gennaro, Naples.....                             | 22       |
| Catacomb of San Giovanni, Syracuse .....                         | 24       |
| Textual sources .....  | 25       |
| A brief introduction to methods .....                            | 26       |
| Connoisseurship .....  | 26       |
| Quantitative analysis of epigraphy .....                         | 27       |
| Social network analysis .....                                    | 28       |
| Interpretive models .....  | 29       |

|   |            |
|---|------------|
| <i>Columbaria</i> : Funerary associations and “mass production” (?) of tombs..... | 30         |
| <i>Manceps</i> and choachyte: Funerary professionalism in Italy and Egypt.....    | 33         |
| The Roman stone trade: Primary and secondary exchange networks.....               | 36         |
| Overview of subsequent chapters.....  | 38         |
| <b>2. The <i>fossor</i>: Labor and agency in the Roman catacombs.....</b>         | <b>48</b>  |
| <i>Fossores</i> and debates on catacomb management.....                           | 50         |
| Primary evidence for <i>fossor</i> activity.....                                  | 60         |
| <i>Fossores</i> ’ social status.....  | 66         |
| <i>Fossores</i> in the Roman economy.....   | 68         |
| Conclusion.....   | 70         |
| <b>3. The painter: Context, “signature,” and choice.....</b>                      | <b>74</b>  |
| The Zona Greca.....   | 77         |
| Contextual factors affecting painter and painting.....                            | 81         |
| Defining criteria for evaluating painting.....                                    | 83         |
| Analysis.....   | 87         |
| Tools used by the Zona Greca workshop.....  | 87         |
| Colors used by the Zona Greca workshop.....                                       | 90         |
| Composition style of the Zona Greca workshop.....                                 | 91         |
| Fill motif execution techniques of the Zona Greca workshop.....                   | 94         |
| The Zona Greca workshop “signature”.....  | 102        |
| Room for negotiation and personal choice.....                                     | 103        |
| Conclusion.....   | 106        |
| <b>4. The engraver: Workshop insights from epigraphy.....</b>                     | <b>135</b> |
| Site-specific styles and workshops.....   | 137        |
| Methods.....  | 140        |
| Quantitative analysis.....  | 140        |
| Artifactual analysis.....   | 142        |
| Samples.....  | 143        |
| Quantitative study of epigraphy.....  | 144        |
| Regional styles: Domitilla versus San Giovanni.....                               | 144        |
| Local styles: Domitilla versus S. Callixtus and the Coemeterium Maius.....        | 148        |
| Inscriptions as artifacts.....  | 152        |
| Types and treatments of stone.....  | 153        |
| Use of tools and guidelines.....  | 156        |
| “Regularity”.....   | 156        |
| Conclusion.....   | 160        |
| <b>5. Toward a social-network theory of catacomb cultural production.....</b>     | <b>176</b> |
| Methods.....  | 177        |
| Models for social interaction in the funerary industry.....                       | 178        |
| Model 1: <i>Mancipes</i> , choachytes, and personal relationships.....            | 178        |
| Model 2: The Roman stone trade and funerary consumption.....                      | 181        |
| Model 3: <i>Columbaria</i> and patron-side management.....                        | 182        |
| Models for a catacomb social network.....   | 185        |
| Network thinking and “motif maps”.....  | 188        |
| Conclusion.....   | 194        |

|                          |            |
|--------------------------|------------|
| <b>CONCLUSION .....</b>  | <b>215</b> |
| <b>APPENDICES.....</b>   | <b>220</b> |
| <b>BIBLIOGRAPHY.....</b> | <b>262</b> |



## LIST OF TABLES

|   |     |
|---|-----|
| Table 2.1. Inscriptions referencing <i>fossore</i> s by site and type.....                                      | 62  |
| Table 2.2. Painted and engraved images of <i>fossore</i> s by site .....  | 65  |
| Table 3.1. Examples of the principal fill motifs of the Zona Greca workshop .....                               | 95  |
| Table 4.1. Use of epithets across all inscriptions from Domitilla and San Giovanni.....                         | 161 |
| Table 4.2. Use of formulaic phrases across all inscriptions in Domitilla and San Giovanni .....                 | 161 |
| Table 4.3. Use of the most popular engraved motifs among all inscriptions from Domitilla and San Giovanni ..... | 161 |

## LIST OF FIGURES

|  |     |
|--|-----|
| Figure 1.1. Bishop Damasus’ inscription for Saint Agnes, Chiesa di Sant’Agnese <i>fuori le mura</i> (Rome). .....  | 40  |
| Figure 1.2. Detail of an inscription in the distinctive “Filocalan” style, Ecomuseo Casilino “Ad Duas Lauros” (Rome). .....  | 40  |
| Figure 1.3. Plan of the catacomb of Domitilla (Rome), upper level. After de Rossi, Silvagni, and Ferrua 1922 ( <i>ICUR</i> vol. III). .....                                | 41  |
| Figure 1.4. Plan of the catacomb of Domitilla (Rome), lower level. After de Rossi, Silvagni, and Ferrua 1922 ( <i>ICUR</i> vol. III). .....                                | 42  |
| Figure 1.5. Plan of the catacomb of Domitilla (Rome), regions Pi, Q, and the Basilica of SS. Nereus and Achilleus. ....  | 43  |
| Figure 1.6. Plan of the catacomb of San Gennaro (Naples), upper level. ....  | 44  |
| Figure 1.7. Plan of the catacomb of San Gennaro (Naples), lower level. ....  | 45  |
| Figure 1.8. Plan of the catacomb of San Giovanni (Syracuse). .....   | 46  |
| Figure 1.9. Detail of the catacomb of San Giovanni (Syracuse) showing “Syracusan” <i>arcosolia</i> . .....   | 47  |
| Figure 2.1. Watercolor of Diogenes’ tomb, catacomb of Domitilla (Rome). .....  | 71  |
| Figure 2.2. Drawing of Diogenes’ lunette painting before destruction. ....   | 72  |
| Figure 2.3. Painting of a <i>fossor</i> at work, catacomb of SS. Marcellino e Pietro (Rome). ....  | 73  |
| Figure 2.4. Engraving of a <i>fossor</i> with shroud-wrapped corpse from the catacomb of Commodilla (Rome), housed in the Ecomuseo Casilino “Ad Duas Lauros” (Rome). ..... | 73  |
| Figure 3.1. Diagram representing ergonomic constraints that could affect a painter working in a <i>Zona Greca arcosolium</i> . ....  | 99  |
| Figure 3.2. Plan showing the <i>Zona Greca</i> (D1, D2, D3) and adjacent areas A0 and A1. ....   | 107 |
| Figure 3.3. Diagrams of a typical <i>arcosolium</i> in the <i>Zona Greca</i> . ....  | 108 |

|   |     |
|---|-----|
| Figure 3.4. Diagrams showing the <i>arcosolia</i> studied here. ....  | 109 |
| Figure 3.5. Sample of a schematic diagram showing the line framework in the vault of a Zona<br>Greca <i>arcosolium</i> . .... | 110 |
| Figure 3.6. View of the entrance to D1 (left) from inside of A0. ....   | 111 |
| Figure 3.7. View into D1. Entrance to D2 at right; entrance to D3 in background. ....   | 112 |
| Figure 3.8. View into D1, with <i>arcosolia</i> D1.1L and D1.1U at extreme left, partly out of frame.<br>.....                | 113 |
| Figure 3.9. View into D2, with <i>arcosolia</i> D2.1L and D2.1U at left. ....   | 114 |
| Figure 3.10. View of <i>arcosolia</i> D2.3La and D2.3U. ....  | 115 |
| Figure 3.11. View into D3, showing later tombs obstructing the gallery. ....  | 116 |
| Figure 3.12. <i>Arcosolium</i> D1.1L. ....  | 117 |
| Figure 3.13. Detail of a naturalistic basket in D1.1L. ....   | 117 |
| Figure 3.14. <i>Arcosolium</i> D1.1U. ....  | 118 |
| Figure 3.15. <i>Arcosolium</i> D2.1L. ....  | 118 |
| Figure 3.16. Detail of a stylized basket in D2.1L. ....   | 119 |
| Figure 3.17. Detail of a vase in D2.1L. ....  | 120 |
| Figure 3.18. Detail of a leafy branch in D2.1L. ....  | 121 |
| Figure 3.19. Detail of a rosette in D2.1L. ....   | 122 |
| Figure 3.20. <i>Arcosolium</i> D2.1U. ....  | 122 |
| Figure 3.21. Interior view of D2.1U, showing burial shafts. ....  | 123 |
| Figure 3.22. <i>Arcosolium</i> D2.2L. ....  | 123 |
| Figure 3.23. <i>Arcosolium</i> D2.2U. ....  | 124 |
| Figure 3.24. Interior view of <i>arcosolium</i> D2.3La, with D2.3Lb visible at left and D2.3Lc at right.<br>.....             | 124 |
| Figure 3.25. Detail of a sea creature in D2.3La. ....   | 125 |
| Figure 3.26. Detail of a “heart and ball” motif in D2.3La. ....   | 126 |

|   |     |
|---|-----|
| Figure 3.27. <i>Arcosolium</i> D2.3Lb. ....   | 127 |
| Figure 3.28. Detail of a bird in D2.3Lb. ....   | 127 |
| Figure 3.29. Detail of a shell with tendrils and “slash” fill in D2.3Lb. ....   | 128 |
| Figure 3.30. <i>Arcosolium</i> D2.3Lc. ....   | 128 |
| Figure 3.31. Detail of a grape cluster in D2.3Lc. ....  | 129 |
| Figure 3.32. <i>Arcosolium</i> D2.3U. ....  | 130 |
| Figure 3.33. <i>Arcosolium</i> D2.4U. ....  | 130 |
| Figure 3.34. Diagram of the vault painting in A1. ....  | 131 |
| Figure 3.35. Detail of the vault painting in A1 showing the octagonal <i>tondo</i> at the center of the vault. ....         | 132 |
| Figure 3.36. Detail of the vault painting in A1 showing the Building of the Celestial Tower. ...                            | 133 |
| Figure 3.37. View into the vault of an <i>arcosolium</i> in A1, partially cut away with the removal of the cliff face. .... | 133 |
| Figure 3.38. Detail of an <i>arcosolium</i> in A1. ....   | 134 |
| Figure 4.1. Ages recorded in Domitillan inscriptions, by age group. ....  | 162 |
| Figure 4.2. Ages recorded in inscriptions at San Giovanni, by age group. ....   | 162 |
| Figure 4.3. Gender as represented in Domitillan inscriptions. ....  | 163 |
| Figure 4.4. Gender as represented in inscriptions from San Giovanni. ....   | 163 |
| Figure 4.5. Graphic representation of patterns of epithet use in Domitilla and S. Giovanni. ....                            | 164 |
| Figure 4.6. Graphic representation of patterns of formulaic phrase use in Domitilla and S. Giovanni. ....                   | 164 |
| Figure 4.7. Graphic representation of engraved motif use in Domitilla and S. Giovanni. ....                                 | 165 |
| Figure 4.8. Ages recorded in inscriptions from Domitilla, S. Callixtus, and the Coemeterium Maius. ....                     | 165 |
| Figure 4.9. Genders represented in inscriptions from Domitilla. ....  | 166 |
| Figure 4.10. Genders represented in inscriptions from S. Callixtus. ....  | 166 |
| Figure 4.11. Genders represented in inscriptions from the Coemeterium Maius. ....   | 167 |

|  |     |
|--|-----|
| Figure 4.12. Graphic representation of patterns of epithet use in Domitilla, S. Callixtus, and the Coemeterium Maius. ....                             | 167 |
| Figure 4.13. Graphic representation of patterns of formulaic phrase use in Domitilla, S. Callixtus, and the Coemeterium Maius. ....                    | 168 |
| Figure 4.14. Graphic representation of patterns of engraved motif use in Domitilla, S. Callixtus, and the Coemeterium Maius. ....                      | 169 |
| Figure 4.15. Museo Archeologico Regionale Paolo Orsi (MARPO) inv. no. 33, showing reuse of a piece of sculpted marble for a funerary inscription. .... | 169 |
| Figure 4.16. MARPO inv. no. 14439, showing reuse of a piece of sculpted marble for a funerary inscription. ....  | 170 |
| Figure 4.17. MARPO inv. no. 39, an example of a plaque used twice for funerary inscriptions (once on each side). ....                                  | 170 |
| Figure 4.18. Examples of inscriptions on pieces of reused marble. ....   | 171 |
| Figure 4.19. Detail of Museo Archeologico Regionale Paolo Orsi (MARPO) inv. no. 13042, showing letters incised with a flat chisel. ....                | 172 |
| Figure 4.20. Detail of MARPO inv. no. 33, showing possible use of a round chisel. ....   | 173 |
| Figure 4.21. Detail of MARPO inv. no. 14426 showing use of a drill at the ends of letter strokes. ....   | 173 |
| Figure 4.22. Example of a “highly regular” inscription (MARPO inv. no. 13042). ....  | 174 |
| Figure 4.23. Example of a “somewhat regular” inscription (MARPO inv. no. 14437). ....  | 174 |
| Figure 4.24. Example of an “irregular” inscription (MARPO inv. no. 14426). ....  | 175 |
| Figure 5.1. A network model based on the <i>manceps</i> . ....   | 195 |
| Figure 5.2. A catacomb social network based on the <i>manceps</i> model. ....  | 195 |
| Figure 5.3. A network model based on the choachyte. ....   | 196 |
| Figure 5.4. A catacomb social network based on the choachyte model. ....   | 196 |
| Figure 5.5. A network model based on the Roman stone trade. ....   | 197 |
| Figure 5.6. A network based on the Roman stone trade model, showing how a catacomb engraver and patron could connect to the broader stone trade. ....  | 197 |
| Figure 5.7. A network model based on the <i>columbarium</i> . ....   | 198 |

|  |     |
|--|-----|
| Figure 5.8. A catacomb social network modeled on the <i>columbarium</i> .  | 198 |
| Figure 5.9. A hypothetical catacomb social network centered on the <i>fossor</i> .   | 199 |
| Figure 5.10. A hypothetical catacomb social network centered on the patron.  | 200 |
| Figure 5.11. A catacomb social network featuring a “funerary middleman.”   | 201 |
| Figure 5.12. A catacomb social network with the role of “funerary middleman” played by a member of the clergy.   | 202 |
| Figure 5.13. “Motif map” showing engraved images, upper level, catacomb of Domitilla (Rome).   | 203 |
| Figure 5.14. “Motif map” showing engraved images, lower level, catacomb of Domitilla (Rome).   | 204 |
| Figure 5.15. “Motif map” showing engraved images, regions Pi, Q, and Basilica, catacomb of Domitilla (Rome).   | 205 |
| Figure 5.16. “Motif map” showing painted images, upper level, catacomb of Domitilla (Rome).  | 206 |
| Figure 5.17. “Motif map” showing painted images, lower level, catacomb of Domitilla (Rome).  | 207 |
| Figure 5.18. “Motif map” showing engraved and painted images, upper level, catacomb of Domitilla (Rome).   | 208 |
| Figure 5.19. “Motif map” showing engraved and painted images, lower level, catacomb of Domitilla (Rome).   | 209 |
| Figure 5.20. “Motif map” showing engraved and painted images, upper level, catacomb of Domitilla (Rome).   | 210 |
| Figure 5.21. “Motif map” showing engraved and painted images, lower level, catacomb of Domitilla (Rome).   | 211 |
| Figure 5.22. Detail of “motif map” showing engraved motifs in regions R, S, and T (the <i>retrosanctos</i> area), lower level, catacomb of Domitilla (Rome).             | 212 |
| Figure 5.23. Detail of “motif map” showing engraved and painted motifs in regions R, S, and T (the <i>retrosanctos</i> area), lower level, catacomb of Domitilla (Rome). | 212 |
| Figure 5.24. Detail of “motif map” showing painted motifs in “Region of the <i>Mensores</i> ,” upper level, catacomb of Domitilla (Rome).                                | 213 |
| Figure 5.25. Detail of “motif map” showing engraved and painted motifs in “Region of the <i>Mensores</i> ,” upper level, catacomb of Domitilla (Rome).                   | 213 |

Figure 5.26. Detail of “motif map” showing painted motifs in region P (including the  
“Hypogeum of the Aurelii”), lower level, catacomb of Domitilla (Rome). .....214

## LIST OF APPENDICES

|  |     |
|--|-----|
| Appendix A. Glossary of key terms .....  | 221 |
| Appendix B. Schematic diagrams of <i>Zona Greca arcosolium</i> paintings .....         | 222 |
| Appendix C. Catalog of inscriptions from Roman catacombs .....                         | 244 |
| Appendix D. Catalog of inscriptions from the catacomb of San Gennaro (Naples) .....    | 260 |
| Appendix E. Catalog of inscriptions from the catacomb of San Giovanni (Syracuse) ..... | 261 |



## ABSTRACT

Late antique funerary workers shaped the material forms of burial and commemoration and played influential roles in the social world of the cemetery. In this dissertation, I present a social-historical inquiry into their working practices and interactions with their patrons. In particular, I examine the work of gravediggers, painters, and engravers who labored in catacombs—the massive subterranean necropoleis that developed outside some Italian urban centers in the third to sixth centuries CE. The catacombs of Domitilla (Rome), San Gennaro (Naples), and San Giovanni (Syracuse) furnish the large corpora of architecture, painting, and inscriptions through which I study the late antique funerary industry, using methods drawn from classical archaeology, art history, and philology. Throughout I argue for the application of “network thinking” to the study of these poorly understood workers: where we cannot trace the movements of an individual, we should look for workshops, communities, and other “collective agents” accomplishing funerary labor through social interaction.

The first chapter provides context for this inquiry by outlining its theoretical and methodological approaches, major sources, and datasets. Chapter 2 addresses the Roman *fossores*—the gravediggers who excavated and managed catacombs—and reviews longstanding debates about the extent of the Church’s control over their work. Chapter 3 proposes criteria for workshop attribution in catacomb painting by systematically examining painting of the so-called “red and green linear style” in Naples, a style often overlooked in favor of the figural types employed in catacomb decoration. Chapter 4 approaches engravers from two directions:

quantitative analysis of a large epigraphic corpus to find workshop-specific patterns in the use of words and images, and an examination of a small group of inscribed plaques as artifacts, in order to uncover the working practices and trade networks of engravers. Chapter 5 considers the work of *fossores*, painters, and engravers in the social contexts of catacombs, attempting to chart these workers' interactions with their patrons, with each other, and with members of non-funerary professions.

This interdisciplinary project takes a worker-centered approach to funerary labor in late antiquity, seeking to shed light on the social contexts of cultural production in the catacombs.

## CHAPTER 1

### Working in the dark: Approaches to funerary labor

Damasus, bishop of Rome from 366 to 384 CE, helped to transform the cult of the saints from a folk practice to a Church project. This involved monumentalizing the tombs of martyr-saints in the catacombs.<sup>1</sup> In addition to ordering the excavation of larger spaces around important subterranean tombs and having them marked with marble aedicules, he composed verse inscriptions recounting episodes from the martyrs' lives and martyrdoms to be displayed at their tombs for the benefit of those who came to venerate them.<sup>2</sup> These inscriptions were large, some of them carved on marble slabs up to three meters long, and a few were signed *Damasus episcopus fecit* ("Bishop Damasus made it"), ensuring that they made a strong impression in the dim light of the tomb (see, for example, fig. 1.1).<sup>3</sup> But the most characteristic feature of these inscriptions is their script. The letterforms are strikingly broad, with an elegant rhythm of wide and narrow strokes, and distinctive curving serifs (see fig. 1.2). This script was invented by

---

<sup>1</sup> Peter Brown, *The cult of the saints: Its rise and function in Latin Christianity* (Chicago: University of Chicago Press, 1982), 23-49.

<sup>2</sup> Antonio Ferrua, *Epigrammata damasiana* (Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 1942); Dennis Trout, *Damasus of Rome: The epigraphic poetry* (New York: Oxford University Press, 2015); Vincenzo Ficocchi Nicolai, Fabrizio Bisconti, and Danilo Mazzoleni, *Le catacombe cristiane di Roma: Origini, sviluppo, apparati decorativi, documentazione epigrafica* (Regensburg: Schnell & Steiner, 1998), 48-58.

<sup>3</sup> *Damasus episcopus fecit* appears, for example, in the first line of Ferrua's cat. no. 18, the epitaph of Bishop S. Eusebius; the same legend takes up two of the four lines of the inscription for S. Januarius (cat. no. 24). The massive inscribed plaque for S. Agnes is among the largest of the Damasan inscriptions at 308 cm wide (cat. no. 37). Ferrua, *Epigrammata damasiana*.

Furius Dionysius Filocalus, late antiquity's most famous calligrapher.<sup>4</sup> Whether he carved Damasus' inscriptions himself or simply designed them remains uncertain, but Filocalus' influence is clear: he created the epigraphic style that defined Damasus' work in the catacombs and became one hallmark of the visual culture of the fourth-century cult of saints.<sup>5</sup>

We know of Filocalus, however, not because of the quality of his work, but because of his social status. Little is known of Filocalus' life except that he was on friendly terms with certain Christian members of the Roman elite, and was probably a Christian aristocrat himself.<sup>6</sup> Had he not signed his name on Damasus' inscriptions, calling himself Damasus' *cultor adque amator* ("supporter and friend"),<sup>7</sup> he probably would have remained as anonymous from our point of view as the other calligraphers and engravers of antiquity. Without Filocalus' signature, we probably would attribute his inscriptions' innovative qualities more to the one who paid for them than to the one who made them.

This project focuses on the social context of cultural production in catacombs, specifically on the workers who produced catacomb architecture, painting, and inscriptions in negotiation with their patrons. Nearly all of these workers remain nameless to us, and their contributions are often elided with those of the more powerful people and institutions who commissioned their work. To find these workers, I look to the catacombs of Rome, Naples, and Syracuse, which were used for burial primarily between the third and sixth centuries CE. These massive subterranean cemeteries exhibit both the continuity of some elements of Roman funerary culture and the innovations of late antiquity across thousands of tombs made by and

---

<sup>4</sup> Trout, *Damasus of Rome: The epigraphic poetry*, 47-50.

<sup>5</sup> Ibid., 47-49; Michele Renée Salzman, *On Roman time: The Codex-Calendar of 354 and the rhythms of urban life in late antiquity* (Berkeley, CA: University of California Press, 1990), 26; Alan Cameron, "Filocalus and Melania," *Classical Philology* 87, no. 2 (Apr. 1992): 49.

<sup>6</sup> Salzman, *On Roman time*, 202-04; Cameron, "Filocalus and Melania," 142-43.

<sup>7</sup> Ferrua, *Epigrammata damasiana*, cat. no. 18; Trout, *Damasus of Rome*, 48.

often for the working classes. Using documentary and material evidence, I undertake a social-historical inquiry into the working practices and organization of three types of laborers who figure prominently in the catacombs: gravediggers (*fossores*), painters, and engravers. The agency of workers involved in the catacombs tends to be overlooked in catacomb scholarship partly because of the dominant role the Christian church has played in the catacombs' management and interpretation in the modern period, and partly because studies of funerary culture generally tend to focus on the dead and their commemorators rather than on funerary workers. This project therefore has a secondary goal of developing better methods for accessing these workers through their products. Whatever larger institutional forces had a hand in the catacombs' development, primary agency lies with these workers, who made their products in negotiation with their patrons. Through careful examination of their products, we can observe these laborers at work.

### **Guiding premises**

#### Premise 1

This project builds on five basic premises about workers, how we study them, and the particular contexts of catacombs. Firstly, **workers exercise agency** over their labor and their products. Decades after Gell's seminal works on the agency of artists, this might seem an obvious position to take.<sup>8</sup> I state it explicitly, however, because I am dealing with many anonymous individuals in the distant past who cannot always be distinguished from one another through their products. The individual gravedigger (*fossor*), painter, or engraver, whose work

---

<sup>8</sup> Alfred Gell, "The technology of enchantment and the enchantment of technology," in *Anthropology, art and aesthetics*, ed. Jeremy Coote (Oxford: Clarendon Press, 1992); Alfred Gell, *Art and agency: An anthropological theory* (Oxford: Clarendon Press, 1998).

appears in this study, is for the most part a theoretical individual and rarely a nameable, identifiable one. I take the “intentional stance” described by Fuchs, attributing individual agency to persons whom one might not normally treat as individuals due to their temporal and spatial distance from us, their anonymity, and their consequent collectiveness.<sup>9</sup> Ascribing agency to a worker does not preclude the influence of social structures, economic factors, or other actors on the worker’s choices; one can imagine that slaves, apprentices, and child laborers, for example, may have had few opportunities for personal choice in their work. Nevertheless, I assume that every worker made some choices that affected the outcome of the work.

### Premise 2

This leads to the second premise: **products reveal their makers** in some way. Following from Gell’s notion of artists’ agency is his concept of *secondary* or *distributed agency*, which is the portion of workers’ agency that becomes embedded in their products and that acts in turn on other actors to create and reproduce social ties.<sup>10</sup> Latour theorizes that the workshop and the moment of making are the points in an object’s life at which the object is most bound up in its maker’s agency and social relationships.<sup>11</sup> By studying objects along with contextual information about their creation and use, we can thus approach the objects’ makers.<sup>12</sup> Dobres and Robb argue that “[s]ocial reproduction and cultural change ... depend fundamentally on the nexus of agency and materiality”; in other words, studying workers and their products (or agents and their objects) is essential for understanding the social contexts of cultural production.<sup>13</sup> I assume that

---

<sup>9</sup> Stephan Fuchs, “Beyond agency,” *Sociological Theory* 19, no. 1 (Mar. 2001): 32.

<sup>10</sup> Gell, “The technology of enchantment,” 51-56.

<sup>11</sup> Bruno Latour, *Reassembling the social: An introduction to actor-network theory* (Oxford: Clarendon, 2005), 80.

<sup>12</sup> *Ibid.*, 81.

<sup>13</sup> Marcia-Anne Dobres and John E. Robb, “‘Doing’ agency: Introductory remarks on methodology,” *Journal of Archaeological Method and Theory* 12, no. 3 (Sep. 2005): 162.

close examination of artifacts, built on a rigorous theoretical foundation, can uncover information about the workers who made the artifacts and the social contexts in which the making took place.

### Premise 3

My third premise—that **repetition builds habits**—operates on two levels. Firstly, workers’ repetitive manual and mental actions can develop over time into habits that govern their practices. These habits can be as simple as how a painter holds a brush, or as complex as how a sculpture workshop carves a sarcophagus. Habits may be developed and transmitted by both individuals and groups (workshops). This premise relies heavily on Sennett’s embodied interpretation of the transmission of craft knowledge.<sup>14</sup> The concept of the *chaîne opératoire*—the sequence of an agent’s thoughts and actions that guide an object’s whole “life cycle” from the collection of raw materials to the final product’s eventual discard—also comes into play.<sup>15</sup> An individual’s or group’s particular way of working grows not just from repetitive action, but also from the repetition of actions in the right sequence. When we look at their products, we should look for signs of the sequence in which the actions occurred, since these reflect the makers’ habits.

On a broader, less concrete level, the repetition of ideas builds cultural norms. This premise rests on Bourdieu’s concept of *habitus*, or the set of “dispositions” shared by members of a social group; a group’s *habitus* is created and maintained by repetition (*mimesis*).<sup>16</sup> The language used in Roman funerary inscriptions, for example, depended heavily on formulas that

---

<sup>14</sup> Richard Sennett, *The craftsman* (New Haven: Yale University Press, 2008).

<sup>15</sup> Frédéric Sellet, “*Chaîne opératoire*: The concept and its applications,” *Lithic Technology* 18, no. 1/2 (Spring/Fall 1993), 106.

<sup>16</sup> Pierre Bourdieu, *Outline of a theory of practice* (Cambridge: Cambridge University Press, 1977), 72-95.

were repeated many thousands of times among people who identified to some extent as “Roman” across the vast territorial expanse of the Roman world. Use of these formulas served as a marker of participation in Roman culture, and some of these formulas (*Dis Manibus Sacrum*, “sacred to the infernal spirits,” above all) eventually took on symbolic qualities in contexts where their explicit meaning may not have been relevant.<sup>17</sup> This project leans heavily on the premise that both personal and cultural habits grow from numerous iterations of smaller actions, thoughts, and interactions.

#### Premise 4

Since repetitive action plays a key role in my analysis, I anticipated that **bigger sites would make better sources** of data. In a catacomb with thousands of tombs (as opposed to dozens), it is easier to look for evidence of phenomena like inter-workshop communication and centralized management of multiple workshops. This is especially important for this project because so few individuals can be distinguished among the ancient workers, and often even these workers must be treated as collective agents. As Russell points out, big markets like the Roman sarcophagus industry call for a higher degree of specialization among workers.<sup>18</sup> In a large catacomb I expected to find better evidence for the division of labor in workshops, which could bring me closer to individual workers. My selection of the largest catacombs associated with major cities of late antique Italy (Rome, Naples, and Syracuse) also allowed me to consider

---

<sup>17</sup> For example, Kraemer notes the occurrence of *Dis Manibus Sacrum* in Jewish inscriptions, despite the fact that such an invocation, taken literally, would have conflicted with Jewish monotheism. Ross S. Kraemer, “Jewish tuna and Christian fish: Identifying religious affiliation in epigraphic sources,” *The Harvard Theological Review* 84, no. 2 (1991): 155-58. Many “Christian” uses of this and other “pagan” formulas exist as well. Danilo Mazzoleni, *Epigrafi del mondo cristiano antico* (Roma: Pontificia Università Lateranense, 2002), 12-13.

<sup>18</sup> Ben Russell, *The economics of the Roman stone trade* (New York: Oxford University Press, 2013), 291.



funerary labor as part of a possible funerary “industry,” or a segment of a diversified and well-developed urban economy of significant scale.

#### Premise 5

My particular interest in and approach to funerary systems mean that the **religious beliefs of the participants are only a minor concern** in this project. As we will see, religious *institutions* play a part in this story, and some of the actors may have had religious *motivations*. This does not change the fact that a worker of any religious affiliation could, in theory, perform the tasks of gravedigging, painting, and engraving, and there is no good evidence that religious groups routinely made religious affiliation a priority when hiring a worker or workshop for a particular project.<sup>19</sup> In fact, the evidence points in the opposite direction: single workshops are known to have made products (frescoes or mold-made lamps, for example) containing imagery from different religions.<sup>20</sup> The religious affiliation of a particular funerary worker or workshop is neither easy to determine nor particularly relevant to the work.

At the same time, patrons’ religious identities are not always clearly expressed through tombs, paintings, or inscriptions. Despite Fiocchi Nicolai’s insistence on a third-century CE or

---

<sup>19</sup> J. B. Ward-Perkins, “The role of craftsmanship in the formation of early Christian art,” in *Atti del IX Congresso internazionale di archeologia cristiana, Roma, 21-27 settembre 1975* (Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 1978), 642-47; Jaś Elsner, “Archaeologies and agendas: Reflections on late ancient Jewish art and early Christian art,” *Journal of Roman Studies* 93 (2003): 118-19.

<sup>20</sup> At Dura Europos, for example, a single workshop seems to have decorated the synagogue, church, and Mithraeum around the same time. The painters’ religious affiliation (which is unknown) clearly did not affect their ability to create images appropriate for each group. Lee I. Levine, *Visual Judaism in late antiquity: Historical contexts of Jewish art* (New Haven: Yale University Press, 2012), 76. A lamp-making workshop that signed its wares “Florentius” made lamps with a range of molded motifs, some “pagan,” some “Christian,” showing that a single workshop could make products that would appeal to patrons of various religious backgrounds. Jeffrey Spier, “The earliest Christian art: From personal salvation to imperial power,” in *Picturing the Bible: The earliest Christian art*, ed. Jeffrey Spier (New Haven; Fort Worth, TX: Yale University Press, in association with the Kimbell Art Museum, 2007), 5, 171.

earlier date for the birth of exclusively Christian cemeteries, the strongest factors affecting a person's choice of burial space in late antiquity were probably class, wealth, and immediate social ties, with religious identity playing a lesser role.<sup>21</sup> Late Roman cemeteries—even catacombs, and even in the fourth century—saw people of various religions buried together.<sup>22</sup> Painting also does not make a good marker of religious identity. The earliest painting in Italian catacombs closely resembles that of pagan (i.e. not Christian or Jewish) tombs<sup>23</sup>; even in fourth-century sites like the Via Latina/Dino Compagni catacomb, “pagan” and “Christian” motifs occur side by side.<sup>24</sup> In such a context, either the owners of the catacomb were a mixed group of pagans and Christians who commissioned separate paintings to represent their separate identities,

---

<sup>21</sup> Ramsay MacMullen, “Christian ancestor worship in Rome,” *Journal of Biblical Literature* 129, no. 3 (2010): 610. For Fiocchi Nicolai's history of Christian cemeteries, see Vincenzo Fiocchi Nicolai, *Strutture funerarie ed edifici di culto paleocristiani di Roma dal IV al VI secolo* (Città del Vaticano: IGER, 2001); Vincenzo Fiocchi Nicolai, “L'organizzazione dello spazio funerario,” in *Christiana loca: Lo spazio cristiano nella Roma del primo millennio*, ed. Letizia Pani Ermini (Roma: Fratelli Palombi Editori, 2000); Vincenzo Fiocchi Nicolai, “Le aree funerarie cristiane di età costantiniana e la nascita delle chiese con funzione sepolcrale,” in *Atti del XVI Congresso internazionale di archeologia cristiana* (Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 2016).

<sup>22</sup> R. A. Philpott, “Late Roman cemetery organization in Britain,” in *Römerzeitliche gräber als Quellen zu Religion, Bevölkerungsstruktur und Sozialgeschichte*, ed. Manuela Struck (Mainz: Universität Mainz, 1993); Barbara Borg, *Crisis and ambition: Tombs and burial customs in third-century CE Rome* (Oxford: Oxford University Press, 2013), 118. See especially Bodel's argument that there are too many tombs in the Roman catacombs for them all to have belonged to Christians, given the estimated population of Rome in the fourth century and a hypothetical “rate of conversion” to Christianity. John Bodel, “From *columbaria* to catacombs: Collective burial in pagan and Christian Rome,” in *Commemorating the dead: Texts and artifacts in context. Studies of Roman, Jewish, and Christian burials*, ed. Laurie Brink and Deborah A. Green (New York: Walter de Gruyter, 2008).

<sup>23</sup> I use Cameron's definition of “pagan” to mean simply “not Christian (or Jewish),” i.e. pertaining to the broader culture (Roman or otherwise) in which Christians participated. Alan Cameron, *The last pagans of Rome* (New York: Oxford University Press, 2011), 14-32.

<sup>24</sup> Spier, “The earliest Christian art,” 7; William Tronzo, *The Via Latina catacomb: Imitation and discontinuity in fourth-century Roman painting* (University Park, PA: Published for the College Art Association of America by the Pennsylvania State University Press, 1986).

or the paintings were made for a group for whom both sets of images had symbolic value.<sup>25</sup> Even epitaphs offer ample room for ambiguity concerning the religious affiliation of the deceased. Much of catacomb epigraphy consists of neutral language derived from the long tradition of Roman funerary epigraphy, garnished with “pagan” (e.g., *D[is] M[anibus]*) or “Christian” (e.g., *in Christo*) elements, which sometimes co-occur in the same inscription.<sup>26</sup> For this reason, Carletti argues that catacomb epigraphy should be considered part of Roman epigraphy, not as a distinct category with clear boundaries.<sup>27</sup> In short, identifying the religious affiliation of a worker or a patron is a complicated endeavor, and one that is not particularly worthwhile for the purposes of this project. Guyon and Ward-Perkins have both argued that the actual *work* of the funerary industry can and should be viewed as an economic transaction in which religious affiliation was but one factor influencing the participants’ behavior—a view which I wholeheartedly adopt.<sup>28</sup>

---

<sup>25</sup> For an example of how elite Christians in particular might have commissioned blended programs of “pagan” and “Christian” motifs, see Tronzo’s discussion of Cubiculum O in the Via Latina catacomb. Tronzo, *The Via Latina catacomb*, 65-70.

<sup>26</sup> The following inscriptions from the *ICUR* contain both some form of the *D(is) M(anibus) S(acrum)* formula and phrases or motifs normally associated with “Christian” epigraphy: 7121b includes both *D(is) M(anibus)* and *in pace*; 9206 includes *D(is) M(anibus)*, a *chi-rho*, and a palm frond; 9221 includes both *D(is) M(anibus) S(acrum)* and *dormit in pace*; 9233 includes both *D(is) M(anibus)* and *dormit in pace*; 9700 includes both *D(is) M(anibus)* and *vivas in Deo*, accompanied by an engraved image of a Good Shepherd; 10083 includes both *D(is) M(anibus)* and *in pace*; and 22709 includes *D(is) M(anibus) S(acrum)* with a *chi-rho* inserted before the *S(acrum)*.

<sup>27</sup> Carlo Carletti, *Epigrafia dei cristiani in occidente dal III al VII secolo: Ideologia e prassi* (Bari: Edipuglia, 2008), 7-13.

<sup>28</sup> Jean Guyon, “La vente des tombes à travers l’épigraphie de la Rome chrétienne (IIIe - VIIe siècles): Le rôle des *fossores*, *mansionarii*, *praepositi* et prêtres,” *Mélanges de l’Ecole Française de Rome: Antiquité* 86 (1974): 577-78; Ward-Perkins, “The role of craftsmanship in the formation of early Christian art,” in *Atti del IX Congresso internazionale di archeologia cristiana, Roma, 21-27 settembre 1975*, 642-47.

### A note on worker demographics

In my search for funerary workers, I have been guided by principles of feminist scholarship and gender studies, both fields that emphasize the complex identities of human subjects and the ways that textual or material evidence might privilege or obscure some groups of people. As discussed above, my subjects' individual religious identities are not easily determined, and at any rate, I suspect that there are other aspects of identity at play in funerary work. In particular, I wanted to allow for the possibility that I might find evidence for women and children working in funerary professions where men are already well attested. Unfortunately, for the three professions I examine closely—gravediggers, painters, and engravers—only adult men are explicitly represented as workers in the relevant inscriptions or images. A possible exception is the inscribed plaque of Eutropos from the catacomb of SS. Marcellinus and Peter in Rome, which depicts two sculptors carving a sarcophagus, one guiding a drill, and the other, much smaller, powering the drill with a pull-cord.<sup>29</sup> Based on his size and supporting role, the smaller of these figures could represent a child worker (or a slave; the artist's intent is not clear). Although I cannot point to clear evidence for the participation of women and children in these professions, we should assume they were involved in some capacity, as we know they were in many other professions dominated by adult men (e.g., the military).<sup>30</sup> If throughout this text I

---

<sup>29</sup> *ICUR* 17226; Giancarlo Gori *et al.*, “Le collezioni fabretti e stoppani: ‘Specchi’ i-xxii,” in *1756-1986, Il museo archeologico di Urbino. I, storia e presentazione delle collezioni Fabretti e Stoppani*, ed. Mario Luni and Giancarlo Gori (Urbino: Quattro Venti, 1986), 55-57.

<sup>30</sup> There is an extensive literature on women and children associated with the Roman military; see, for example, Sara Elise Phang, *The marriage of Roman soldiers (13 BC - AD 235): Law and family in the imperial army* (Boston: Brill, 2001); Lindsay Allason-Jones, “Women and the Roman army in Britain,” in *The Roman army as a community*, ed. Adrian Goldsworthy and Ian Haynes (Portsmouth, RI: Journal of Roman Archaeology, 1999); Mark Hassall, “Homes for heroes: Married quarters for soldiers and veterans,” in *The Roman army as a community*, ed. Adrian Goldsworthy and Ian Haynes, JRA supplementary series (Portsmouth, RI: Journal of Roman Archaeology, 1999).

refer to these workers as men, it is because that is how they are presented to us in literary texts, legal texts, inscriptions, engraved images, and paintings. The social status (slave, free, clerical, lay, etc.) of these funerary workers is another complex question, one for which there is no easy answer. I can only present the evidence I have and hope that in the future we may know more.

### **Historiographic overview**

#### On catacombs

Catacomb scholarship has a long, rich history extending back to the sixteenth century. Explorer-antiquarians like Antonio Bosio (c.1575-1629) published descriptions and illustrations of catacombs as they (re)discovered them in the suburbs of Rome.<sup>31</sup> The modern Catholic Church took a particular interest in the catacombs as evidence of its deep roots in early Christianity—an important connection to make during the Counter-Reformation—and through the mid-nineteenth century visitors making the Grand Tour stopped in the catacombs of Rome and Naples.<sup>32</sup> Bosio's *Roma sotterranea* formed the foundation on which Giovanni Battista de Rossi (1822-1894) built the field of "Christian archaeology," a discipline that embraces the archaeology, art, architecture, epigraphy, and topography of catacombs, early churches, and

---

<sup>31</sup> Antonio Bosio, *Roma sotterranea*, ed. Giovanni Severano and Paolo Aringhi (Portland, OR: Collegium Graphicum, 1972).

<sup>32</sup> On Bosio's work and influence, see Leonard V. Rutgers, *Subterranean Rome: In search of the roots of Christianity in the catacombs of the eternal city* (Leuven: Peeters, 2000), 15-24; Philippe Pergola and Palmira Maria Barbini, *Le catacombe romane: Storia e topografia* (Roma: Carocci, 1999), 35-37. On Counter-Reformation historiography of catacombs, see Irina Oryshkevich, "Roma sotterranea and the biogenesis of new Jerusalem," *RES: Anthropology and Aesthetics* 55/56 (Spring-Autumn 2009); Elsner, "Archaeologies and agendas," 119; J. Osborne, "The Roman catacombs in the Middle Ages," *Papers of the British School at Rome* 53 (1985): 278. On catacombs and the Grand Tour, see, for example, Robert W. Gaston, "British travellers and scholars in the Roman catacombs 1450-1900," *Journal of the Warburg and Courtauld Institutes* 46 (1983). For one seventeenth-century visitor's account of the catacombs in Naples, see Gilbert Burnet, *Some letters containing an account of what seemed most remarkable in Switzerland, Italy, etc.* (Rotterdam: Abraham Acher, 1686).

other Christian sites, primarily in Rome.<sup>33</sup> De Rossi's student Josef (Giuseppe) Wilpert (1856-1944) conducted a comprehensive survey of catacomb paintings, offering iconographic identifications and documenting the paintings in a large corpus of watercolors that remains invaluable for the study of catacomb art even today.<sup>34</sup> In the twentieth century, Angelo Silvagni and Antonio Ferrua expanded de Rossi's initial catalog of catacomb inscriptions to create the *Inscriptiones Christianae Urbis Romae (ICUR)*, a comprehensive catalog of inscriptions from Christian sites at Rome.<sup>35</sup> Major archaeological projects in Rome and Naples under the direction of Umberto Maria Fasola led the field of Christian archaeology in an ever more scientific direction.<sup>36</sup> Today, the foremost living scholars working in this field concern themselves with the archaeology of catacombs and funerary basilicas (Vincenzo Ficocchi Nicolai), iconography in early Christian art (Fabrizio Bisconti), topography of Christian sites (Philippe Pergola, Lucrezia Spera), and epigraphy (Danilo Mazzoleni).<sup>37</sup> Although Christian archaeology has now shifted away from its roots in Counter-Reformation apologetics, the discipline retains its interest in

---

<sup>33</sup> Antonio Baruffa, "Giovanni Battista de Rossi," in *Centocinquanta anni di tutela delle catacombe cristiane d'Italia*, ed. Pontificia Commissione di Archeologia Sacra (Città del Vaticano: Pontificia Commissione di Archeologia Sacra, 2002).

<sup>34</sup> On Wilpert's life, work, and legacy, see Stefan Heid, ed. *Giuseppe Wilpert: Archeologo cristiano. Atti del convegno (Roma -- 16-19 maggio 2007)* (Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 2009); Per Jonas Nordhagen, "Working with Wilpert: The illustrations in *Die Römischen Mosaiken und Malereien* and their source value," *Acta ad archaeologiam et artium historiam pertinentia*, Series altera in 8.5 (1985), 247-257. For a selection of Wilpert's works, see Bibliography.

<sup>35</sup> Giovanni Battista de Rossi, Angelo Silvagni, and Antonio Ferrua, *Inscriptiones christianae urbis Romae septimo saeculo antiquiores, nova series* (Romae: Ex Officina Libraria Doct. Befani, 1922).

<sup>36</sup> E.g. Umberto Maria Fasola, *Le catacombe di S. Gennaro a Capodimonte* (Roma: Editalia, 1975).

<sup>37</sup> See Bibliography for selected works by each of these authors.

catacombs (minus the Jewish catacombs, of course) as monuments providing witness to early Christianity.<sup>38</sup>

The use of catacombs and their contents (inscriptions, paintings, etc.) for social-historical inquiry is a relatively recent phenomenon, and one to which a more international group of scholars contributes. Bisconti's *Mestieri nelle catacombe romane* examines the iconography of trades and professions in catacombs, but his argument deals more with the shift from realism to symbolism in catacomb art than with the social history of the workers represented.<sup>39</sup> A number of studies use catacomb epigraphy for demographic analysis: Shaw's article comparing age and gender distributions in pre- and post-third-century funerary epigraphy is a classic example of the Anglophone approach to this research, while Sgarlata's study of Syracusan demography through catacomb epigraphy is a rare Italian example.<sup>40</sup> Despite extensive documentation and analysis from topographic, art historical, and epigraphic perspectives, catacombs remain an underexploited resource for those interested in sub-elite culture and artistic production in late antiquity.

#### On Roman economy and manual labor

While catacomb studies is a narrow field occupied by only a few very active scholars, the study of the Roman economy has produced an enormous corpus of secondary scholarship, not to mention the many fine collections of primary texts relating specifically to economy, labor, and

---

<sup>38</sup> Kim Bowes, "Early Christian archaeology: A state of the field," *Religion Compass* 2, no. 4 (2008): 575-619.

<sup>39</sup> Fabrizio Bisconti, *Mestieri nelle catacombe romane: Appunti sul declino dell'iconografia del reale nei cimiteri cristiani di Roma* (Città del Vaticano: Pontificia Commissione di Archeologia Sacra, 2000).

<sup>40</sup> Brent D. Shaw, "The cultural meaning of death: Age and gender in the Roman family," in *The family in Italy from antiquity to the present*, ed. David I. Kertzer and Richard P. Saller (New Haven: Yale University Press, 1991); Mariarita Sgarlata, *Ricerche di demografia storica: Le iscrizioni tardo-imperiali di Siracusa* (Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 1991).

professional organizations. Here I will review only a few of those most closely related to this project. Russell's work on the Roman imperial stone trade treats one segment of an ancient economy in the context of the whole, admirably balancing discussions of inter-regional trade networks with the minutiae of workshop practices.<sup>41</sup> Temin's, Terpstra's, and Holleran's works on markets and retail trading informed my understanding of how the production of funerary goods and services fit into broader urban economies.<sup>42</sup> Joshel and Hawkins provide valuable social-historical perspectives on laborers in Roman cities, while a group of works by Kloppenborg, Ascough, Harland, and Wilson present primary sources and interpretive discussion of the voluntary and professional associations to which many of those laborers belonged.<sup>43</sup> Kristensen and Poulsen's volume on ateliers contains some useful essays, especially Birk's on the composition and operation of marble sculpture workshops.<sup>44</sup> An area of this field that remains underdeveloped is the study of funerary labor *per se*; progress in this area is hampered by the paucity of evidence that can be gleaned from the usual sources.

---

<sup>41</sup> Russell, *The economics of the Roman stone trade*.

<sup>42</sup> Peter Temin, *The Roman market economy* (Princeton; Oxford: Princeton University Press, 2012); Taco T. Terpstra, *Trading communities in the Roman world: A micro-economic and institutional perspective* (Boston: Brill, 2013); Claire Holleran, *Shopping in ancient Rome: The retail trade in the late Republic and the Principate* (Oxford: Oxford University Press, 2012).

<sup>43</sup> Sandra R. Joshel, *Work, identity, and legal status at Rome: A study of the occupational inscriptions* (Norman: University of Oklahoma Press, 1992); Cameron Hawkins, "Work in the city: Roman artisans and the urban economy" (University of Chicago, 2006); Richard S. Ascough, Philip A. Harland, and John S. Kloppenborg, *Associations in the Greco-Roman world: A sourcebook* (Waco, TX: Baylor University Press, 2012); John S. Kloppenborg and Richard S. Ascough, *Greco-Roman associations: Texts, translations, and commentary* (New York: De Gruyter, 2011); John S. Kloppenborg and S. G. Wilson, *Voluntary associations in the Graeco-Roman world* (New York: Routledge, 1996).

<sup>44</sup> Stine Birk, "Carving sarcophagi: Roman sculptural workshops and their organization," in *Ateliers and artisans in Roman art and archaeology*, ed. Troels Myrup Kristensen and Birte Poulsen, Journal of Roman archaeology supplementary series (Portsmouth, RI: Journal of Roman Archaeology, 2012).



## On funerary labor

On the precise topic of funerary labor, several scholars have made important contributions that have shaped this project.<sup>45</sup> In three studies, Bodel analyzes epigraphic and archaeological evidence for the working practices and social and legal status of certain funerary professionals in Rome, Cumae, and Puteoli in the imperial period.<sup>46</sup> Bond considers the textual evidence for Constantine's public burial program in Constantinople, as well as comparable programs in Antioch and Ephesus, all of which employed hundreds of funerary workers under Church management.<sup>47</sup> Focusing more specifically on *fossores* (catacomb diggers), Guyon examines the inscriptions that record *fossores*' economic transactions, and Conde Guerri analyzes images of *fossores* in the catacombs, attributing to them a certain symbolic power as mediators between the living and the dead.<sup>48</sup> The study of ancient painting is a vast field, but monographs on catacomb *painters* (not just their paintings) are rare. Zimmermann's study of painting workshops in the urban Roman catacombs is sophisticated and well rounded, while

---

<sup>45</sup> There are, of course, innumerable works on funerary art and artifacts, many of which could provide valuable information on workers if examined from an appropriate angle. Venit's *Visualizing the afterlife* is a recent example; she discusses the "bricolage" of Greek and Egyptian representational styles and eschatologies in tomb painting of the Ptolemaic period, but from the perspective of the patrons' identities, not the painters' practices. Marjorie S. Venit, *Visualizing the afterlife in Graeco-Roman Egypt* (New York: Cambridge University Press, 2016).

<sup>46</sup> John Bodel, "The organization of the funerary trade at Puteoli and Cumae," in *Libitina e dintorni: Atti dell'XI Rencontre franco-italienne sur l'épigraphie*, ed. Silvio Panciera (Roma: Quasar, 2004); John Bodel, "Dealing with the dead: Undertakers, executioners and potter's fields in ancient Rome," in *Death and disease in the ancient city*, ed. Valerie M. Hope and Eireann Marshall (New York: Routledge, 2000); John P. Bodel, *Graveyards and groves: A study of the Lex Lucerina* (Cambridge, MA: Harvard University, 1994).

<sup>47</sup> Sarah E. Bond, "Mortuary workers, the Church, and the funeral trade in late antiquity," *Journal of Late Antiquity* 6, no. 1 (2013).

<sup>48</sup> Guyon, "La vente des tombes"; Elena Conde Guerri, *Los "fossores" de Roma paleocristiana: Estudio iconográfico, epigráfico y social, Studi di antichità cristiana* (Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 1979), 103-23.

Bordignon's deals strictly with technique.<sup>49</sup> Finally, across the extensive literature on Roman (and more specifically, catacomb) epigraphy, Susini's and Di Stefano Manzella's guides to ancient engraving techniques are still among the best.<sup>50</sup> These works all deal in some way with the labor of gravediggers, tomb painters, and engravers, but none presents a holistic interpretation of the social context of cultural production in catacombs. This is where I hope this project will make its contribution.

### **Problems of preservation, publication, and access**

A project such as this one must navigate some serious problems of preservation and unevenness of publication. Although I will focus on three sites—the catacombs of Domitilla (Rome), San Gennaro (Naples), and San Giovanni (Syracuse)—there are a number of problems that affect the study of catacombs in general. First of all, environmental factors like high humidity, changes in the water table, and weaknesses in the *tuffo* (the stone into which catacombs are usually dug) have contributed to the decay of frescoes and the occasional collapse of catacomb structures.<sup>51</sup> Human intervention has caused even greater devastation. With rare exceptions, catacombs in Italy have been looted extensively from antiquity to the present. The

---

<sup>49</sup> Norbert Zimmermann, *Werkstattgruppen Römischer Katakombenmalerei* (Münster, Westfalen: Aschendorff, 2002); Celso Bordignon, *Caratteri e dinamica della tecnica pittorica nelle catacombe di Roma* (Roma: Caxias do Sul, 2000).

<sup>50</sup> G. C. Susini, *The Roman stonecutter: An introduction to Latin epigraphy* (Oxford: Blackwell, 1973); Ivan Di Stefano Manzella, *Mestiere di epigrafista. Guida alla schedatura del materiale epigrafico lapideo* (Roma: Quasar, 1987). More recently, there are some helpful essays in Christer Bruun and Jonathan Edmondson, eds., *The Oxford handbook of Roman epigraphy* (New York: Oxford University Press, 2015); Alison Cooley, *The Cambridge manual of Latin epigraphy* (2012).

<sup>51</sup> Bordignon, *Caratteri e dinamica*, 78-80, 121-30. See also D'Ossat on the geological conditions that permitted the Roman catacombs' construction and now pose problems for their preservation. Gioacchino de Angelis D'Ossat, *La geologia delle catacombe Romane* (Roma: Scuola Tipografia Pio X, 1938).

armies besieging Rome during the Gothic War ransacked the catacombs looking for gold, and the ongoing insecurity of the countryside throughout late antiquity prompted Romans to collect some remains for reburial inside the city.<sup>52</sup> From the early Middle Ages well into the early modern period, the Roman Church collected human remains from the catacombs for use as relics in churches in other parts of Europe, assuming that all those buried in the catacombs had been Christian martyrs.<sup>53</sup> Once early modern exploration began in earnest, the grave goods and inscribed plaques that remained in the catacombs began to make their way into church and museum collections, or at least into above-ground antiquaria at the catacomb sites.<sup>54</sup> As recently as the early 2000s, a looter destroyed a rare mosaic-glass portrait of a young girl that had remained *in situ* at the catacomb of Sant' Agnese.<sup>55</sup> As a result of this history of depredations, even the thousands of inscriptions that survived to be documented in the *ICUR* represent a small fraction of what there must have been there originally.

The situation was similar in Naples. Later interventions have had noticeable impacts on the catacomb of San Gennaro. An early modern renovation of the adjacent Chiesa di S. Gennaro

---

<sup>52</sup> Osborne, "The Roman catacombs in the Middle Ages," *passim*; Matilda Webb, *The churches and catacombs of early Christian Rome: A comprehensive guide* (Portland, OR: Sussex Academic Press, 2001), xxii; Marios Costambeys, "Burial topography and the power of the Church in fifth- and sixth-century Rome," *Papers of the British School at Rome* 69 (2001): 172; Focchi Nicolai, Bisconti, and Mazzoleni, *Le catacombe cristiane di Roma*, 65. For the broader historical context of Church-sponsored relic collection in catacombs, see Caroline J. Goodson, *The Rome of Pope Paschal I: Papal power, urban renovation, church rebuilding and relic translation, 817-824* (New York: Cambridge University Press, 2010).

<sup>53</sup> Webb, *The churches and catacombs of early Christian Rome*, xxii; Pergola and Barbini, *Le catacombe romane*, 37-39; Osborne, "The Roman catacombs in the Middle Ages," 291-92.

<sup>54</sup> Ann Marie Yasin, "Displaying the sacred past: Ancient Christian inscriptions in early modern Rome," *International Journal of the Classical Tradition* 7, no. 1 (Summer 2000).

<sup>55</sup> Pers. comm. Dr. Claudia Lega, Dec. 1-2, 2014. See also Claudia Lega, "Roma, cimitero di Domitilla: Una nuova testimonianza in tarsia vitrea," in *Atti dell'VIII Colloquio dell'Associazione italiana per lo studio e la conservazione del mosaico: Con il patrocinio del Ministero per i beni e le attività culturali, Firenze, 21-23 febbraio 2001* (Ravenna: Edizioni del Girasole, 2001), 506.

*fuori le mura* claimed nearly all of the extant stone plaques from the catacomb for use as paving stones inside the church; a subsequent remodeling saw the plaques torn up and permanently lost.<sup>56</sup> Over the centuries the catacomb itself was used for various purposes: in the early twentieth century, for example, the site served as an air-raid shelter and hospital. All of this activity resulted in the disturbance and relocation of many of the ancient burials, as well as damage to the architecture and its decoration.<sup>57</sup>

In Syracuse, the catacomb of San Giovanni saw its first wave of antiquarian study in the seventeenth century, with more scientific study undertaken by Paolo Orsi, the foremost archaeologist of Syracuse, in the late nineteenth century.<sup>58</sup> The main problem of preservation at this site has been looting, both ancient and more recent. While the paintings, mosaics, and movable goods have almost completely vanished, several hundred inscribed plaques remain.<sup>59</sup> Today these are housed at the nearby Museo Archeologico Regionale Paolo Orsi, but due to the museum's scant operating budget and limited storage space, even this group of inscriptions can

---

<sup>56</sup> The corpus of surviving inscriptions—just over 100 items—consists mainly of those painted or scratched onto frescoes. Giovanni Liccardo, *Redemptor meus vivit: Iscrizioni cristiane antiche dell'area napoletana* (Trapani: Il Pozzo di Giacobbe, 2008); Fasola, *Le catacombe di S. Gennaro a Capodimonte*, 6-7.

<sup>57</sup> Liccardo, *Redemptor meus vivit*, 30-31; Fasola, *Le catacombe di S. Gennaro a Capodimonte*, 6. The archives of the Pontificia Commissione di Archeologia Cristiana contains some interesting documents relating to the management of the catacomb in the nineteenth and twentieth centuries, including a letter describing the collection and reburial of a large number of bones in the catacomb. Sovrintendente dell'Ospedale di San Gennaro de' Poveri, *Letter to Gennaro Aspreno Galante*, vol. Busta ASD/112, fasc. 5 (Rome: Archivio della Pontificia Commissione di Archeologia Sacra, 1912).

<sup>58</sup> Mariarita Sgarlata, *S. Giovanni a Siracusa* (Città del Vaticano: Pontificia Commissione di Archeologia Sacra, 2003), 21-31; Mariarita Sgarlata, "Un secolo di ricerche sui cimiteri cristiani del suburbio e del territorio di Siracusa," in *Ricerche e attività del Corso internazionalizzato di archeologia. Catania, Varsavia, Konia 2009-2012*, ed. P. Militello and M. Camera, *Syndesmoi 3* (Palermo: 2012).

<sup>59</sup> Paolo Orsi, *Insigne epigrafe del cimitero di S. Giovanni in Siracusa: Nota* (Roma: Tipografia della Pace di Filippo Cuggiani, 1895), 3.

be challenging to study. There is still no complete catalog of the inscriptions from San Giovanni.<sup>60</sup>

Overall, material from the city of Rome is much more thoroughly published than that from Naples or Syracuse. The Domitilla catacomb in Rome has a particularly rich catalog of publications, since it was one of the first to be rediscovered in the early modern period.<sup>61</sup> The sole archaeological monograph on the San Gennaro catacomb in Naples is Fasola's, and it aims to present a broad history of the site, not close readings of the details.<sup>62</sup> Ebanista has published many articles on the archaeology of this catacomb, but a new synthetic interpretation and a complete catalog of the paintings would be valuable at this point.<sup>63</sup> The paintings at San

---

<sup>60</sup> Sgarlata, *Ricerche di demografia storica*, 91.

<sup>61</sup> Notable recent studies are by Felle on epigraphy; Zimmermann on painting workshops; and Scheiblaue *et al.*, who use laser scanning as a means of architectural analysis and digital preservation. Pergola remains the foremost scholar of this particular catacomb. Antonio Enrico Felle, "Prassi epigrafiche nella catacomba di Domitilla a Roma. Elementi di riflessione," in *Episcopus, civitas, territorium. Actas XV Congreso internacional de arqueología cristiana (Toledo, 8-12 septiembre 2008)*, Toledo (Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 2013); C. Scheiblaue, M. Wimmer, and N. Zimmermann, "Interactive Domitilla catacomb exploration," in *VAST 2009: The 10<sup>th</sup> International symposium on virtual reality, archaeology, and cultural heritage; the 7<sup>th</sup> Eurographics workshop on graphics and cultural heritage: St. Julians, Malta, September 22-25, 2009*, ed. Kurt Debattista (Aire-la-Ville, Switzerland: Eurographics Association, 2009); Zimmermann, *Werkstattgruppen*; Philippe Pergola, "*Mensores frumentarii Christiani* et annone à la fin de l'antiquité (relecture d'un cycle de peintures)," *Rivista di Archeologia Cristiana* 66, no. 1-2 (1990); Philippe Pergola, "Die Domitilla-Katakombe," *Boreas* 13 (1990).

<sup>62</sup> Fasola, *Le catacombe di S. Gennaro a Capodimonte*.

<sup>63</sup> E.g. Carlo Ebanista, "Lastre con decorazione incisa dalla catacomba di S. Gennaro a Napoli," in *Incisioni figurate della tarda antichità*, ed. Fabrizio Bisconti and Matteo Braconi (Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 2014); Carlo Ebanista, "Rilievo grafico e topografia cimiteriale: Il caso della catacomba di S. Gennaro a Napoli," in *Medioevo letto, scavato, rivalutato: Studi in onore di Paolo Peduto*, ed. Rosa Fiorillo and Chiara Lambert (Firenze: All'Insegna del Giglio, 2012); Carlo Ebanista and Emanuele Procaccianti, "Elementi di recinzione marmorea di età tardoantica dalla catacomba di S. Gennaro a Napoli," *Rivista di Archeologia Cristiana* 89 (2014). Achelis' (1936) catalog of the paintings remains a valuable resource, but it does not include the arcosolium of Cerula, which was discovered decades after the book was published. Hans Achelis, *Die Katakomben von Neapel* (Leipzig: K. W. Hiersemann, 1936).

Giovanni in Syracuse have been catalogued and analyzed by Ahlqvist, and Sgarlata frequently publishes articles on the site's archaeology and epigraphy, but San Giovanni is otherwise not widely published.<sup>64</sup> For autoptic research, catacombs are notoriously difficult to access. Even in Naples and Syracuse, "Christian" catacombs fall under the control of the Vatican, not the local archaeological superintendency, so research permits are scarce. If my data seem like an odd patchwork, it is because I have tried to choose the best of what is extant and accessible while leaning toward material that has not been extensively published, or at least not treated the way I treat it.

### **Datasets**

My data come principally from the three large catacomb sites of Domitilla in Rome, San Gennaro in Naples, and San Giovanni in Syracuse. Below I describe the key features of these sites and the types of data I collected from each.

#### Catacomb of Domitilla, Rome

The catacomb of Domitilla is located in the ancient suburban area on the south side of Rome, near the intersection of Via Ardeatina and Via delle Sette Chiese (see figs. 1.3, 1.4, 1.5 for plans of the site). By some estimates it is the oldest of the large Roman catacombs, with the earliest parts of the complex dating to the second century CE.<sup>65</sup> From a few early private tombs,

---

<sup>64</sup> Agneta Ahlqvist, *Pitture e mosaici nei cimiteri paleocristiani di Siracusa: Corpus iconographicum* (Venezia: Istituto Veneto di Scienze, Lettere ed Arti, 1995); Mariarita Sgarlata, *L'epigrafia greca e latina cristiana della Sicilia*, vol. 2 (Pisa: Scuola Normale Superiore di Pisa, 2000); Mariarita Sgarlata, "Parole e immagini nelle catacombe di Siracusa," in *Incisioni figurate della tarda antichità*, ed. Fabrizio Bisconti and Matteo Braconi (Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 2013).

<sup>65</sup> The "Regione dei Flavi Aureli" and the "Ipogeo di Ampliato" have been dated to the second century CE. Donatella Nuzzo, *Tipologia sepolcrale delle catacombe Romane: I cimiteri ipogei*

the site gradually expanded outward, at first in a regular “fishbone” plan, then in a more haphazard fashion, on two main levels.<sup>66</sup> Burial activity at the site diminished in the fifth century, but at the same time cultic activity grew, culminating in the construction of the semi-subterranean basilica of SS. Nereus and Achilleus over the traditional site of those martyrs’ tombs around 600 CE.<sup>67</sup> Domitilla includes about 15 linear kilometers of galleries, and by Zimmermann’s way of reckoning, about 75,000 tombs; it is probably second only to the nearby catacomb of S. Callixtus in size.<sup>68</sup> The principal tomb types are *loculi* and *arcosolia*, which are found in both galleries and *cubicula* (see Appendix A for definitions of these tomb types).<sup>69</sup> Domitilla contains the second largest corpus of painting among urban Roman catacombs (after the catacomb of SS. Marcellinus and Peter).<sup>70</sup>

For the purposes of this project, the strength of this site is its large corpus of inscriptions, published in the *Inscriptiones Christianae Urbis Romae* (ICUR volume III). My procedure has been to collect every legible inscription that commemorated an individual (or multiple individuals) with at least one piece of information relating to the identity of the deceased.<sup>71</sup>

---

*delle Vie Ostiense, Ardeatina e Appia* (Oxford, England: Arcaheopress, 2000), 45, 48; Webb, *The churches and catacombs of early Christian Rome*, 232; Conde Guerri, *Los “fossore,”* 23.

<sup>66</sup> A “fishbone” (*spina di pesce*) plan is one in which a central gallery is intersected at right angles by secondary galleries, typical of early catacomb development in Rome; Pergola and Barbini, *Le catacombe romane*, 213.

<sup>67</sup> Damasus built some sort of monumental structure over the tombs of these martyrs in the fourth century, but the basilica as we know it dates to the late sixth-early seventh century. Webb, *The churches and catacombs of early Christian Rome*, 232; Pergola and Barbini, *Le catacombe romane*, 214; Fiocchi Nicolai, Bisconti, and Mazzoleni, *Le catacombe cristiane di Roma*, 50-53.

<sup>68</sup> Zimmermann estimates an average of 5 burials per linear meter of galleries and chambers. The number of burials given by guides at the site is twice as large. Zimmermann, *Werkstattgruppen*, 41; Society of the Divine Word, “The catacombs of Domitilla,” accessed Dec. 14, 2016. <<http://www.Domitilla.info/docs/brochures/brochen.pdf>>.

<sup>69</sup> Nuzzo, *Tipologia sepolcrale delle catacombe romane*, 45-62.

<sup>70</sup> Zimmermann, *Werkstattgruppen*, 42-3.

<sup>71</sup> By focusing on funerary inscriptions, I excluded pilgrims’ graffiti and other inscriptions relating to the cult of the saints. The “one piece” of demographic information could take the form

These inscriptions went into a database along with samples from two other large urban Roman catacombs (S. Callixtus in the Via Appia-Ardeatina region, and the Coemeterium Maius, near Via Nomentana). Using this database, I conduct quantitative analysis of the inscriptions, and the inclusion of multiple sites allows me to compare patterns site-to-site (in Chapter 4).

Zimmermann's study of painting workshops in Domitilla guided my study of painting in Naples.<sup>72</sup> In short, material from Domitilla serves as the backbone of my epigraphic study (in Chapter 4) and as a representative of urban Roman catacomb culture for comparison with the other two sites.

#### Catacomb of San Gennaro, Naples

The catacomb of San Gennaro lies in Naples' modern Rione Sanità, under the Basilica dell'Incoronata Madre del Buon Consiglio (Via Capodimonte) and adjacent to the Chiesa di San Gennaro *fuori le mura* (see figs. 1.6, 1.7 for plans of the site).<sup>73</sup> Like Domitilla, this complex began as a few private second-century tombs and expanded to accommodate the many who wished to be buried near Saints Agrippinus (from the third century) and Januarius (*Gennaro* in

---

of a name (or part of a name), gender (indicated grammatically if the name was absent), age (or part of an age), or an epithet. The real purpose of this rule was to make sure the inscription was about a dead person, not some other type of dedicatory text.

<sup>72</sup> Zimmermann, *Werkstattgruppen*, 126-62.

<sup>73</sup> For overviews of the history of scholarship of these sites, see Carlo Ebanista, "Il piccone del fossore: Un secolo di scavi nella catacomba di S. Gennaro a Napoli (1830 - 1930)," *Rivista di Archeologia Cristiana* 86 (2011); Maria Amodio, "Gli studi di archeologia cristiana a Napoli dal '600 ad oggi," in *Roma, la Campania e l'oriente cristiano antico*, ed. Luigi Cirillo and Giancarlo Rinaldi (Napoli: Università degli Studi di Napoli "L'Orientale," 2004); Maria Amodio, "Riflessi monumentali del culto ianuario: Le catacombe di San Gennaro a Capodimonte," in *San Gennaro nel XVII centenario del martirio (305-2005). Atti del convegno internazionale (Napoli, 21-23 settembre 2005)*, ed. Gennaro Luongo (Napoli: Editoriale Comunicazioni Sociali, 2006). A fascinating early guide to the site is that originally published in 1872 by Galante: Gennaro Aspreno Galante and Nicola Spinosa, *Guida sacra della città di Napoli* (Napoli: Società Editrice Napoletana, 1985).



Italian, from the fifth century).<sup>74</sup> Burial at the site continued into the sixth century, after which cultic and other functions prevailed.<sup>75</sup> Architecturally, San Gennaro differs markedly from the catacombs of Rome: because the native stone is less friable than the Roman *tuffo*, the diggers in Naples made galleries as wide as modern streets, disposed on two main levels.<sup>76</sup> Here the dominant tomb types are *arcosolia* inside of *cubicula* and *fossae* in the floors of some galleries, plus a few galleries on the lower level dedicated almost exclusively to *loculi* (see Appendix A for definitions of these tomb types). Special features include a crypt used by the bishops of Naples during the fifth and sixth centuries, a baptistery installed by Bishop Paul II in the mid-eighth century (the only known baptistery inside of a catacomb), and an early third-century painting of the Building of the Celestial Tower, representing an episode from the second-century text *The Shepherd of Hermas*, in which three women construct a tower from bricks representing Christian souls. Although this Christian text enjoyed widespread popularity in the third century CE, images from it are rare.<sup>77</sup>

At San Gennaro I was able to gain access to the site for extended study of the paintings, particularly in the so-called “Zona Greca,” a third-century region characterized by Greek inscriptions incorporated into the frescoes. These paintings are the subject of Chapter 3. This site also provided useful information about ancient tomb-digging practices in the form of several partially excavated *cubicula* (chamber tombs).

---

<sup>74</sup> Fasola, *Le catacombe di S. Gennaro a Capodimonte*, 15-130.

<sup>75</sup> As a reaction to the removal of San Gennaro’s relics by the king of Beneventum in the ninth century, the bodies of certain bishops were translated to the catacomb; otherwise, the site had long served mostly cultic purposes. Liccardo, *Redemptor meus vivit*, 30.

<sup>76</sup> Fasola, *Le catacombe di S. Gennaro a Capodimonte*, 6.

<sup>77</sup> On the “Crypt of the Bishops,” see Stefano D’Ovidio, “Devotion and memory: Episcopal portraits in the catacombs of San Gennaro in Naples,” in *The face of the dead and the early Christian world*, ed. Ivan Foletti (Rome: Viella, 2013). On the baptistery, see Liccardo, *Redemptor meus vivit*, 30. On the painting, see Fasola, *Le catacombe di S. Gennaro a Capodimonte*, 26; D’Ovidio, “Devotion and memory,” 89.

## Catacomb of San Giovanni, Syracuse

The catacomb of San Giovanni in Syracuse, used for burial between the early fourth and early sixth centuries CE, lies to the east of the large archaeological park containing the Greek theater, quarries, and Roman amphitheater (see fig. 1.8 for a plan of the catacomb site).<sup>78</sup> This area—the *Akradina* quarter—was located outside the ancient city and contains numerous cemeteries from a broad chronological range. Unlike other large catacombs, San Giovanni seems to have been planned and excavated in only one or two main campaigns, according to a design that balanced rationalism (laying out the major galleries at right angles like streets) with opportunism (taking advantage of pre-existing water channels and cisterns).<sup>79</sup> The distinctive “Syracusan” tomb type dominates the plan: tunnel-like *arcosolia* extend deep into the rock walls, containing up to 24 burial shafts aligned side-by-side (see fig. 1.9).<sup>80</sup> There are about 5,000 of these burial shafts, and their compact arrangement maximizes the burial space in this relatively small complex (about 720 linear meters of galleries and chambers).<sup>81</sup> The catacomb itself contains no major cultic structures, although there is a basilica above ground, and the crypt of S. Marciano nearby. There are, however, a few unusual features inside the catacomb: the “Rotonda di Adelfia,” a chamber tomb in which was found an extraordinary fourth-century sarcophagus decorated with biblical motifs; another chamber tomb with rock-cut sarcophagi that seems to

---

<sup>78</sup> Sgarlata, “Un secolo di ricerche,” 181. For additional historiography of the site, see Sgarlata, *S. Giovanni a Siracusa*, 21-31.

<sup>79</sup> Mariarita Sgarlata, “La catacomba di S. Giovanni,” in *La Rotonda di Adelfia: Testimonianze archeologiche dalla catacomba di S. Giovanni*, ed. Gioconda Lamagna and Rosalba Amato (Palermo: Regione Siciliana, Museo Archeologico Regionale Paolo Orsi, 2014), 9; Sgarlata, *S. Giovanni a Siracusa*, 35-36.

<sup>80</sup> Sgarlata, *S. Giovanni a Siracusa*, 38-39.

<sup>81</sup> Sgarlata, “La catacomba di S. Giovanni,” in *La Rotonda di Adelfia*, 9. The figure of 720 linear meters is my calculation based on the plan in Sgarlata, *S. Giovanni a Siracusa*.

have belonged to a female monastic order; and an *a mensa* tomb with holes for liquid offerings cut into the stone slab that covered the body.<sup>82</sup>

In the Museo Archeologico Regionale Paolo Orsi (Via Teocrito), I was able to study 151 inscribed burial plaques from the catacomb, most of them small and made of marble. I subjected the texts of these inscriptions to quantitative analysis for comparison with Domitilla, and I had the rare opportunity to handle the plaques and record information about their materiality and workmanship. This corpus contributes to the artifact analysis portion of Chapter 4.

### Textual sources

Although textual evidence for the practicalities of funerary labor is rare, a few examples deserve to be highlighted here. Inscriptions recording the sale of burial spaces (catalogued by Guyon) provide direct evidence of the economic transactions conducted by *fossores*.<sup>83</sup> The *Liber Pontificalis* describes a few major construction projects undertaken in the catacombs by the bishops of Rome.<sup>84</sup> The *Novels* of Justinian record aspects of Constantine's elaborate public burial program (analyzed in detail by Bond), while Justinian's *Digest* contains other laws relevant to funerary affairs.<sup>85</sup> Jerome wrote one of the few contemporary first-person accounts of visiting the catacombs, describing subterranean adventures undertaken with his friends as a boy.<sup>86</sup> In describing the tomb of S. Hippolytus, Prudentius evokes dark and disorienting

---

<sup>82</sup> Sgarlata, "La catacomba di S. Giovanni," in *La Rotonda di Adelfia*, 9.

<sup>83</sup> Guyon, "La vente des tombes."

<sup>84</sup> Theodor Mommsen, ed. *Liber pontificalis* (München: Monumenta Germaniae Historica, 1982).

<sup>85</sup> *Novellae* 43 and 59 contain the relevant passages. Justinian, *Novellae*, vol. 3, *Corpus iuris civilis* (Berolini: Weidmann, 1889-1895), 269-73, 316-24; Bond, "Mortuary workers, the church, and the funeral trade in late antiquity"; *The Digest of Justinian*, vol. 1 (Philadelphia: University of Pennsylvania Press, 2011); *The Digest of Justinian*, vol. 4 (Philadelphia: University of Pennsylvania Press, 2011).

<sup>86</sup> Jerome, *Commentarium in Ezechielem Lib. XII*, Patrologia Latina Database, vol. 25 (Alexandria, VA: Chadwyck-Healey, 1996), col. 375.

catacomb tunnels punctuated by shafts of light in Rome's suburban cemeteries.<sup>87</sup> Bishop Damasus' verse inscriptions shed light on the Church's interest in the catacombs as sites of saint worship and pilgrimage.<sup>88</sup> Dating to the late Republican or early Imperial period, inscriptions regarding the day-to-day operations of public funerary workers in Puteoli and Cumae shed light on the state of funerary professionalism in Italy before the catacombs.<sup>89</sup> While these texts offer many small points of illumination, the world of funerary workers remains obscure without careful consideration of the material evidence.

### **A brief introduction to methods**

To approach funerary workers through their products, I use a few methods that require special introduction here.

#### Connoisseurship

As a technique of art historical analysis, connoisseurship has a long pedigree, originating in Renaissance art history with Giovanni Morelli and practiced extensively in Greco-Roman art history by figures like John Beazley.<sup>90</sup> Wilpert was one of the first to try to identify hands (or workshops) in catacomb painting, and Tronzo and Zimmermann have both used this method with

---

<sup>87</sup> Prudentius, *Peristephanon* XI.153-6.

<sup>88</sup> Ferrua, *Epigrammata damasiana*; Trout, *Damasus of Rome*.

<sup>89</sup> Sergio Castagnetti, *Le "leges libitinariae" flegree. Edizione e commento*. (Napoli: Satura Editrice, 2012).

<sup>90</sup> Giovanni Morelli, *Italian masters in German galleries: A critical essay on the Italian pictures in the galleries of Munich, Dresden, Berlin*, trans. Luise Marie Schwaab Richter (London: G. Bell and Sons, 1883); *ibid.*, *Italian painters: Critical studies of their works*, trans. Constance Jocelyn Ffoulkes (London: John Murray, 1892-1893); John D. Beazley, "Citharoedus," *Journal of Hellenic Studies* 42, no. 1 (1922); *ibid.*, *Potter and painter in ancient Athens* (London: Geoffrey Cumberlege, 1944); *ibid.*, *Attic red-figure vase-painters* (Oxford: Clarendon Press, 1963); *ibid.*, *Attic black-figure vase-painters* (New York: Hacker Art Books, 1978).

success in various Roman catacombs.<sup>91</sup> To distinguish the works of different painters or workshops, the art historian tends to examine most closely the more rote aspects of the painting where its maker was likely to fall back on learned habits. These habits, as discussed under Premise 3 above, can be highly specific to the individual or to a closely related group of individuals, since they develop from repeated patterns of thought and action. For Morelli, the most telling parts of a painting were non-focal details like the ears and hands of figures, where the painter relied on habit rather than consciously composing every detail.<sup>92</sup> The equivalent for catacomb painting is the repertoire of common motifs (birds, flowers, baskets, dolphins, etc.) that see repetitive use as fill elements in “red and green linear style” painting, the broader style to which much of catacomb painting belongs; these motifs would have required little invention on the part of the painter. To answer my questions about the organization of labor in catacomb painting workshops, I apply both a basic Morellian approach and Bordignon’s excellent analysis of the technique of catacomb painting to the paintings in a small, self-contained region in the catacomb of San Gennaro in Naples.<sup>93</sup> By closely examining motifs in a program of painting most likely made by a single workshop, I attempt in Chapter 3 to develop criteria by which workshops could in the future be distinguished even in non-figural catacomb painting.

#### Quantitative analysis of epigraphy

I employ a simple quantitative method to look for patterns in the use of inscribed words and images that might point to workshop-specific practices at different catacomb sites. The method involves selecting a sample group of funerary inscriptions, dividing the sample into groups according to the age and gender of the person(s) commemorated in each inscription, and

---

<sup>91</sup> Tronzo, *The Via Latina catacomb*; Zimmermann, *Werkstattgruppen*.

<sup>92</sup> Morelli, *Italian painters*, 31-63.

<sup>93</sup> Bordignon, *Caratteri e dinamica*, 77-150.

then comparing how frequently a given element (an epithet, formula, engraved image, etc.) appears in the inscriptions of one group versus another. The frequency of the element under consideration is expressed as a percentage of the inscriptions in a given age or gender group. Simple methods like this one have often been used for demographic analysis of Roman epigraphy.<sup>94</sup> The problem with this method is that it can be difficult to determine the significance of the findings; the subsets of inscriptions being compared are sometimes very small. *Chi-squared* tests and other tests of statistical significance are not often used in epigraphic studies of this sort, and so I have not attempted to use them here. Instead, I offer my data and interpretations with as much clarity and caution as possible, hoping that the sum of the interpretations can counterbalance any ambiguity in the individual points. Despite the shortcomings of this method, I believe it to be useful at the very least for producing data that could be comparable across studies.

### Social network analysis

Finally, social network analysis informs my interpretations of interactivity in the catacombs. Actor-network theory has grown over the last few decades as a way to examine the interactions of human agents and material objects in social contexts. As a practical application of

---

<sup>94</sup> Richard P. Saller and Brent D. Shaw, "Tombstones and Roman family relations in the Principate: Civilians, soldiers and slaves," *Journal of Roman Studies* 74 (1984); Shaw, "The cultural meaning of death: Age and gender in the Roman family," in *The family in Italy from antiquity to the present*; Brent D. Shaw, "Latin funerary epigraphy and family life in the later Roman Empire," *Historia* 33, no. 4 (1984); Brent D. Shaw, "The age of Roman girls at marriage: Some reconsiderations," *Journal of Roman Studies* 77 (1987); Hanne Sigismund Nielsen, "Interpreting epithets in Roman epitaphs," in *The Roman family in Italy: Status, sentiment, space*, ed. Beryl Rawson and Paul R. C. Weaver (New York: Oxford University Press, 1997); Inge Nielsen and Hanne Nielsen, eds., *Meals in a social context: Aspects of the communal meal in the Hellenistic and Roman world* (Aarhus: Aarhus University Press, 1998); Janette McWilliam, "Children among the dead: The influence of urban life on the commemoration of children on tombstone inscriptions," in *Childhood, class and kin in the Roman world*, ed. Suzanne Dixon (New York: Routledge, 2001).

actor-network theory, social network analysis offers qualitative and quantitative methods for studying these interactions.<sup>95</sup> In Chapter 5, I use an open-source network visualization program called Gephi to create graphic representations of the social relationships among various funerary workers and their patrons.<sup>96</sup> While I use these network diagrams primarily for qualitative descriptions of the social networks I am proposing, there is also a quantitative element to these diagrams. In Gephi it is possible to manipulate the appearance of the diagrams' elements (circles and lines) to reflect certain quantitative measures of an agent's "connectedness" to other agents, such as *degree* (the number of connections an agent has to others) and *betweenness centrality* (how important a role a given agent plays in connecting the network as a whole).<sup>97</sup> Because the network diagrams presented in Chapter 5 are at least partly hypothetical, these quantitative measures serve simply to help indicate the proposed influence of a given agent among the others in the network. Overall, I aim for a holistic approach to my evidence, balancing qualitative and quantitative approaches to human and material interaction.

### Interpretive models

Those who made the catacombs did not invent them *ex novo* in the late second or early third century; they likely felt the influence of several social, economic, and architectural developments that occurred over the centuries before catacombs appeared. Three phenomena

---

<sup>95</sup> Carl Knappett, *An archaeology of interaction: Network perspectives on material culture and society* (Oxford: Oxford University Press, 2011), 7-10. My application of social network analysis lies somewhere between Knappett's mostly quantitative approach to Bronze Age potters and ceramics and Remus' purely qualitative treatment of a man and his social contacts at an Asclepieion at Pergamon. Ibid.; Harold Remus, "Voluntary associations and networks: Aelius Aristides at the Asclepieion in Pergamum," in *Voluntary associations in the Graeco-Roman world*, ed. John S. Kloppenborg and Stephen G. Wilson (New York: Routledge, 1996), 146-75.

<sup>96</sup> Gephi is distributed and maintained by the Gephi Consortium ([www.gephi.org](http://www.gephi.org)).

<sup>97</sup> Knappett, *An archaeology of interaction*, 41-42; Stephen P. Borgatti *et al.*, "Network analysis in the social sciences," *Science* 323 (2009): 894.

from the late Roman Republican to the high Imperial period can serve as models to help us understand catacombs and the complex system of human and material interaction they represent: 1) columbaria, 2) known groups of funerary professionals in the Roman world, and 3) the Roman imperial stone trade. The first two models relate more to possible roles of *fossores* than of painters or engravers, but as we will see, *fossores* probably facilitated the work of other laborers by managing access to tombs.

#### Columbaria: Funerary associations and “mass production” (?) of tombs

*Columbaria*—which Borbonus defines as “closed, collective funerary monuments that deposit cremation ashes in urns and niches on their interior walls”—were in use over a brief period, from the reign of Augustus to around the end of the first century CE.<sup>98</sup> They are found only in Rome, Ostia, and Puteoli, and they appear to have belonged to clearly defined non-elite social groups: either independent funerary *collegia* or the extended households (slaves, freedmen, and their relatives) of the Roman elite, including the imperial family.<sup>99</sup> *Columbaria* seem to have functioned this way:

- Property was acquired and the tomb built, including niches for cinerary urns. The number of possible burials was thus determined from the beginning (unless the tomb structure itself was later extended).<sup>100</sup>

---

<sup>98</sup> Dorian Borbonus, *Columbarium tombs and collective identity in Augustan Rome* (New York: Cambridge University Press, 2014), 1, 20.

<sup>99</sup> *Ibid.*, 5, 136; Kinuko Hasegawa, *The familia urbana during the early Empire: A study of columbaria inscriptions* (Oxford: Archaeopress, 2005).

<sup>100</sup> Hasegawa, *The familia urbana during the early Empire*, 4; Borbonus, *Columbarium tombs*, 22, 98. Lindsay suggests that in some cases, *columbaria* (or at least some niches in *columbaria*) were built on speculation, to be sold to buyers who were not otherwise connected to those building the tomb. Hugh M. Lindsay, “The cost of dying at Rome,” *Ancient History* 31, no. 1 (2001): 22.



- The basic design principles seem to have been economy and uniformity: the majority of the niches were made to be identical, with the possibility of customization by adding inscriptions, sculpture, or other furnishings or decorations.<sup>101</sup>
- Members of a social group (funerary *collegium* or household, not necessarily a group of biological relatives) would then purchase or distribute the niches. In some cases, it seems likely that all occupants of the tomb belonged to one social group; in other cases, it is possible that some spaces were sold to outsiders.<sup>102</sup>
- In the case of a *columbarium* wholly owned by one group, members of the group took responsibility for managing the site once it was built.<sup>103</sup>
- The whole project was funded by the treasury of the *collegium* or household, or elite patrons may have sponsored the project for the benefit of their dependents.<sup>104</sup>

Borbonus adds a few important points of interpretation. Firstly, *columbaria* face inward: they have relatively plain exteriors, may not even have had exterior signage naming the owners, and only displayed their contents to those who could enter.<sup>105</sup> Secondly, the walls packed with uniform niches would have affected the choices of the people who used the *columbarium* over time: “every newly installed burial must necessarily have been construed in relation to existing ones, either blending in or standing out from the background.”<sup>106</sup> *Columbaria* provide a model for how non-elite Romans might have chosen to balance their need for economical burial options with their desire to express both membership in a group and personal identity.

---

<sup>101</sup> Hasegawa, *The familia urbana during the early Empire*, 4; Borbonus, *Columbarium tombs*, 67-68.

<sup>102</sup> Hasegawa, *The familia urbana during the early Empire*, 4.

<sup>103</sup> *Ibid.*, 82-88; Borbonus, *Columbarium tombs*, 136.

<sup>104</sup> Hasegawa, *The familia urbana during the early Empire*, 4, 86-88.

<sup>105</sup> Borbonus, *Columbarium tombs*, 41-46.

<sup>106</sup> *Ibid.*, 67.

The *columbarium* was a short-lived phenomenon, however, and Borbonus suggests that catacombs later emerged to meet similar needs for similar sorts of social groups, as burial practices shifted broadly toward inhumation.<sup>107</sup> It is easy to see how this might be the case, since in several ways catacombs function like *columbaria*. Catacombs face inward: even if their entrances were visible from the suburban roads, their interiors certainly were not. Once inside, a visitor would have been impressed by the uniformity of the *loculi*, although there were certainly many ways in which a catacomb tomb could be personalized. There are several examples of small regions in catacombs belonging to clearly defined social groups: the “Region of the *Mensores*” in Domitilla, for example, or a gallery designated for a group of cooks in the catacomb of Praetextatus (Rome).<sup>108</sup> Catacombs and *columbaria* differ, however, in terms of management: *columbaria* are known to have been operated under the explicit management of named officials, while the identities and responsibilities of catacomb managers remain debated. What the *columbarium* model can contribute to our understanding of catacombs is a) the concept of an inward-facing collective tomb whose users were interested in expressing some combination of group membership and individuality, and b) the need in such a tomb for management by a small number of people for the benefit of many.<sup>109</sup>

---

<sup>107</sup> Ibid., 152.

<sup>108</sup> On the region in Domitilla variously attributed to *mensores*, *pistores*, or *fornai* (at any rate, some group involved in the *annona* or bread production), see Bisconti, *Mestieri nelle catacombe romane*, 151, 91-92, 262-65; Zimmermann, *Werkstattgruppen*, 126-54. On the region designated for cooks in Praetextatus, see *ICUR* 14815a-b; Bisconti, *Mestieri nelle catacombe romane*, cat. no. VIIb8.

<sup>109</sup> The “circiform” (circus-shaped) funerary basilicas built in Rome in the fourth century may also have drawn inspiration from *columbaria*, aside from the more obvious architectural influences of circuses and basilicas in their designs. Although these basilicas lie outside the scope of the present study, they are fascinating examples of late antique innovation in funerary architecture and culture, and a closer examination of their relationships to catacombs would surely be fruitful. On funerary basilicas, see Vincenzo Ficocchi Nicolai, “La nuova basilica paleocristiana ‘circiforme’ della Via Ardeatina,” in *Via Appia: Sulle ruine della magnificenza*

## Manceps and choachyte: Funerary professionalism in Italy and Egypt

Funerary “professionalism” is the set of practices, whether governed officially by law or simply by habit, that characterize the labor of one who works primarily in a funerary context. Workers who contribute to the funerary economy only part-time—painters and engravers, for example, who might also work in domestic or public contexts—lack this sort of professionalism.<sup>110</sup> The distinction between funerary professionals and others who only do some of their work in funerary contexts is an important one to make: those who work primarily or exclusively in the funerary realm may be subject to special rules or taboos due to the nature of their work,<sup>111</sup> and these conditions affect their practices and products. Models for understanding funerary professionalism as it might relate to catacombs come from two groups of funerary professionals in the Roman world: the Italian *manceps*, and the Egyptian choachyte (χοαχύτης). I have chosen to focus on these two particular professions because they are better documented than others, but each of these types of workers was part of a network of related professions in the funerary realm. By examining these workers in their contexts, we can attempt to construct models for how *fossores* or other professional catacomb laborers may have interacted with patrons and colleagues.

---

*antica* (Roma: Leonardo Arte, 1997); Fiocchi Nicolai, *Strutture funerarie*, 49-62; Ramsay MacMullen, “Christian ancestor worship in Rome,” *Journal of Biblical Literature* 129, no. 3 (2010).

<sup>110</sup> For a detailed discussion of all the products consumed in the course of a Roman funeral—including many, like food and flowers, that were not exclusive to funerary use, see Lindsay, “The cost of dying at Rome.”

<sup>111</sup> On Roman taboos and other religious attitudes toward funerary workers, see Hugh M. Lindsay, “Death-pollution and funerals in the city of Rome,” in *Death and disease in the ancient city*, ed. Valerie M. Hope and Eireann Marshall (New York: Routledge, 2000).

The *manceps* was a sort of public undertaker attested at Puteoli, Cumae, and perhaps also Rome in the late Republican and early Imperial period.<sup>112</sup> He entered into a contract with the city that gave him a monopoly on funerary business in exchange for performing certain public services free of charge, including the removal of abandoned bodies and the execution of criminals.<sup>113</sup> To help with these responsibilities, he employed a variety of workers, including bier-bearers, gravediggers, and executioners.<sup>114</sup> We might compare the *manceps* to a modern funeral director, one who deals personally with patrons while managing those who perform the various tasks associated with burials.<sup>115</sup>

The choachyte was a different sort of funerary professional. The best evidence for this profession comes from Thebes in the Ptolemaic period.<sup>116</sup> In this context, patrons seem to have contracted individually with several types of funerary workers, including at a minimum a lector-priest, a gravedigger, and a choachyte. Lector-priests handled mummification and the associated rituals, and gravediggers transported bodies to tombs, but the choachytes' job description was more complicated.<sup>117</sup> They could arrange the sale of a tomb, supply grave goods, pay the relevant taxes, and perform the recurring rituals that would otherwise be required of the decedent's

---

<sup>112</sup> Bodel, *Graveyards and groves*, 14-15; Bodel, "The organization of the funerary trade at Puteoli and Cumae."

<sup>113</sup> Bodel, *Graveyards and groves*, 15-16.

<sup>114</sup> Bodel, "The organization of the funerary trade at Puteoli and Cumae," 152-55, 60.

<sup>115</sup> Ibid.

<sup>116</sup> Although the distance of time and space between choachytes and Roman Imperial-period funerary workers should make us cautious, Bodel suggests that comparing these two realms of funerary labor can be valuable. Ibid., 147.

<sup>117</sup> S. P. Vleeming, "The office of a choachyte in the Theban area," in *Hundred-gated Thebes: Acts of a colloquium on Thebes and the Theban area in the Graeco-Roman period*, ed. S. P. Vleeming (Leiden: Brill, 1995), 244-45. For discussion of the broad range of funerary professionals attested in papyri, see Tomasz Derda, "Necropolis workers in Graeco-Roman Egypt in light of the Greek papyri," *Journal of Juristic Papyri* 21 (1991).

closest relatives.<sup>118</sup> Three aspects of this profession deserve special mention. Firstly, choachytes built long relationships with their patrons: a single choachyte might serve multiple generations of a given family, and the choachyte's obligation to a patron extended to the choachyte's descendents in perpetuity (as long as the patron kept paying).<sup>119</sup> Secondly, a choachyte held a monopoly on a particular cemetery (or part of a cemetery), purchased from the temple of Amun. Once a patron purchased a tomb from a choachyte (or hired the choachyte's services at a tomb the patron already owned), only *that* choachyte could work in *that* tomb.<sup>120</sup> Finally, choachytes seem to have been low-ranking members of the Amun temple hierarchy, with minor religious roles in addition to their main line of work, and both male and female choachytes are attested.<sup>121</sup> In the Roman and Byzantine periods, *nekrotaphoi* (νεκροτάφοι) appear to have replaced choachytes; *nekrotaphoi* seem to have been lower in social status, but otherwise they had the same responsibilities as choachytes.<sup>122</sup>

The choachyte/*nekrotaphos* provides a model for how a funerary professional might manage a cemetery by buying the space and subdividing it to sell to patrons.<sup>123</sup> Like choachytes, *fossores* may have developed long-term relationships with individuals or groups of patrons, or with particular cemeteries or parts of cemeteries, as a few Roman inscriptions attest.<sup>124</sup> While

---

<sup>118</sup> Vleeming, "The office of a choachyte in the Theban area," 245-47; Derda, "Necropolis workers in Graeco-Roman Egypt," 23-25.

<sup>119</sup> Vleeming, "The office of a choachyte in the Theban area," 246.

<sup>120</sup> Lector-priests also worked according to territories, where they held "monopolies on the corpses of the people who died in particular areas." *Ibid.*, 245, 48-50.

<sup>121</sup> *Ibid.*, 255; Derda, "Necropolis workers in Graeco-Roman Egypt," 23-25.

<sup>122</sup> Derda, "Necropolis workers in Graeco-Roman Egypt," 28-31.

<sup>123</sup> See also Boussac and Empereur for a group of inscriptions reflecting similar "funerary entrepreneurship" in Alexandria. Marie-Françoise Boussac and Jean-Yves Empereur, "Les inscriptions," in *Nécropolis 1*, ed. Jean-Yves Empereur and Marie-Dominique Nenna (Cairo: Institut Français d'Archéologie Orientale, 2001).

<sup>124</sup> For example, Conde Guerri cites two inscriptions recording sales of tombs by a *fossor* named Muscurutio to a buyer named Alexander, and the inscriptions themselves appear to have come

*fossore*s probably did not perform rituals on behalf of commemorators in the manner of a choachyte, they almost certainly facilitated the performance of those rituals in some ways.<sup>125</sup> Because the Egyptian evidence comes from funerary workers' private archives, we can clearly see the participation of women in this line of work. If we had documents of a more personal nature regarding funerary workers in Italy, we might know more about the roles of women and children in that context, too. In looking for evidence of labor organization and professionalism in the catacombs, we should consider the possibility that older funerary professions carried on in some way, even as the form of cemeteries evolved.

#### The Roman stone trade: Primary and secondary exchange networks

The trans-Mediterranean trade in stone (especially marble) during the Roman Imperial period provides a model for how materials and finished products intended for funerary use could circulate through both local and interregional markets. All marble, whether it was intended for architectural, ornamental, or funerary use, moved from quarry to final product following a similar route. At a quarry, workers extracted the stone and gave it a rough shaping according to its intended use: cylinders for columns, hollowed-out boxes for sarcophagi, blocks for architectural elements, and so on.<sup>126</sup> The stone then traveled by sea or land to a collection and distribution point near its final destination, where purchasers or stonecutting workshops could retrieve the pieces they had ordered. Rome had two such points, one at the "Emporium" (or

---

from the same workshop. She suggests that these inscriptions reflect an ongoing relationship among a *fossor*, a patron, and an engraving workshop. Conde Guerri, *Los "fossore*s," 179; cat. nos. 12, 14. On the possibility that a *fossor* might control a particular area inside a catacomb, see Guyon, "La vente des tombes," 567.

<sup>125</sup> For example, Bisconti suggests that the gold-glasses found in catacombs came from vessels systematically broken by *fossore*s for embedding in the mortar around *loculi* after they were used in ritual funerary meals. Vincenzo Fiocchi Nicolai, Fabrizio Bisconti, and Danilo Mazzoleni, *The Christian catacombs of Rome: History, decoration, inscriptions*, trans. Cristina Carlo Stella and Lori-Ann Touchette (Regensburg: Schnell & Steiner, 1999), 80.

<sup>126</sup> Russell, *The economics of the Roman stone trade*, 118-23, 253.

“marble wharf”) site on the east bank of the Tiber near the Tiber Island, and another at Portus.<sup>127</sup> These “stoneyards” also served as storage spaces for pieces of marble that were rejected by their buyers, reclaimed from demolition, or otherwise kept on hand for future use.<sup>128</sup> After collecting semi-finished stone from the stoneyard, a workshop would then go about finishing an object according a patron’s specifications. Some workshops may also have made finished objects “to stock,” that is, to sell with few or no alterations to a patron who had not custom-ordered a product.<sup>129</sup> Any marble damaged in the workshop, rejected by the patron, or otherwise unwanted and available for reclamation, might make its way back to the stoneyard, where other buyers or workshops could claim it for a new use. The stoneyard thus represented an important hub for the stonecutting industry, where the “primary” market in raw or unfinished materials, the “secondary” market in used or reclaimed materials, and various workers and consumers all came together.

It is important to note that marble for funerary use—in particular sarcophagi and plaques for inscriptions—circulated in the same system as marble for architectural or other sculptural uses.<sup>130</sup> The same is true for the workers who made funerary objects in marble: workers seem to have moved freely among workshops, and some workshops may have produced both

---

<sup>127</sup> Ibid., 235-37. See also a summary report on the excavation of the Emporium in Luigi Maria Bruzza, “Gli scavi dell’Emporio,” in *Triplice omaggio alla santità di Papa Pio IX* (Rome: 1877).

<sup>128</sup> Russell, *The economics of the Roman stone trade*, 234-35.

<sup>129</sup> The question of whether workshops made items “to stock” is especially common in studies of sarcophagi; Russell outlines circumstances in which this production model is more likely, i.e., in a large workshop in a major metropolitan market with steady demand for these very expensive products. Ben Russell, “The Roman sarcophagus ‘industry’: A reconsideration,” in *Life, death, and representation: Some new work on Roman sarcophagi*, ed. Jaś Elsner and Janet Huskinson (Berlin: De Gruyter, 2010), 126-27.

<sup>130</sup> Shipwrecks containing sarcophagi have been found along the same shipping routes as wrecks containing architectural elements. One shipwreck at Torre Sgarrata (Puglia) had a cargo of sarcophagi, marble and alabaster blocks, and marble veneer panels. Russell, *The economics of the Roman stone trade*, 121.

architectural sculpture and sarcophagi.<sup>131</sup> In the case of marble objects, production for funerary consumption was thus integrated into both local networks of laborers and materials, and long-range exchange. By tracing the movements of sarcophagi and other funerary marbles through their uses and reuses, we can better understand how funerary consumption related to broader urban and international markets (an analysis I undertake in Chapter 4).

These models—based on *columbaria*, Italian and Egyptian funerary professions, and the stone trade—should inform our understanding of catacombs and the workers who contributed to their creation. Like *columbaria*, catacombs offered a basic type of burial (in a *loculus*) with many options for customization and “upgrades” to larger, more luxurious tombs. We should consider the effects that social ties and entrepreneurship played in the planning and excavation of catacombs, reflecting on the power of cemetery managers—whoever played that role—to influence the material forms of burial and commemoration and the social world of the cemetery. Inasmuch as catacombs were innovative, they also drew on traditions and on existing networks of labor, materials, and information, and these connections form the context in which we should examine the work of *fossores*, painters, and engravers.

### **Overview of subsequent chapters**

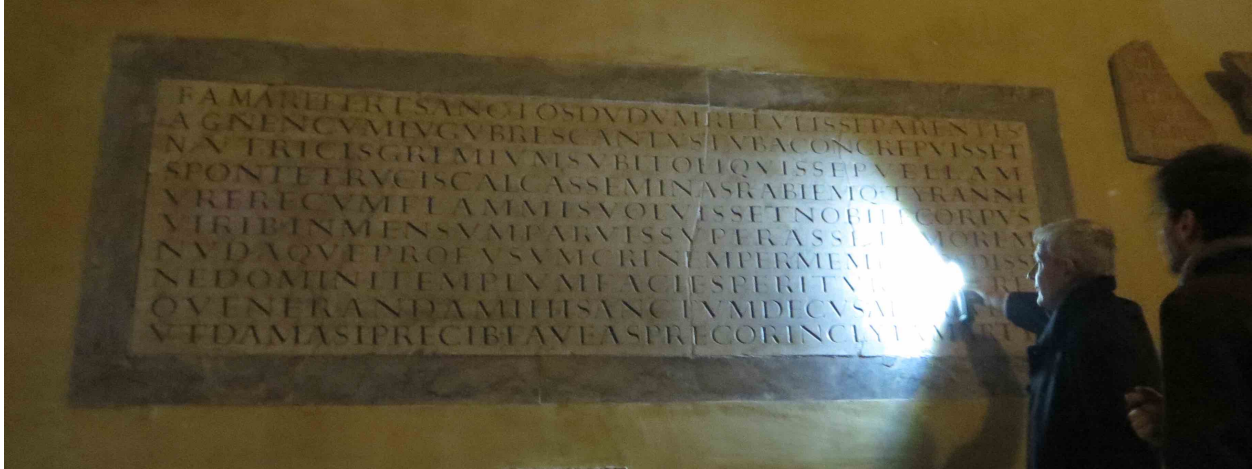
In the following four chapters, I present and analyze evidence for the working practices and organization of *fossores*, painters, and engravers. In Chapter 2 I address issues surrounding the Roman *fossores* and the longstanding debate about the influence of the Christian church on

---

<sup>131</sup> On the fluidity of sarcophagus-carving workshops, see Birk, “Carving sarcophagi.” For example, some of the workers involved in the sculpture of the Arch of Constantine in Rome may also have made sarcophagi; see Jeffrey Spier, *Picturing the Bible: The earliest Christian art* (New Haven; Fort Worth, TX: Yale University Press, in association with the Kimbell Art Museum, 2007), cat. no. 43.



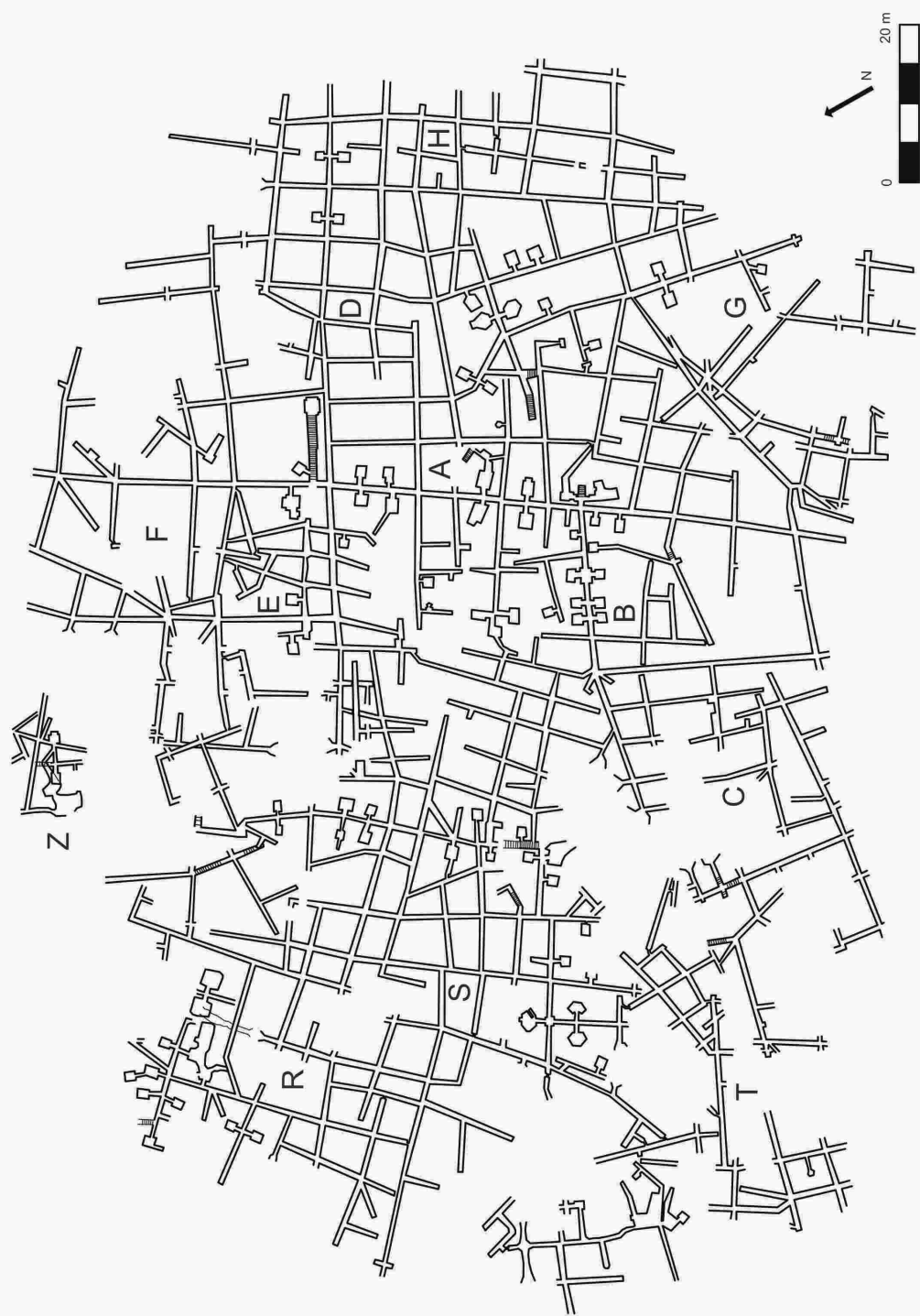
their work. I offer the two major lines of thought on the subject—those of Rebillard and Fiocchi Nicolai—and present my own interpretation, which argues for the agency of *fossores* over that of any higher-ranking manager. In Chapter 3 I systematically examine painting in Naples to develop criteria for workshop attribution in catacomb painting of the so-called “red and green linear style,” which is more resistant to this type of analysis than the more figural styles. In Chapter 4 I approach engravers from two directions: quantitative analysis of a large epigraphic corpus to find workshop-specific patterns in the use of words and images; and study of a small group of inscribed plaques as artifacts, to uncover the working practices and trade networks of Syracusan engravers. In Chapter 5 I consider the work of *fossores*, painters, and engravers in the social contexts of catacombs, analyzing these workers’ interactions with their patrons, with each other, and with members of non-funerary professions.



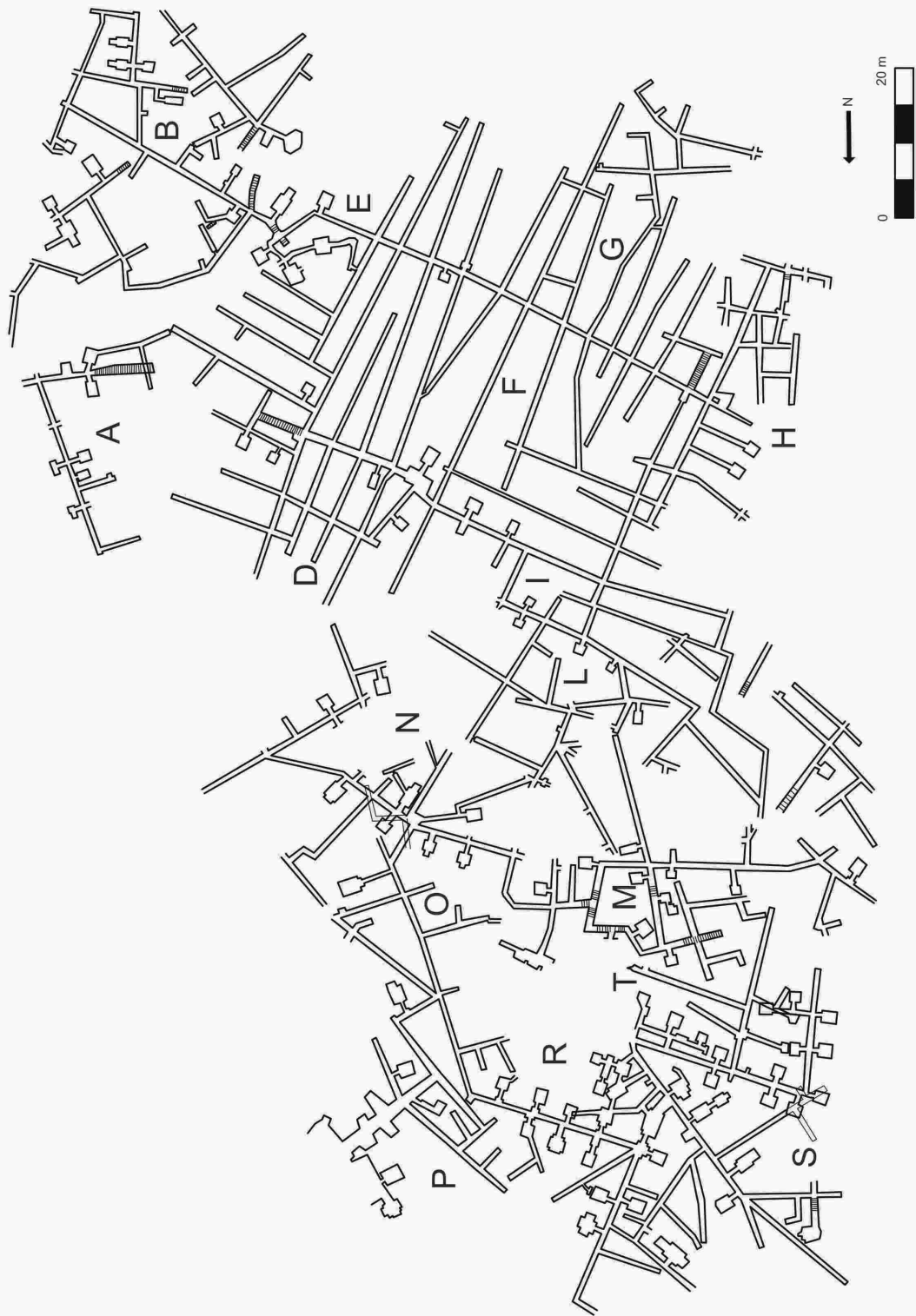
**Figure 1.1.** Bishop Damasus' inscription for Saint Agnes, Chiesa di Sant'Agnese *fuori le mura* (Rome). Photo: author.



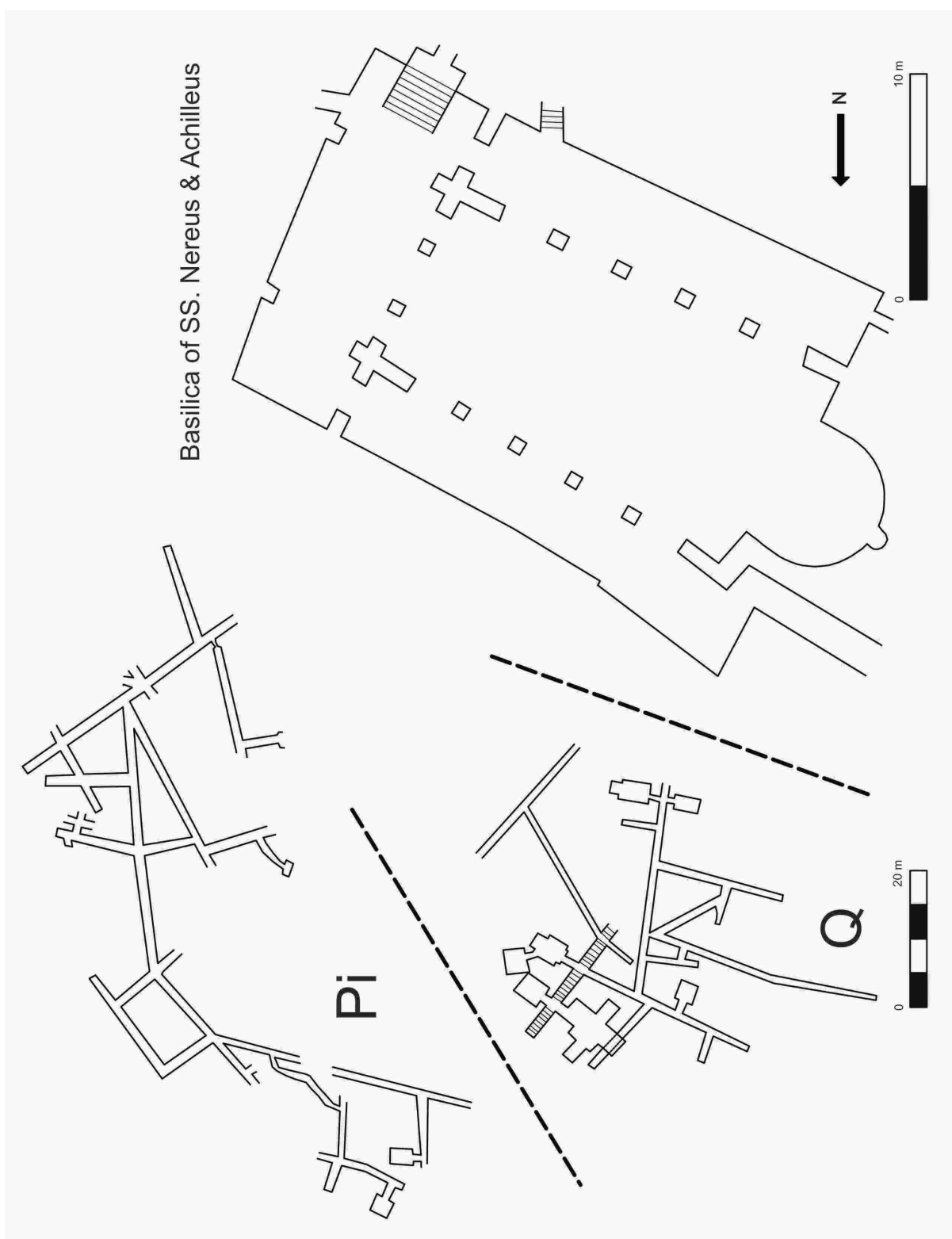
**Figure 1.2.** Detail of an inscription in the distinctive "Filocalan" style, Ecomuseo Casilino "Ad Duae Lauros" (Rome). Note the curly serifs, narrow vertical strokes, and the guidelines left visible. Photo: author.



**Figure 1.3. Plan of the catacomb of Domitilla (Rome), upper level.** Adapted from de Rossi, Silvagni, and Ferrua 1922 (ICUR vol. III).



**Figure 1.4. Plan of the catacomb of Domitilla (Rome), lower level.** Adapted from de Rossi, Silvagni, and Ferrua 1922 (*ICUR* vol. III).



**Figure 1.5. Plan of the catacomb of Domitilla (Rome), regions Pi, Q, and the Basilica of SS. Nereus and Achilleus.** Adapted from de Rossi, Silvagni, and Ferrua 1922 (*ICUR* vol. III).



**Figure 1.6.** Plan of the catacomb of San Gennaro (Naples), upper level. Adapted from Ebanista 2012, fig. 1.



**Figure 1.7. Plan of the catacomb of San Gennaro (Naples), lower level.** Adapted from Ebanista 2012, fig. 2.



**Figure 1.8. Plan of the catacomb of San Giovanni (Syracuse).** Adapted from Sgarlata 2003, tavola II.





**Figure 1.9.** Detail of the catacomb of San Giovanni (Syracuse) showing “Syracusan” arcosolia. The “Rotonda di Adelfia” is at the center of this plan.

## CHAPTER 2

### The *fossor*: Labor and agency in the Roman catacombs

DIOGENES FOSSOR IN PACE DEPOSITUS  
OCTAB KALENDAS OCTOBRIS  
("Diogenes, a *fossor*, in peace; buried  
On the eighth before the Kalends of October.")<sup>1</sup>

Diogenes is gone. In his *arcosolium* an irregular hole in the plaster marks the place where his funerary portrait had been from the time of its making in the fourth century CE until 1720, when Boldetti drew it, tried to detach it from the wall, and in so doing destroyed it (see figs. 2.1, 2.2).<sup>2</sup> The drawing shows Diogenes as youthful, beardless, poised in almost dainty *contrapposto* with his pick over his right shoulder and his lamp in his left hand. He wears a long tunic with embroidered emblems and a mantle over his left shoulder; this is far too fine an outfit for the hard labor of catacomb digging, but a fitting one for a funerary portrait. He stands against a schematic backdrop, suggestive of a catacomb interior, with other digging tools disposed around him. As if this painted scene were not explicit enough, the inscription labels him *fossor*, one of the workers who dug the catacombs. The looter may have sensed the value of this image; it is a rare, if not the only, representation of a named individual *fossor*. But even this carefully crafted image tells an incomplete story: we know nothing about Diogenes other than his name,

---

<sup>1</sup> ICUR 6449, from the catacomb of Domitilla.

<sup>2</sup> Marc'Antonio Boldetti, *Osservazioni sopra i cimiteri de' santi martiri ed antichi cristiani di Roma* (Roma: G. M. Salvioni, 1720), 60, 64. A detailed description of the painting can be found in Conde Guerri, *Los "fossores,"* 24-27.

occupation, and the date of his burial. If Diogenes is unusual in having himself represented in this way, he is typical among *fossores* for being otherwise shrouded in mystery. Despite their obscurity, I argue that *fossores* played a pivotal role in the development and operation of catacombs, especially in Rome, and that their agency should be given primacy in considerations of catacomb management.

*Fossores* remain poorly understood partly due to the limited textual and archaeological evidence relating to their work, and partly because of the nature of the work itself. *Fossores* toiled in the dark; the lamps that often appear next to them in paintings and engravings emphasize this fact. A number of inscriptions attest to the *fossor*'s work, but few literary or legal texts do.<sup>3</sup> It can be difficult to infer even the most basic details of *fossores*' identities; while they are depicted as men and have masculine names in their inscriptions, their ages and civil status (slave, freed, or freeborn) remain unclear. Most people who encountered a *fossor* probably met him in his workplace, where he facilitated the transition from life to death and helped commemorators perform their pious duties. This liminality is a defining feature of the *fossores*' trade: they worked between the living and the dead, in the midst of a network of people and materials necessary for decorous burial.

Scholarship on catacombs also marginalizes *fossores* by eliding their efforts with those of Church officials who took an interest in the catacombs; this is an oversight that I attempt to correct in this chapter. The two principal studies of *fossores*—Guyon's (1974) catalog of catacomb inscriptions dealing with *fossores* and Conde Guerri's (1979) analysis of painted and engraved images of *fossores*—are now both well over thirty years old, and more recent

---

<sup>3</sup> The inscriptions (e.g., texts attesting sales of tomb space by *fossores*) come primarily from Rome, while the other texts (e.g., mentions of funerary workers in Justinian's *Digest*) refer mostly to the eastern Mediterranean. For the Roman inscriptions, see Guyon, "La vente des tombes."

scholarship on late antique funerary workers, such as Bond's (2013) article on mortuary professions in the eastern Mediterranean, touches on the Roman *fossores* only in passing.<sup>4</sup> The field is ripe for a new examination of the roles that *fossores* played in the social world of catacombs, and such an examination must begin with a reassessment of the assumptions that have kept *fossores* on the fringe of catacomb studies for so long. Below, I evaluate the two main schools of thought on catacomb management and propose a middle ground where *fossores*' agency is given its due. If catacomb architecture, decoration, and epigraphy are to be understood as the products of interactions between workers and their patrons, it is essential first to clarify who the workers and patrons were; this is especially crucial for workers as closely tied to the physical context of catacombs as the *fossores*.

### ***Fossores* and debates on catacomb management**

In order to understand the relationship between *fossores* and their patrons, we must first understand for whom the *fossores* were really working. Were the *fossores* Church employees implementing an official burial program, or free agents for hire by anyone, or something in between? The question of what role the Church took in managing cemeteries in late antiquity is the subject of ongoing debate; the answer varies not only among scholars, but also according to the type of cemetery, its geographic location, and its date. I argue that there is not conclusive evidence for extensive, systematic management of catacombs by the Church before the mid-fourth century CE; the *fossores* who developed the catacombs from the very late second or early third century up to that point most likely worked with a high degree of independence. For the

---

<sup>4</sup> Ibid.; Conde Guerri, *Los "fossores"*; Bond, "Mortuary workers." Conde Guerri also published an addendum to *Los "fossores"* in 1989: Elena Conde Guerri, "Nuevas lapidas de 'fossores' en Roma," *Quaeritur inventus colitur, 1* (1989).

purposes of this discussion, I will focus on Roman *fossore*s and catacombs between the third and fifth centuries CE, for which we have more evidence (specifically epigraphic and archaeological evidence) than elsewhere.<sup>5</sup>

Two prominent scholars of late antique funerary culture—Vincenzo Fiocchi Nicolai and Éric Rebillard—offer opposing viewpoints on Church management of cemeteries, and their perspectives represent two divergent schools of interpretation that have shaped the study of catacombs in the last few decades. The crux of their disagreement lies in their definitions of a “Christian cemetery” and the dates at which they believe such cemeteries came into existence. For Fiocchi Nicolai, a Christian cemetery is a clearly delimited tomb or cemetery space intended for exclusive use by a group of Christians. According to his interpretation of the scant textual evidence, early third-century Christian communities around the Mediterranean desired their own private cemeteries where they could be buried exclusively among Christians and practice the funerary rites specific to their faith.<sup>6</sup> He contends that Christian cemeteries began to appear in the third century because at that time Christian congregations were achieving the size and organizational capacities to bring such cemeteries into being, not just for their own use, but also for the poor to whom they wanted to offer burial as an act of charity.<sup>7</sup>

---

<sup>5</sup> Naples and Syracuse (and other sites) may have seen their *fossore*s laboring under different circumstances. In Naples the excavation of the catacombs was more closely tied with quarrying, since unlike the *tufo* of the Roman catacombs, that in Naples made a good construction material. Fasola suggests that quarrying usable blocks may have been an integral part of the catacomb project at San Gennaro (Fasola, *Le catacombe di S. Gennaro a Capodimonte*, 72). At San Giovanni in Syracuse, the apparent planning of the bulk of the catacomb from its inception suggests some sort of central authority, whether this was one big workshop or a group of cooperating workshops directed by some agent (Sgarlata, *S. Giovanni a Siracusa*, 35). Just as with the literary evidence from the eastern Mediterranean (discussed below), we should be careful about making sweeping inferences based on the archaeological evidence from any one site, since each site and each city may have invented its own systems of funerary production.

<sup>6</sup> Fiocchi Nicolai, “L’organizzazione dello spazio funerario,” 43.

<sup>7</sup> *Ibid.*

Fiocchi Nicolai sees a strong link between the abstract concept of an exclusively Christian, Church-managed cemetery and some of the concrete features of catacomb architecture. The architectural concept of underground tomb complexes was not a Christian invention; certain Hellenistic cemeteries in Alexandria, for example, exhibit architectural characteristics that anticipated those of Italian catacombs, such as galleries, chamber tombs, and shelf-like tombs cut into walls.<sup>8</sup> Fiocchi Nicolai, however, credits Christians with the invention of the catacomb form as we know it: a system of galleries and chambers designed for intensive burial with the potential for expansion, in which the numerous uniform *loculus* burials reflect the egalitarian ideals of the community.<sup>9</sup> In the fourth century the Christian cemetery benefited from imperial patronage in the form of Constantine's funerary basilicas, which, Fiocchi Nicolai says, were built as churches with a secondary funerary function.<sup>10</sup> Both the superficial cemeteries associated with these basilicas and any catacombs underneath them, Fiocchi Nicolai assumes, would have fallen under official Church management.<sup>11</sup> All responsibility for the design and day-to-day management of these cemeteries would thus have belonged to the Church, not to those

---

<sup>8</sup> Venit and Daszewski offer opposing interpretations of the cultural roots of the Alexandrian "catacombs" (Greek *versus* Egyptian). Marjorie S. Venit, *The monumental tombs of Alexandria: The theater of the dead* (New York: Cambridge University Press, 2002); Wiktor A. Daszewski, "The origins of Hellenistic hypogea in Alexandria," in *Aspekte Spätägyptischer Kultur: Festschrift für Erich Winter zum 65. Geburtstag*, ed. Martina Minas and Jürgen Zeidler (Mainz am Rhein: Verlag Philipp von Zabern, 1994).

<sup>9</sup> Fiocchi Nicolai, "L'organizzazione dello spazio funerario," 45. Fiocchi Nicolai, *Strutture funerarie*, 15-32; Fiocchi Nicolai, Bisconti, and Mazzoleni, *Le catacombe cristiane di Roma*, 16.

<sup>10</sup> Fiocchi Nicolai, "L'organizzazione dello spazio funerario," 54; Fiocchi Nicolai, "Le aree funerarie cristiane di età costantiniana," 630. For a different interpretation of the funerary basilicas—that they accommodated ongoing "pagan" funerary practices under a new "Christian" guise—see MacMullen, "Christian ancestor worship in Rome."

<sup>11</sup> This is implied in Fiocchi Nicolai's reference to the *Liber Pontificalis*' comments on these projects—he contends that while some of these basilicas are Constantinian, they are all connected to the bishops of Rome. Fiocchi Nicolai, "Le aree funerarie cristiane di età costantiniana," 628-29.

whose manual labor and technical expertise actually brought catacombs and other cemeteries into existence.

Scholarship that begins from premises like Fiocchi Nicolai's tends to interpret all catacombs (except for obviously Jewish or pagan ones) as projects of the Christian church, intended for exclusive use by Christians and managed in an official capacity by the clergy.<sup>12</sup> Everything and everyone in a catacomb is presumed Christian until proven otherwise, including the *fossore*s, whose work is interpreted in the light of Christian charitable concerns, and whose status as minor clergy is posited from an early date.<sup>13</sup> Although Fiocchi Nicolai gives the clearest presentation of this line of reasoning, a similar set of premises and conclusions can be found underlying much of catacomb scholarship.

An opposing view, argued forcefully by Éric Rebillard in a series of articles on the subject of Christian burial, holds that “it is impossible to contend on the basis of the documents usually put forward that the exclusivity of the Christian funerary space was established at an early date.”<sup>14</sup> One by one he takes the few fragments of textual evidence frequently used to support arguments for early Church management of exclusive Christian cemeteries and casts doubt on the common interpretation.<sup>15</sup> Rebillard argues that the expectation that Christians bury

---

<sup>12</sup> Mazzoleni, for example, acknowledges that much of early “Christian” epigraphy is indistinguishable from “pagan” epigraphy of the same period, and can only be called “Christian” because of its context—catacombs! Mazzoleni, *Epigrafi del mondo cristiano antico*, 11-12.

<sup>13</sup> Mazzoleni reckons that *fossore*s had been incorporated into the Church hierarchy by the early fourth century, if not sooner. Danilo Mazzoleni, “Fossori e artigiani nella società cristiana,” in *Christiana loca: Lo spazio cristiano nella Roma del primo millennio*, ed. Letizia Pani Ermini (Roma: Fratelli Palombi Editori, 2000), 251.

<sup>14</sup> Éric Rebillard, “Church and burial in late antiquity (Latin Christianity, third to sixth centuries CE),” in *Transformations of religious practices in late antiquity* (Burlington, VT: Ashgate, 2013), 232.

<sup>15</sup> Several of the essays from *Transformations* take up this line of argument: “Church and burial in late antiquity”; “*Koimeterion* and *coemeterium*: Tomb, martyr tomb, necropolis”; “Were the

their dead exclusively among other Christians in Church-sanctioned cemeteries first gained traction in sixth-century monastic culture and became the norm among European Christians not earlier than the thirteenth century.<sup>16</sup> By this reckoning, the concept of an exclusively Christian cemetery managed by the Church would be highly anachronistic in the third or fourth century. He acknowledges that the Church took an interest in the burial of the poor, but he insists that public assistance for burial was not the sole province of the Church. Several Roman emperors funded programs to subsidize burial as a form of public euergetism; Constantine's program of free burial for the people of Constantinople seems to have been the most extensive such program, and its internal mechanisms are fairly well documented.<sup>17</sup> Although the Church was charged with administering this program, Rebillard argues that it was not a burial program *for Christians per se*, but rather for the urban poor, regardless of religious identity.<sup>18</sup>

In short, Rebillard's position is that while the Church may have managed some cemeteries in some places and times, there was not widespread official Church management of exclusively Christian cemeteries in which ordinary Christians expected (or were expected) to be buried. Most Christians in late antiquity would have had the same range of burial options as their non-Christian neighbors (e.g., family tombs, *collegium* tombs), and the primary responsibility for burial lay with the close relatives or associates of the deceased; the Church (or the city, the state, or private donors) took an interest only in the burial of destitute and abandoned.<sup>19</sup> To take this interpretation a step further, one could argue that the Roman catacombs should not be viewed as

---

Carthaginian *areae* Christian cemeteries or burial enclosures for Christians?"; and "The Church of Rome and the development of the catacombs."

<sup>16</sup> Rebillard, "Church and burial in late antiquity," 247-49.

<sup>17</sup> Rebillard, "The burial of the poor in the Roman Empire"; Justinian *Novellae* 43, 59.

<sup>18</sup> Rebillard, "The burial of the poor in the Roman Empire," 322-23.

<sup>19</sup> Rebillard, "The Church of Rome and the development of the catacombs," 310; "Church and burial in late antiquity," 240, 45-46; "The burial of the poor in the Roman Empire," 321.



centrally-organized Church projects, but as cemeteries like those that Romans had used for centuries before: land donated or purchased for burial and filled with tombs belonging to families or other social groups, perhaps with some Church- or publicly-funded burials of the poor mixed in. Rebillard offers no strong opinion on the role of *fossores*, but his decentralized, granular view of cemetery management implies at the least that any workers attached to cemeteries were managed at a local level, if not completely independent.

Each of these views might seem extreme in its own way, but I believe a reasonable middle ground exists between them. First of all, any argument about the date at which Christian cemeteries began depends on one's definition of "Christian cemetery." Rebillard objects to the early starting date of Church-managed exclusive cemeteries in Fiocchi Nicolai's interpretation, but in my opinion the latter's point of view is much easier to accept if we allow that some of these "Christian cemeteries" were Christian *de facto* rather than by design. A family or other small social group composed of Christians might make their own cemetery and fill it with the usual Christian identifiers (e.g., the *chi-rho* or christogram symbol, *in pace*) without Church oversight.<sup>20</sup> Such a cemetery would be "Christian" because of who happened to own and occupy it, not because some external authority set it up that way. If we take "Christian cemetery" to mean simply a cemetery occupied largely by Christians, then these certainly existed as early as the third century, if not earlier.

The more fundamental question is whether it is even possible or useful to try to identify a Christian burial or cemetery. It is easy to observe in any collection of "Christian" funerary

---

<sup>20</sup> Carletti lists these and other characteristic elements of post-third-century-CE "Christian" epigraphy while also acknowledging the difficulty (and futility) of trying to separate "Christian" epigraphy from broader ("pagan") Roman epigraphy. Carletti, *Epigrafia dei cristiani in occidente*, 7-13, 35 ff. Carlo Carletti, "'Un mondo nuovo': Epigrafia funeraria dei cristiani a Roma in età postcostantiniana," *Vetera Christianorum* 35, no. 1 (1998).

epigraphy how frequently such inscriptions employ “pagan” formulas like *D(is) M(anibus) S(acrum)* out of habit or for apotropaic purposes. The formula *in pace* (“in peace”)—in catacomb studies often taken as a sure sign of Christian identity—is in fact also typical of Jewish funerary inscriptions.<sup>21</sup> We should thus allow the possibility that the many valences of a word or symbol may not be clear to modern eyes, and that determining an ancient person’s religious beliefs on the basis of a brief, often vague, inscription is rarely a straightforward affair. Given the combined burial capacity of the catacombs in Rome (over one million bodies) and the well-established temporal range for primary burial activity (third to fifth century CE), is it reasonable or even possible that the majority of those burials could have belonged to Christians? Bodel thinks not; using conservative estimates for the population of Rome during this time and a hypothetical rate of conversion to Christianity, he calculates that in the early fourth century the catacombs are not likely to have been *full* of Christians—there simply would not have been enough Christians to fill the catacombs.<sup>22</sup> So much of catacomb scholarship (especially in Fiochi Nicolai’s school of thought) assumes our ability to easily identify Christians through epigraphy and iconography, even though many acknowledge that the distinction is not always easy to make in practice. What if, by trying to identify Christians and Christian cemeteries, we are asking the wrong questions, especially in regard to the cemeteries’ creation and day-to-day management?

Let us set aside for a moment the supposed distinctions between pagan and Christian burials, or at least allow that such distinctions may be difficult to make. Under this condition, in

---

<sup>21</sup> Moreed Arbabzadah, “A note on Jewish and Christian funerary formulae (addendum to McKechnie, zpe 169),” *Zeitschrift für Papyrologie und Epigraphik* 175 (2010).

<sup>22</sup> At the same rate of conversion, most of the Roman population would have been Christian by the mid- to late fourth century; this seems reasonable in light of late fourth-century imperial acceptance of the religion. Once the population was nearly one hundred percent “Christian” (whether by real conversion or *de facto*), the catacombs could be considered wholly Christian as well, although the meaning of that designation would have been somewhat diluted. Bodel, “From *columbaria* to catacombs,” 183-85.

order to identify a “Christian cemetery,” we should look not for Christians but for evidence of Church management. Constantine’s program to provide free burial for the people of Constantinople offers one model for Church management of cemeteries on a large scale. The program involved commissioning 950 workshops of funerary workers (specifically *lecticarii*, bier-bearers, and *decanoi*, “funeral directors”) to do the work of burial, receiving tax exemptions in exchange for their service to the city. The bishop of Constantinople oversaw these workshops.<sup>23</sup> The bishops of other major cities (including Rome) had patronage relationships with gangs of funerary workers, but Bond points out that we do not really know whether systems like Constantine’s existed anywhere else.<sup>24</sup> Rebillard would counter that, while the Church had authority over the system, its mechanics remain unclear, and although the funerary workers received tax exemptions similar to those of the clergy, the workers themselves were not necessarily clergy.<sup>25</sup> Furthermore, he argues that the program sought to bury the poor and unclaimed, making it similar to earlier elite and imperial euergetic endeavors.<sup>26</sup> Public funerary euergetism, however, was never very widespread or successful; even for imperial donations like *Monumentum Liviae*, the key administrative unit was the funerary collegium, and the target audience was a limited social group (in this case, Livia’s household staff).<sup>27</sup> Even in projects with imperial backing, the actual responsibility for management seems to have devolved upon small administrative units like workshops and *collegia*.

How might we recognize Church management of cemeteries when we see it? It would have to look different from the other funerary systems at play in the Roman world. From the

---

<sup>23</sup> Bond, “Mortuary workers,” 135-36.

<sup>24</sup> *Ibid.*, 136, 47.

<sup>25</sup> Rebillard, “The burial of the poor in the Roman Empire,” 323-25.

<sup>26</sup> *Ibid.*, 317-22.

<sup>27</sup> *Ibid.*, 319.

complex network of funerary professionals at Thebes, to the *mancipes* of Puteoli and Cumae, to the *columbaria* of Rome, the bulk of funerary decision-making happened at the level of the worker or workshop and the patron.<sup>28</sup> Cultures set the codes, cities made policies, and sometimes emperors contributed resources, but the parts of burial visible to us—the tomb, its decorations, the epitaph—seem to have come from the collaborative efforts of their maker and buyers.

Centralized management of a cemetery system as vast as the Roman catacombs would have been revolutionary; although Roman law made provisions for what could and could not be done with a particular tomb, large-scale centralized management of cemeteries does not seem to have occurred in Roman cities.<sup>29</sup> Rather than being the material manifestation of a systemic revolution, the catacombs seem to reflect a blend of continuity and change. “Christian” catacombs share their architectural forms with contemporary Jewish and pagan cemeteries and draw on earlier cemetery designs, like the Hellenistic “catacombs” at Alexandria.<sup>30</sup> Catacomb epigraphy, as mentioned above, retains many of the formulas of the widespread Roman funerary epigraphic tradition. Painting in catacombs follows the developmental trajectory of late Roman domestic and funerary painting, and with the exception of some specific figural motifs,

---

<sup>28</sup> See Chapter 1 for a detailed discussion of these funerary labor systems.

<sup>29</sup> As collected in Justinian’s *Digest*, the Roman laws governing the treatment of tombs rest on a few basic principles: a tomb is supposed to be inviolable, and its sanctity derives from the burial of a body; anyone can thus create a tomb by burying a body (in a plot of land or inside a structure, provided certain conditions are met); responsibility for a tomb (including control over who can be buried in it) lies with the owners of the tomb, whether individual or collective; and the primary concern of the law in funerary affairs is the proper practice of religion (i.e., not allowing a body to go unburied). See *Digest* 11.7 *passim*, especially 11.7.1 and 11.7.41-43, and 47.12; “The Digest of Justinian, vol. 1”; “The Digest of Justinian, vol. 4” The growth and management of cemeteries over time thus depends on whoever owns the land and the tombs, not a central authority. The *manceps*’ monopoly covered the handling of bodies, not the management of tombs and cemeteries (outside of any that he may have owned). Bodel, “The organization of the funerary trade at Puteoli and Cumae.”

<sup>30</sup> Kimberly Bowes, “Early Christian archaeology,” 585; Elsa Laurenzi, *Jewish catacombs. The Jews of Rome: Funeral rites and customs* (Rome: Gangemi Editore, 2013), 40-42; Venit, *The monumental tombs of Alexandria*.

“Christian” funerary painting is indistinguishable from “pagan” in this period.<sup>31</sup> Whether the Church managed the catacombs is moot, since that management does not manifest itself in any way that we have yet been able to measure conclusively in catacomb architecture, epigraphy, or decoration. Since it appears that interactions between workers and patrons may have produced the catacombs and everything in them, we should focus our attention on these interpersonal negotiations.

If the *fossores* were not employed by the Church—at least not early on, and not on a massive scale—then we should seek their patrons among the dead and their commemorators represented in the catacombs. The catacomb dead seem to have come from all walks of life; the professions attested in catacomb epigraphy include butchers, carpenters, vegetable sellers, hairdressers, bureaucrats, priests, exorcists, and bishops, to name a few.<sup>32</sup> Their names reflect a variety of cultural origins (Latin, Greek, North African)—one man buried in Domitilla had come to Rome from a village in Syria.<sup>33</sup> Those who dedicated inscriptions to commemorate these diverse decedents include their parents, spouses, siblings, children, friends, and colleagues; many inscriptions specify that the dead commissioned their own inscriptions while still living.<sup>34</sup> Patrons acted alone or collectively; professional *collegia* are attested at Domitilla and Praetextatus, for example, and the *titulus Fasciolae* (the community associated with the house-

---

<sup>31</sup> Roger Ling, “Roman painting of the middle and late Empire,” in *The Cambridge history of painting in the classical world*, ed. J. J. Pollitt (New York: Cambridge University Press, 2014), 407; Ida Baldassarre *et al.*, *Pittura romana: Dall’ellenismo al tardo-antico* (Milano: F. Motta, 2002), 342-58.

<sup>32</sup> Bisconti’s *Mestieri nelle catacombe romane* deals with this subject at length; see especially his p. 300, *grafico* III, for a summary chart of professions.

<sup>33</sup> *ICUR* 8048.

<sup>34</sup> In my epigraphic sample from Domitilla, over one-fifth of inscriptions mention dedicators, either the deceased themselves or other persons.

church *Fasciola*) seems to have buried its members at Domitilla as well.<sup>35</sup> In short, the *fossores*' patrons probably represent a broad cross-section of the Roman population in the third to fifth centuries.

### Primary evidence for *fossor* activity

The primary evidence—inscriptions and painted or engraved images—shows that *fossores* were important agents in the making of catacombs and their contents. Mazzoleni and Guyon have assumed on the basis of epigraphic and archaeological evidence that *fossores* had some responsibility for catacomb management, particularly for sales of tomb spaces, handling of bodies, and general site maintenance.<sup>36</sup> How *fossores* organized themselves—in formal corporations or *ad hoc* collaborations—remains debatable, although the epigraphic evidence points more toward flexible arrangements.<sup>37</sup> Several (myself included) have suggested that groups of *fossores* and other workers (e.g., engravers) may have been linked with specific sites, as demonstrated by site-specific styles of painting and epigraphy, for example.<sup>38</sup>

---

<sup>35</sup> Joan M. Petersen, "The identification of the *Titulus Fasciolae* and its connection with Pope Gregory the Great," *Vigiliae Christianae* 30, no. 2 (June 1976): 5-6.

<sup>36</sup> Mazzoleni, "Fossori e artigiani nella società cristiana," 251-52. Guyon, "La vente des tombes," 568.

<sup>37</sup> Conde Guerri and Mazzoleni favor a formal organization of *fossores*, while Guyon, who studied the sale inscriptions most closely, leans toward informal organization. Conde Guerri, *Los "fossores,"* 183. Mazzoleni, "Fossori e artigiani nella società cristiana," 252-53. Guyon, "La vente des tombes," 566-68.

<sup>38</sup> Zimmermann, *Werkstattgruppen*, 44-45. Carlo Carletti, "Littera et figura: Osservazioni sulle dinamiche interattive nell'epigrafia funeraria tardoantica," in *Incisioni figurate della tarda antichità*, ed. Fabrizio Bisconti and Matteo Braconi (Città del Vaticano: Pontificia Istituto di Archeologia Cristiana, 2014), 25; Conde Guerri, *Los "fossores,"* 179; Jenny R. Kreiger, "Remembering children in the Roman catacombs," in *The Oxford handbook of childhood and education in the classical world*, ed. Judith Evans Grubbs and Tim Parkin (New York: Oxford University Press, 2013).

The first *fossores* were most likely quarriers or hydraulic engineers who took up tomb excavation as an alternative or supplement to their usual work.<sup>39</sup> Catacombs in Rome, Naples, and Syracuse occur in or near stone deposits once exploited for construction material. At the catacomb of San Gennaro (Naples), for example, toolmarks left in unfinished *cubicula* show that the *fossores* attempted to extract stone in usable pieces as they dug tombs, and the extraction of *pozzolana* (sand used to make concrete) at catacombs in Rome is well attested.<sup>40</sup> *Fossores*' apparent understanding of local geology and expertise in engineering led them to develop different architectural forms at different sites in negotiation with their patrons. The Roman *fossores* thus tended to dig narrow galleries in the sandy Roman *tuffo* to reduce the risk of collapse, while *fossores* in Naples and Syracuse excavated lofty halls and deep *arcosolia* in the tougher stones of their regions (see figs. 1.3, 1.4, 1.5, 1.6, 1.7, 1.8). Although catacomb architecture exhibits *fossores*' handiwork directly, it is less useful for understanding *fossores*' organization and management than the epigraphic and iconographic evidence.

Epigraphic evidence for *fossor* activity takes the form of sale inscriptions and epitaphs, with a few exceptions (as noted in Table 3.1 below).

---

<sup>39</sup> Rebillard, "The burial of the poor in the Roman Empire," 328.

<sup>40</sup> Fasola, *Le catacombe di S. Gennaro a Capodimonte*, 72; Webb, *The churches and catacombs of early Christian Rome*, 225-6.

| Site                        | Epitaph   | Sale      | Other          | Fragmentary | Site totals |
|-----------------------------|-----------|-----------|----------------|-------------|-------------|
| S. Pancrazio                | 1         | 1         |                |             | 2           |
| Ponziano                    |           | 1         |                |             | 1           |
| <i>Area Lucinae</i>         |           | 2         |                |             | 2           |
| Commodilla                  |           | 14        |                |             | 14          |
| Domitilla                   | 2         | 5         |                |             | 7           |
| S. Callixtus                | 1         | 3         | 5 <sup>A</sup> | 1           | 10          |
| SS. Marco e Marcelliano     | 1         | 5         |                |             | 6           |
| Near basilica of Pope Mark  | 1         |           |                |             | 1           |
| Other near Via Ardeatina    | 1         | 4         |                |             | 5           |
| S. Sebastiano               | 1         | 3         | 1 <sup>B</sup> | 1           | 6           |
| Praetextatus                | 1         |           |                | 1           | 2           |
| Gordiano ed Epimaco         |           | 2         |                |             | 2           |
| Aproniano                   |           | 1         |                |             | 1           |
| SS. Pietro e Marcellino     |           | 1         | 1 <sup>C</sup> |             | 2           |
| Ciriaca/S. Lorenzo          | 3         | 13        |                |             | 16          |
| Ciriaca or S. Ippolito      | 1         |           |                |             | 1           |
| Sant'Agnese                 | 1         |           |                |             | 1           |
| <i>Coemeterium Maius</i>    | 2         |           |                |             | 2           |
| Giordani                    |           |           | 2 <sup>D</sup> |             | 2           |
| Priscilla                   | 4         | 1         |                |             | 5           |
| S. Valentino                |           | 3         |                |             | 3           |
| Uncertain or unknown origin | 5         | 16        | 2 <sup>E</sup> | 2           | 19          |
| <b>Totals</b>               | <b>25</b> | <b>75</b> | <b>11</b>      | <b>4</b>    | <b>115</b>  |

A) Including one verse epitaph that mentions a *fossor*, three graffiti by a *fossor*, and one sale inscription that may mention a *fossor*.  
B) A graffito naming a *fossor* and his subordinate workers.  
C) An *adclamatio* referencing a *fossor*.  
D) Records a *fossor*'s digging of his own tomb; the other simply names a *fossor*.  
E) An epitaph dedicated by a *fossor* to his wife; another epitaph addressed to a *fossor* (as to a passerby).

**Table 2.1. Inscriptions referencing *fossores* by site and type.**<sup>41</sup>

The sale inscriptions follow in a long tradition of funerary epigraphy that declares ownership of a tomb space (and sometimes also the tomb's dimensions or other characteristics), along with or

<sup>41</sup> Condensed from Guyon, "La vente des tombes," 552-60.



instead of personal information about the decedent.<sup>42</sup> Because they usually name both parties to the sale, catacomb sale inscriptions offer information about the purview of *fossores*, whether working alone or in groups. *Fossores* could work alone, digging a single tomb or managing a particular region of a catacomb for a period of time.<sup>43</sup> For example, a *fossor* named Alexander appears several times in sale inscriptions from complexes in the area of the Via Appia and Via Ardeatina, and a “mountaineer” (*montanarius*) named Debestus claims in his own epitaph to have worked all over the Coemeterium Maius, presumably as a *fossor*.<sup>44</sup> A *fossor* might conduct some of his sales alone and others jointly with colleagues, or with other *fossores* serving as witnesses to his sale.<sup>45</sup> A *fossor* named Muscurutio active at the catacomb of Commodilla is known to have made transactions of these types, in addition to selling multiple tombs to a single patron (based on two inscriptions that name him as vendor and the same person as buyer).<sup>46</sup> Conde Guerri thinks that these two inscriptions could have been made in the same workshop, based on their appearance,<sup>47</sup> if this is true, then either the two tombs and their inscriptions were purchased at the same time, or Muscurutio, the patron, and the engraving workshop had an ongoing relationship. What the sale inscriptions lack is any reference to professional associations, managers, owners (if the *fossores* were slaves), or any authority other than the

---

<sup>42</sup> For numerous examples of such sale inscriptions from before the opening of the catacombs, see M. L. Caldelli and *et al.* (eds.), “*Iura sepulcrum* a Roma: Consuntivi tematici ragionati,” in *Libitina e dintorni: Atti dell’XI Rencontre franco-italienne sur l’épigraphie*, ed. Silvio Panciera (Roma: Quasar, 2004); Valerie M. Hope, *Death in ancient Rome: A sourcebook* (New York: Routledge, 2007).

<sup>43</sup> Guyon, “La vente des tombes,” 567-70; Zimmermann, *Werkstattgruppen*, 38, n. 138.

<sup>44</sup> Conde Guerri, *Los “fossores,”* 178. Mazzoleni, “Fossori e artigiani nella società cristiana,” in *Christiana loca: Lo spazio cristiano nella Roma del primo millennio*, 252.

<sup>45</sup> Guyon, “La vente des tombes,” 566; Zimmermann, *Werkstattgruppen*, 38-39.

<sup>46</sup> Conde Guerri thinks that the inscriptions themselves may have been made in the same workshop. Conde Guerri, *Los “fossores,”* 179; Guyon, “La vente des tombes,” 566.

<sup>47</sup> Conde Guerri, *Los “fossores,”* 179.

*fossores*' own.<sup>48</sup> The sale inscriptions show clearly that *fossores* could and did work autonomously, doing their business in negotiation with their patrons.

Concrete evidence for larger organizational structures thus remains scarce at best; the *fossores* appear to have worked singly or in small egalitarian groups. Besides the example of Muscurutio in the catacomb of Commodilla above, other joint operations by *fossores* are attested at S. Pancrazio, Domitilla, S. Sebastiano, Praetextatus, S. Lorenzo, and Priscilla.<sup>49</sup> In inscriptions like these, the text makes no indication of rank among the *fossores*, and their relationships seem to have been fairly fluid, with partnerships forming and dissolving from one inscription to the next.<sup>50</sup> When the texts indicate a long-term relationship among *fossores*, it is a familial one, comprising some combination of brothers, fathers, and sons, or a patriarch, his sons, and his grandsons.<sup>51</sup> While none of this evidence *disproves* the existence of a professional association of *fossores*, it positively points toward a high level of agency on the part of the *fossor* and the importance of collegial relationships in the *fossor*'s work.

Pictorial representations of *fossores* tell us about both their activities and their symbolic power in the visual world of the catacombs. Images of *fossores* survive in two media: fresco and engraving on stone plaques (see figs. 2.3, 2.4 for examples). The extant paintings date from the mid-third to early fourth centuries CE, and while professional painters probably crafted most of

---

<sup>48</sup> The only mention of a central authority comes from an inscription of unknown provenience (now lost) that alludes to a cemetery archive where a record of sales was kept (ICUR 3868; Guyon, "La vente des tombes," 571.

<sup>49</sup> In Guyon's catalog, these are numbers 2 (S. Pancrazio), 9 (Commodilla), 21 (Domitilla), 51 (S. Sebastiano), 54 (Praetextatus), 66-67 (S. Lorenzo), and 82 (Priscilla). Muscurutio appears in cat. nos. 9-10. Guyon, "La vente des tombes."

<sup>50</sup> Ibid., 568.

<sup>51</sup> Zimmermann, *Werkstattgruppen*, 38, n. 139. = ICUR VIII 21905, Carletti 1986 no. 110; Conde Guerri, *Los "fossores,"* 178; Guyon, "La vente des tombes," 566.

these images, *fossores* themselves may have been responsible for a few.<sup>52</sup> The following table summarizes where painted and engraved images of *fossores* appear in the Roman catacombs.

| Site   | Paintings | Engravings |
|--|-----------|------------|
| Domitilla  | 1         |            |
| S. Callixtus   | 5         |            |
| Via Latina/Dino Compagni   | 1         |            |
| SS. Pietro e Marcellino  | 19        |            |
| Hermetes   | 1         |            |
| Calepodio  |           | 1          |
| Commodilla   |           | 1          |
| Damaso   |           | 1          |
| Sant'Agnese  |           | 1          |
| <b>Total</b>   | <b>27</b> | <b>4</b>   |
| Additional paintings of <i>fossores</i> noted at the Cimitero "Anomino" di Via Anapo and Gordiano ed Epimaco are now lost. |           |            |

**Table 2.2. Painted and engraved images of *fossores* by site.**<sup>53</sup>

Images of *fossores* can be identified by their depictions of digging and the relevant tools: pickaxes, buckets or baskets, lamps, and so on. Occasionally an image provides clues about other work *fossores* may have done. The scatter of tools in Diogenes' lunette painting include not just those used for digging, but also a paintbrush, making this the only image of a *fossor* to hint at some role in the decoration of catacombs (see figs. 2.1, 2.2).<sup>54</sup> A rough engraving from the catacomb of Commodilla (ICUR 6446) shows a hooded *fossor* with his pickaxe and lamp standing over a body wrapped tightly in a shroud, suggesting that this *fossor* may have had some

<sup>52</sup> Conde Guerri, *Los "fossores,"* 81-82; Zimmermann, *Werkstattgruppen*, 37; Mary Charles-Murray, "The emergence of Christian art," in *Picturing the Bible: The earliest Christian art*, ed. Jeffrey Spier (New Haven: Yale University Press, 2007), 55.

<sup>53</sup> Conde Guerri, *Los "fossores,"* 24-100.

<sup>54</sup> Zimmermann, *Werkstattgruppen*, 38.

responsibility for handling bodies as well as making tombs (see fig. 2.4).<sup>55</sup> But these are the exceptions; in visual representations, *fossores* are defined by the work of digging.

Bisconti emphasizes that the primary function of these images is to symbolize ideals associated with the funerary realm rather than to represent real people and activities.<sup>56</sup> In a 1979 study of *fossor* images, still the most comprehensive work on the subject, Conde Guerri offers three interpretations of what these images might have meant to their makers and viewers. The *fossor* may have been an allegorical image, paradoxically juxtaposing the realm of death (in the person of the *fossor*) with the coming resurrection (in the light of his lamp).<sup>57</sup> The *fossor* could also have served as a generic stand-in for Tobias, or simply a personification of the charitable act of burial.<sup>58</sup> But her most convincing theory, and the one that has met with the widest acceptance, holds that the *fossor* served as a sort of *genius loci*, a tutelary spirit presiding over the journey to the realm of the dead in the tradition of the Etruscan Vanth or the Hermes Psychopompos.<sup>59</sup> In addition to their practical contributions, *fossores* may thus have served some symbolic functions for patrons and other workers (especially painters and engravers) involved with the catacombs.

#### *Fossores'* social status

Who were the Roman *fossores*—slaves, freedmen or freeborn, members of the clergy or laity? Evidence for their social status is slim and often extrapolated from what we know of

---

<sup>55</sup> Ibid. The handling and transport of dead bodies were some of the functions performed by the *manceps* or his staff (in cities where *manceps* existed); at Thebes in the Ptolemaic period, gravediggers performed these tasks, moving bodies between lector-priests (who presided over mummification) and choachytes (who attended bodies at their tombs). Vleeming, “The office of a choachyte in the Theban area,” 244-46; Derda, “Necropolis workers in Graeco-Roman Egypt,” 23-25. See Chapter 1 for detailed discussion of these funerary professionals.

<sup>56</sup> Bisconti, *Mestieri nelle catacombe romane*, 93-98.

<sup>57</sup> Conde Guerri, *Los “fossores,”* 115-23.

<sup>58</sup> Ibid., 109-15.

<sup>59</sup> Ibid., 104-08.

comparable workers (e.g., the *manceps* of Puteoli or Cumae).<sup>60</sup> Whether they were slave or free is difficult to determine. Only one of the *fossores* in Guyon's catalog used the *tria nomina*, and three others the *duo nomina*, all before the mid-fourth century when these naming systems went out of use for the general population.<sup>61</sup> The vast majority of Guyon's *fossores* used single names, which is not a sure indicator of servile status in this period. Whether they were slave or free, the fact that the *fossores* of the sale inscriptions conducted business in their own names, without explicit reference to masters, managers, patrons, or professional associations, indicates a high level of independence, at least in economic transactions. Even the *fossores*' names offer few clues on the question of status. Guyon traces some shifts over the course of the fourth century from fewer foreign and "Christian" names to more of both, but from this evidence he argues that, overall, the names of *fossores* have more in common with onomastic trends among the general population of the late antique Roman world than those among the clergy.<sup>62</sup>

If the Roman *fossores* were not clergy themselves, then what was their relationship to Church officials? We cannot know for sure, but it was probably collaborative, and it probably evolved over time. Priests appear in only three of Guyon's sale inscriptions, and he argues that their interest in burial was not economic: clergy may have witnessed or given moral authority to the transaction, but *fossores* still collected the money.<sup>63</sup> By the sixth century, burial activity in catacombs had slowed to a trickle; by that time the *fossor* had become more of a caretaker (*mansionarius*) than a gravedigger, and a new character, the *praepositus*, entered the scene. The *praepositus* seems to have taken responsibility for selling burial spaces in the suburban funerary basilicas. The clerical status of the *praepositi* is not certain, but it seems that at least some of

---

<sup>60</sup> See Chapter 1 for detailed discussion of *mancipes*.

<sup>61</sup> Guyon, "La vente des tombes," 560.

<sup>62</sup> *Ibid.*, 561-63.

<sup>63</sup> *Ibid.*, 577-78, 90-91.

them were members of the clergy.<sup>64</sup> In the eastern Mediterranean, Bond makes a clear case for Church management of funerary workers, both in relation to both organized burial schemes like Constantine's at Constantinople and in the use of funerary workers as political muscle by bishops in Alexandria and Ephesus.<sup>65</sup> Was the same true at Rome? Damasus, bishop of Rome from 366 to 384 CE, is known to have employed gravediggers as his personal militia, and in his monumentalization projects at various cemeteries he and his associates certainly would have collaborated with whomever they found working there.<sup>66</sup> But Rebillard argues that, while the *copiatae* of Constantinople were the equivalent of Roman *fossores*, not even *copiatae* actually made it into the rolls of the clerical orders, despite their similar tax exemptions.<sup>67</sup> *Copiatae* thus worked under Church management, received tax exemptions like those afforded the clergy, and performed much the same tasks as *fossores*, yet they did not count as clergy. I agree with Rebillard in suggesting that *fossores*, with their apparently looser ties to the Church, probably were not clergy either. Political and circumstantial interactions between church officials and funerary workers do not constitute practical, day-to-day management of workers or their absorption into clerical orders, and the textual evidence seems to point toward the *fossores*' independence in their relations with their patrons.

#### Fossores in the Roman economy

A funerary industry based on direct interaction between patrons and workers or small workshops seems consistent with primitivist interpretations of Roman economic behavior.<sup>68</sup> In such thinking, craft production in the Roman world probably never reached the level of

---

<sup>64</sup> Ibid., 578-87.

<sup>65</sup> Bond, "Mortuary workers," 141.

<sup>66</sup> Ibid., 139, 47.

<sup>67</sup> Rebillard, "The burial of the poor in the Roman Empire," 323-25.

<sup>68</sup> Walter Scheidel, "Approaching the Roman economy," in *The Cambridge companion to the Roman economy*, ed. Walter Scheidel (New York: Cambridge University Press, 2012).

integration and labor specialization characteristic of modern industries.<sup>69</sup> Most of the goods a person consumed would have been made in a small workshop, either locally or somewhere in reach of a trading network.<sup>70</sup> Distinct workshops would sometimes have cooperated by sharing supplies or equipment (e.g., common clay pits and kilns for a group of ceramic workshops), or by locating their offices near one another, without actually integrating into a single manufacturing entity (a firm or factory).<sup>71</sup> The professional *collegia* precluded integration by performing some of the economic functions of firms, allowing workshops to remain somewhat independent.<sup>72</sup> Possible exceptions in this model would include some of the imperial extraction projects, like the mines of the *Mons Claudianus*, but these were distinct operations serving a single consumer (the emperor and his projects), separate from the economy that served private consumers.<sup>73</sup> In short, the basic unit of the Roman manufacturing economy, which would have included the making of tombs and all funerary goods, was the small workshop, and it is in this context that we may best view the *fossores* and other funerary workers.<sup>74</sup> If funerary products

---

<sup>69</sup> Russell points out, however, that modern definitions of “industry” often assume the mechanization of mass production as part of labor specialization; minus mechanization, ancient economies did achieve a sort of mass production, and so, he argues, it is possible to think of some types of ancient production as “industrial” in nature and scale. Russell, “The Roman sarcophagus ‘industry,’” 121-22.

<sup>70</sup> Jean-Jacques Aubert, *Business managers in ancient Rome: A social and economic study of institores, 200 B.C.-A.D. 250* (Leiden: Brill, 1994), 201.

<sup>71</sup> *Ibid.*, 207-08; Cameron Hawkins, “Manufacturing,” in *The Cambridge companion to the Roman economy*, ed. Walter Scheidel (New York: Cambridge University Press, 2012), 180.

<sup>72</sup> Hawkins, “Manufacturing,” 182-83.

<sup>73</sup> See Russell for a discussion of the imperial quarrying industry and how it related to quarrying for private consumers. Russell, *The economics of the Roman stone trade*.

<sup>74</sup> Here I am assuming a large measure of conservatism in the economics of funerary labor. Because the material considered in this study dates broadly to the third through late fifth or early sixth century, I expect that the economics of the mid- to late imperial period would still apply to an extent, despite macroeconomic changes that began in the crises of the third century and continued throughout late antiquity. For a detailed discussion of third-century economic change, based on archaeological evidence from rural sites, see Richard Duncan-Jones, “Economic change

result from the choices and actions of small groups of workers in negotiation with patrons to a greater or lesser degree, then by examining those products, we should be able to gain insight onto their makers and the interactions that surrounded their creation.

### **Conclusion**

In this chapter I have argued that *fossores* probably conducted their business with a high degree of independence and personal agency. The Church certainly took an interest in burial (of the poor), but there is not strong evidence for large-scale Church management of exclusively Christian cemeteries in Rome before the mid-fourth century CE. When the Roman Church did take a strong interest in cemeteries under Bishop Damasus, its primary aim was the monumentalization of martyr cults; ordinary burial activity probably went on as usual.<sup>75</sup> If extensive centralized management of catacombs existed before Damasus, this has not left obvious traces. In funerary production (of burial space, of goods or services relating to burial), as in the rest of the Roman manufacturing economy, the workshop probably served as a basic unit of production, with “industrialization” in the modern sense never achieved. It is in this context that we should view catacombs and their contents, as the products of low-level, interpersonal transactions, without systematic oversight by some central authority. A small workshop and its interactions with patrons form the subject of the next chapter.

---

and the transition to late antiquity,” in *Approaching late antiquity: The transformation from early to late Empire*, ed. Simon Swain and Mark Edwards (New York: Oxford University Press, 2004).

<sup>75</sup> MacMullen, “Christian ancestor worship in Rome,” 612-13.





WILPERT DIR.

**Figure 2.1. Watercolor of Diogenes' tomb, catacomb of Domitilla (Rome).** From Wilpert 1903, vol. 2, pl. 180.

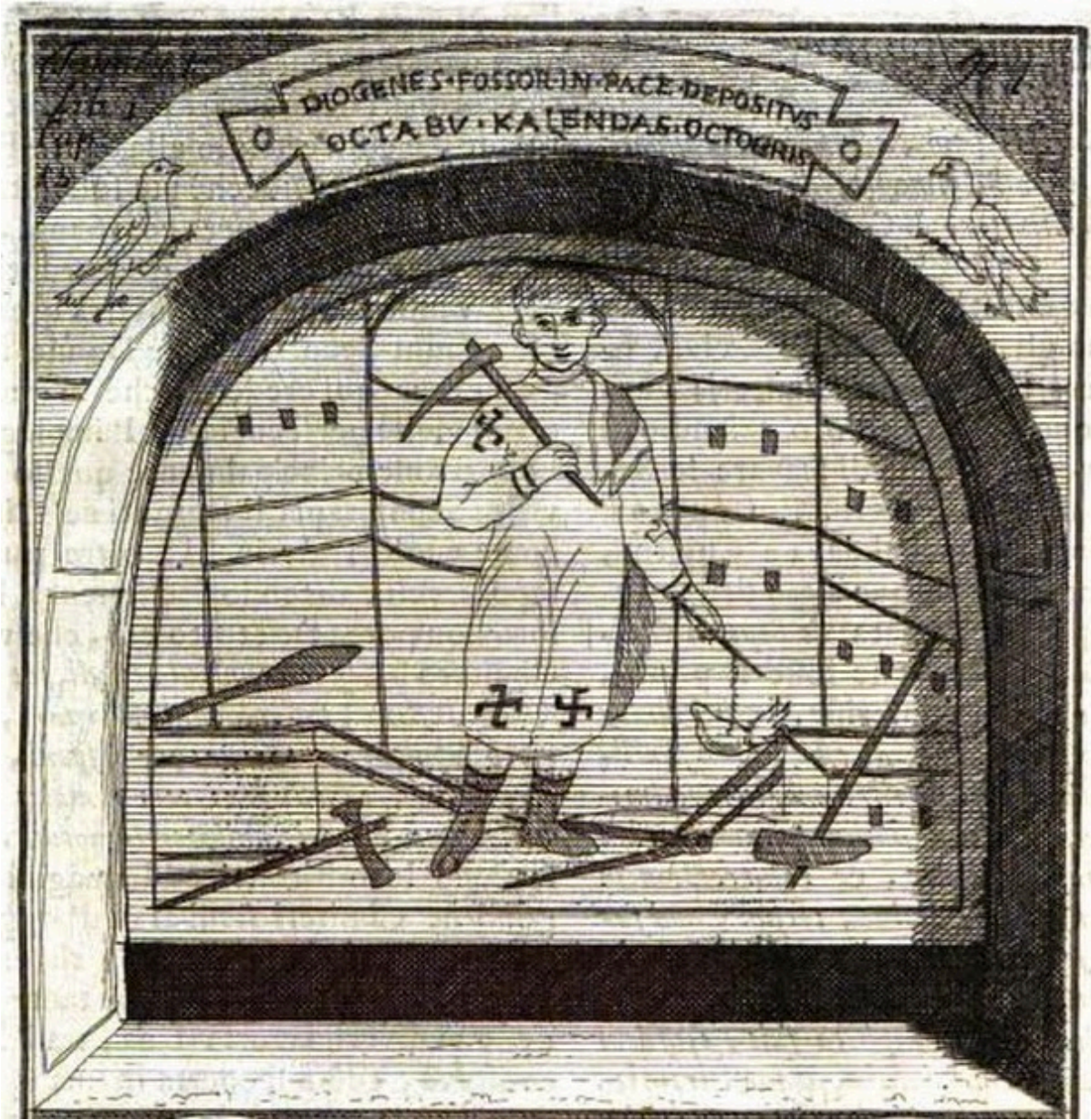


Figure 2.2. Drawing of Diogenes' lunette painting before destruction. From Boldetti 1720, p. 60.



**Figure 2.3. Painting of a *fossor* at work, catacomb of SS. Marcellino e Pietro (Rome).** Image in the public domain. Accessed 28 Jan 2017  
<<https://commons.wikimedia.org/wiki/File:Fossor.PNG>>.



**Figure 2.4. Engraving of a *fossor* with shroud-wrapped corpse from the catacomb of Commodilla (Rome), housed in the Ecomuseo Casilino “Ad Duas Lauros” (Rome).** Photo: author.

## CHAPTER 3

### The painter: Context, “signature,” and choice

Catacomb painting has played a crucial role in histories of early Christian art, offering some of the first examples of Christian iconography and biblical narrative imagery. Aside from the inclusion of certain explicitly Christian motifs, catacomb painting follows the traditions of Roman tomb painting, which in turn had a close relationship to domestic decoration.<sup>1</sup> Painting of the so-called “red and green linear style” (henceforward “linear style”), which forms the basis of catacomb decoration, is attested in houses and tombs in Rome from the late second century CE onward.<sup>2</sup> This style consists of a spare framework of colored lines dividing a white ground into fields that generally follow architectural contours, with small fill motifs arranged in the white spaces. More complex examples may include narrative scenes, with figures either floating on a groundline over the white background, or (less commonly) surrounded by minimal architectural or natural scenery.<sup>3</sup> Studies of catacomb painting have often focused on the more figural and narrative examples, interpreting their iconography or trying to infer the identities (and religious

---

<sup>1</sup> Ling, “Roman painting of the middle and late Empire,” 407. For observations on catacomb painting technique, see Josef Wilpert, *Die Malereien der Katakomben Roms* (Freiburg im Breisgau: Herder, 1903), 3-14; *ibid.*, *Sulla tecnica delle pitture cimiteriali e sullo stato di loro conservazione, Dissertazione della pontificia accademia Romana di archeologia* (Roma: Pontificia Accademia Romana di Archeologia, 1894), 199-218.

<sup>2</sup> The principal examples of “red and green linear style” painting outside of catacombs include a house under S. Giovanni in Laterano, the “Villa Piccola” under S. Sebastiano, and the “Hypogeum of the Aurelii” in Viale Manzoni, all in Rome. Ling, “Roman painting of the middle and late Empire,” 406-09; Baldassarre *et al.*, *Pittura romana*, 348-50.

<sup>3</sup> Roger Ling, *Roman painting* (Cambridge: Cambridge University Press, 1991), 187-88.

beliefs) of the painters and patrons.<sup>4</sup> The simpler sorts of catacomb painting, however, remain an underutilized and potentially rich resource for the study of workshop practices and painter-patron interaction.<sup>5</sup>

In this chapter I apply the basic principles of Morellian connoisseurship<sup>6</sup> to a program of linear style catacomb painting that Fasola attributes to a single workshop commissioned by a single (perhaps collective) patron. For the purposes of this inquiry—and based on my own intuitive assessment of the paintings—I take the single-workshop attribution to be correct. The following three goals thus guide this inquiry:

- 1) to identify criteria by which to analyze the painting as the work of a single workshop;
- 2) to use these criteria to define that workshop's "signature"; and
- 3) to detect the possible influence of painter-patron negotiation and personal choice on the finished product.

The third goal reflects my overarching aim to approach workers, as both individual and social agents, through their products.

The exact nature of Roman painting workshops is a matter of some debate.<sup>7</sup> These workshops seem not to have been characterized by long-term internal cohesion (like some

---

<sup>4</sup> E.g., Tronzo, *The Via Latina catacomb*; Fabrizio Bisconti, *L'Ipogeo degli Aureli in Viale Manzoni: Restauri, tutela, valorizzazione e aggiornamenti interpretativi* (Città del Vaticano: Pontificia Commissione di Archeologia Sacra, 2011); Fabrizio Bisconti, *Temi di iconografia paleocristiana* (Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 2000); Fabrizio Bisconti, *Le pitture delle catacombe Romane: Restauri e interpretazioni* (Todi: Tau, 2011). Zimmermann focuses on workshops, but the paintings he analyzes tend to be those with figural panels and narrative scenes. Zimmermann, *Werkstattgruppen*.

<sup>5</sup> Ward-Perkins, "The role of craftsmanship in the formation of early Christian art," 643.

<sup>6</sup> Morelli, *Italian painters*, 31-63. See Chapter 1 for an introduction to this method and its application here.

<sup>7</sup> See, for example, a group of essays dedicated to the subject in Eric M. Moormann, ed. *Mededelingen van het Nederlands Historisch Instituut te Rome. Antiquity*, vol. 54 (Assen, Netherlands: Van Gorcum, 1995).

Renaissance painting workshops), but rather to have been formed for a particular project and then dissolved.<sup>8</sup> A painter might thus have participated in many “workshops” over the course of his career. To what extent, then, can we treat Roman painting workshops as cohesive units with characteristic “styles,” “practices,” or “habits?” Perhaps we should seek insights from the field of paleography, where the “hands” of writers who did not study in the same school still share traits typical of the broader writing styles of a period or place.<sup>9</sup> Even if two painters met for the first time while working on a particular project, they would probably have shared many practices and stylistic tendencies *because* of their frequent contact with many other painters of similar training, not despite it. For the purposes of this discussion, I follow Allison’s flexible definition of a painting “workshop” as a group of painters collaborating on a particular project.<sup>10</sup> These painters may or may not have worked together on other occasions, but when they did work together, their products reflected the shared goals and practices that guided their collaboration (with each other and with their patrons), as well as the peculiarities of each individual’s personal habits and choices. In other words, the products of a given “workshop” reflect the commonalities and differences of that particular group of people.<sup>11</sup>

---

<sup>8</sup> Ling, *Roman painting*, 217.

<sup>9</sup> In Greek papyri, for example, clerical handwriting was extremely conservative and can be readily identified as belonging to one long period or another (e.g., Ptolemaic, Byzantine, etc.). Frederic G. Kenyon, *The paleography of Greek papyri* (Chicago: Argonaut, 1970), 34-41.

<sup>10</sup> Penelope Allison, “‘Painter-workshops’ or ‘decorators’ teams?,” *Mededelingen van het Nederlands Historisch Instituut te Rome* 54 (1995): 102.

<sup>11</sup> Allison phrases it best: “The term ‘painter-workshop’ refers to one or more painters who decorated part or all of a house together. They may have habitually worked together or they may have united for this particular job. In either case, because of their complexity, it is conceivable that a principal painter (or entrepreneur) may have had some overall control of the decorative schemes, possibly in collaboration with the proprietor, and thus the ‘workshop’ may have had a preference, or conditioning, which caused the repetition of certain arrangements and combinations of motifs. They may have habitually worked together or they may have united for one particular job.” Although she prefers to call this group of workers a “decorators’ team”

A workshop's "signature" combines its characteristic practices (its preferred use of tools, compositional style, division of labor, etc.) with its responses to contextual factors (e.g., the architecture being painted), and it can be observed in the painting itself.<sup>12</sup> By studying a group of paintings in close architectural relationships to one another and already assigned to a single workshop, I hope to define both that workshop's "signature" and a step-by-step analytical process for delineating the "signature." Once the contextual factors and the workshop signature have been observed and defined, we may approach the overarching goal: to draw inferences about which aspects of the painting may be attributable to negotiation between painter and patron, or to personal choice on the part of either, since these will reflect the painter's and patron's agencies at work.

### **The Zona Greca**

To serve as the subject of this analysis, I selected eleven painted *arcosolia* (barrel-vaulted niche tombs) in the so-called Zona Greca in the catacomb of San Gennaro in Naples (see figs. 3.2, 3.4; cf. fig. 1.6).<sup>13</sup> This small region, consisting of galleries D1, D2, and D3 (fig. 3.2), takes its name from a number of Greek inscriptions painted or incised over the frescoes.<sup>14</sup> Fasola dates the area after the first half of the third century CE, suggesting that it was decorated by a single

---

rather than a "painter-workshop" (to avoid connotations of the Renaissance painting-workshop model), the definition remains the same. Ibid.

<sup>12</sup> The "signature" is thus inextricably linked to contextual factors. To clarify which parts of the workshop signature derive solely from the workers—not from the context—one would need to identify work by the same workshop in various disparate contexts. Although Zimmermann (*Werkstattgruppen*) has accomplished this for some workshops producing figural painting in catacombs, multiple non-figural paintings by a single workshop are much more difficult to identify.

<sup>13</sup> See Chapter 1 for a broad introduction to the history and archaeology of the whole San Gennaro catacomb.

<sup>14</sup> Fasola, *Le catacombe di S. Gennaro a Capodimonte*, 31-32.

workshop and may have served as the first communal Christian cemetery of Naples—an identification for which he offers no concrete evidence.<sup>15</sup> The Zona Greca has a close relationship to adjacent rooms A0 and A1 (discussed in detail below): they communicate with one another architecturally; the painting, although clearly by separate workshops, shares some characteristics; and Fasola speculates that the owners of these two areas may have been connected in some way.<sup>16</sup> I take Fasola’s attribution of the Zona Greca and A0-A1 to single but separate workshops as given, since my goal in this discussion is to develop a systematic way of describing the “signature” of a single workshop, rather than to propose or dispute any existing attributions.

The Zona Greca pertains to the upper of San Gennaro’s two main levels, and it is located at the part of the catacomb that was nearest to the cliff face under Capodimonte in antiquity. When the cliff was cut away in the late fourth or early fifth century to make a platform for the church of San Gennaro *fuori le mura*, parts of D1 and A0 were removed, exposing the Zona Greca to the light and air (with deleterious effects on the painting; see fig. 3.6).<sup>17</sup> Gallery D1 branched away from A0 to run roughly north-south; today it is approximately 11 meters long and 2 meters wide (see figs. 3.2, 3.6, 3.7, 3.8). D2 and D3 both run roughly east-west, and both are about 5.5 meters long and 2 meters wide.<sup>18</sup> D2 opens into D1 near D1’s southern end, and D3 opens into D1’s northern end; both D2 and D3 were accessible only through D1 (see figs. 3.2, 3.7). At one time these galleries were packed over 2 meters deep in later burials, and D3 remains so today, so I was unable to enter that gallery, much less examine its architecture or painting (see

---

<sup>15</sup> Ibid., 29-33. Contrast Bordignon’s assertion that in the Roman catacombs, *cubicula* often contain painting by multiple workshops, working either around the same time or in different periods. Bordignon, *Caratteri e dinamica*, 111.

<sup>16</sup> Fasola, *Le catacombe di S. Gennaro a Capodimonte*, 29-30.

<sup>17</sup> Ibid., 30-31, 164.

<sup>18</sup> I took these measurements from the plan, since D3 was not accessible.



fig. 3.11).<sup>19</sup> D1 and D2, however, have been cleared of later burials, leaving only the original arrangement of shaft tombs in their floors and *arcosolia* disposed in two registers in their walls (see figs. 3.7, 3.8, 3.9, 3.10).

The *arcosolia* of the Zona Greca present a few unusual features (see fig. 3.3). Firstly, inside the catacomb of San Gennaro, the “stacked” arrangement of *arcosolia* in registers is peculiar to the Zona Greca and the adjacent A0-A1.<sup>20</sup> These Zona Greca *arcosolia* have the further distinction of containing multiple burial shafts each—a rare trait in Neapolitan and Roman catacombs, but a common one in Syracuse.<sup>21</sup> The lower-register *arcosolia* each have three (or in one case, four) parallel burial shafts, with each shaft further divided into three superposed tombs by tiles resting on ledges cut inside the shaft (see fig. 3.3, 3.10). The *arcosolia* in the upper register have two or three shafts each, and would have had one or at most two burials stacked in each shaft (see fig. 3.21). Finally, the *arcosolia* of the lower register have their openings at the level of the floor, not in the middle of the wall, as *arcosolia* usually do (see fig. 3.9). These *arcosolia* would have imposed certain physical conditions on the painters who decorated them: to paint a lower-register *arcosolium*, one would have to crouch or stand in a burial shaft, while to reach an upper-register *arcosolium*, one would need a ladder or scaffolding.

Exposure to light and water has affected the preservation of the paintings, which in turn affects their legibility. Some of the painting nearer the modern entrance to the area seems to have faded in the sunlight. Elsewhere, dust and mineral incrustation left by seeping water obscure the paintings to varying degrees. Throughout the *arcosolia* and the gallery walls, the frescoes have

---

<sup>19</sup> Carlo Ebanista and Alessio Cuccaro, “I mosaici pavimentali paleocristiani del ‘grande edificio’ nell’insula episcopalis di Napoli,” in *Atti del XV Colloquio dell’Associazione italiana per lo studio e la conservazione del mosaico (Aquileia, 4-7 febbraio, 2009)*, ed. Claudia Angelelli and Carla Salvetti (Tivoli: Scripta Manent, 2010), 140.

<sup>20</sup> Fasola, *Le catacombe di S. Gennaro a Capodimonte*, 30-31.

<sup>21</sup> Additional “Syracusan” *arcosolia* can be found in region F in San Gennaro. *Ibid.*, 49, fig. 33.

suffered deep gouges, probably made to help support the tile coverings of the later burials that once filled these spaces (see, for example, figs. 3.15, 3.22).<sup>22</sup> In at least one place, a fill motif may have been intentionally cut out.<sup>23</sup> All of the burial shafts in the *arcosolia* have been opened, and although the shafts in the gallery floors are now closed, they have probably been disturbed as well.

Within this context, I identified eleven *arcosolia* that were legible enough for study: two in gallery D1, and the rest in gallery D2 (see fig. 3.4). The nine in D2 represent all of the *arcosolia* pertaining to that gallery; two others (represented in dashed lines on the inset plan in fig. 3.4) belonged to A0 and were cut through to permit light into D2. The painting on the walls and vaults of D1 and D2 is barely legible due to mineral incrustation, and so I do not consider it here.

As discussed above, A0 and A1 have a close relationship to the Zona Greca, and I will refer to them for comparison through the following analysis. Fasola dates A0 and A1 to the early third century CE (presumably on stylistic grounds, but this is not made explicit), and while they may originally have been two separate rooms connected by a door and a short stairway, a renovation transformed the dividing wall into a triple arch, leaving the stairs in the central arch.<sup>24</sup> A0 and A1 probably served as the private tomb of an elite family or other small social group. Half or more of A0 was cut away to make room for the adjacent church, but in the original design this room probably served as an entrance and source of light and air for A1 and the Zona Greca.<sup>25</sup> Like the Zona Greca, A0 and A1 also have multi-shaft *arcosolia* in two registers in the walls, as well as burial shafts in their floors. The vault decoration of A1 represents an especially

---

<sup>22</sup> Ebanista and Cuccaro, “I mosaici pavimentali paleocristiani,” 140.

<sup>23</sup> Arcosolium D1.1L, on the left side of the vault.

<sup>24</sup> Fasola, *Le catacombe di S. Gennaro a Capodimonte*, 22-29.

<sup>25</sup> *Ibid.*, 30.

fine example of third-century painting, and it contains a rare image of the Building of the Celestial Tower, an episode from the *Shepherd of Hermas* (see fig. 3.36).<sup>26</sup> While there are similarities to the painting in the Zona Greca, A0-A1 was clearly painted by a different (half-century earlier) workshop.<sup>27</sup> The painters of the Zona Greca would have been able to study the nearby paintings in A0-A1, and the earlier decoration may have influenced their work. Due to the close relationship between A0-A1 and the Zona Greca, comparisons will be made as appropriate in the analysis that follows.

### **Contextual factors affecting painter and painting**

A painting—or any object, for that matter—can be viewed as the outcome of interactions between humans and materials.<sup>28</sup> A number of contextual factors can thus influence a painting's final form, from processes of human cognition that govern the actions of painting, to the humidity in the room where the painting was made. The contextual factors that shape catacomb painting such as that in the Zona Greca can be described in three broad categories:

- **The painters**—their training and workshop habits, their personal preferences, the broader cultural ideals or styles to which they subscribe, their embodied experiences (i.e., their perceptions of and reactions to their physical environments and the objects in them);
- **The patrons**—their wishes, their resources, the broader cultural ideals or styles to which they subscribe;

---

<sup>26</sup> Ibid., 26.

<sup>27</sup> Ibid., 31.

<sup>28</sup> This is one of the fundamental premises of actor-network theory as described and applied by Knappett to the study of material culture. See also Chapter 1 for a discussion of the role this premise plays in this study as a whole. Knappett, *An archaeology of interaction*.

- **The material conditions**—the physical support or architectural context of the painting, and the various tools, pigments, and other supplies available to the painter.

There may well have been other factors at play, but these three major ones are the most readily observed. The factors can be viewed as engaging, in sequence:

- 1) the physical context (e.g., an *arcosolium*) and materials available (e.g., specific paint colors),
- 2) the patrons' expressed desires and preferences for the nature of the finished product (influenced by cultural norms for products of a given type, or styles), and
- 3) the painters' responses to both of the above, filtered through the lenses of their training, their own sense of style, their personal ergonomics (the ways of working that are most comfortable given one's hand dominance, body position, etc.), and finally, their conscious personal preferences.

What we observe in a painting is the product of all of these factors.

If the ultimate goal is to understand the effects of negotiation and personal choice on a painting—to get at the agency of painters and patrons through their products—it is necessary to identify and isolate those aspects of the painting attributable to material conditions and to the painters' default practices (habits) learned in the workshop. The effects of material conditions are easily identified: in the case of the Zona Greca, the physical context of the painting is a group of *arcosolia*, and the available materials were plaster and paint in a limited range of colors (the colors we observe being a subset of all colors that were available). A good sense of the effects of environmental damage can be gained by comparing those *arcosolia* with substantial light exposure to those that have remained in relative darkness over time.

The effects of workshop habits and painter-patron interaction are less easily identified. To find them, we need to choose criteria by which to evaluate the painting so that a workshop's default practices, its sense of style, and its particular responses to contextual factors—its “signature”—are made clear. Those aspects of the painting that we cannot attribute to the contextual factors or to the workshop signature will be products of negotiation between painters and patrons or personal choice on the part of either.

### **Defining criteria for evaluating painting**

To define the signature of the Zona Greca workshop, I will evaluate the painting according to four criteria: the use of tools, the use of colors, the composition of the line frameworks, and the execution of fill motifs.<sup>29</sup> Each of these criteria will show us the workshop's response to one or more contextual factors. For example, a workshop's choice of tools to use would have been shaped by both *what was available* and *what was common* among comparable workshops. Each criterion also represents part of the practice of painting where the painter could act on a spectrum of intention, from unconscious, rote actions (e.g., using the tools that all painters used) to conscious choices, negotiated solutions, and innovation (e.g., inventing a new motif).

These are the criteria, briefly defined, with the contextual factors to which they relate:

Tools are the implements used to make fresco painting. Roman painters are known to have used brushes of various types, paint pots (made of various materials), compasses or

---

<sup>29</sup> Cf. De Vos' characterization of the Pompeiian “workshop of the painters of Via di Castricio,” which produced a humble oeuvre of Fourth-Style painting without elaborate figural panels, similar in quality, if not in style, to catacomb painting. De Vos defined her workshop's style according to three factors: use of color, forms of the geometric panels, and repertoire of fill motifs. Mariette De Vos, “La bottega di pittori di Via di Castricio,” in *Pompei 1748-1980: I tempi della documentazione*, ed. Ida Baldassarre (Roma: Multigrafica, 1981), 125-26.

straightedges (for laying out the composition on the support), trowels and floats for applying and smoothing the plaster to be painted, ladders and scaffolding, and a range of ancillary tools for mixing plaster and paint.<sup>30</sup> The use of pattern-books, stencils, and cartoons is likely, although the details of these objects' use are debated.<sup>31</sup>

Tools constitute the broadest of the four criteria: fresco painters all over the Roman world probably used similar sets of tools to make paintings in many different contexts and styles. This criterion thus relates to the broadest sorts of contextual factors, including style (in this case, the technology of Roman fresco painting) and available materials (the tools typically used for fresco painting). In analyzing the Zona Greca painting according to this criterion, I am searching for evidence of which of the typical fresco-painting tools this workshop chose to use and any peculiarities in how it used them that reflect a workshop-specific practice.

The workshop's palette comprises the colors typically used in a given commission; the colors present in a given painting can be viewed as a subset of the range of pigments the workshop could acquire from its suppliers and within the patron's budget.<sup>32</sup> Linear style painting in catacombs has a typical color range that includes red, brown, green, yellow, gray, black, white, blue, and occasionally violet, orange, and pink.<sup>33</sup> In my analysis of the Zona Greca paintings, I observe the particular set of colors used by the Zona Greca workshop, as well as any unusual colors outside the normal range for catacomb painting. This criterion is also broad in the sense that all late Roman painting draws from the same range of colors limited by ancient

---

<sup>30</sup> Ling, *Roman painting*, 198-211; Bordignon, *Caratteri e dinamica*, 92-94.

<sup>31</sup> Ling, *Roman painting*, 217-18.

<sup>32</sup> Either patrons or painters could supply the pigments to be used in a project; this matter was settled by contract in advance. *Ibid.*, 207-09.

<sup>33</sup> This list is based partly on my own observations and partly on Bordignon's list of colors that he noted in his extensive survey of Roman catacomb painting. Bordignon, *Caratteri e dinamica*, 335-37.

technologies of pigment extraction. Unlike tools, of which the same sorts were probably available very widely, the range of colors available to painting workshop may have depended on geographic location, trade networks, and the patron's budget.

Composition is here defined as the arrangement of geometric elements that make up the line framework of a linear style painting. In this style, lines tend to follow architectural contours, divide the wall surface into geometric fields, and embellish those fields and the spaces between them with a variety of straight and curved forms. This criterion relates to the architectural context of the painting, to the broad sense of style shared by the many workshops making linear-style painting, and to the particular habits of the Zona Greca workshop. To analyze the composition, I divide the line elements into three categories (see fig. 3.4):<sup>34</sup>

- **Primary elements** follow architectural contours, outlining the area to be painted. These elements are rectangular where the architectural support is rectangular (e.g., a plain wall), or curved where the architecture is curved (e.g., the vault or lunette of an *arcosolium*).
- **Secondary elements** divide the fields defined by primary elements into smaller geometric shapes. The choice of shapes is influenced both by broader style and by workshop practice. Secondary elements may follow the contours of primary elements, or they may follow guidelines incised on the plaster.
- **Tertiary elements** are inserted in the spaces between primary and secondary elements. They may connect to other elements or float freely. Of the three orders of elements, tertiary ones are the most improvisational; they do not follow incised guidelines, and

---

<sup>34</sup> Cf. Bordignon's analysis of line framework elements in the Roman catacombs, which is not as hierarchical as mine. He lists the typical elements used in each sort of architectural space (vaults, walls, *arcosolia*, inter-ocular spaces). Ibid., 96-101.

they are just as likely to run perpendicularly or diagonally away from other elements as they are to run parallel to them.

Of the three categories of line elements, the tertiary elements have the most potential to reflect the practices of a particular workshop and perhaps even conscious choices, negotiation, or invention.

Fill motifs are the images inserted into the spaces inside of and between line elements. These do not include figural panels with groundlines or other scenery (of which there are none in the *Zona Greca arcosolia*). Typical fill motifs associated with the linear style include birds, flowers and garlands, baskets, vases or other vessels, isolated human or mythological figures (e.g., *putti*), land animals, sea animals, and abstract “fantasies.” Although a workshop’s repertoire of fill motifs would have drawn on the norms of the linear style, it also related to the particular practices of the workshop and of the individual painter. While many workshops produced fill motifs in the form of a bird, for example, each workshop or painter probably would have executed that motif using a series of brushstrokes taught by experienced painters to students and then adapted by the students to their particular preferences and ergonomics. In other words, the concept of the bird was widely shared, but the sequence of strokes used to paint the bird could be highly specific to an individual. Any motifs that are unusual either for the genre or for a workshop’s repertoire could be the result of negotiation or personal choice. Likewise, if the various instances of a motif that is repeated in a workshop’s repertoire show notable differences in their brushstroke-sequences, more than one painter might be indicated.

These four criteria—tools, colors, composition, and fill motifs—represent aspects of a workshop’s practice that can be observed firsthand in any well-preserved catacomb painting. By analyzing a single workshop’s painting according to each of these criteria in turn, we can observe



the results of that workshop's reactions to a range of contextual factors, from the most general (e.g., techniques shared by painters in general) to the most specific (e.g., the practices of an individual painter). Through this analysis it is possible to define the "signature" of the workshop and to clarify the effects of contextual factors on the painting. It may also be possible to distinguish some aspects of the painting attributable to painter-patron negotiation, personal choice, or innovation, opening up new avenues for the study of linear style painting.

## Analysis

### Tools used by the Zona Greca workshop

Given the range of tools typically used in Roman fresco painting, the Zona Greca *arcosolia* provide evidence for a few specific aspects of tool use. Firstly, through close examination of brushstrokes it is reasonable to suggest at least three types of brush in use in the Zona Greca: a narrow flat brush (c. 2 cm); a wide flat brush (> 2 cm.); and a round brush (1-2 cm.).<sup>35</sup> The narrow flat brush is best observed in certain tendrils where continuous strokes vary in width as the direction of the stroke changes from vertical to horizontal, giving a calligraphic effect. These brushes may also have been used to form the circles in rosette and "heart-and-ball" motifs (see figs. 3.19, 3.24). The wide flat brush was used to paint elements of the line frameworks in all *arcosolia*, and perhaps also the heavy lines of the stylized baskets and vases (see figs. 3.16, 3.17). At least one wide flat brush in use had a stray hair on one side, which left fine traces of paint adjacent to the intentional line. Round brushes were likely used for the bulk of the strokes in the fill motifs. Notable round brushstrokes include a heavy stroke with the side

---

<sup>35</sup> While Bordignon gives a generic description of the brushes used in catacomb painting (wooden, bone, or metal handles; animal hair, sponge, or vegetable fibers for bristles), and notes the visibility of paintbrush *ductus*, he does not provide any more detailed indication of brush shape or size. Ibid., 103-04.

of the brush, used to form leaves in “leafy branch” motifs; a dabbing stroke made with the point of the brush held perpendicular to the plaster, forming abstract flowers and leaves on some baskets and vases; and a rapid, gestural “slashing” stroke used to fill some outlined forms with color, as in several of the shell motifs (see figs. 3.16, 3.18, 3.26). Distinctive strokes like these reflect the personal practices of one or two painters (as I discuss in more detail under Fill Motifs below), and they form part of the “signature” of this workshop.

The *arcosolia* also provide limited evidence for the Zona Greca workshop’s use of tools to incise guidelines into the plaster. Two *arcosolia* show lightly incised circles in their vaults, placed there to guide circular secondary elements of the line framework. The regularity of the incised circles suggests they were traced using a compass. Notably absent are guidelines for rectangular elements in the *arcosolium* vaults; as a result, some rectangular secondary elements lie well off-center in their fields. Apparently, the painters found the circular elements more difficult to execute freehand, so they took care to draft them with guidelines, making sure to center them inside the primary line framework in the process.

The architectural context of the Zona Greca paintings offers some clues about the painting workshop’s preparation of the support and use of ancillary equipment. The paint was applied to white plaster that coats the *arcosolia* (and much of the walls and vaults of D1 and D2), and losses in the plaster show that it lacks the six layers of plaster that Vitruvius prescribed for above-ground architecture.<sup>36</sup> Although individual preparatory layers are impossible to distinguish, the plaster appears fine in texture and relatively thin (c. 1 to 2 cm) over the *tuffo* wall

---

<sup>36</sup> Vitruvius 7.2-7.4; Ling, *Roman painting*, 199-200.

and vault surfaces, which is typical for catacomb painting.<sup>37</sup> As noted above, the Zona Greca originally had no exterior access of its own; instead, it would have received its light and air from the adjacent room A0. This means that the painters of the Zona Greca would have needed to work by lamplight, and the plaster would have dried slowly in the poorly ventilated atmosphere, giving the painters more time to work on a given expanse of wet plaster compared to an above-ground environment. Finally, assuming that the Zona Greca was excavated completely before painting began, the painters would have needed ladders or scaffolding to reach the upper-register *arcosolia*, the upper portions of the gallery walls, and the gallery vaults. In summary, while there is no evidence for the use of any unusual tools in the Zona Greca, the evidence reveals which tools were most important to this workshop's practice and to its adaptation to the architectural context: round brushes, flat brushes, a compass, lamps, and ladders.

On the matter of tools, A0-A1 shows few substantial differences from the Zona Greca. Like the Zona Greca workshop, the painters of A0-A1 used compasses to lay out circles and other rounded elements, but at times they also incised guidelines to help center fill motifs.<sup>38</sup> The Zona Greca painters seem to have positioned their fill motifs entirely freehand, although an "X" of thin gray lines under one of the basket motifs in D1.1L could have served as a guide for placing the motif. Otherwise, the two workshops seem to have employed similar tools in similar ways.<sup>39</sup>

---

<sup>37</sup> Bisconti, *Le pitture delle catacombe romane*, 34. Bordignon notes that, due to the natural moisture of *tuffo*, catacomb *intonaco* is rarely more than 3 cm thick, as anything thicker would be unlikely to dry properly. Bordignon, *Caratteri e dinamica*, 86.

<sup>38</sup> A1.1L, for example, has a circular field with an "X" inscribed over its center, and a fill motif painted over the "X." The "X" seems to have been intended to guide the placement of the fill motif, since the circle has its own compass-drawn guideline.

<sup>39</sup> Cf. the use of tools in Roman catacombs as documented by Bordignon. He found 25 instances of incised guidelines at 7 sites, and 56 instances where the *ductus* of the brush could be discerned. Bordignon, *Caratteri e dinamica*, 339, 41.

### Colors used by the Zona Greca workshop

The Zona Greca workshop's use of color can be understood in three ways: as a palette of all colors employed; as a hierarchy of color, from most used to least used; and as a distribution, considering how many colors appear in each *arcosolium*. Taking the eleven *arcosolia* together, the palette includes the following colors: red, brown, green, yellow, dark gray, pink, and violet. For comparison, the *arcosolia* and the vault painting of A0-A1 contain all of these colors plus flesh tones for human figures, a light gray used to represent a glass vessel, and a brilliant light blue employed in the line framework of the A1 vault, as well as blends made by overlapping strokes of different colors. The Zona Greca palette thus seems like a pared-down version of the A0-A1 palette, and the Zona Greca painters tended to apply colors side-by-side in motifs, not overlapping, keeping the various hues distinct.

The Zona Greca paintings show a strong hierarchy in the use of colors. The line frameworks in the *arcosolia* present the most straightforward opportunity to rank the colors by frequency of use. Primary elements (i.e., the lines following the contours of the vaults and lunettes) occur only in red and brown, and red clearly outranks brown (13 elements *versus* 8 elements, respectively). Taking all primary, secondary, and tertiary line elements together, red is still the most popular color (appearing in all 11 *arcosolia*), followed by brown and gray (8 each), yellow (6), and pink (1). While the instances of different colors in the fill motifs are more difficult to quantify, green and gray appear to dominate, followed by yellow and red, with brown occurring rarely, and violet only once. The paintings thus reflect a clear preference on the part of their makers for red and brown for line elements, and green and gray for fill motifs.

The distribution of colors across *arcosolia* (in their line frameworks only) also reveals a pattern that may relate to the workshop signature. The average number of colors used in an

*arcosolium*'s line framework is four; one *arcosolium* has only two colors, another six, and the rest either four or five. The line frameworks in the vaults of *arcosolia* are more diverse than those in their lunettes, with an average of three distinct colors *versus* two, but the greater surface area of the vaults may have prompted the creation of more complex designs. By comparison, the *arcosolia* in A0-A1 also have an average of four colors in their line frameworks, although gray is much less common, and pink is not present.<sup>40</sup>

In summary, the Zona Greca workshop's signature use of color comprises a palette of seven colors and a habit of employing some of them primarily for the line frameworks, others extensively in the fill motifs, and two (pink and violet) hardly at all. If any aspect of the use of color in the Zona Greca could relate to painter-patron negotiation or personal choice, it could be the inclusion of pink and violet. Pink is used for a circular secondary line element, and violet for a ribbon carried by a bird in a fill motif. Did a patron specifically request the use of these colors? Did a painter decide to break from his usual palette just in these instances—and if so, why? Were pink and violet pigments available to the painter only in small quantities, requiring a sparing application? It is impossible to ascertain the exact circumstances of these colors' use, but after carefully defining what was *normal* for the Zona Greca workshop, the *abnormal* stands out more clearly.

#### Composition style of the Zona Greca workshop

As detailed above, the line elements forming the framework in a linear style painting fall into three hierarchical categories: primary elements, which follow architectural contours and outline the plane of the wall or vault; secondary elements, which further divide those planes into

---

<sup>40</sup> Bordignon's data on the use of colors in Roman catacomb painting are comparable here. He finds that the colors used in line frameworks and fill motifs are red (noted 352 times), white (345), brown (315), yellow (311), green (217), blue (166), black (151), gray (5), and orange (1). *Ibid.*, 337.

geometric fields; and tertiary elements, which fill and embellish the spaces between primary and secondary elements. The three categories of elements also fall along a spectrum of “control,” with primary elements guided by the immovable architecture, secondary elements following the primary contours or other guidelines, and tertiary elements largely executed freehand. While the primary and secondary elements will thus be shaped by the architectural context, the norms of the style, and the workshop’s habits, tertiary elements have the potential to reflect painter-patron negotiation or painterly improvisation.

The primary line elements in the *Zona Greca arcosolia* consist of red and brown lines along the edges of the vaults and lunettes (see fig. 3.4; see also Appendix B for schematic diagrams of all the *Zona Greca* line frameworks). As noted above, red is more common than brown, and each *arcosolium*’s primary elements are either all red or all brown.<sup>41</sup> Secondary elements come in a wider range of colors: gray, yellow, and pink in addition to red and brown. The most common secondary elements are rectangles and circles, followed by modified versions of these shapes, such as rectangles with one or two curved sides, or ellipses truncated to have one flat or open side. The modified shapes echo the contours of adjacent elements or of the architecture; for example, a modified rectangle might have one concave curved side where it abuts a round element. The typical composition in a lunette is two tall rectangles or modified rectangles that mirror each other around a vertical line. Vault compositions are more complicated, with three main “zones”: the “central zone,” at the highest part of the vault, occupied by a compass-drawn circle or a rectangle; and the lower portions of the vault at the viewer’s right and left (the “end zones”), usually filled with one or two rectangular elements.<sup>42</sup>

---

<sup>41</sup> Cf. Bordinon’s discussion of which colors co-occur in line frameworks; *ibid.*, 97.

<sup>42</sup> Bordinon notes a similar tripartite division of the *sottarco* (vault) of *arcosolia* in the Roman catacombs. *Ibid.*, 100.

These aspects of line framework composition follow the contours of the architecture or of each other, making them more “controlled.” While the primary and secondary line elements are common features of the broader linear style, the particular choice and arrangement of the secondary elements may pertain more specifically to the habits of this workshop.

To fill the remaining spaces and complete the composition, the painters inserted tertiary elements, including diagonal lines, “brackets,” and “I-lines.” Diagonal lines connect primary and secondary elements, but at an angle that does not echo the contours of either. “Brackets” may be simple (shaped like a typewritten bracket: [ ] or ] [ ) or complex, comprising multiple 90-degree changes in direction. “I-lines” may take the form of a simple straight line (either connecting other elements or free-floating), or a line with “serifs” (like a capital letter “I”). In these elements we may be witnessing the particular habits of the Zona Greca workshop, or even some improvisation on the part of the painter, since tertiary elements were probably inserted last and in response to the other elements already laid out.

In comparison, the line frameworks in the *arcosolia* of A0-A1 clearly reflect the habits of a different workshop. These painters employed a number of secondary elements not well represented in the Zona Greca, such as ellipses, lozenges, and triangles (see fig. 3.34-3.38). Different tertiary elements include L-shaped brackets, curved brackets, and a distinctive *omega* shape that appears adapted for use as a secondary element in the Zona Greca (see fig. 3.36).

If there is any evidence for painter-patron negotiation in the composition of the line frameworks, it may lie in the rectangular elements in the lunettes and in the “end zones” of the vaults. These are the areas where inscriptions were added after the frescoes had dried, and Fasola believes that patrons conceived of these areas as relating to the grave shafts below.<sup>43</sup> In

---

<sup>43</sup> Fasola, *Le catacombe di S. Gennaro a Capodimonte*, 33.

considering the disposition of fill motifs (as I do below), it is important to consider whether patrons were making special requests for the motifs in these areas, if indeed they thought of them as having a special relationship to individual decedents.









#### Fill motif execution techniques of the Zona Greca workshop

Having considered tools, colors, and the composition of line frameworks—all areas in which the Zona Greca workshop had much in common with other painters working in a similar context and style—we can now move to fill motifs, the aspect of a linear style painting in which workshop habits and individual practice may be more directly observed. Aside from narrative imagery representing biblical episodes and certain iconography with overtly Christian connotations, catacomb painting draws from the repertoire of Roman funerary painting, which emphasizes the pleasures of nature and paradisiacal refreshment. Birds, flowers, food and drink, land and sea creatures, and certain idyllic genre scenes—shepherding, harvesting, and dining, for example—are typical of Roman funerary painting.<sup>44</sup> Workshops and painters presumably built their own characteristic repertoires by observing the work of others, experimenting with new designs, and incorporating special requests from patrons. The following table lists the principal fill motifs in the repertoire of the Zona Greca workshop, from the most used to the least:

---

<sup>44</sup> On the iconographic repertoire of third-century Roman funerary painting, see Baldassarre *et al.*, *Pittura romana*, 352-58.



| Fill motif               | Number of instances | Sample drawing*   | Sample photo |
|--------------------------|---------------------|---|--------------|
| Leafy branch             | 16                  |    | Fig. 3.18    |
| Bird                     | 14                  |    | Fig. 3.28    |
| Shell                    | 12                  |    | Fig. 3.29    |
| Heart and ball           | 11                  |   | Fig. 3.26    |
| Rosette                  | 11                  |  | Fig. 3.19    |
| Basket                   | 9                   |  | Fig. 3.16    |
| Vase                     | 4                   |  | Fig. 3.17    |
| Sea creature             | 4                   |  | Fig. 3.25    |
| * Drawings not to scale. |                     |   |              |

**Table 3.1. Examples of the principal fill motifs of the Zona Greca workshop.**

Fill motifs have the potential to provide detailed insight into a painter's training and personal practice, further refining our understanding of a workshop's "signature." The following sections lay out key insights on the Zona Greca workshop gained from close examination of the brushwork and composition of fill motifs.

### *Two painters*

While my analysis strongly validates Fasola's suggestion that the *arcosolia* in galleries D1 and D2 were painted by one workshop, key differences in the fill motifs suggest that each gallery had its own painter. Specifically, if D1.1L is compared to the *arcosolia* of D2, it becomes clear that there are two versions of the leafy branch motif, two styles of basket motif, and two ergonomic preferences in the painting of the centers of vaults. All of the leafy branch motifs were formed with the same basic brushstroke: a dabbing motion that involved touching the brush to the plaster tip-first at an angle, pressing downward and pulling a short distance across the plaster, then lifting the brush, forming a tongue-shaped leaf (see fig. 3.18). The painters applied this stroke in various directions to give the leaves a natural arrangement, and sometimes they kept the tip of the brush in contact with the plaster at the end of the stroke to add a narrow stem or twig. The difference between D1.1L and the other *arcosolia* lies in the colors used for the leaves: the painter of D1.1L used both light gray-green and light gray, while the other painter used only the green paint. Each painter followed the same basic *chaîne opératoire* (dabbing stroke, occasional twig, frequent change of direction), suggesting shared training.

The two different types of basket motif in D1 and D2 also suggest the work of two painters. D1.1L has two basket motifs, each executed in a naturalistic style, with cross-hatched lines to represent the basket's woven body, realistic flowers and fruits protruding from the top, and a shadow extending from the bottom (see fig. 3.13 for one of these motifs). All of the nine

baskets in the D2 *arcosolia*, however, appear in schematic form, with a heavy outline, no interior texture, and relatively abstract flowers or fruit resting on (or hovering above!) the basket's rim (see fig. 3.16). The two basket types clearly represent two modes of representation, which could reflect the distinct personal practices of two different painters. Finally, it is worth noting that the line frameworks in D1.1 (both upper and lower) include a few elements not found in the D2 *arcosolia*, strengthening the possibility that the Zona Greca workshop probably employed two painters for the decoration of these *arcosolia*.

#### *One painter per arcosolium*

Leafy branches serve not only to distinguish the two painters, but also to demonstrate an important point about the Zona Greca workshop's division of labor. As noted above, leafy branches occur in four *arcosolia*, and where they occur, they appear four times, once in each lower corner of the vault.<sup>45</sup> This arrangement makes it possible to compare multiple instances of the same motif to determine whether they were all painted by the same hand. In each of the four *arcosolia*, the leafy branches pass the test: despite slight adjustments and variations due to the different alignments and the gestural quality of the motif, all the leafy branches in a given *arcosolium* appear to have been painted by one hand. If one painter made all the leafy branches in an *arcosolium*, the same painter probably also made all the other fill motifs in that *arcosolium*. "One painter per *arcosolium*" may seem like an obvious division of labor—it seems much more practical than having multiple painters moving in and out of an *arcosolium* to insert the various motifs—but it is an important point because if each *arcosolium*'s fill motifs are the work of one painter, it becomes easier to connect multiple *arcosolia* to a single painter on the basis of

---

<sup>45</sup> Arcosolia D1.1L, D2.1L, D2.2L, D2.3Lb.

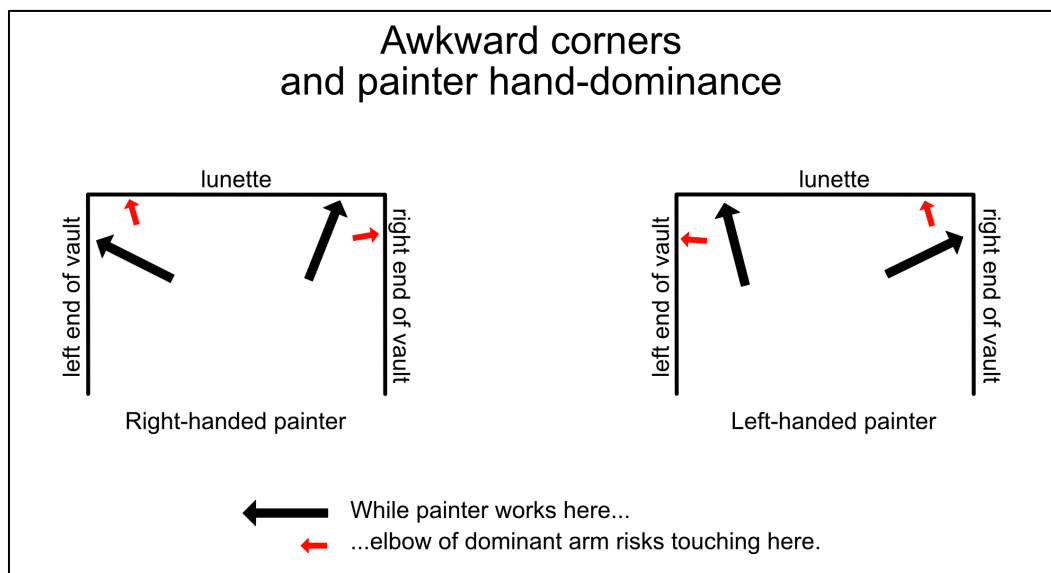
similarities in a few motifs. Furthermore, any innovation in the fill motifs can be linked to that one painter. This principle becomes crucial in the discussion of invented abstract motifs below.

### *Ergonomic adjustments*

The orientation of certain fill motifs may offer evidence for the painter's bodily position while working. First, it should be noted that the *arcosolia* are not much more than one meter high at the tops of their vaults; to paint a lower-register *arcosolium*, the painter would have had to stand in a grave shaft or sit on the lip of one, while the upper-register *arcosolia* would have required the painter to climb in or work from the ladder or scaffold. Assuming that most painters would prefer not to have to paint any motif upside-down, the orientation of a motif could reflect the orientation of the painter's body. This premise comes into play only for the motifs at the tops of vaults, where "down" could be in any of several directions. In eight of the eleven *arcosolia*, the painter seems to have faced the lunette while painting the motif in the center of the vault; in two, he faced away from the lunette; and in the final two *arcosolia*, his orientation could not be determined. Leaving out the illegible instances, we can note an interesting pattern: the painter of D1.1L faced away from the lunette, while the painter of the D2 *arcosolia* faced toward it in all but one (upper-register) instance, including in D2.3La, where he faced toward where the lunette *should have been* (i.e., where D2.3Lc actually is). Despite its obvious tenuousness, this consideration of the painter's body orientation suggests that the two painters may have adapted differently to the ergonomic challenges posed by the architecture.

The fill motifs offer scant evidence for the hand-dominance of the painters, but I believe it is worth considering nonetheless. The back corners of the *arcosolia*, where the vault meets the

lunette, would probably pose problems for a painter’s freedom of movement.<sup>46</sup> For example, a right-handed painter working on a motif at the back left corner of the vault might have to be careful to avoid bumping his elbow into the lunette at his right, and so on (see fig. 3.1 below).<sup>47</sup> If motifs in these corners show any differences in brushwork from other instances of the same motif (especially elsewhere in the same *arcosolium*), those differences could reflect the painter’s adaptation to an awkward position, which in turn could indicate which hand he was using to paint. D2.1L for example, contains four leafy branches, one of which has fewer leaves and a more cramped composition than the others—the one at the back left corner of the vault. Perhaps the painter of D2 was right-handed and had to adjust his usual patterns of movement when working in these awkward corners.



**Figure 3.1. Diagram representing ergonomic constraints that could affect a painter working in a *Zona Greca arcosolium*.**

<sup>46</sup> Bordignon notes a variety of factors that could have influenced painters’ bodily experiences while working, including not just narrow spaces that cramped movement, but also low light, high humidity, and poor ventilation. Bordignon, *Caratteri e dinamica*, 81.

<sup>47</sup> Wilpert found evidence of this potential problem for painters: “In the cemetery of SS. Peter and Marcellinus I noted in two *arcosolia* that the painter had unconsciously used his elbow to lean with his arm over a painted area, leaving the imprint of his garment, which must have been of a very coarse fabric.” Wilpert, *Sulla tecnica delle pitture cimiteriali*, 209.

### *Interest in variety*

The arrangement of fill motifs in linear style painting tends to be repetitive, partly due to the limited repertoire of motifs used in any given painting, and partly due to the style's tendency toward symmetrical arrangements of motifs. The Zona Greca workshop seems to have attempted to inject variety into motifs that they used multiple times in close proximity.<sup>48</sup> Three adjacent lower-register *arcosolia* have the leafy branch motif in each of the four lower corners of their vaults. The leafy branches in D2.1L have red flowers, those in D2.2L have yellow flowers, and in D2.3Lb, two branches have red flowers, one yellow, and the last no flowers at all. It seems that the painters were willing to use the same motif for three *arcosolia* in a row, but not without a slight modification to keep the motifs from being uniform. The same phenomenon occurs among motifs repeated in a single *arcosolium*. D2.3Lc, for example, contains three bird motifs in its vault, but the painter(s) gave each bird a different combination of head, body, and wing positions. The painter(s) also diversified their repeated motifs with interchangeable “accessories”: tendrils, leaf clusters, and “slash” fills appear in a variety of compositions with baskets, vases, and shells. The three shell motifs in D2.3Lb, for example, show two different arrangements of tendrils and “slash” fill, depending on where the motif lies in the vault. While a certain level of uniformity seems to have been acceptable and even desirable in this style of painting, the Zona Greca workshop subtly introduced variety through the colors and compositions of fill motifs.

---

<sup>48</sup> A similar phenomenon—of a workshop deliberately varying its repertoire inside a house, for example—has been observed in Pompeii, and could be achieved either through coordinated effort or simply by assigning different spaces to different painters. Ling, *Roman painting*, 216.

*New abstract motifs from existing elements*

Finally, the Zona Greca workshop enriched its repertoire of fill motifs by assembling new abstract motifs from parts of the representational ones. The “heart and ball” motif begins with a heavily outlined circle (the “ball”), with white space reserved at its center (see fig. 3.26). Similar circles form the centers of the rosette motif found throughout the Zona Greca (see fig. 3.19).<sup>49</sup> Below the “ball,” and seemingly depressed by its weight, is a cluster of broad leaves, like the leafy bases found on some basket and shell motifs elsewhere among the *arcosolia*. The “heart” consists of two long tendrils that begin at either side of the leafy base and curl outward and downward to enclose it, terminating in outturned curlicues below. These tendrils are similar in form and brushwork to those found on some basket, vase, and shell motifs. Some instances of the “heart and ball” motif also include “slash” fill inside the heart (see fig. 3.26). If the painter of D2 began painting with the *arcosolia* at D2.1 and worked clockwise around the gallery, the *arcosolia* where this motif appears would have come late in the project.<sup>50</sup> If my assumption about the painter’s movement around the gallery is correct, then the painter(s) may have invented this motif to increase variety in a repertoire that was becoming, by that point, fixed and repetitive.

Although the paintings in A0-A1 include many similar fill motifs, the repertoire there is much broader, and the brushwork more complex overall. The A0-A1 motifs include human and mythological figures (e.g., *putti*), leopards, bulls, theatrical masks, palmettes, and several instances of pomegranates, depicted as growing on their tree or arranged on a groundline (see

---

<sup>49</sup> The four-petaled rosette motif is widely used in catacomb painting; I have observed instances of it in the Roman catacombs as well (in the “Cubiculum of the *Coronatio*” in the catacomb of Praetextatus, for example).

<sup>50</sup> “Heart and ball” motifs appear in D2.3La, D2.3Lb, D2.4U, at the far end of the gallery from D2.1.

figs. 3.34, 3.35, 3.38 for examples). Here motifs tend to be painted in a third-century CE “impressionistic” style, with brushstrokes of different colors overlapped to create contours and suggest volumes.<sup>51</sup> While the Zona Greca motifs technically belong to the same style, their particular execution seems more graphic by comparison: colors overlap less, and some motifs (e.g., sea creature, “heart and ball,” stylized baskets, and vases) consist mostly or totally of contour lines, with little or no indication of interior volumes or textures. The Zona Greca painters may have drawn inspiration from the earlier painting in A0-A1, to which they would have had access, but their fill motifs reflect their particular habits, adaptations, and inventions.

### **The Zona Greca workshop “signature”**

Having discussed the architectural context of the Zona Greca paintings and then analyzed them according to the four criteria above, we can now summarize the “signature” of the Zona Greca workshop. This workshop employed compasses to lay out the circular elements in line frameworks, but guidelines were not otherwise important to this workshop’s practice. The workshop used a limited range of colors with some clear preferences for *how* they were to be used: red and brown for primary line elements; red, brown, yellow, and gray for secondary and tertiary elements; and green and gray predominantly for the fill motifs. This workshop’s particular style of line framework composition involved paired rectangles in most of the lunettes and a distinctive repertoire of tertiary elements. The repertoire of fill motifs focused on a few key motifs repeated many times (leafy branch, bird, shell, rosette, basket, vase, and sea creature), in addition to an abstract motif assembled from existing parts (the “heart and ball”). According to

---

<sup>51</sup> On third-century painting styles, see Baldassarre *et al.*, *Pittura romana*, 342-58; Bordignon, *Caratteri e dinamica*, 110-16.



each criterion, the Zona Greca workshop stands apart from its nearest neighbors, the painters of A0-A1.

### **Room for negotiation and personal choice**

We have now broadly accounted for the material conditions in which the Zona Greca paintings were produced, the prevailing style to which they belong, and the signature of the workshop that made them. At this point we may be able to attribute a few remaining aspects of the paintings to negotiation and personal choice. Firstly, a few architectural features of D2 probably reflect an external negotiation between *fossores* and the owners of A0-A1, followed by the Zona Greca painters' internal negotiation of how to adapt their work to those features. As discussed above, *fossores* altered certain *arcosolia* of A0 in order to let light and air into D2, which probably required the permission of the owners or custodians of A0.<sup>52</sup> The unusual arrangement of the three *arcosolia* at D2.3L(a, b, c)—unique in the catacomb of San Gennaro—almost certainly resulted from some sort of negotiation between the *fossores* and the owners of the Zona Greca (see figs. 3.4, 3.24). The painters then worked around both the light-passages and the unusual *arcosolia* by using primary line elements to outline the light-passages, devising asymmetrical compositions to accommodate the unusual features, and even adapting a fill motif to a narrow sliver of pseudo-lunette reserved at the transition between D2.3La and D2.3lc (see fig. 3.24). All of this would have required special planning and execution on the part of the painters, since in this context the architecture broke from the typical *arcosolium* form.

---

<sup>52</sup> Fasola, *Le catacombe di S. Gennaro a Capodimonte*, 29-30. On late Roman funerary law governing the treatment of others' tombs, see Justinian, *Dig.* 11.7-8 ("The Digest of Justinian, vol. 1," 348-56).

Secondly, the division of labor between the painter of D1 and the painter of D2 almost certainly resulted from negotiation or personal choice. Roman painting workshops could divide their basic tasks—preparing the support, painting the line frameworks or other geometric/architectural elements, painting the figural panels or fill motifs—among their workers in various ways.<sup>53</sup> I suggest that the Zona Greca workshop divided the labor of painting by gallery, assigning one painter to D1, the other to D2. The differences in the fill motifs seem to show the two painters separated in this way, and the differences in the line frameworks also seem to point to two separate hands. It could be that each painter produced both the line frameworks and the fill motifs in his designated area. In such a case, we can image what negotiations must have taken place to produce the degree of uniformity across the two galleries that we do see, and the effects of the two workers' personal choices become clearer.

The clearest examples of the two painters' personal choices—or perhaps their negotiations with the patrons—may lie in those fill motifs that only appear once (or twice, in a pendant arrangement). In D2.3Lc, the right “end zone” of the vault contains two rectangular secondary elements, each filled with a grape cluster (see fig. 3.31). This motif appears nowhere else among the Zona Greca *arcosolia*. Added inside the rectangular elements after the fresco

---

<sup>53</sup> Diocletian's “Price Edict,” for example, cites two different wage figures for a “wall painter” and a “picture painter”; if a room contained both ordinary decorative painting and picture panels, it is possible that two separate painters divided the work and received different wages. Ling, *Roman painting*; Tenney Frank, ed. *An economic survey of ancient Rome*, vol. V: Rome and Italy of the Empire (Baltimore: The Johns Hopkins Press, 1940), 305-421. The distinction between decorative and figural painters may have been flexible in practice. Tronzo draws some important inferences about the organization of labor in the Via Latina/Dino Compagni catacomb: firstly, that a workshop could have multiple painters of equal skill who could switch between figure-painting and decorative-painting as needed; and secondly, that although the decorative elements were usually applied first and then filled with figures, those tasks could occur in either order (as in *cubiculum* E, where the figure-painter went first). Tronzo, *The Via Latina catacomb*, 25, 34.

dried are inscriptions naming people presumably buried inside the *arcosolium*.<sup>54</sup> The placement of the inscriptions seems to treat the rectangular elements like headstones—in fact, throughout the Zona Greca, inscriptions are located in the lower parts of the vaults and lunettes, near the tops of the burial shafts. If the owners of the Zona Greca truly did conceive of parts of the painting as associated with particular tombs, perhaps they requested certain motifs especially for those areas. Alternatively, the painter could have chosen to insert this unusual motif for any number of reasons; even if we cannot discern the reason, the fact of this choice would remain. At the very least, the addition of the inscriptions represents the patrons' adaptation of the paintings to their particular needs after the workshop had finished. Whatever the precise terms of the negotiations and choices that shaped these paintings, their effects are worth considering as part of the whole story of the Zona Greca workshop and its labor.

That the catacomb of San Gennaro was a site of painterly invention is clear: consider the rare (Fasola says unique) instance of the Building of the Celestial Tower, an episode from the *Shepherd of Hermas*, incorporated into the vault painting of A1 (see figs. 3.34, 3.36).<sup>55</sup> We cannot know whether the painters of A1 designed their own image inspired by the text, or based theirs on a pattern in circulation.<sup>56</sup> Patrons, of course, also played a role in the development of innovative images. Elsewhere in the catacomb of San Gennaro, a group of fifth-century portraits contains motifs reflecting North African influences, probably introduced by African Christians who brought their own iconographic traditions with them when they immigrated to Naples.<sup>57</sup> The

---

<sup>54</sup> Fasola, *Le catacombe di S. Gennaro a Capodimonte*, 33.

<sup>55</sup> *Ibid.*, 26.

<sup>56</sup> The painting appears to draw on two distinct passages from the *Shepherd*: *Vision* III.2.4-9 and *Parable* IX.3.3-5, 16.1-2.

<sup>57</sup> Maria Amodio and Anita Rocco, *La componente africana nella civiltà napoletana tardo-antica: Fonti letterarie ed evidenze archeologiche*, *Atti della Pontificia accademia romana di archeologia* (Roma: Edizioni Quasar, 2006), 69-142.

effects of painter-patron negotiation and personal choice are easily sought in rich figural paintings like these, but through careful observation according to the criteria presented above, it may be possible to observe negotiation and choice in linear style painting as well.

### **Conclusion**

By analyzing linear style painting with respect to the tools used, the colors chosen, the composition of the line frameworks, and the execution of the fill motifs, I have tried to show that it is possible to define the “signature” of a painting workshop even without narrative scenes on which to practice more traditional connoisseurship. In a catacomb with more of this style of painting, this method could be used to help identify new workshops. For example, a series of third- and fourth-century *cubicula* in the catacomb of SS. Marcellinus and Peter, painted by several workshops that all included unusual images of *fossores* in their designs, would make a good corpus to analyze using this method.<sup>58</sup> More valuable, however, is this method’s potential to shed light on the practices and choices of a single workshop and its patrons, since these conditions of art production can be difficult to access by other means.

---

<sup>58</sup> Conde Guerri, *Los “fossores,”* 38-49.

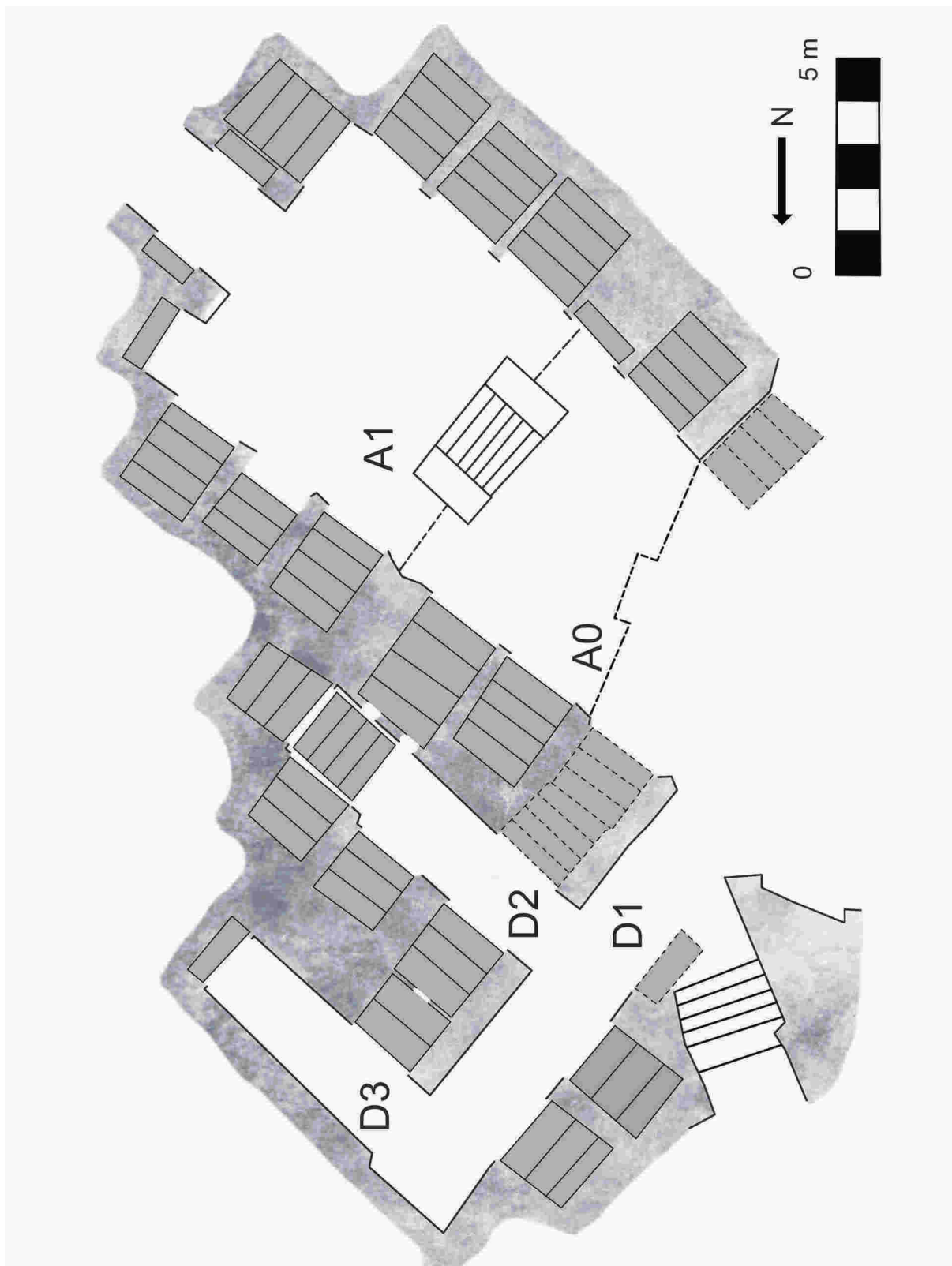
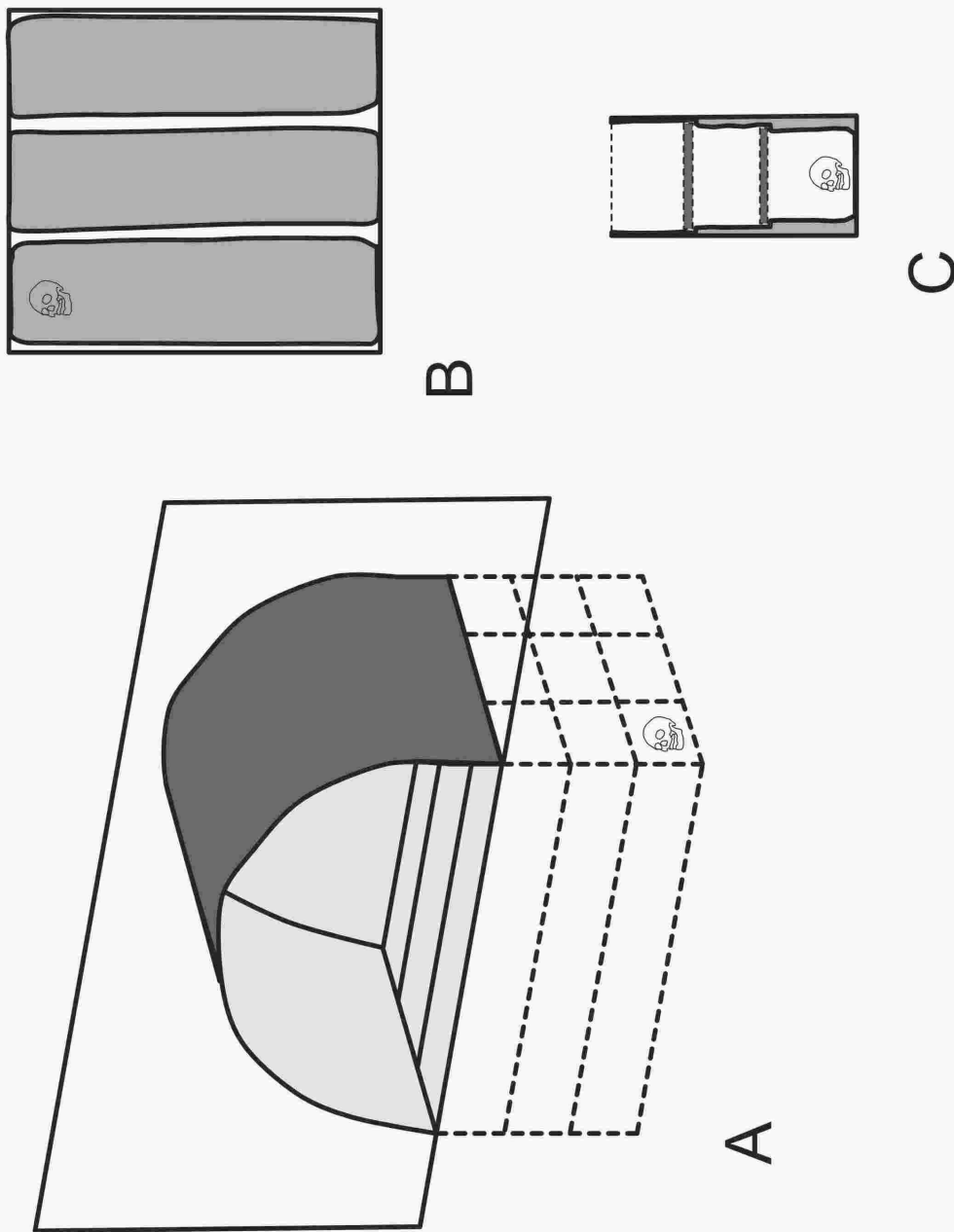
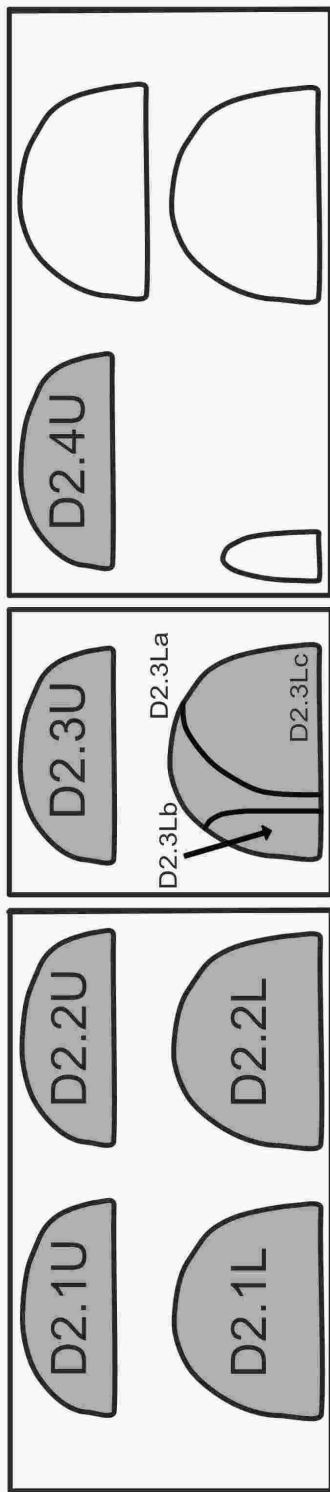


Figure 3.2. Plan showing the Zona Greca (D1, D2, D3) and adjacent areas A0 and A1.



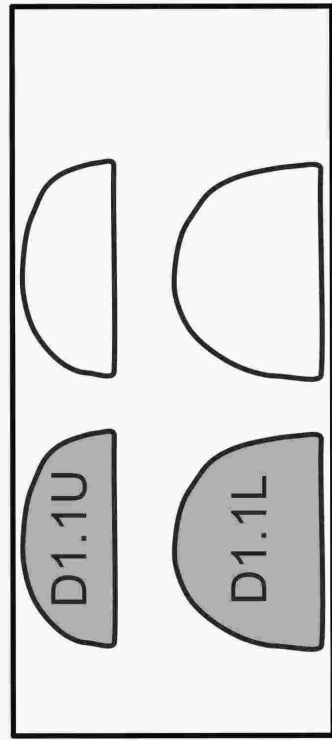
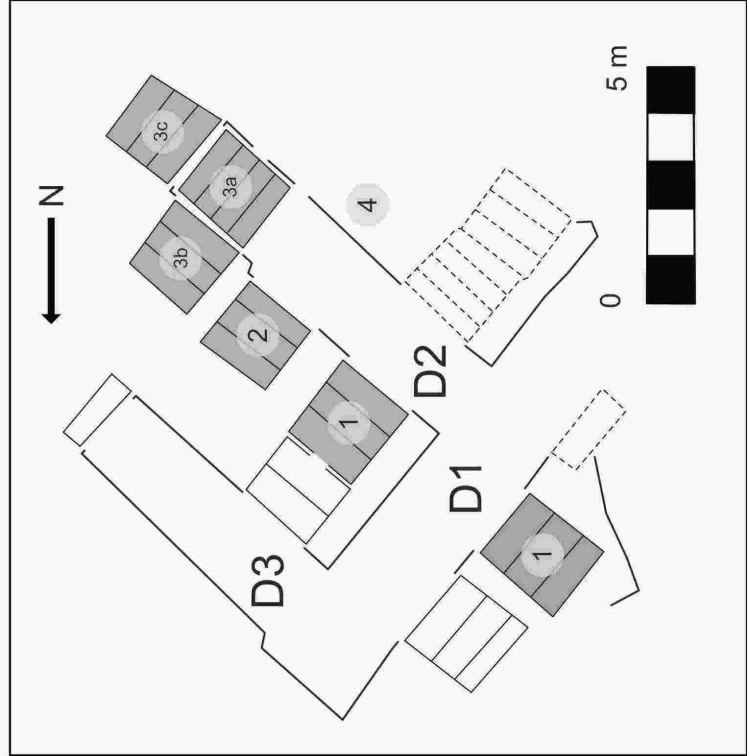
**Figure 3.3. Diagrams of a typical *arcosolium* in the Zona Greca:** A) axiometric view showing burial shafts below floor level (in white); B) plan view of the burial shafts; C) section of a burial shaft showing three stacked tomb spaces separated by tiles.



D2 southwest wall

D2 southeast wall

D2 northeast wall

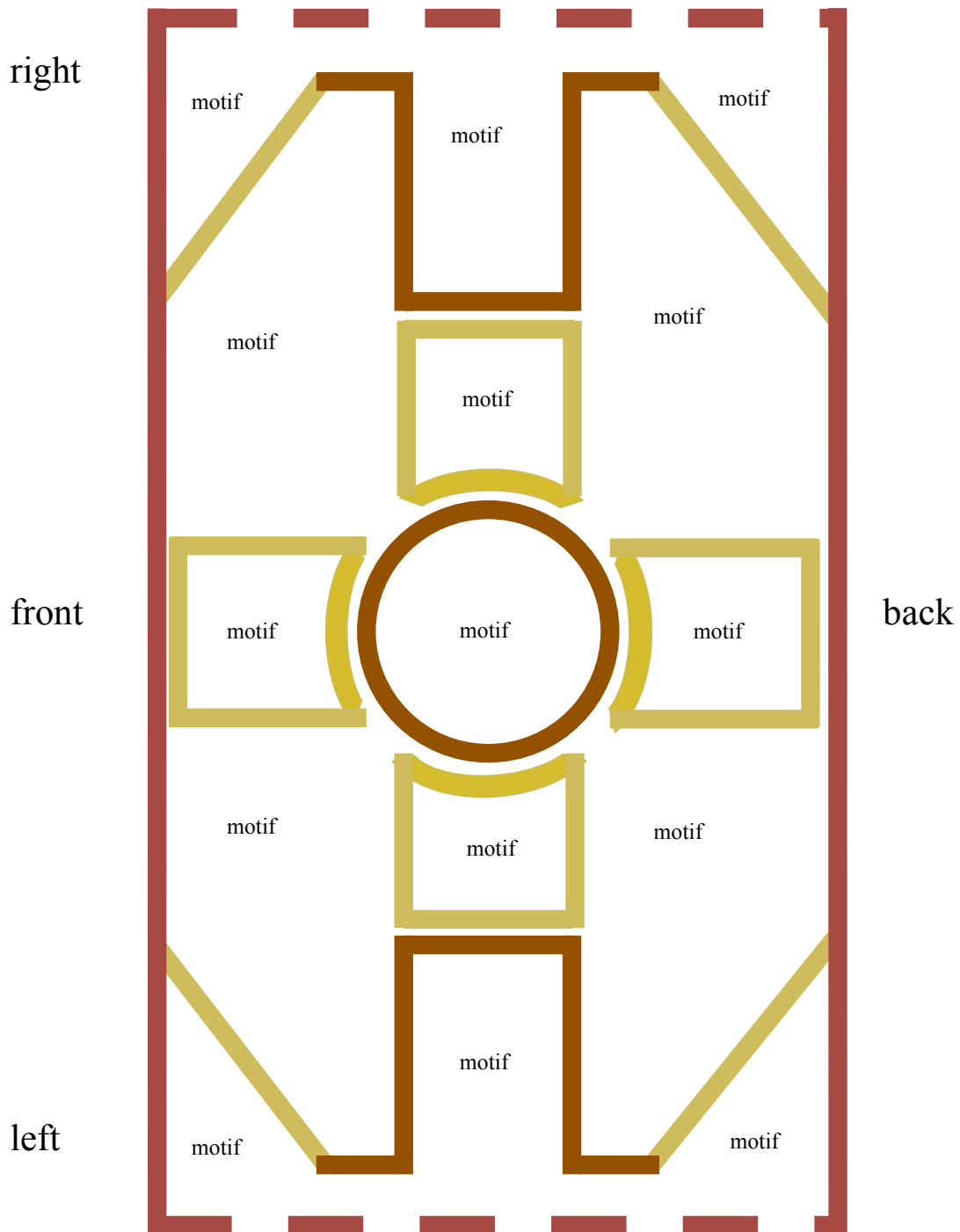


D1 northwest wall



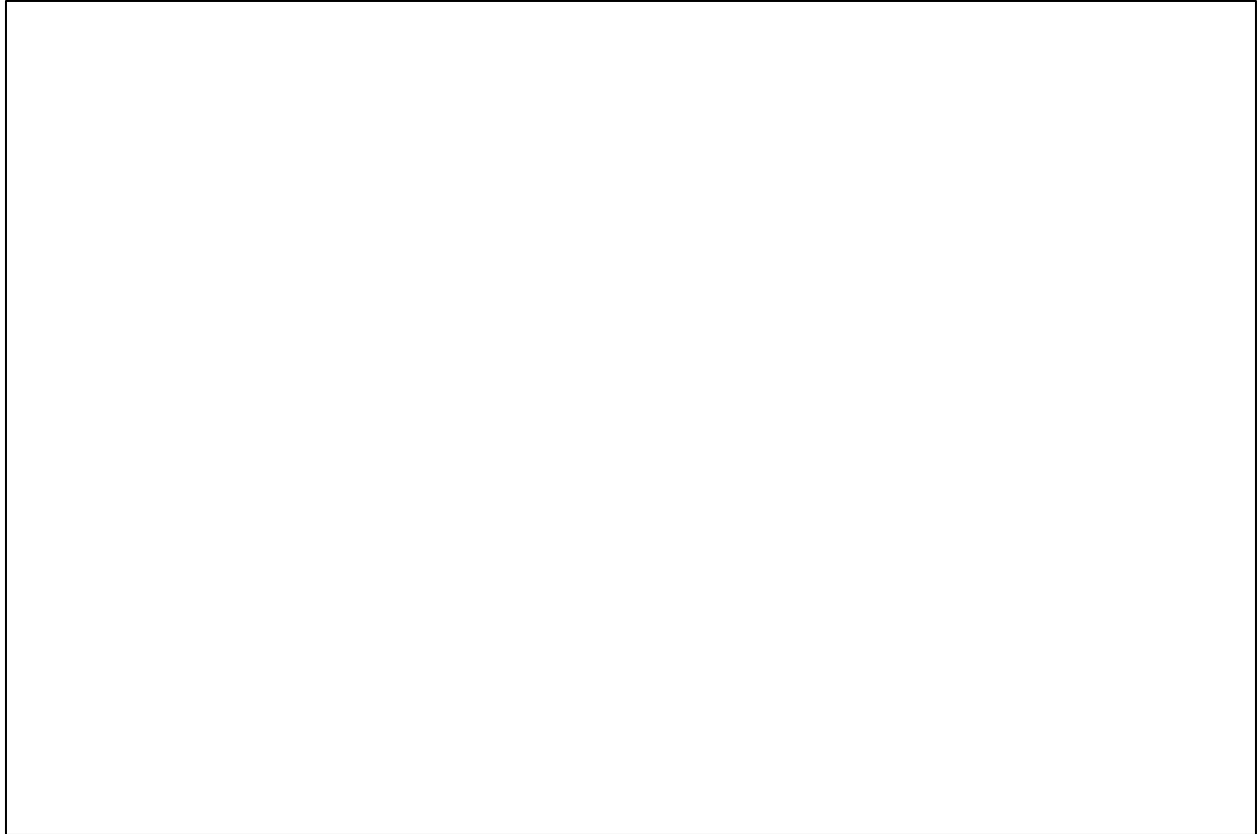
Figure 3.4. Diagrams showing the *arcosolia* studied here.

### Sample arcossolium vault painting diagram



**Figure 3.5. Sample of a schematic diagram showing the line framework in the vault of a *Zona Greca arcossolium*.** Primary elements are red; secondary elements are brown; tertiary elements are yellow. For a full set of diagrams representing the paintings in the eleven *Zona Greca arcossolia*, see Appendix A.

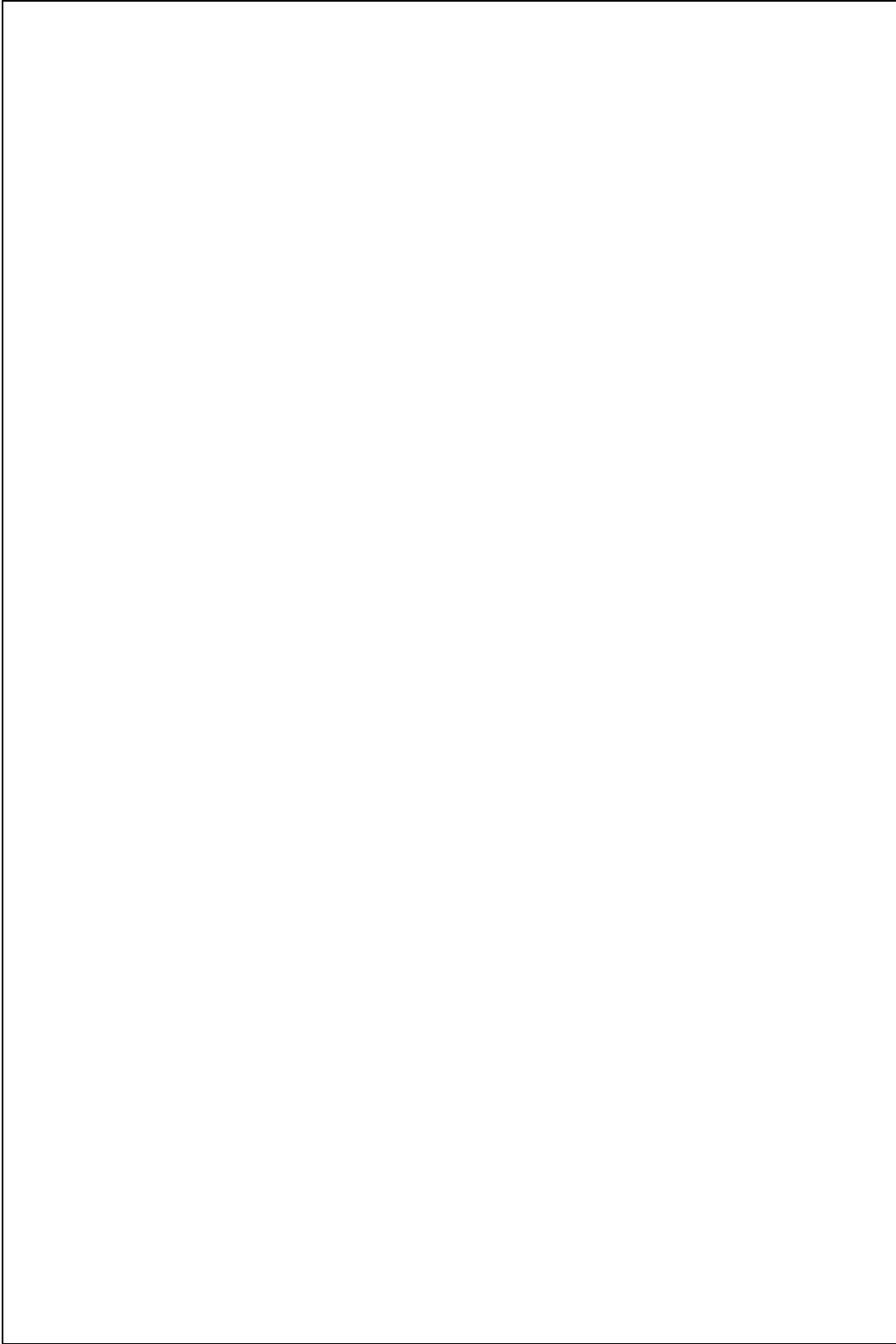




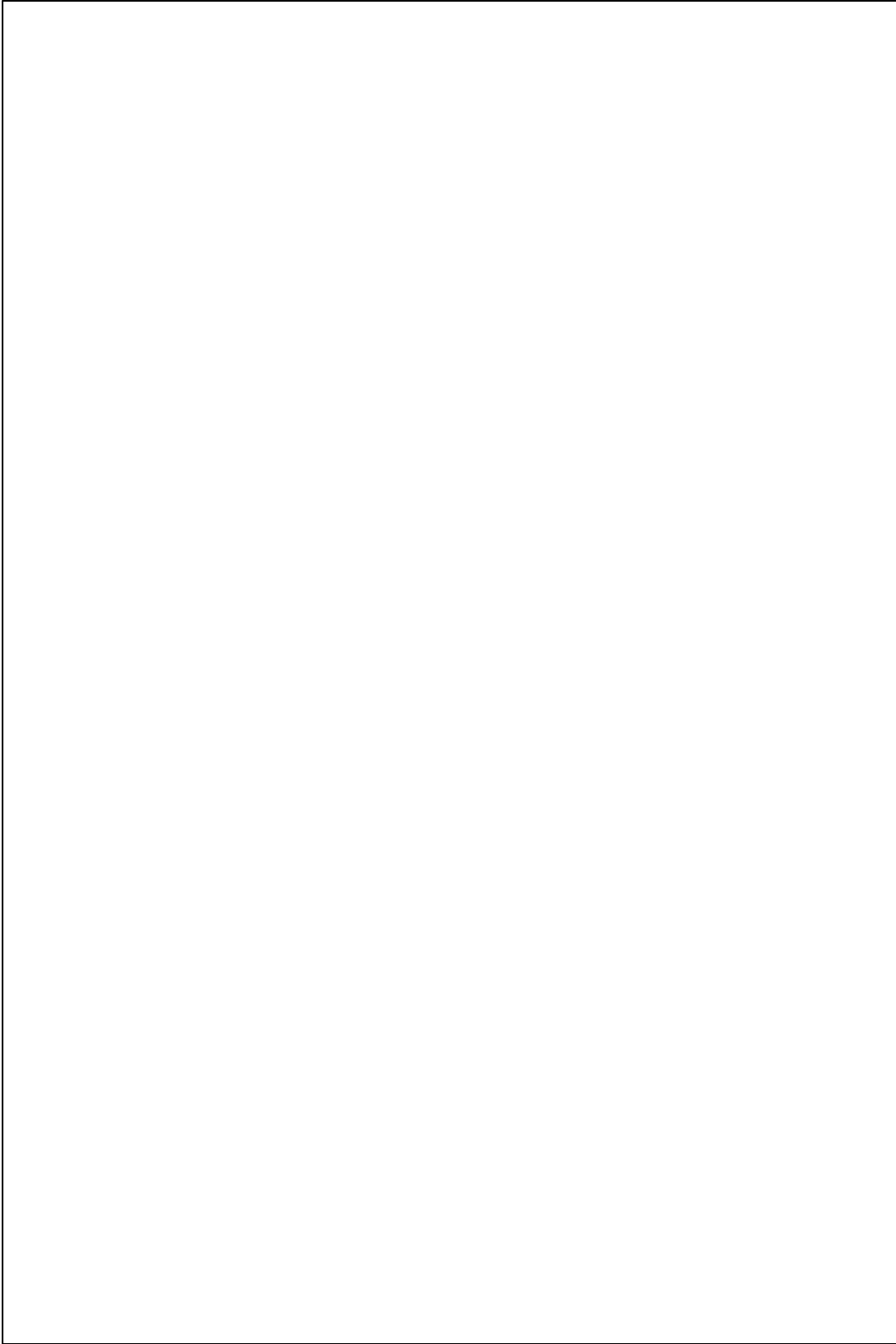
**Figure 3.6. View of the entrance to D1 (left) from inside of A0.** Photo: author.



**Figure 3.7. View into D1. Entrance to D2 at right; entrance to D3 in background.** Photo: author.



**Figure 3.8.** View into D1, with *arcosolia* D1.1L and D1.1U at extreme left, partly out of frame. Photo: author.



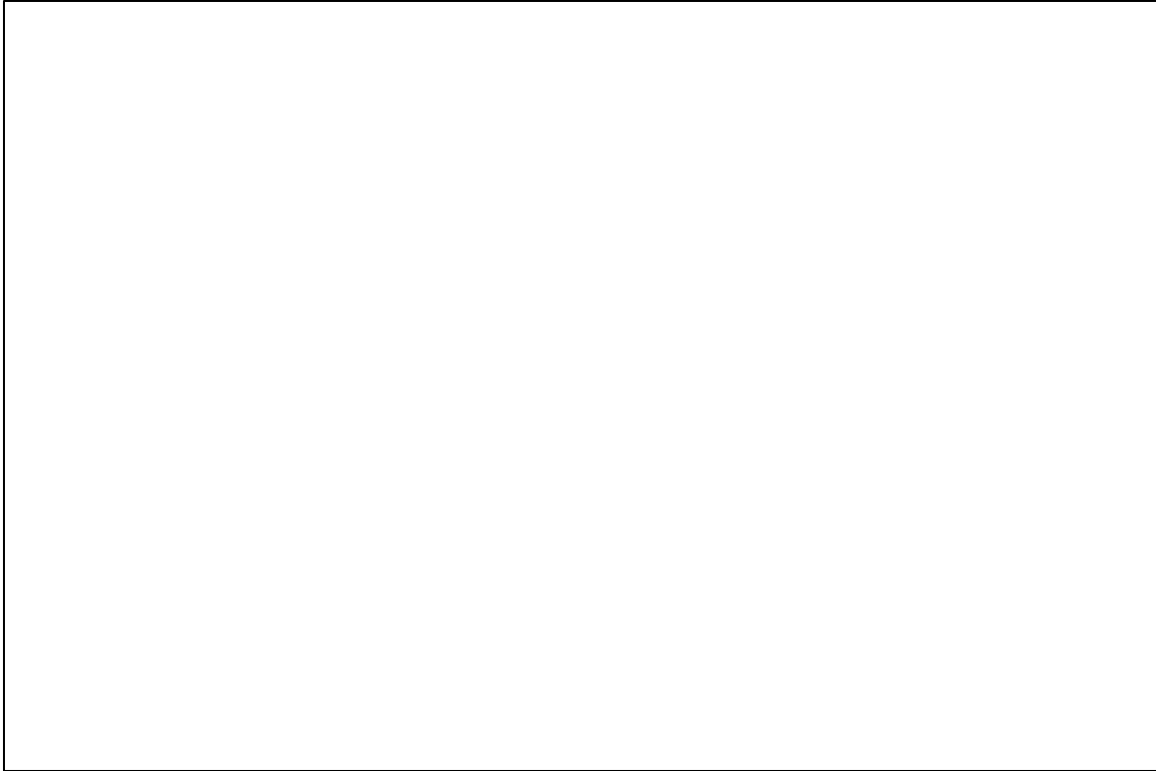
**Figure 3.9.** View into D2, with *arcosolia* D2.1L and D2.1U at left. Photo: author.



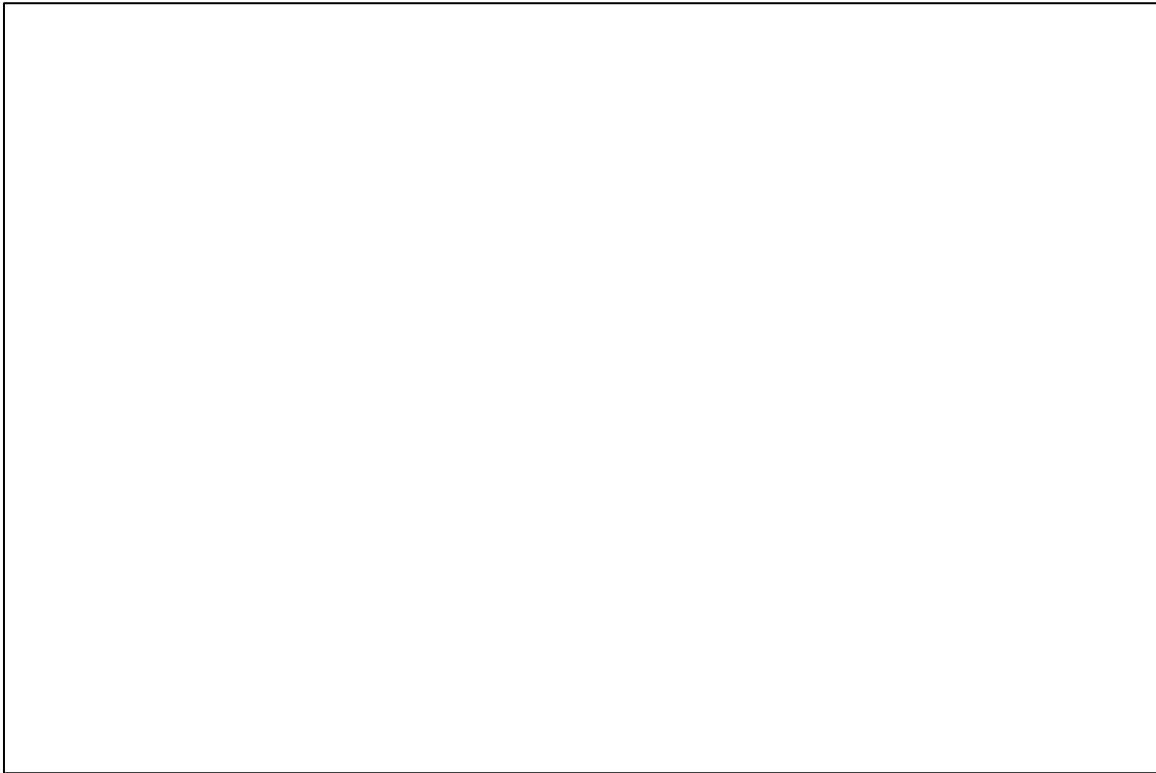
**Figure 3.10.** View of *arcosolia* D2.3La and D2.3U. At left are *arcosolia* D2.2L and D2.2U; at upper right is D2.4U. Photo: author.



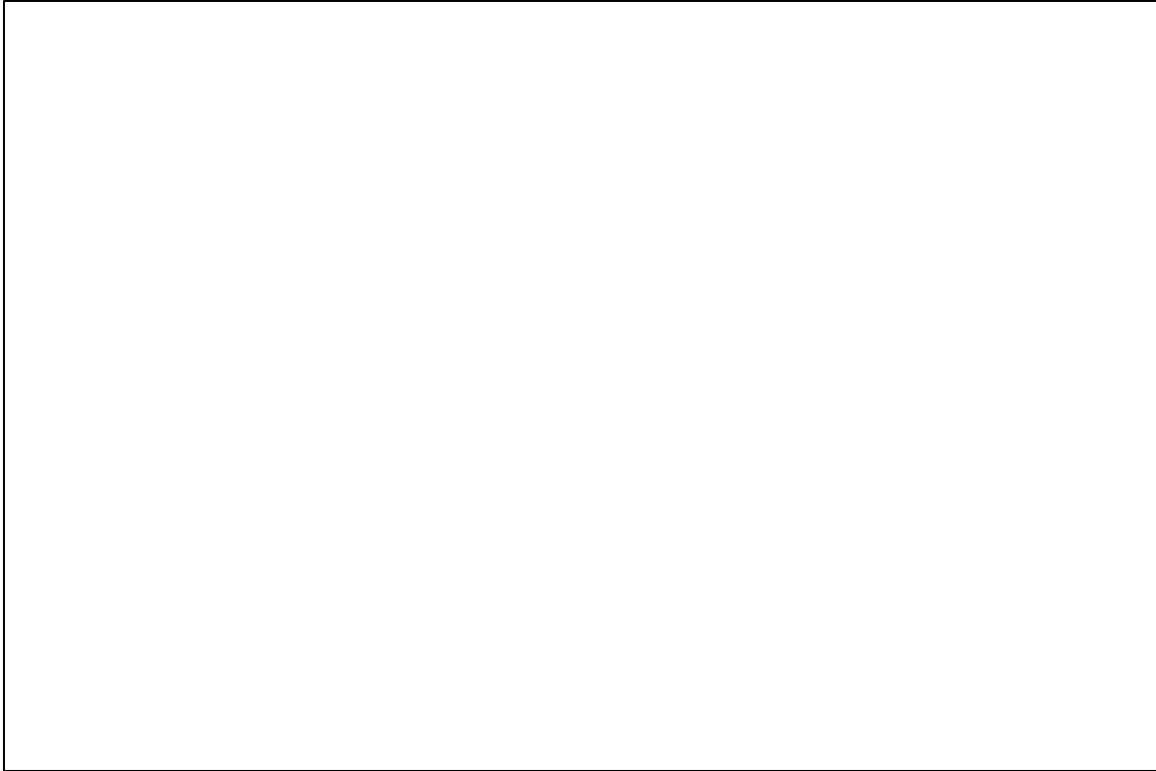
**Figure 3.11. View into D3, showing later tombs obstructing the gallery. Photo: author.**



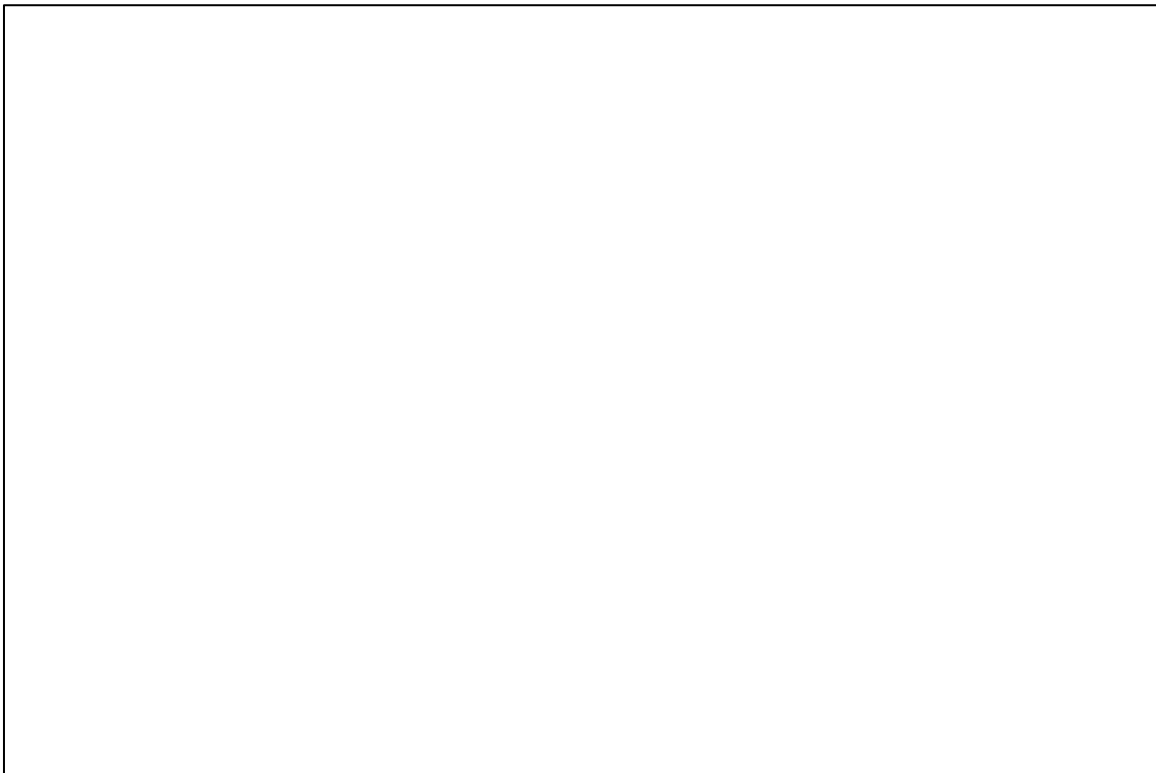
**Figure 3.12.** *Arcosolium D1.1L*. Photo: author.



**Figure 3.13.** Detail of a naturalistic basket in *D1.1L*. Photo: author.

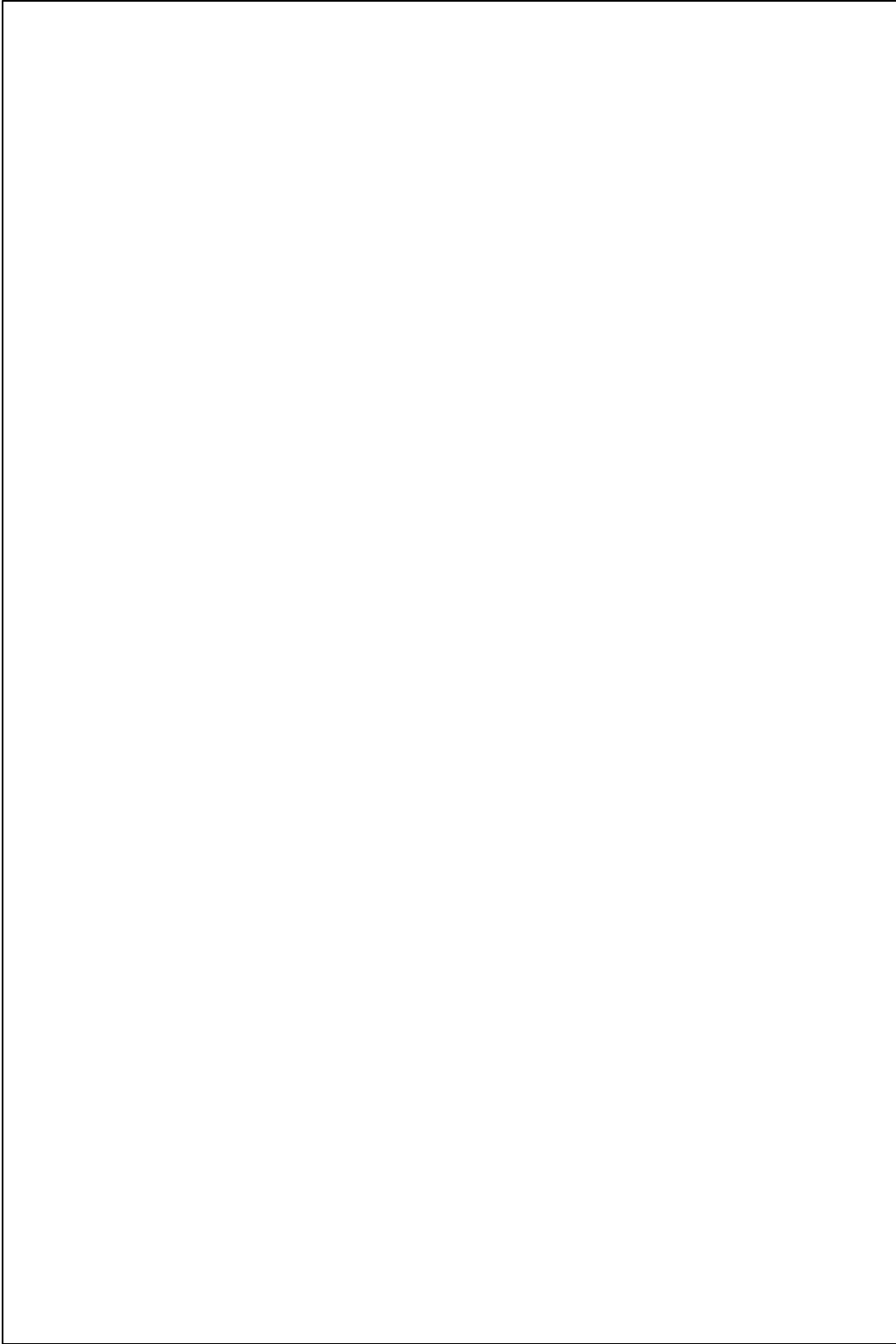


**Figure 3.14.** *Arcosolium D1.1U*. Photo: author.

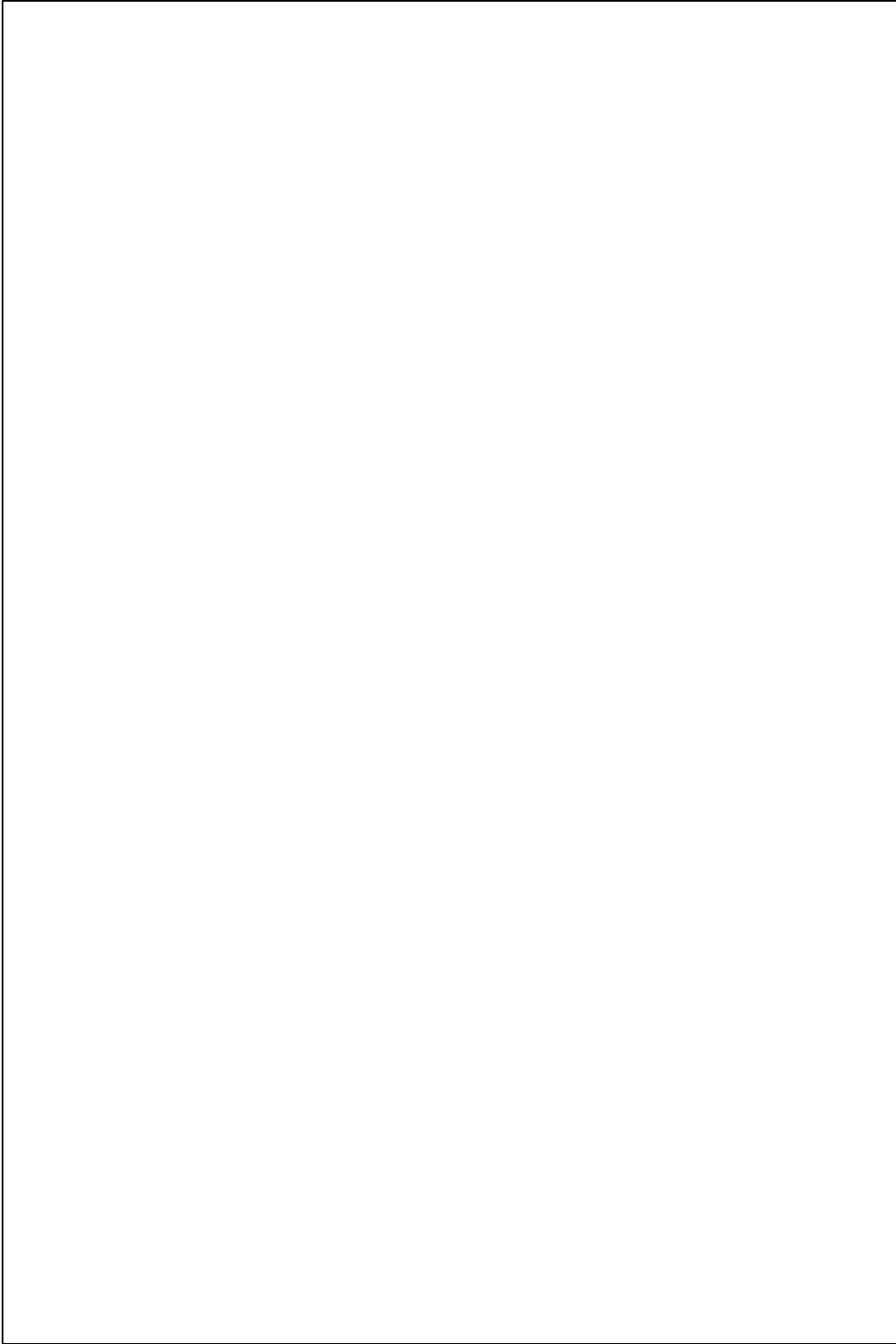


**Figure 3.15.** *Arcosolium D2.1L*. Photo: author.





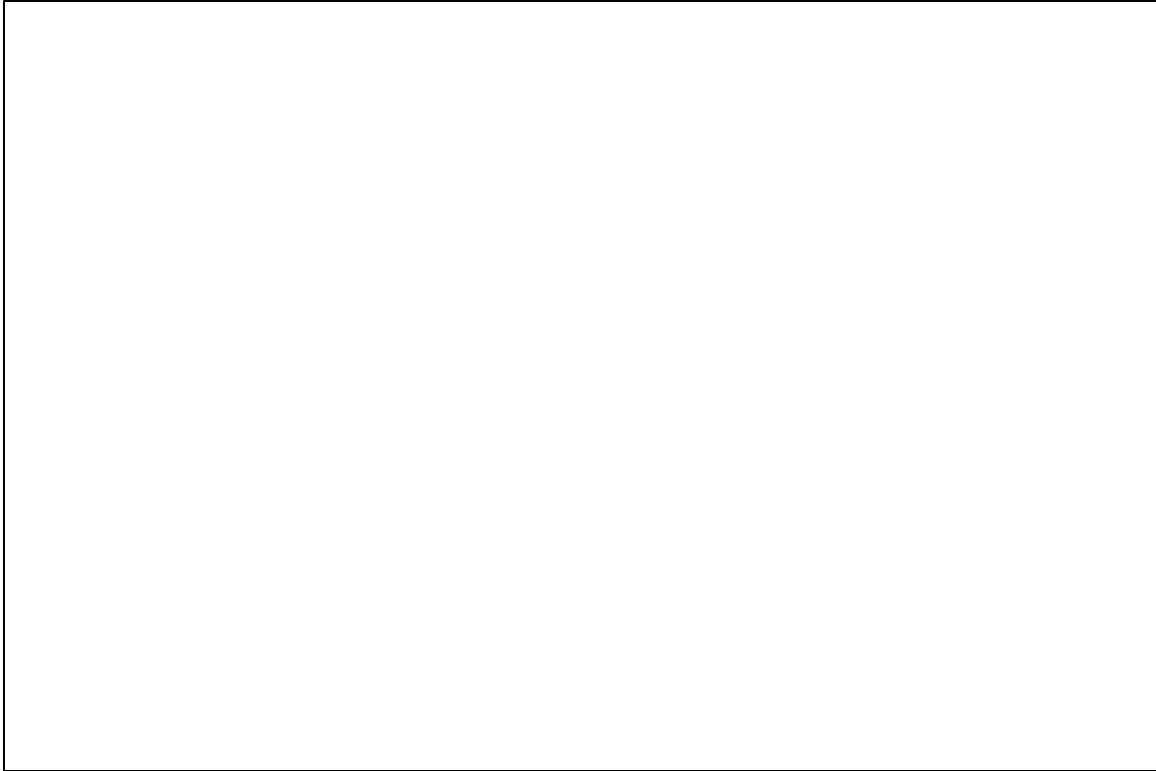
**Figure 3.16. Detail of a stylized basket in D2.1L.** Photo: author.



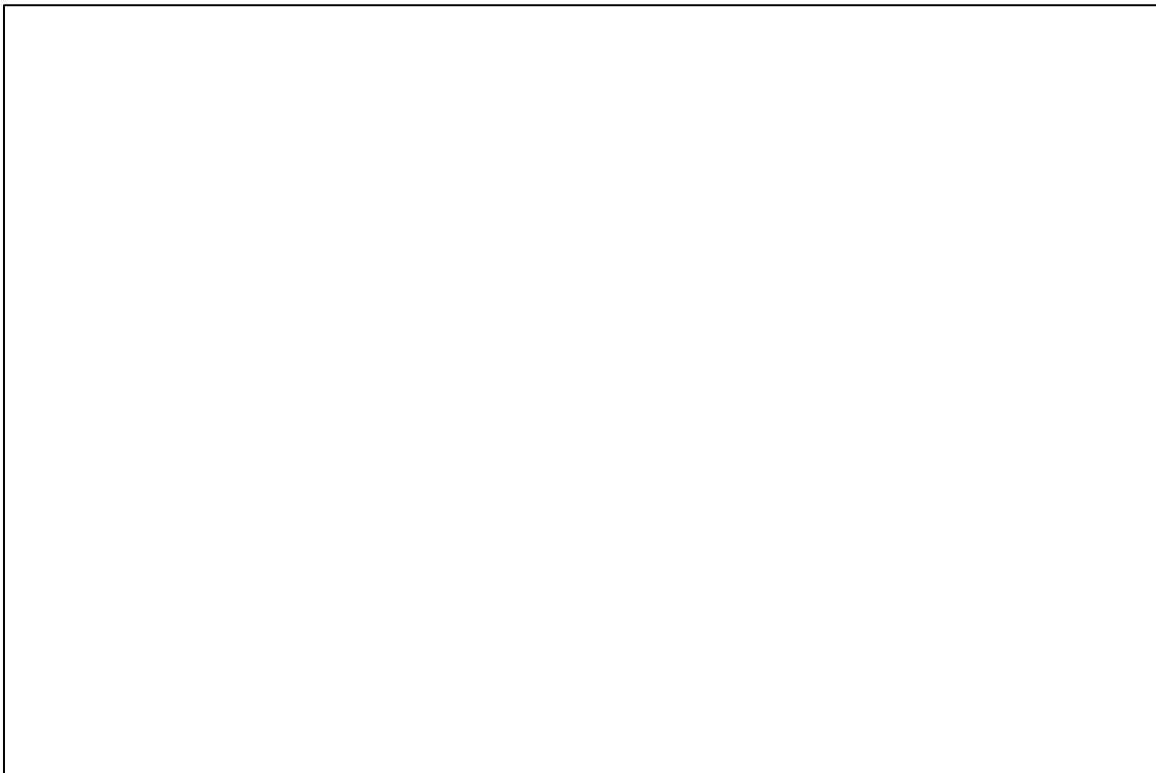
**Figure 3.17. Detail of a vase in D2.1L.** Photo: author.



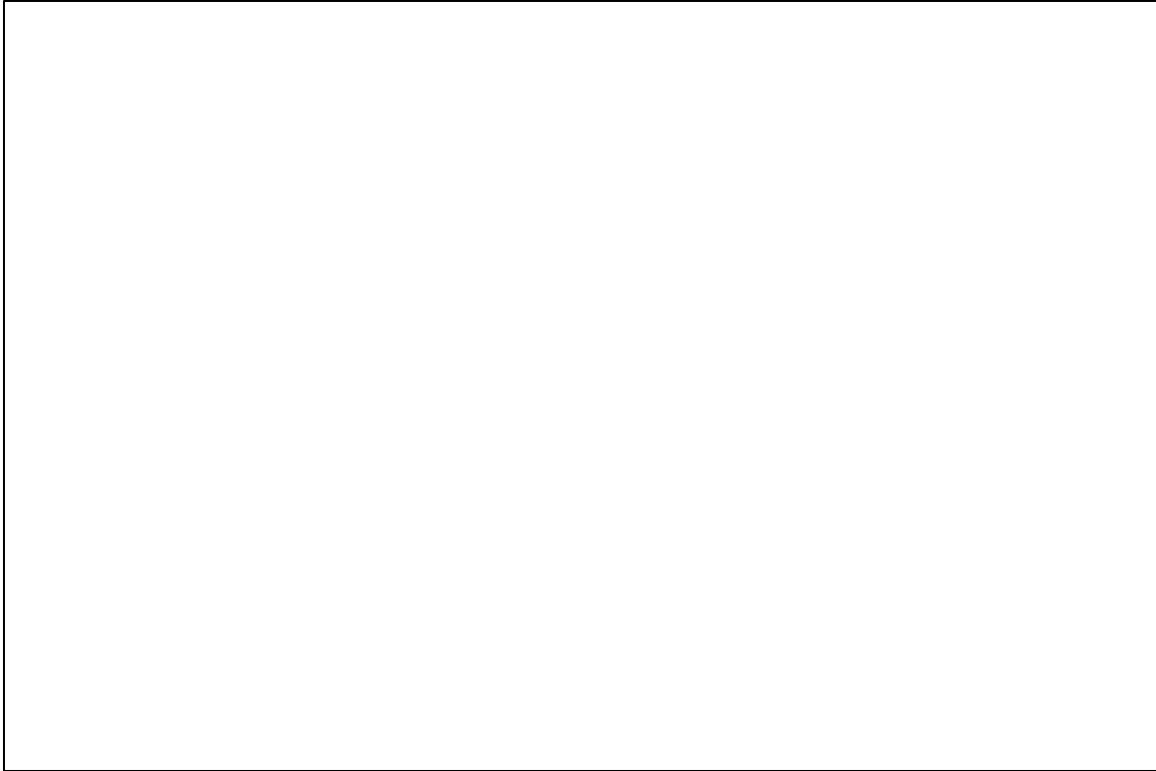
**Figure 3.18. Detail of a leafy branch in D2.1L.** Note the inscription (*CABEINA*, “Sabina,”) applied over the painting at lower right. Photo: author.



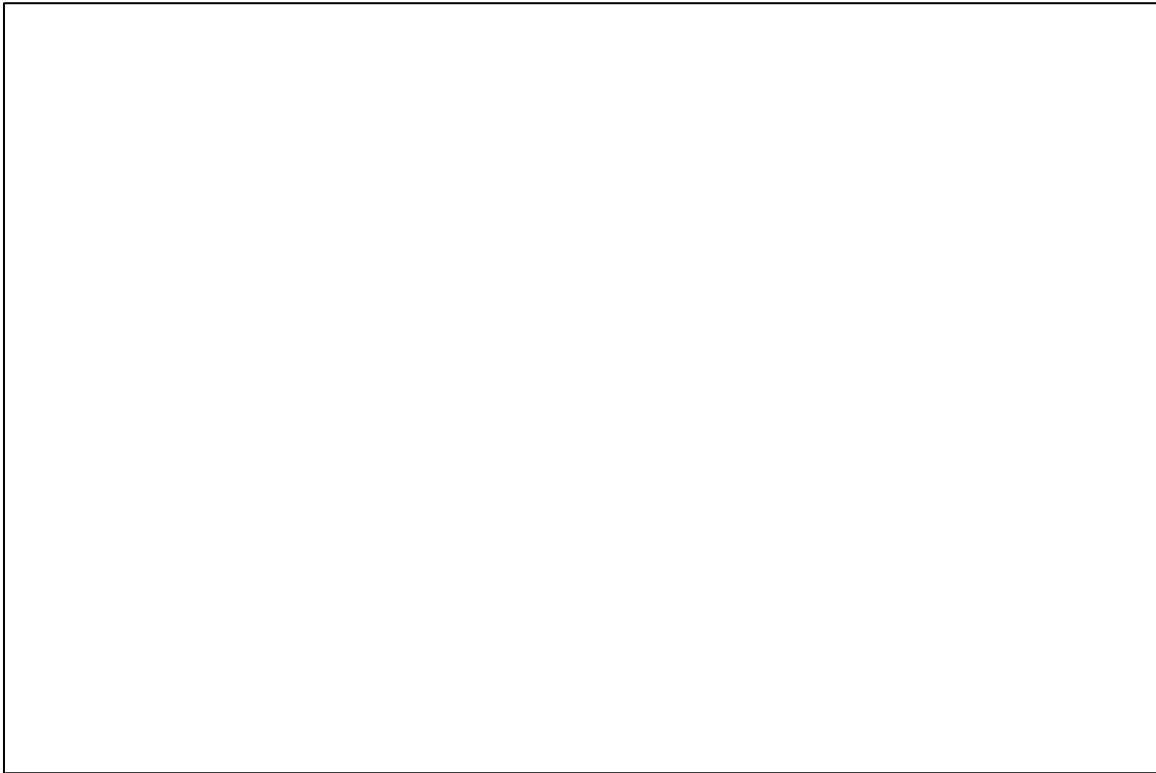
**Figure 3.19.** Detail of a rosette in D2.1L. Photo: author.



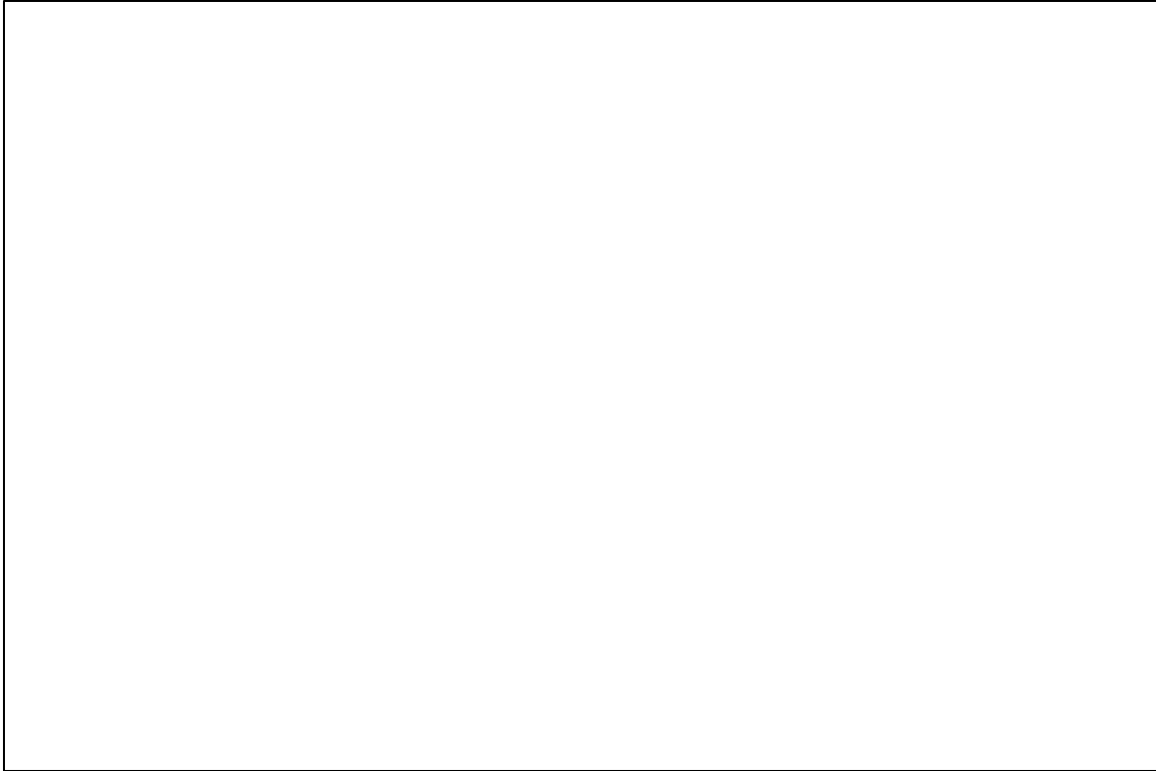
**Figure 3.20.** *Arcosolium* D2.1U. Photo: author.



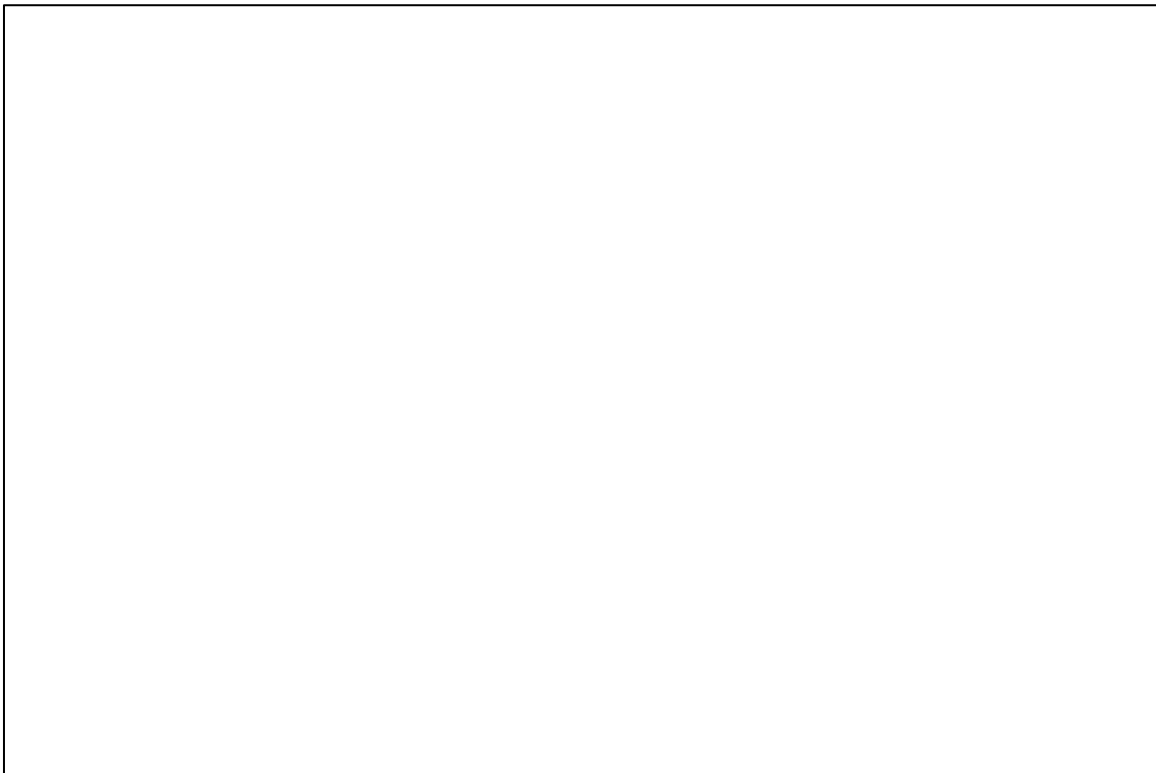
**Figure 3.21. Interior view of D2.1U, showing burial shafts.** Photo: author.



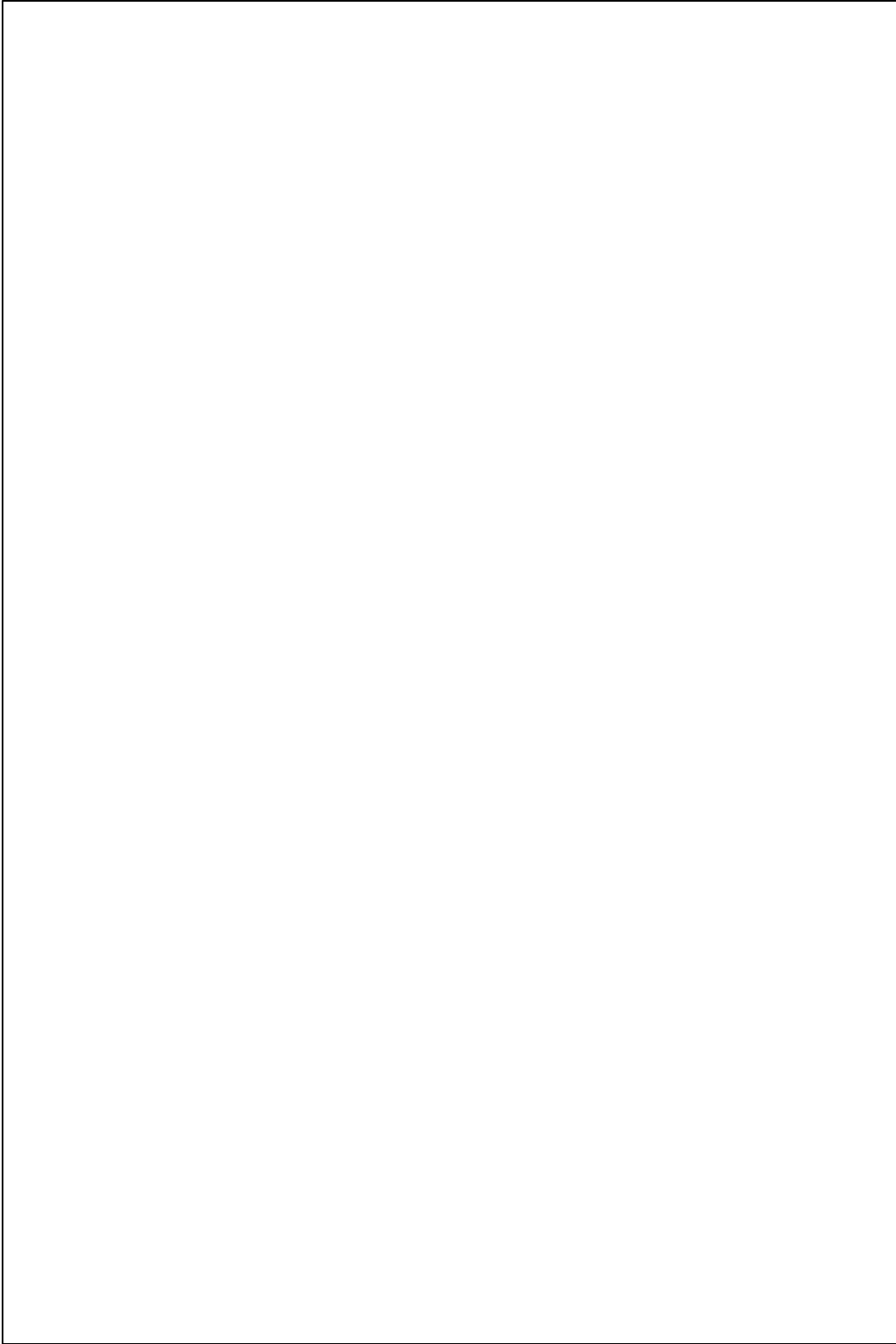
**Figure 3.22. *Arcosolium* D2.2L.** Photo: author.



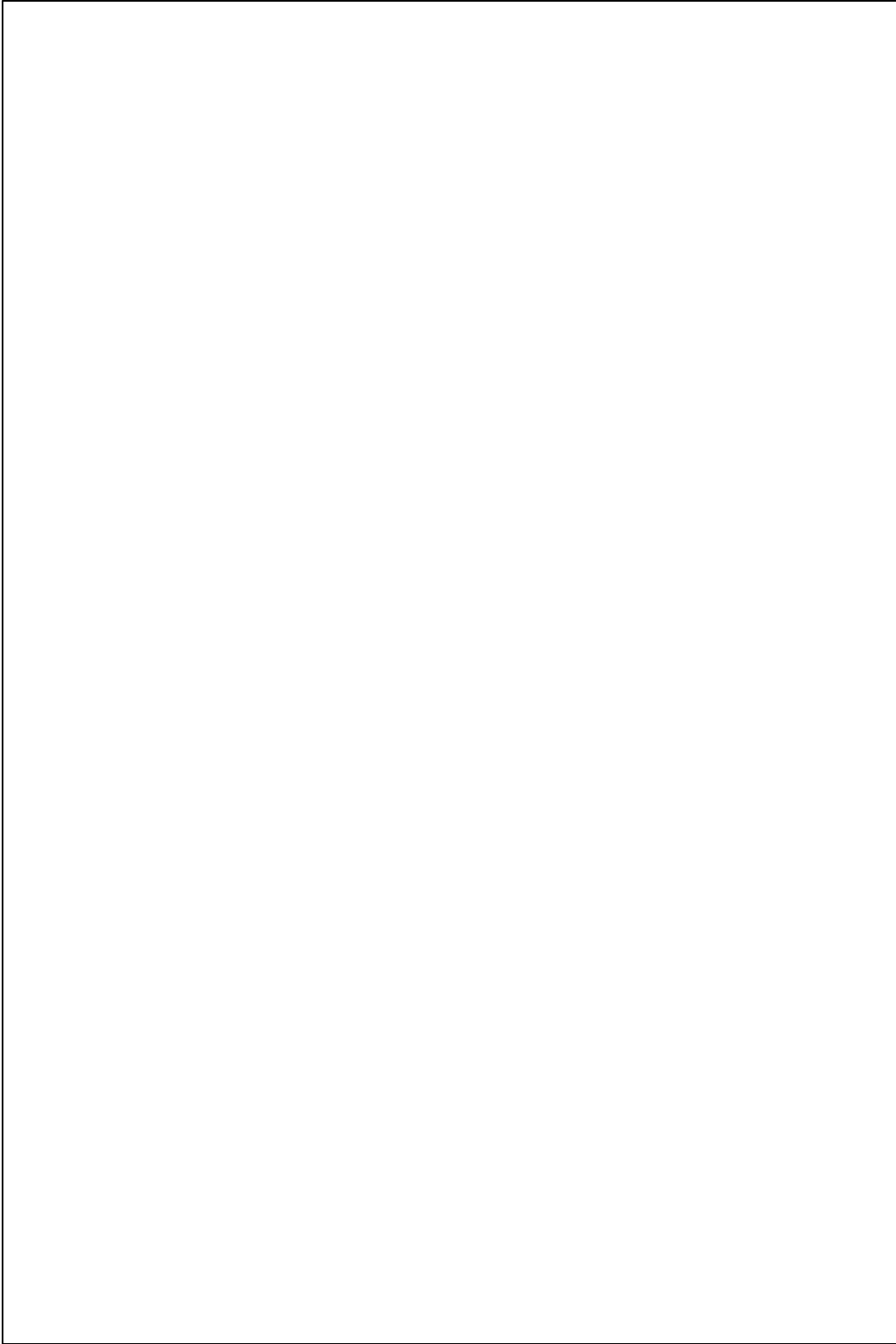
**Figure 3.23.** *Arcosolium* D2.2U. Photo: author.



**Figure 3.24.** Interior view of *arcosolium* D2.3La, with D2.3Lb visible at left and D2.3Lc at right. Photo: author.

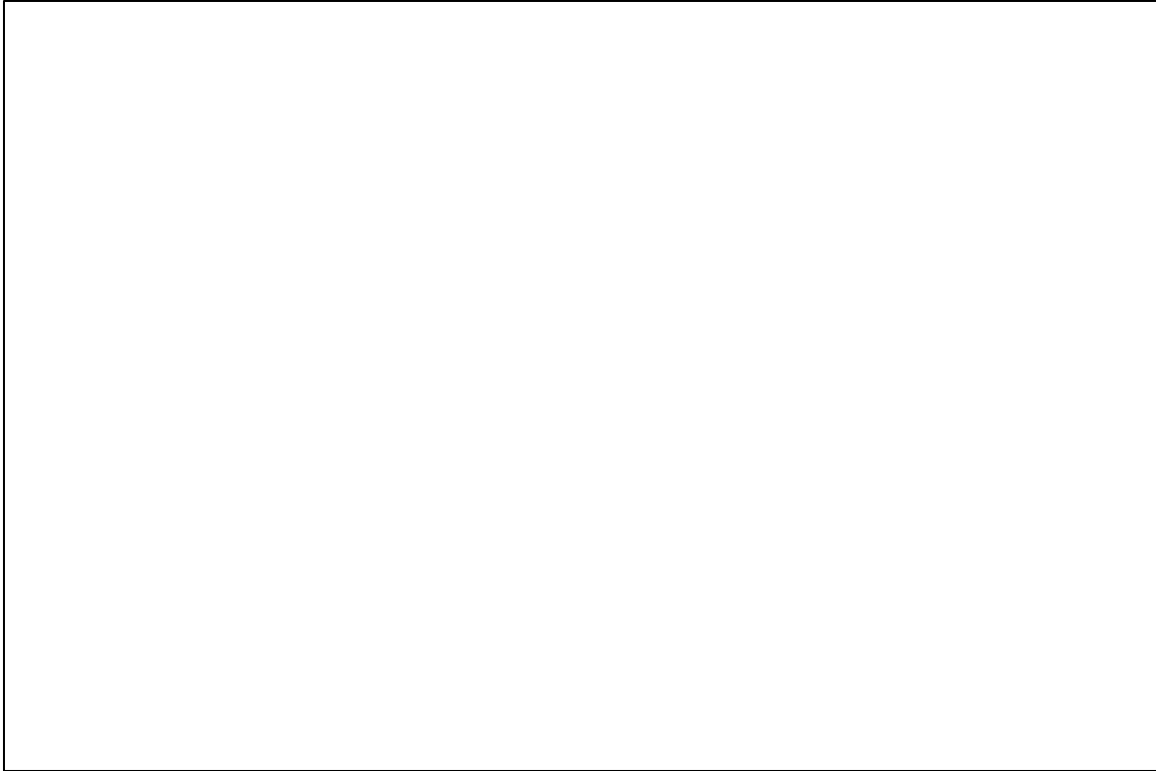


**Figure 3.25. Detail of a sea creature in D2.3La.** Photo: author.

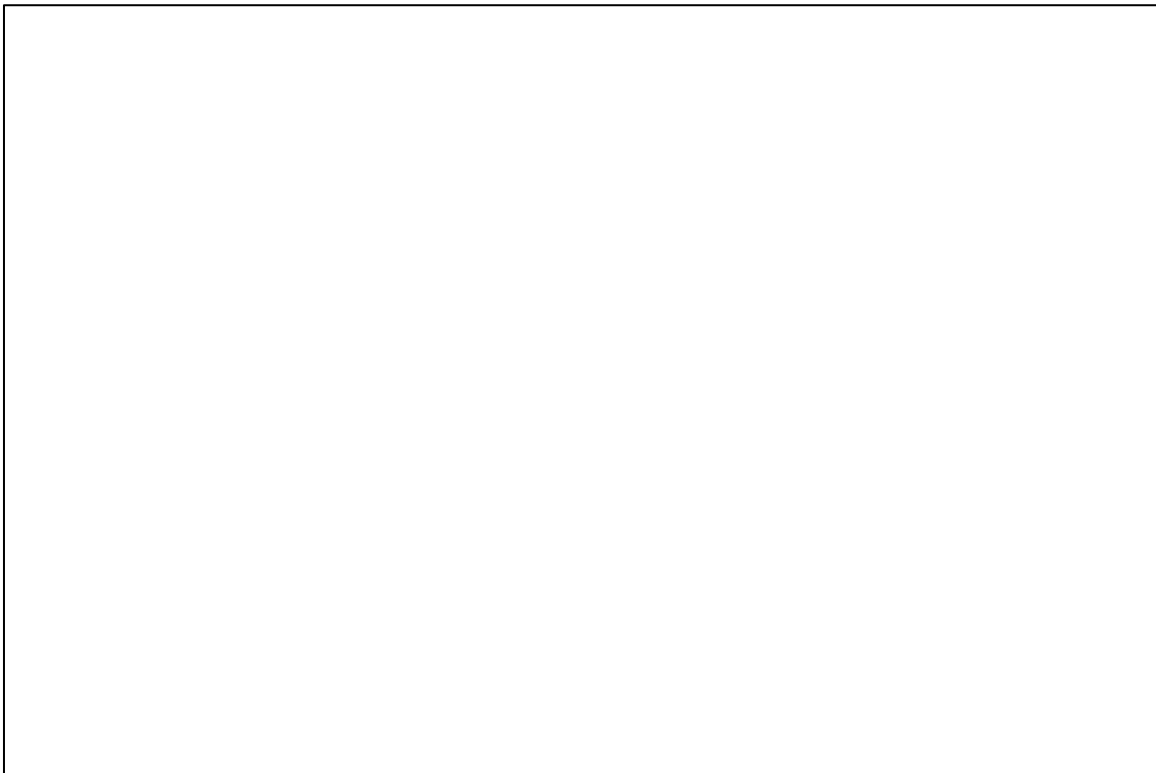


**Figure 3.26. Detail of a “heart and ball” motif in D2.3La. Photo: author.**

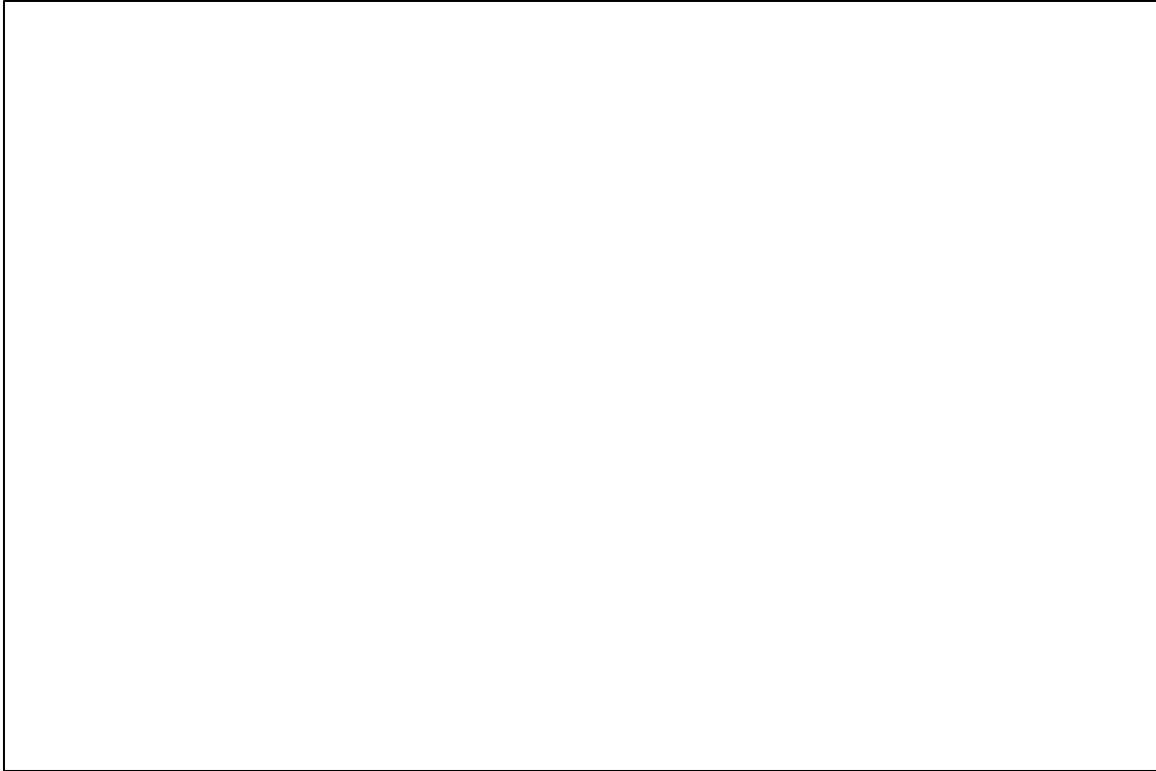




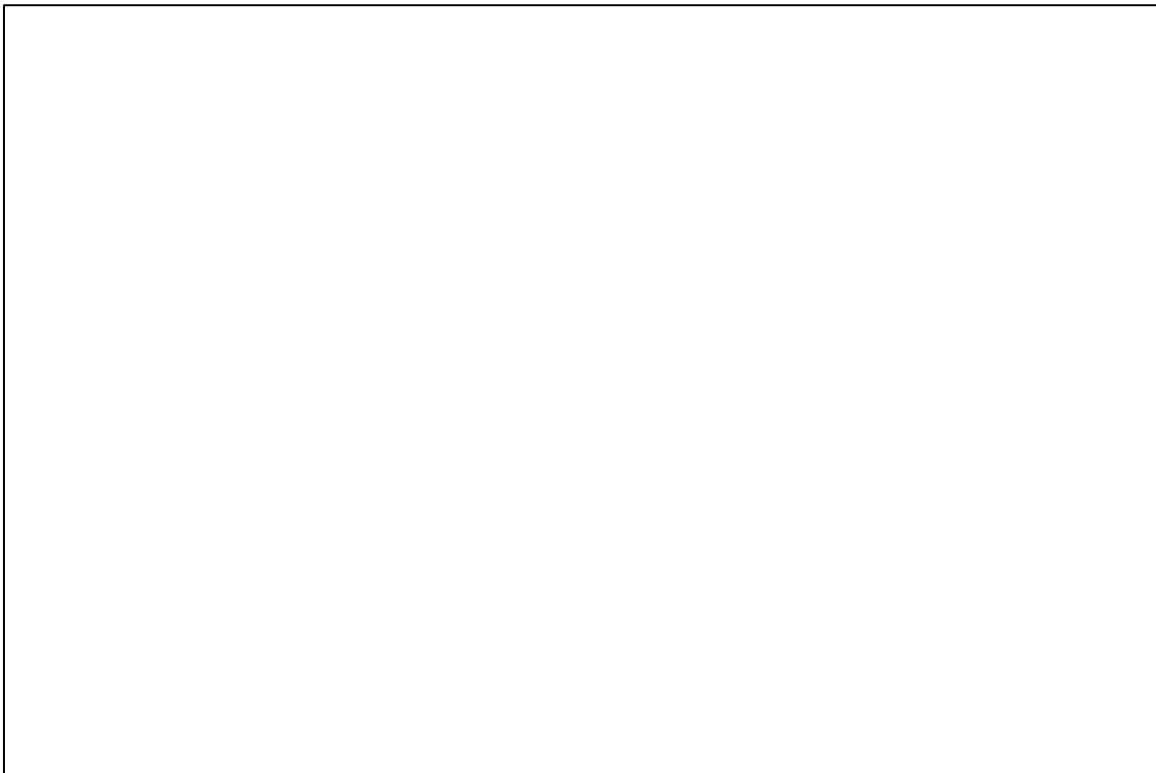
**Figure 3.27.** *Arcosolium D2.3Lb.* Photo: author.



**Figure 3.28.** Detail of a bird in *D2.3Lb.* Photo: author.



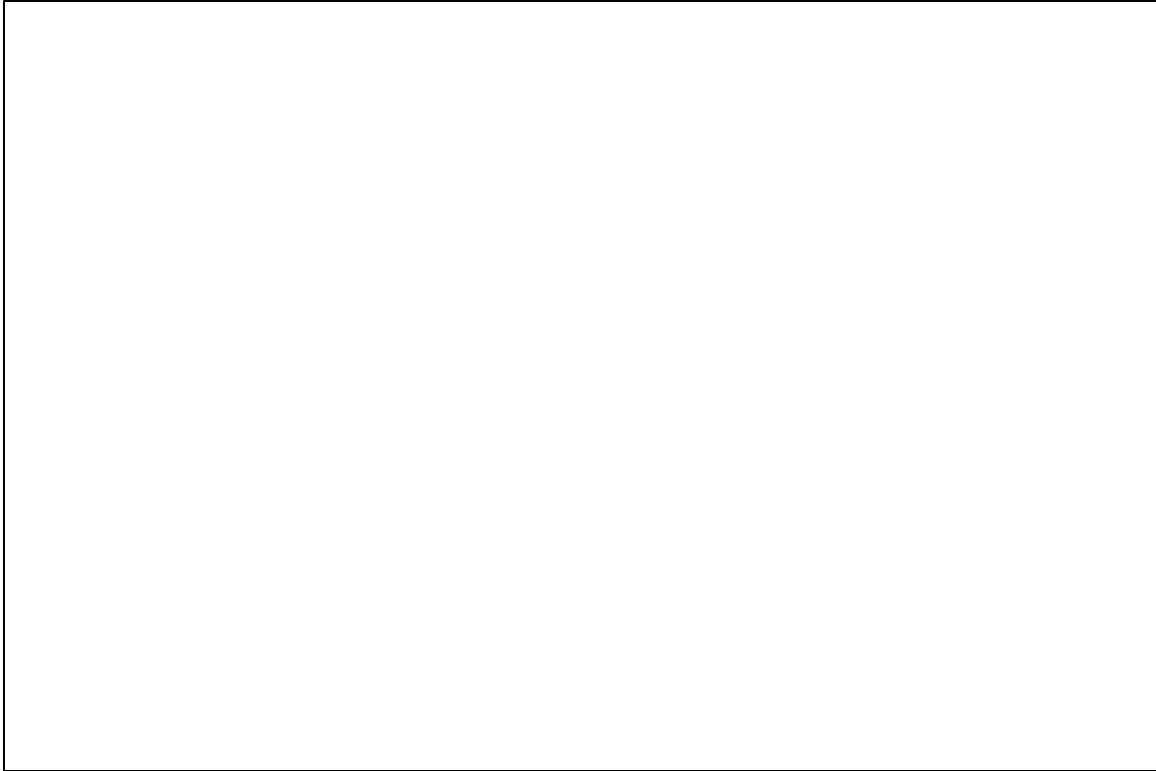
**Figure 3.29.** Detail of a shell with tendrils and “slash” fill in D2.3Lb. Photo: author.



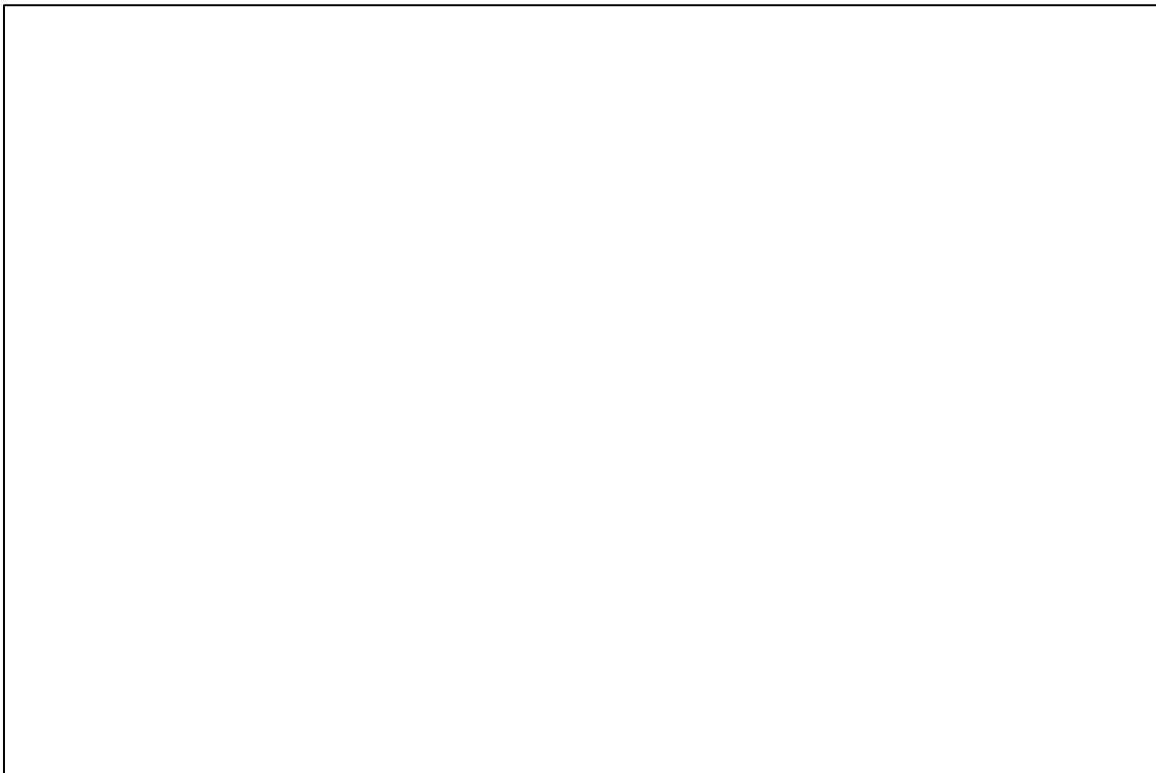
**Figure 3.30.** *Arcosolium* D2.3Lc. Photo: author.



**Figure 3.31. Detail of a grape cluster in D2.3Lc.** Note the fragmentary inscription just visible (in red) at the bottom of the photograph. Photo: author.



**Figure 3.32.** *Arcosolium D2.3U*. Photo: author.



**Figure 3.33.** *Arcosolium D2.4U*. Photo: author.

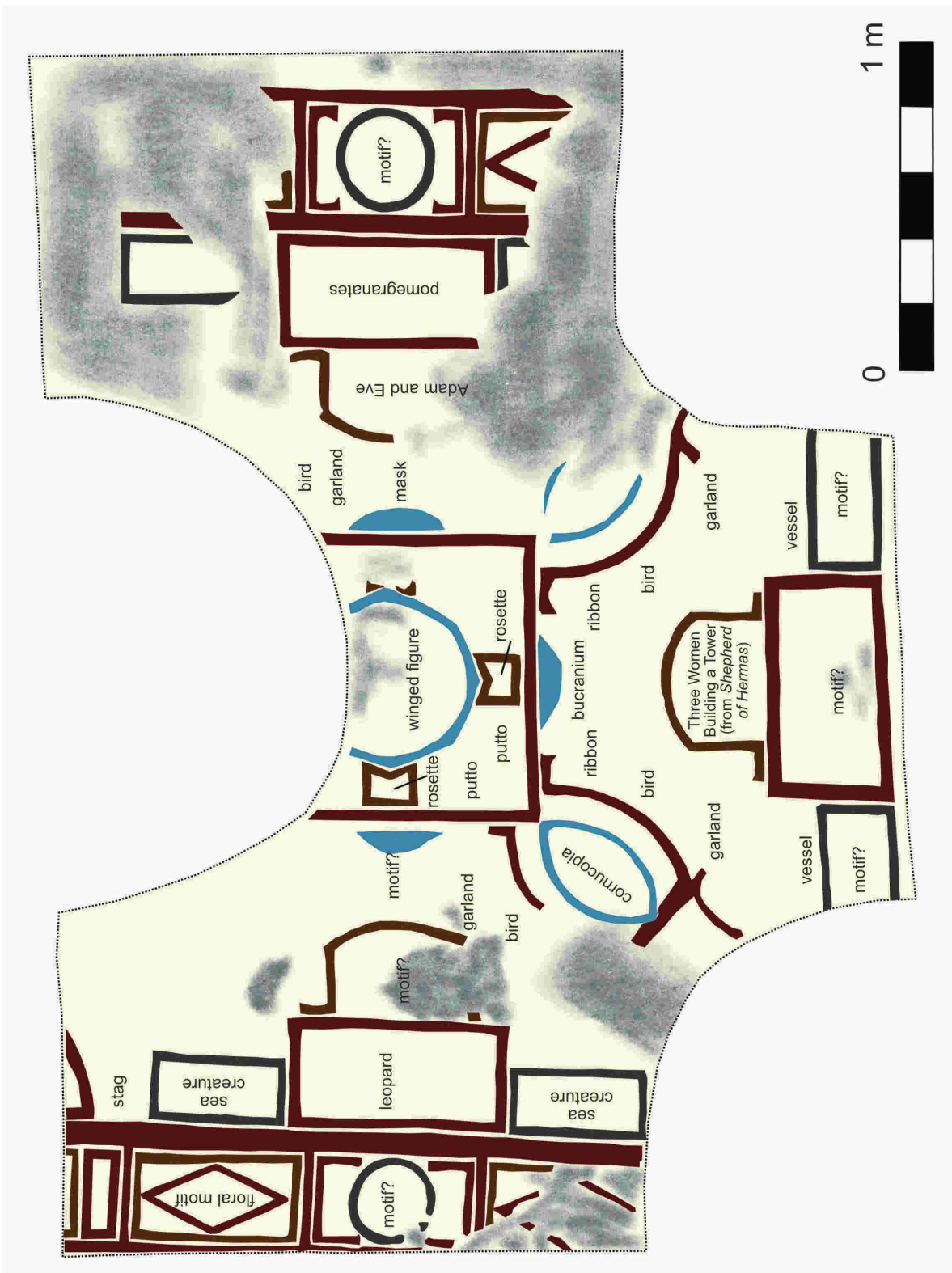
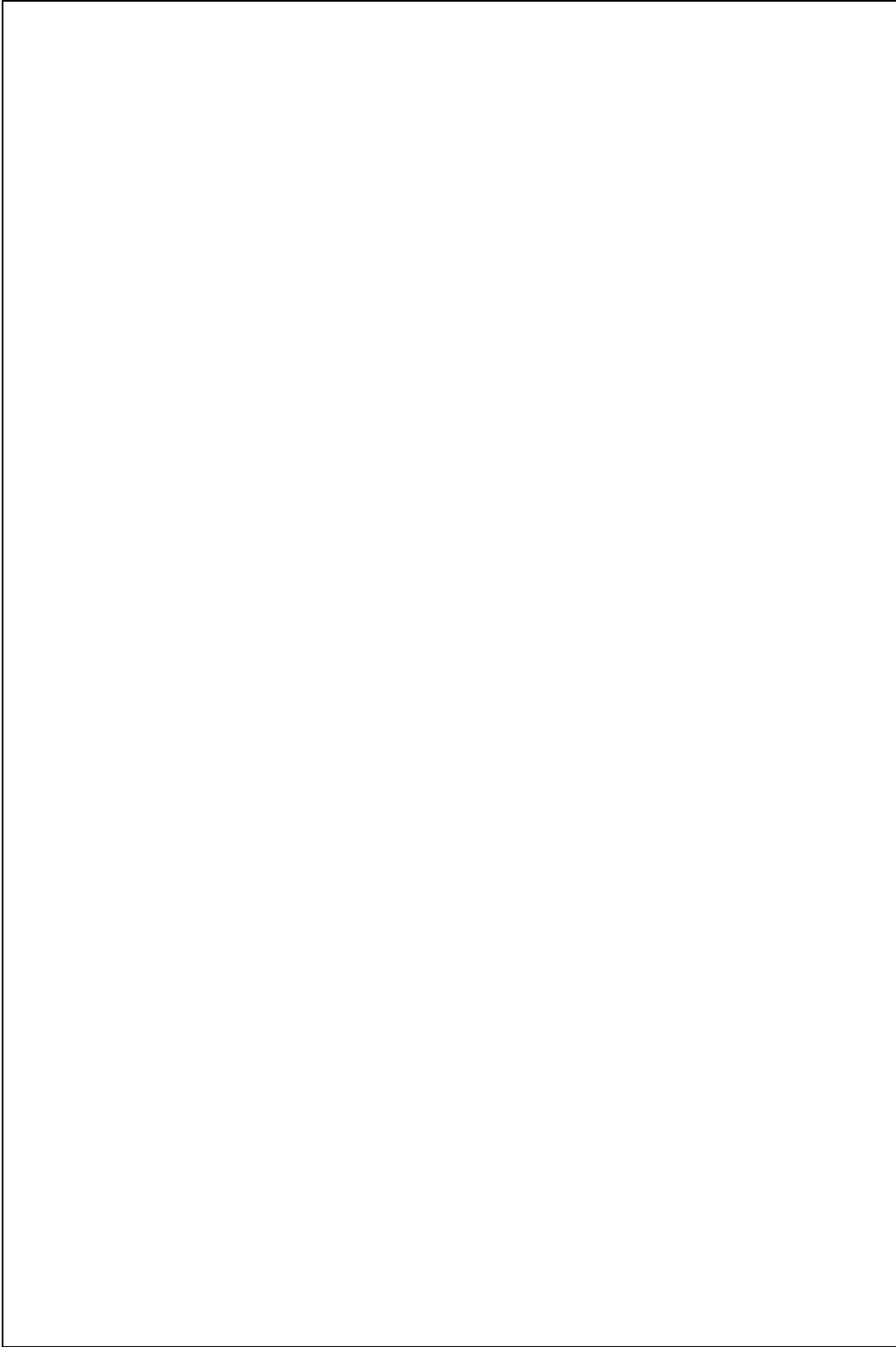
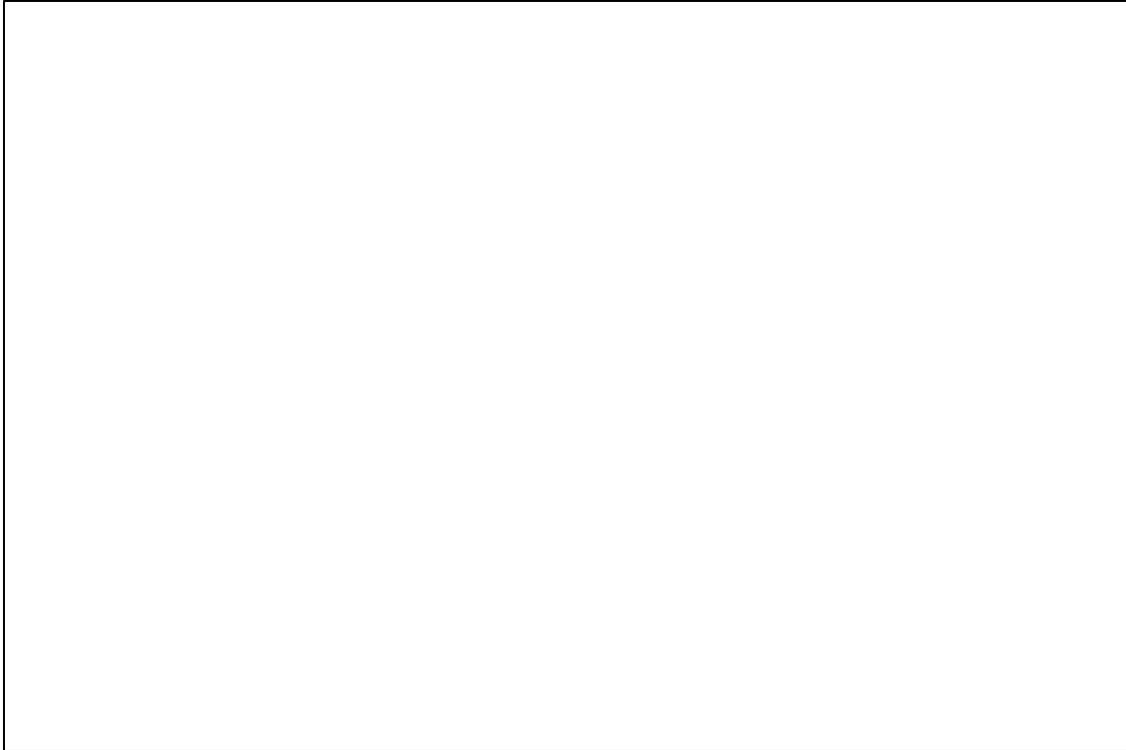


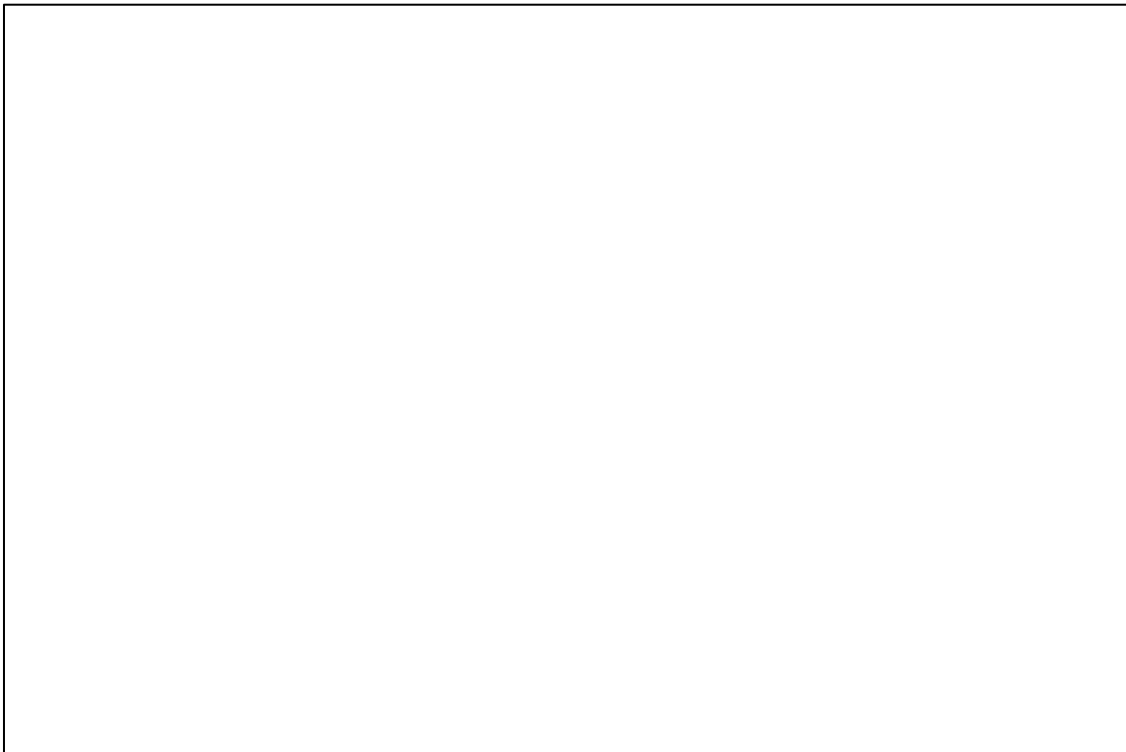
Figure 3.34. Diagram of the vault painting in A1. Adapted from Fasola 1975, *tavola II*.



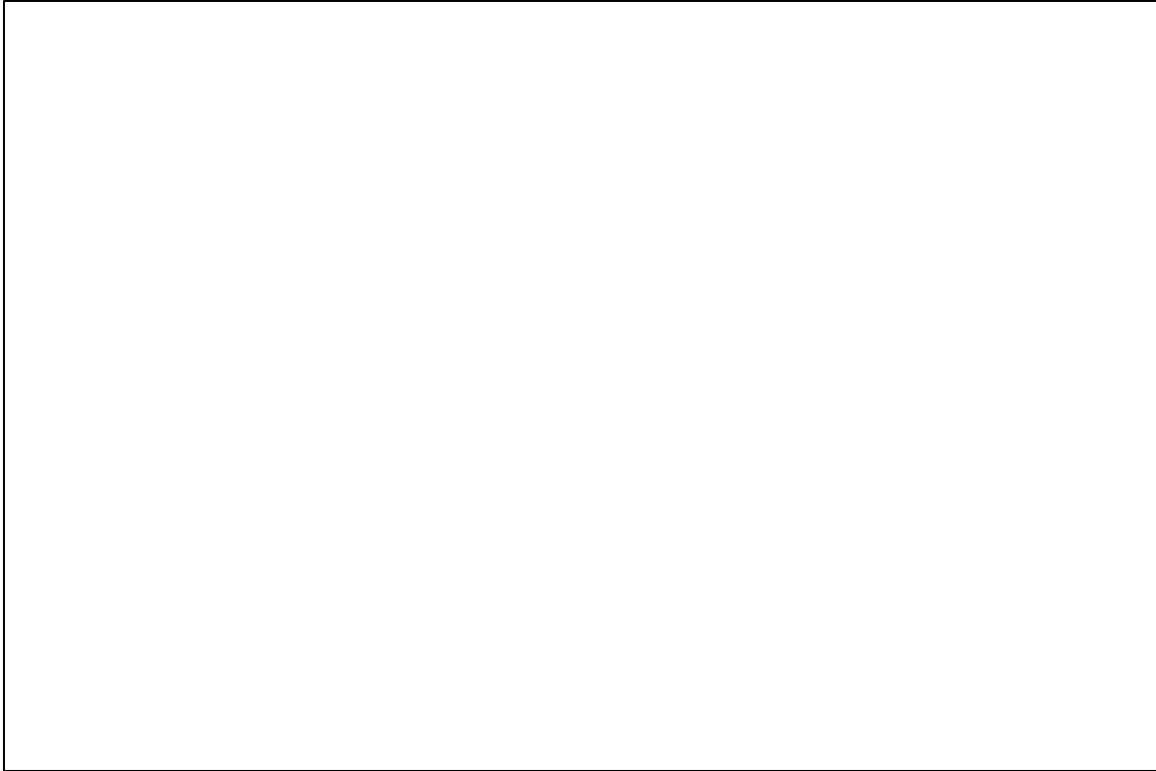
**Figure 3.35. Detail of the vault painting in A1 showing the octagonal *tondo* at the center of the vault.** Photo: author.



**Figure 3.36. Detail of the vault painting in A1 showing the Building of the Celestial Tower.**  
Photo: author.



**Figure 3.37. View into the vault of an *arcosolium* in A1, partially cut away with the removal of the cliff face.** Photo: author.



**Figure 3.38. Detail of an *arcosolium* in A1**, showing some features attested also in the Zona Greca (red and brown primary line elements, circular and modified rectangular secondary line elements, rosette motifs) and some not attested in the Zona Greca (elliptical secondary line element, human or mythological head motif, ivy motif). Photo: author.



## CHAPTER 4

### The engraver: Workshop insights from epigraphy

Bishop Damasus' preferred calligrapher Filocalus may have enjoyed fame for his elegant words on stone, but his fellow engravers labored in obscurity. Although we can infer several distinct stages in the process of making an inscription (preparing the surface, drafting the text, cutting the letters), we do not have a clear idea of how these tasks were divided among workers in a stonecutting workshop. In all likelihood, division of labor varied from shop to shop, with many workers able to take on different roles as needed.<sup>1</sup> In catacombs, where commemorative inscriptions appear carved on stone, painted on tile, or even scratched into mortar, it may be possible to observe the work of many sorts of engravers. Aside from professional engravers, *fossores* may have made some inscriptions themselves.<sup>2</sup> Even those who came to bury or commemorate their dead may have left their marks; the prevalence of graffiti near the tombs of martyrs shows that visitors to the catacombs were willing and able to make their own inscriptions.<sup>3</sup> Examined through appropriate lenses, catacomb epigraphy has the potential to yield new insights into engravers' work. By quantitatively analyzing large epigraphic corpora

---

<sup>1</sup> Susini, *The Roman stonecutter*, 9-20.

<sup>2</sup> Charles-Murray, "The emergence of Christian art," 55.

<sup>3</sup> On catacomb graffiti, see Ann Marie Yasin, "Prayers on site: The materiality of devotional graffiti and the production of early Christian sacred space," in *Viewing inscriptions in the late antique and medieval world*, ed. Antony Eastmond (New York: Cambridge University Press, 2015), 40; James Harpur, *Sacred tracks: 2000 years of Christian pilgrimage* (Berkeley, Los Angeles: University of California Press, 2002), 20-22.

and studying catacomb inscriptions as artifacts, I aim to shed light on engravers' interactions with patrons, their working practices, and their links to exchange networks.

Past scholarship of catacomb epigraphy has focused on a few key themes: commemoration, constructions of identity, and the development of "Christian" epigraphy. Shaw has used catacomb inscriptions to approach problems in social history and changes in Roman commemoration in the imperial period.<sup>4</sup> Sigismund Nielsen and McWilliam have both examined the use of epithets in inscriptions commemorating children, including inscriptions from catacombs.<sup>5</sup> The study of "Christian" epigraphy has yielded a vast corpus of Italian scholarship, from the broad treatises of Marucchi and Mazzoleni, to Carletti's articles on themes more closely related to the present discussion.<sup>6</sup> One recent volume edited by Bisconti and Braconi offers several essays on the particular theme of engraved images associated with inscriptions, which I examine quantitatively below.<sup>7</sup> Although the making of inscriptions has not been a popular subject in catacomb scholarship, there are a few excellent studies of inscriptions *about* workers. Bisconti discusses representations of trades and workers in catacomb epigraphy and iconography.<sup>8</sup> Guyon surveys inscriptions relating to *fossores*, and Conde Guerri puts those

---

<sup>4</sup> Shaw, "The age of Roman girls at marriage: Some reconsiderations"; Shaw, "The cultural meaning of death: Age and gender in the Roman family."

<sup>5</sup> Sigismund Nielsen, "Interpreting epithets in Roman epitaphs"; Nielsen and Nielsen, *Meals in a social context*; McWilliam, "Children among the dead."

<sup>6</sup> Orazio Marucchi, *Christian epigraphy: An elementary treatise, with a collection of ancient Christian inscriptions, mainly of Roman origin*, trans. J. Armine Willis (Chicago: Aris Publishers, 1974); Mazzoleni, *Epigrafi del mondo cristiano antico*; Carlo Carletti, *Iscrizioni cristiane di Roma: Testimonianze di vita cristiana (secoli III-VII)* (Firenze: Nardini, 1986); Carletti, *Epigrafia dei cristiani in occidente*.

<sup>7</sup> Fabrizio Bisconti and Matteo Braconi, *Incisioni figurate della tarda antichità: Atti del convegno di studi, Roma, Palazzo Massimo, 22-23 marzo 2012* (Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 2013).

<sup>8</sup> Bisconti, *Mestieri nelle catacombe romane*.

inscriptions in dialogue with images of *fossores*.<sup>9</sup> Each of these studies, however, focuses on work and workers described in the contents of inscriptions, not on the formal qualities of inscriptions as expressions of an engraver's signature style, or as artifacts whose physical properties could yield insight into engravers' practices.

### **Site-specific styles and workshops**

Uncommon in the study of catacomb epigraphy is the consideration of engravers as agents, not just in the production of tens of thousands (perhaps originally hundreds of thousands) of inscriptions, but also in the local trends observable in those inscriptions. Two concepts crucial to the study of engravers as agents are the site-specific epigraphic style and the site-specific epigraphic workshop.

“Style” in catacomb epigraphy refers to patterns in the choice of words and images to include in an inscription, as well as to the formal qualities of those words and images. Epigraphic style can vary according to a variety of factors, including geographic region, cultural identity, period, demography, and so on. For the purposes of this study, it is crucial to note that epigraphic style can also vary among cemeteries in a single city. Carletti has observed this phenomenon among the catacombs of Rome, pointing out site-to-site variations in the use of certain iconographic or linguistic elements. He attributes these differences in style to the presence of different workshops.<sup>10</sup> How workshops relate to catacombs is not perfectly clear: some

---

<sup>9</sup> Guyon, “La vente des tombes”; Conde Guerri, *Los “fossores”*; Conde Guerri, “Nuevas lapidas de ‘fossores’ en Roma.”

<sup>10</sup> Carletti, “Littera et figura,” 25. For other perspectives on site-specific or regional epigraphic styles in catacombs and other late antique cemeteries, see Valeria Cipollone and Vincenzo Fiocchi Nicolai, “Le lapidi con figurazioni incise nei cimiteri paleocristiani del Lazio,” in *Incisioni figurate della tarda antichità*, ed. Fabrizio Bisconti and Matteo Braconi (2014); Vincenzo Fiocchi Nicolai, *I cimiteri paleocristiani del Lazio e Etruria meridionale*, vol. 1 (Città

workshops may have supplied inscriptions for multiple catacombs, and some catacombs may have contained inscriptions from multiple workshops. Part of this problem is that it is not easy to find links between clearly defined living communities (e.g., parishes, urban regions, professional associations) and particular catacombs.<sup>11</sup> In trying to study the epigraphy of one catacomb in comparison with another, we risk creating an artificial division between corpora that may be socially intertwined.

My proposed solution to this problem is to treat the archaeological context of a catacomb as the unifying factor for its epigraphic corpus, no matter how many living communities or workshops may be represented therein. In burying their dead in a given catacomb, patrons would have encountered both the existing epigraphy of that catacomb and the workers associated with that site. By producing inscriptions for use in a given catacomb, engravers came into contact with the patrons' expectations for the inscription, and perhaps also with other inscriptions at that catacomb.<sup>12</sup> I argue that through involvement at a given catacomb (either as a patron or as a worker), a person would be influenced by the words and images already visible in that catacomb,

---

del Vaticano: Pontificio Istituto di Archeologia Cristiana, 1988); Sgarlata, "Parole e immagini nelle catacombe di Siracusa," 512.

<sup>11</sup> While it is possible to link certain *parts* of catacombs with clearly defined social groups (e.g., the "Region of the *Mensores*" in Domitilla with a *collegium* of grain-dole officials), efforts to link large catacomb sites to urban or ecclesiastical regions have not been successful. Domitilla seems to have had a connection to the *titulus Fasciola*, but assertions that this community managed the site made on the basis of a few inscriptions referring to the *titulus* may go too far. Petersen, "The identification of the *Titulus Fasciola*"; Webb, *The churches and catacombs of early Christian Rome*, 232. For a map of Rome indicating proposed connections between catacombs and ecclesiastical regions, see Carletti, *Epigrafia dei cristiani in occidente*, fig. 22.

<sup>12</sup> On patrons' control over the contents of an inscription—and engravers' power of suggestion—see Cooley, *The Cambridge manual of Latin epigraphy*, 286-91; Jonathan Edmondson, "Inscribing Roman texts: *Officinae*, layout, and carving techniques," in *The Oxford handbook of Roman epigraphy*, ed. Christer Bruun and Jonathan Edmondson (New York: Oxford University Press, 2015), 113-14; Bradley H. McLean, *An introduction to Greek epigraphy of the Hellenistic and Roman periods from Alexander the Great down to the reign of Constantine (323 B.C.-A.D. 337)* (Ann Arbor: University of Michigan Press, 2002), 10-11, n. 27.

and perhaps be moved to perpetuate that catacomb's epigraphic style by creating inscriptions in keeping with the existing trends.<sup>13</sup> If a particular workshop or community of patrons contributed many similar inscriptions to a single catacomb, these could perhaps influence the choices of others who used the site.

Given these premises, it is possible to treat a catacomb as a sort of community of patrons and workers who developed a local epigraphic style through the "feedback loop" of repeated contact with each other, with the site itself, and with the growing body of inscriptions there. This community was defined by the architectural limits of the catacomb: by gaining the right to bury or to work in the site, individuals joined this community, which might correspond neatly to one social group or overlap many. Through repetitive viewing of a catacomb's inscriptions—at burials, on feast days, during visits to a saint's tomb, or otherwise—members of a catacomb community would have been exposed to that site's style, which they might have perpetuated themselves, in a process that could iterate over generations.<sup>14</sup> Engravers participated in this cycle, too, whether they were making inscriptions at a catacomb site or simply receiving orders from patrons who were habituated to a particular site-specific style.

The epigraphic corpus of a given catacomb could thus comprise products from one workshop or many, with patrons playing an important role in the development of the site-specific style. To learn about engravers from their products, we can, therefore, take two contrasting

---

<sup>13</sup> Borbonus proposes a similar theory of cultural reproduction in *columbaria*: "Individual niches cannot be perceived individually, but their endlessly repeated continuum gives visual expression to the entire *columbarium* collective as an undivided entity." Borbonus, *Columbarium tombs*, 49.

<sup>14</sup> A person might enter a catacomb multiple times for a variety of reasons. For example, a person might attend the burials of several relatives or associates; participate in commemorative banquets above ground, going below to leave offerings at tombs; view a tomb to be purchased; or visit the tombs of martyrs or other prominent figures. On *mensae* for ritual meals and food offerings in catacombs, see Sgarlata, *S. Giovanni a Siracusa*, 40-43; Mark J. Johnson, "Pagan-Christian burial practices of the fourth century: Shared tombs?," *Journal of Early Christian Studies* 5, no. 1 (1997).

approaches. Firstly, we can examine the epigraphy of whole catacombs as distinct corpora, potentially reflecting the style and interactions of workers and patrons tied to a particular architectural context. Secondly, we can look holistically at individual inscriptions and their supports, seeking evidence in inscribed objects for engravers' working practices and links to exchange networks.

### **Methods**

To approach engravers through their products, I apply two methods to the large epigraphic corpora surviving from the catacombs of Domitilla (Rome) and San Giovanni (Syracuse), drawing in comparanda from additional sites. Using quantitative analysis, I first treat inscriptions as assemblages of words and images, de-materializing them to create a body of data in which to seek site-specific styles. Then I analyze inscriptions as artifacts, examining the physical properties of individual inscriptions and their supports to observe the hand of the maker at work. Below I describe each method and the corpora to which I apply them in detail.

#### Quantitative analysis

Studies of demography and commemoration by Saller and Shaw, Sigismund Nielsen, and McWilliam have provided models for how to use simple quantitative methods to detect patterns in large epigraphic corpora.<sup>15</sup> The first step is to collect inscriptions that commemorate a deceased individual (or multiple individuals) and sort them into groups based on gender and age. Occurrences of specific phenomena (e.g., the use of a particular epithet) are calculated as a percentage of the inscriptions in a given category: for example, “33% of inscriptions for girls under the age of 7 include the epithet *dulcis* (“sweet”).” Expressions like this one can be

---

<sup>15</sup> Shaw, “The cultural meaning of death”; Sigismund Nielsen, “Interpreting epithets in Roman epitaphs”; McWilliam, “Children among the dead.”

generated for each demographic segment under consideration and then compared. In this study, the demographic groups are as follows:

- Genders:
  - Female: for individuals gendered female either through a personal name or a grammatical gender (as reflected in pronouns and adjectives);
  - Male: for individuals gendered male either through a personal name or a grammatical gender (as reflected in pronouns and adjectives);
  - Indeterminate: for individuals whose gender cannot be determined through personal names or grammatically, or for mixed-gender groups of decedents.
- Ages (rounded down to nearest whole year):<sup>16</sup>
  - Infant: birth to 1 year;
  - Young child: birth to 7 years;
  - Older child: 8 to 14 years;
  - Young adult: 15 to 19 years;
  - Adult: 20 to 49 years;
  - Senior: 50 years and older.

In order to seek site-specific epigraphic styles, I compare the correspondences of various epithets, phrases, and images with different demographic groups in the epigraphy of each site,

---

<sup>16</sup> The age categories are based on ancient lifecycle milestones. Note that the “infant” age group lies inside the range for “young children,” making it possible to separate infants or consider them together with young children as needed. On the rationale behind the age categories, see Shaw, “The age of Roman girls at marriage,” 37; Beryl Rawson, “Death, burial, and commemoration of children in Roman Italy,” in *Early Christian families in context: An interdisciplinary dialogue*, ed. D. L. Balch and C. Osiek (Grand Rapids, MI: William B. Eerdmans, 2003), 280-81; Gillian Clark, “The fathers and the children,” in *The church and childhood. Papers read at the 1993 summer meeting and the 1994 winter meeting of the Ecclesiastical History Society*, ed. Diana Wood (Cambridge, MA: Blackwell, 1994), 12.

generating a stylistic “signature” for each site.<sup>17</sup> A “signature” can then be analyzed as the product of interactions among the patrons and workers of a given site. I apply this method first to the epigraphy of the catacomb of Domitilla in comparison with the epigraphy from San Giovanni to consider how styles can differ across regions. Then I compare the Domitilla corpus to another sample of epigraphy from several other Roman catacombs to show how site-specific styles can vary inside an urban context. The compositions and limitations of the various samples are outlined below.

### Artifactual analysis

I also analyze a group of inscriptions as artifacts, studying their physical properties for evidence of their makers’ working processes and other choices. Among the surviving inscriptions from the catacomb of San Giovanni, I was permitted to study 151 stone plaques; I was able to handle 133 of these, recording information about the treatment of their edges and reverses, while most of the others I could only observe from one side (because they were on display). I recorded the following information about each plaque, when possible:

- The type of stone used for the support (limestone or marble);
- The treatment of the plaque’s reverse (unfinished, partly finished, or polished; plain or featuring another inscription, relief sculpture, other marks);
- The state of the plaque’s edges (broken or cut);
- The shape and depth of the incisions (both text and guidelines)—a reflection of the types of tools used;
- The presence and nature of any incised guidelines around the text;

---

<sup>17</sup> Cf. my similar use of the concept of a workshop “signature” in Chapter 3.



- Letterforms and layout (the use of space between letters and lines and around the text block).

Using this information, I attempt to draw inferences about the engravers' connection to exchange networks (reflected in the types of stone used), their working practices (reflected in the tools and guidelines used), and their levels of "professionalism" (reflected in the inscription's "regularity," a metric defined below).

### Samples

The samples in this study come from two principal catacombs—Domitilla (Rome), and San Giovanni (Syracuse)—with comparative material collected from additional Roman sites.<sup>18</sup> The sample from Domitilla consists of 2,875 inscriptions published in the *Inscriptiones Christianae Urbis Romae* (ICUR, vol. III), and it represents every inscription from Domitilla that a) commemorated an individual or group of decedents, and b) contained at least one point of demographic data about a decedent (e.g., name, gender, or age). To allow special consideration of the role that engraved images play in inscriptions, I collected inscriptions including images from two additional Roman catacombs, S. Callixtus and the Coemeterium Maius. These sites are both comparable in size to Domitilla and represent two catacomb-rich parts of the Roman suburbium: S. Callixtus lies adjacent to Domitilla in the area of the Via Appia, Via Ardeatina, and Via delle Sette Chiese; the Coemeterium Maius is north of the ancient city in the area of the Via Nomentana and Via Salaria. This sample of Roman catacomb epigraphy lends itself to quantitative study because of its size and comprehensiveness. It would have been impracticable, however, to try to study these inscriptions as artifacts, partly because they are so numerous, and

---

<sup>18</sup> I omit San Gennaro (Naples) from this analysis because only 99 of its inscriptions remain, most of which consist of single names painted on walls, making this corpus difficult to compare to the others. The San Gennaro inscriptions can be found in Liccardo, *Redemptor meus vivit*.

partly because today the inscriptions are stored and displayed in many locations around Rome, often mounted in walls, making it impossible to study the treatments of the edges and reverses.

San Giovanni contributed relatively few inscriptions to this study, partly because no complete catalog of the corpus has been published,<sup>19</sup> and partly because the Museo Archeologico Regionale Paolo Orsi, where the entire remaining corpus is kept, would only grant access to about one-fifth of the corpus.<sup>20</sup> That access was, however, fruitful: I was able to handle most of the inscribed plaques, photograph them, and record detailed information about their physical characteristics.

### Quantitative study of epigraphy

#### Regional styles: Domitilla versus San Giovanni

Domitilla and San Giovanni present two contrasting site-specific epigraphic styles, deriving in part from differences in regional cultures (of Rome *versus* Sicily), predominant languages (Latin *versus* Greek), and demographic regimes. The first point to consider is the difference in demographic regimes, since the choice of words or images to include in an inscription may often have hinged on demographic factors.<sup>21</sup> Overall, the population represented

---

<sup>19</sup> Despite the lack of a complete catalog, there has been some thoughtful recent work on late antique Sicilian epigraphy, including that of the Syracusan catacombs: Antonio Enrico Felle, “Epigrafia pagana e cristiana in Sicilia: Consonanze e peculiarità,” *Vetera Christianorum* 42 (2005); Sgarlata, *Ricerche di demografia storica*; Sgarlata, “L’epigrafia greca e latina cristiana della Sicilia”; Mariarita Sgarlata, “L’epigrafia cristiana nell’età di Cesare Baronio,” in *Arte e committenza nel Lazio nell’età di Cesare Baronio*, ed. Patrizia Tosini (Rome: Gangemi Editore, 2009); Sgarlata, “Parole e immagini nelle catacombe di Siracusa.”

<sup>20</sup> I was allowed access only to the smaller inscriptions, i.e., those that were easily portable without the assistance of object handlers, who were unavailable. I was able to observe a few larger inscriptions that happened to be stored near the small ones, plus those that were on display.

<sup>21</sup> There is a substantial body of scholarship devoted to age- and gender-linked uses of epigraphic formulas. Some of the studies that have influenced the present project include Saller and Shaw,

in the San Giovanni sample is older than that in Domitilla (see figs. 4.1, 4.2). As is common in Roman funerary inscriptions, children are grossly underrepresented, doubtless in light of the high childhood mortality rates typical in this and other pre-industrial societies.<sup>22</sup> Females and males are roughly equally represented (see figs. 4.3, 4.4).<sup>23</sup> The difference in the age distribution in these corpora could stem from accidents of preservation in the corpora themselves, but they may also represent an aspect of site-specific style: the community involved with the San Giovanni catacomb may have had some other way of commemorating children that did not involve an inscription on stone in the catacomb. Since the two demographic regimes are otherwise similar, the differences in other aspects of the inscriptions could represent site-specific ways of commemorating adult women and men.

The Domitilla and San Giovanni corpora show marked differences in their use of epithets, or adjectives and nouns used to describe the deceased's real or idealized personal

---

“Tombstones and Roman family relations”; Shaw, “Latin funerary epigraphy and family life”; Shaw, “The age of Roman girls at marriage”; Shaw, “The cultural meaning of death”; Sigismund Nielsen, “Interpreting epithets in Roman epitaphs”; McWilliam, “Children among the dead.” I have attempted this sort of study elsewhere; see Kreiger, “Remembering children.”

<sup>22</sup> Peter Garnsey, “Child rearing in ancient Italy,” in *The family in Italy from antiquity to the present*, ed. David I. Kertzer and Richard P. Saller (New Haven, CT: Yale University Press, 1991), 52; Maureen Carroll, *Spirits of the dead: Roman funerary commemoration in western Europe* (New York: Oxford University Press, 2006), 102; Tim Parkin, *Demography and Roman society* (Baltimore, MD: Johns Hopkins University Press, 1992); Tim Parkin, “The demography of infancy and early childhood in the ancient world,” in *The Oxford handbook of childhood and education in the classical world*, ed. Judith Evans Grubbs and Tim Parkin (New York: Oxford University Press, 2013); Keith Hopkins, “On the probable age structure of the Roman population,” *Population Studies* 20, no. 2 (1996).

<sup>23</sup> In order to test how the assignment of genders to the indeterminate and plural plaques would affect the overall counts, I reread the group of mixed-gender plaques from San Giovanni and found that males and females remain roughly equal in number, and that very few individuals still could not be identified by gender in the end. On the basis of this small test, I suggest that the same would be true in the Domitilla sample, meaning that in both samples, females and males have roughly equal representation. The approximate gender parity in these samples is consistent with Shaw's findings for sex ratios in post-third-century epigraphic corpora; the third century seems to be the point at which females catch up to and then overtake males in funerary epigraphic representation. Shaw, “The cultural meaning of death,” 83.

qualities and social roles (see table 4.1, fig. 4.5). To generalize in quantitative terms, Domitilla's epithets tend to characterize the deceased according to familial relationships and familial sentiments, while San Giovanni's epithets focus more on individuals' religious and professional identities. As Table 4.1 shows, two of Domitilla's most commonly used epithets (*benemerens*, "well deserving"; *dulcis*, "sweet") do not appear at all in San Giovanni. At the same time, some epithets that are relatively common in San Giovanni (*innocens* or *innocens*, "innocent"; the designation "Christian"; occupational titles) are relatively rare in Domitilla. These differences cannot be explained only by the different languages predominant at the two sites (Latin in Domitilla, Greek in San Giovanni), since both Greek and Latin versions of these words occur in the Roman catacombs.

The different demographic regimes of the sites—and the different commemorative priorities that went with them—probably had the most potent effect on the workers' and patrons' choices of epithets. Because children are virtually invisible at San Giovanni, the epithet most closely associated with them in the broader Roman epigraphic culture (*dulcis*) is missing, too. At San Giovanni the epigraphic style turns away from emphasizing familial identities, and toward highlighting individuals' roles and qualities in a religious community. The deceased are called "Christian" and "innocent"; this latter term is usually reserved for children, but here the epithet spreads across age groups and suggests a spiritual state rather than a more literal one.<sup>24</sup> The dead are named according to their trades, and some are designated virgins, both a spiritually desirable quality and a position of honor open particularly to women in the early Church.<sup>25</sup> In Domitilla,

---

<sup>24</sup> On the use of *innocens* in catacomb epigraphy, see Hanne Sigismund Nielsen, "The value of epithets in pagan and Christian epitaphs from Rome," in *Childhood, class and kin in the Roman world*, ed. Suzanne Dixon (New York: Routledge, 2001), 173.

<sup>25</sup> Kate Cooper, *The virgin and the bride: Idealized womanhood in late antiquity* (Cambridge, MA: Harvard University Press, 1996), 74-87.

on the other hand, *virgo* appears in barely 1% of all inscriptions, and the term “Christian” or occupational titles occur even less frequently.<sup>26</sup> The epigraphic styles of Domitilla and San Giovanni differ in their use of epithets on these key points.

In their use of formulaic phrases, the two styles diverge even more strikingly. Formulaic phrases are fixed expressions describing the deceased’s current state or relationship to the tomb (see table 4.2, fig. 4.6). Typical formulas in catacomb epigraphy include *in pace* (“in peace”) and various verbs meaning “to rest or sleep” (*quiescere, dormire, etc.*). *In pace* dominates formula usage in Domitilla, appearing in nearly one-third of all inscriptions; no other formula occurs in more than 2% of the inscriptions. At San Giovanni, the most popular formula was ἐνθάδε κεῖται (“here lies [name]”), followed by two formulas connoting the purchase and ownership of the tomb: ἀγορασία (“purchase”), and τόπος or *locus* plus a personal name in the genitive case (“[Name]’s place”).<sup>27</sup> The Domitilla corpus contains five inscriptions recording sales of tombs, plus a few using the *locus*-plus-genitive formula; perhaps declaring ownership of a burial space was not the priority in Domitilla that it seems to have been in San Giovanni.<sup>28</sup> At the same time, patrons and engravers at San Giovanni seem to have been less concerned with specifying the deceased’s condition beyond saying that he or she “lies inside” the tomb. These different patterns in formula use seem to reflect not just stylistic differences, but perhaps also different social or religious functions that commemorators at these sites expected their inscriptions to perform.

---

<sup>26</sup> In Domitilla I counted ten instances of occupational titles and no instances of the term “Christian,” although there were 27 epithets that strongly suggested Christian affiliation (*martyr, presbyter, neofitus, etc.*).

<sup>27</sup> Strazzulla noted that ἐνθάδε κεῖται occurred in nearly all of Syracusan mortuary epigraphy of the “Christian” period (fourth to sixth century) that he had seen. Vincenzo Strazzulla, *Studio critico sulle iscrizioni cristiane di Siracusa* (Siracusa: Tipografia di Andrea Norcia, 1895), 11.

<sup>28</sup> The sale inscriptions from Domitilla are ICUR 8202, 7677d, 7760, 8481, and 8485. Guyon, “La vente des tombes,” 554.

Engraved images accompanying the texts of inscriptions also vary markedly between these two sites. At Domitilla, the four most popular motifs—a bird, the *chi-rho* (christogram), a palm frond, and an ivy leaf—see roughly equal usage, appearing in between 7% and 10% of all inscriptions (see table 4.3, fig. 4.7). At San Giovanni, the *chi-rho* is by far the most popular motif, occurring in 46% of all inscriptions. The *chi-rho* thus forms an important element in the San Giovanni epigraphic style, perhaps reflecting differences in the preferences and habits of that community as compared with the Domitilla corpus.

The Domitilla and San Giovanni corpora have shown that catacombs in different regions could foster the development of distinctly different epigraphic styles.<sup>29</sup> The contrasts may derive from some combination of different regional cultures, language use, and local concerns in the communities these catacombs served. As I will show below, different epigraphic styles could also develop among catacombs that ostensibly had much more in common, like those in the suburbs of Rome. Among the Roman catacombs, stylistic differences may be more closely related to ongoing, repeated contact among patrons, engravers, and inscriptions associated with a particular catacomb site.

#### Local styles: Domitilla versus S. Callixtus and the Coemeterium Maius

To more clearly define characteristics of the epigraphic style of the catacomb of Domitilla, I compare it with two other large catacombs in Rome: the catacomb of S. Callixtus, adjacent to Domitilla; and the Coemeterium Maius, located near the Via Nomentana north of the center of Rome. For this comparison, I have chosen to focus on inscriptions that include engraved images along with text, so the sample from each site represents only part of that site's

---

<sup>29</sup> For other scholars' perspectives on the site-specific styles of these catacombs, see Strazzulla, *Studio critico sulle iscrizioni cristiane di Siracusa*; Felle, "Prassi epigrafiche nella catacomba di Domitilla a Roma. Elementi di riflessione," in *Episcopus, civitas, territorium. Actas XV Congreso internacional de arqueología cristiana (Toledo, 8-12 septiembre 2008)*, Toledo.

total corpus. In my earlier research on the catacomb of Domitilla, I found that there are no substantial demographic differences between inscriptions with images and those without; my hope is that this selection strategy permits a more focused study without substantially compromising the representativeness of the data.<sup>30</sup> Below, I compare inscriptions from Domitilla to those from S. Callixtus and the Coemeterium Maius in their demographic regimes and their uses of epigraphy, phrases, and images.

### *Demographic regimes*

All three sites present roughly similar demographic regimes, with a few notable differences. In terms of gender, the sites appear fairly equal: females are represented slightly more frequently than males, with individuals of undetermined gender (or mixed-gender groups of decedents) receiving between roughly a quarter and third of inscriptions (see figs. 4.9-4.11).<sup>31</sup> S. Callixtus and the Coemeterium Maius share Domitilla's emphasis on young children (aged 0 to 7 years) and adults (aged 20 to 49 years), but there are key differences (see fig. 4.8). In S. Callixtus, young children are represented with unusually high frequency: 56% of inscriptions that indicate an age for the decedent record an age below 7 years. The Coemeterium Maius shows an opposite trend: here young children are represented less frequently, and adults more frequently, than at the other sites. These phenomena could be explained in two ways. On the one hand, the living communities using these catacombs may have been composed differently; perhaps there simply were more children among the patrons ordering inscriptions for use at S. Callixtus. On the other hand, the choice of *whom* to commemorate with a record of age at death could be an element of a site's specific style; the patrons and workers involved at S. Callixtus

---

<sup>30</sup> Kreiger, "Remembering children in the Roman catacombs," in *The Oxford handbook of childhood and education in the classical world*, 606-10.

<sup>31</sup> As noted above, counting every decedent individually reduces the numbers of "indeterminate" individuals without drastically changing the sex ratio.

may have chosen to record children's ages (or even to include children in the catacomb) more frequently than at other sites. Either way, site-specific styles come into play: the personal identities of the decedents influenced patrons' and engravers' choices, and the habits and preferences of patrons and engravers affected who received commemoration at all.

#### *Use of epithets*

A comparison of epithet usage across these three sites reveals marked contrasts (see fig. 4.12). All three corpora show similar trends in epithet *choice*, with *benemerens* ("well deserving") being most popular, followed by *filius/a* ("son/daughter"), *coniunx* (or other words meaning "spouse"), and *dulcis* ("sweet"). This pattern is typical of Roman funerary epigraphy in Italy, which tends to emphasize the deceased's good performance of familial roles (making them "well deserving") and the affective quality of "sweetness."<sup>32</sup> In terms of how these epithets are used, however, the three sites present distinctly different habits. For example, inscriptions from the Coemeterium Maius include epithets more frequently than those from Domitilla (in 48% of inscriptions versus 34%), but each epithet appears more frequently among the Domitilla inscriptions than those from the Coemeterium Maius. This means that inscriptions from Domitilla are more likely to contain multiple epithets, perhaps as part of that site's style. Meanwhile in S. Callixtus, the use of epithets is uncommon overall, showing that this element of a commemorative text was by no means a requirement of the epigraphic style at this site.

#### *Use of formulaic phrases*

An even more extreme contrast among the three sites emerges from an examination of formulaic phrase usage (see fig. 4.13). Once again, inscriptions from the Coemeterium Maius are

---

<sup>32</sup> Sigismund Nielsen, "Interpreting epithets in Roman epitaphs," in *The Roman family in Italy: Status, sentiment, space*; Sigismund Nielsen, "The value of epithets"; McWilliam, "Children among the dead."



more likely to contain a formula, but inscriptions from Domitilla are more likely to contain multiple formulas. *In pace* (“in peace”) is by far the most popular. The Domitillan epigraphic style shows a remarkable preference for this phrase, which appears in 92% of inscriptions, compared with 34% at the Coemeterium Maius and 26% at S. Callixtus.<sup>33</sup> We can only speculate about *why* this phrase was so popular at Domitilla, but the contrast between this and the two other sites is clear on this point.

### *Use of images*

Finally, differences in the epigraphic styles of these three sites can also be observed in the use of images (see fig. 4.14). The four most popular images—the bird, the *chi-rho*, the palm frond, and the ivy leaf—appear roughly equally among the three sites, with Domitilla using the bird, *chi-rho*, and palm frond a little more frequently than the other sites. By comparing the frequencies with which these motifs appear in inscriptions for decedents of various ages, it is possible to observe some potential associations between motifs and demographic groups that could derive from site-specific styles. In Domitilla, for example, birds appear in a minimum of 52% of inscriptions in any age group, with infants (up to 1 year old) and seniors (over 50 years old) seeing the highest rates of bird use. In S. Callixtus and the Coemeterium Maius, however, the groups with the most frequent use of birds are young children (up to 7 years) and adults (20 to 49 years). If patrons and engravers conceived of some conceptual link between certain motifs and people of certain ages, they seem to have done so differently from site to site.

By comparing the use of words and images in the epigraphy of whole catacomb sites both across regions and inside a single city, we can observe patterns that may be attributable to site-

---

<sup>33</sup> NB: here I am examining only inscriptions with images from Domitilla, so the figures for epithet and phrase use are different from those for the whole corpus, discussed in comparison with San Giovanni, above.

specific styles. Such styles would develop over time among the patrons and engravers involved with a catacomb as they interacted with each other and with the growing body of inscriptions at the site.<sup>34</sup> Looking at large numbers of inscriptions allows us to approach groups of patrons and workers who are difficult to identify beyond their association with a particular catacomb site. Such a broad view of catacomb epigraphy is not, however, without its problems. Close reading of individual inscriptions—both as texts and as objects—can balance and enrich our understanding of catacomb epigraphy and its makers.

### **Inscriptions as artifacts**

Approximately 700 inscriptions have been documented in the catacomb of San Giovanni in Syracuse, and many of those engraved on stone plaques are now kept in the Museo Archeologico Regionale Paolo Orsi near the catacomb.<sup>35</sup> Of those inscribed plaques in the museum, 151 were accessible for firsthand study, either on display or in a temporary storage area. These 151 inscriptions represent the smaller objects in the corpus, in the range of 10 to 30 cm on each side and 2 to 5 cm thick, plus a few larger objects that happened to be accessible as well. The conclusions reached below might thus reflect phenomena particular to the smaller plaques. By noting the types of stone represented, observing the tool marks, and attempting to distinguish different levels of apparent skill in the carving, it is possible to draw some inferences about the engravers who contributed inscriptions to this catacomb.

---

<sup>34</sup> See Chapter 5 for discussion of how interaction could have shaped catacomb cultural production, including epigraphic styles. Cf. Borbonus' thinking on the cumulative influence of burials in *columbaria*: "Individual niches cannot be perceived individually, but their endlessly repeated continuum gives visual expression to the entire *columbarium* collective as an undivided entity." Borbonus, *Columbarium tombs*, 49.

<sup>35</sup> Carmelo Scandurra, "Epigrafia e società," in *La Rotonda di Adelfia: Testimonianze archeologiche dalla catacomba di S. Giovanni*, ed. Gioconda Lamagna and Rosalba Amato (Palermo: Regione Siciliana, Museo Archeologico Regionale Paolo Orsi, 2014), 21.

## Types and treatments of stone

The types of stone represented in this corpus offer a view of their makers' access to various support materials, whether local or imported, purpose-made or reused. Among the 151 plaques, 142 appear to be made of marble of various types, 7 of a limestone or tufaceous stone, and 2 of unidentified materials.<sup>36</sup> The prevalence of marble is immediately striking because of the presence of enormous limestone quarries in Syracuse, a few hundred meters from the catacomb, which supplied building material for the ancient city over centuries.<sup>37</sup> Limestone was presumably available in abundance; the choice of marble for the vast majority of the plaques thus seems to represent a preference on the part of the patrons or the engravers for an imported (and probably more expensive) material.<sup>38</sup> Of the marble types represented, two-thirds are white marbles, and the rest gray or (rarely) polychrome.<sup>39</sup> This data can be compared to a survey of over 8,000 marble pieces used to decorate bars at Pompeii and Herculaneum, conducted by Fant, Russell, and Barker. They found that white and gray marbles made up the majority of the pieces used in bars, and most of these seem to have come from the ancient quarries at Luna (Carrara, Italy).<sup>40</sup> Even without chemical analysis of the San Giovanni marbles, it seems possible that the whites and grays may also have come from the principal white marble quarry operating in Italy

---

<sup>36</sup> I follow Fant, Russell, and Barker's definition of marble as "any stone capable of taking a polish." J. Clayton Fant, Ben Russell, and Simon J. Barker, "Marble use and reuse at Pompeii and Herculaneum: The evidence from the bars," *Papers of the British School at Rome* 81 (2013): 187.

<sup>37</sup> Filippo Coarelli and Mario Torelli, *Sicilia, Guide archeologiche Laterza 13* (Roma: Laterza, 1984), 258-61.

<sup>38</sup> It is possible that a preference for one type of stone over another could stem from a sense among patrons or engravers that one type of stone was more appropriate for funerary contexts than another.

<sup>39</sup> Here again I use Fant, Russell, and Barker's system of classification into white, gray, and polychrome marbles. In their corpus of over 8,000 marble pieces, half were white, one-fifth were gray, and just over one-quarter were polychrome. Fant, Russell, and Barker, "Marble use and reuse at Pompeii and Herculaneum" 187.

<sup>40</sup> *Ibid.*, 187-88.

in the Imperial period.<sup>41</sup> The polychrome examples, on the other hand, are more likely to have originated outside of Italy and been imported for decorative or other uses.<sup>42</sup> Although it would be beyond the scope of this study to try to identify each of the marble types through chemical analysis, even this imprecise data suggests that the San Giovanni engravers had access to a range of marbles quarried far from Syracuse, linking these workers, even distantly and indirectly, to the broader Mediterranean stone trade.<sup>43</sup>

Where exactly did the San Giovanni engravers acquire these pieces of stone? Fant, Russell, and Barker judge marble pieces to be reused on one or more of the following criteria:

- the presence of fragmentary inscriptions;
- relief sculpture that suggests former use as revetment moulding;
- rust or fragments of iron, again suggesting use as revetment;
- shaping consistent with architectural uses (thresholds and windowsills, in particular);
- geometric shapes and thinness (0.5 – 2 cm) characteristic of *opus sectile* pieces;
- and, less conclusively, irregular shapes and broken edges, which occur on 90% of the pieces in their sample.<sup>44</sup>

They argue that stones exhibiting these criteria could have been reclaimed from renovation or demolition projects, sold on an open market or by specialized dealers, or been traded privately in

---

<sup>41</sup> Luna was “the most intensively exploited source of white marble in the western Mediterranean” from the Augustan period onward; Russell, *The economics of the Roman stone trade*, 91.

<sup>42</sup> In Fant, Russell, and Barker’s sample, the most common polychrome marbles are *cipollino* (quarried principally in Euboea, Greece), *giallo antico* (Chemtou, Tunisia), *africano* (Teos, Asia Minor), and *portasanta* (Chios, Greece). Fant, Russell, and Barker, “Marble use and reuse at Pompeii and Herculaneum,” 188; Russell, *The economics of the Roman stone trade*, 86-93.

<sup>43</sup> On the Roman stone trade, especially in the Imperial period, see Russell, *The economics of the Roman stone trade*. For Sgarlata’s observations on reused stone in Syracusan epigraphy, see Sgarlata, “Parole e immagini nelle catacombe di Siracusa,” 515 ff.

<sup>44</sup> Fant, Russell, and Barker, “Marble use and reuse at Pompeii and Herculaneum,” 198-99.

the social networks of the people who owned the bars.<sup>45</sup> However reusable stone circulated, the authors speculate that it happened locally in most cases.<sup>46</sup> Since marble for funerary uses traveled through the same channels as marble for other uses, Fant, Russell, and Barker's findings offer valuable comparanda for the reuse of marble in catacombs.

A large number of the San Giovanni plaques show potential evidence of previous use, suggesting that at least for the smaller plaques, engravers may have "recycled" stone from other contexts. Nine plaques have relief sculpture on their reverses, and five have inscriptions on both sides, reflecting the reclamation and reuse of those pieces of stone (see figs. 4.15-4.17). The shapes of some plaques may also suggest reuse. The typical catacomb plaque is rectangular, making it easy to affix across the rectangular opening of a *loculus* or similar tomb; seventy of the San Giovanni plaques had unusual shapes (triangles, circles, trapezoids, etc.) before their inscriptions were carved, suggesting that those pieces of stone may have served some other purpose previously, or may have been reshaped after breaking (see fig. 4.18). Finally, it may be worth noting that 91 of the San Giovanni plaques were polished on both sides. While this does not strongly point to reuse, it opens up the possibility. Polishing a stone slab on a side never meant to be seen may seem like a waste of effort, but panels intended for revetment were sometimes polished on both sides.<sup>47</sup> Setting polish aside, the surer signs of reuse indicate that the San Giovanni engravers had access to sources of reclaimed stone and frequently took advantage of these sources when making small plaques.

---

<sup>45</sup> Ibid., 200-02, 05.

<sup>46</sup> Ibid., 204.

<sup>47</sup> Of over 200 marble slabs found stacked in the kitchen of an inn (waiting to be installed as flooring or revetment), "the majority" had been polished on both sides, and only "a few" were rough on one side. Antonio De Simone and Salvatore Ciro Nappo, eds., ...*Mitis Sarni Opes. Nuova indagine archeologica in località Murecine* (Napoli: Denaro, 2000), 125, cat. no. 18.

### Use of tools and guidelines

Tool marks and guidelines reflect engravers' working processes, and differences in these processes can shed light on the diverse group of engravers represented at San Giovanni. The vast majority of the inscriptions were cut using flat chisels (see fig. 4.19), but a few show the possible marks of punches, round chisels, and even a drill (see figs. 4.20, 4.21). Among the flat-chiseled inscriptions, it is possible to observe many different hands interacting with stone of various grain size and hardness; some of the incisions are clean-edged, symmetrical, and consistent, while others vary wildly, even on a single plaque. These diverse styles of cutting may also reflect different levels of skill, as I discuss in greater detail below.

Guidelines can help an engraver lay out a text in even rows and center the text block on a plaque. While nothing can be said about guidelines that were removed from plaques after they served their purpose, 32 of the San Giovanni plaques preserve guidelines that were incised into the stone before the text was cut. Of these plaques, 20 preserve a full set of guidelines—that is, lines at the edges of the text block and above or below each row of text (see fig. 4.19). The rest preserve guidelines only in some parts of the plaque, with some rows of text apparently unguided. Both single and double guidelines appear between rows of text, but single ones are twice as common. The choice of how to use guidelines (if at all) and whether to leave or remove them probably represents habits that engravers developed during the course of their practice. Taking tool marks and guidelines as a whole, we can catch a glimpse of the wide variety of workers who contributed inscriptions at San Giovanni.

### “Regularity”

More difficult to analyze objectively is the “whole package” of an engraver's practices, from the arrangement of the text on the support to the making of individual incisions. It would be

too easy to assume that a highly regular inscription (with clean lines, uniform letter shapes and sizes, finishing that removes tool marks, etc.) came from a skilled worker and a highly irregular one from an amateur; even skilled workers can produce irregular inscriptions if perfect regularity was not the goal.<sup>48</sup> Instead, perhaps it is better to start from the premise that an inscription perfectly regular in cut, orthography, and layout takes more time, effort, and experience to produce than an irregular one, and that the workers most likely to have these resources at hand were practiced professionals rather than occasional or novice engravers.<sup>49</sup> Reexamining the San Giovanni inscriptions according to their “regularity,” it may be possible to make inferences about the sorts of engravers involved with this catacomb.

The criteria for sorting inscriptions according to regularity derive from a combination of letterforms, layout of the inscription on the support, and orthography (i.e., spelling and grammar). In a “highly regular” inscription, letterforms are consistent throughout the text (see fig. 4.22); letter size can vary in the styles of some periods, so it is more important that every instance of a given letter have the same shape and size rather than that all letters should occupy the same amount of space. The lines of text run straight across the support, letters are evenly spaced between the lines, and orthography is consistent throughout the text (and usually also

---

<sup>48</sup> And we should not assume that perfect regularity was, in fact, always the intention. Bisconti and Carletti have suggested that the (less wealthy) users of the catacombs embraced a humble aesthetic as being more in line with Christian ideals than the “pagan” traditions of funerary display. Irregularity in epigraphy could be an expression of such an aesthetic. Fiocchi Nicolai, Bisconti, and Mazzoleni, *The Christian catacombs of Rome*, 75-84.

<sup>49</sup> In Italian epigraphic scholarship, irregular inscriptions are sometimes designated *extraofficinale*—i.e., “made outside the workshop,” by non-professional engravers. For an example, see Antonio Enrico Felle, “Recenti acquisizioni epigrafiche da catacombe romane,” *Mélanges de l'École Française de Rome. Antiquité* 106, no. 1 (1994): 54, cat. no. 5. The concept of professionalism (i.e., full-time dedication of one’s labor to a particular craft) existed for certain types of artistic work in late antiquity, as attested by tax exemptions for painters, sculptors, mosaicists, and other specialized trades. *Cod. Theod.* XIII, 4, 1-2. Cyril A. Mango, *The art of the Byzantine Empire, 312-1453: Sources and documents* (Englewood Cliffs, NJ: Prentice-Hall, 1986), 14-15.

with contemporary conventions). The most regular funerary inscriptions bear resemblances to monumental epigraphy, with a perfect (or nearly perfect) attention to the uniformity of the letters and lines cut cleanly and sharply, usually with the triangular profile created by a flat chisel. Inscriptions of this sort require the most effort and practice to produce, and therefore their makers are likely to have been workers with a high degree of specialized training and experience.

“Somewhat regular” inscriptions may have letterforms that vary over the course of a text, lines that wander over the support, and cuts made with various tools and varying degrees of precision (see fig. 4.23). Orthography may vary from the norm, but the text remains comprehensible overall. The minimum amount of skill and practice needed to make such an inscription is lower, so while a highly skilled worker could produce less regular inscriptions, the range of possible makers broadens to include workers with less experience and poorer training (but not total novices).

“Irregular” inscriptions combine heterogeneous letterforms, confused layouts, unpracticed cuts (e.g., showing multiple stray scratches), and content more or less incomprehensible due to deviant orthography (see fig. 4.24).<sup>50</sup> In Rome, irregular inscriptions often take the form of incisions in the mortar that seals *loculi*; *fossores* or commemorators may

---

<sup>50</sup> Carletti views such deviations from traditional carving styles as a feature of the late fourth century, when the traditional engraving techniques were being neglected and “extra-official” (i.e. outside of traditional workshops, amateur) production was on the rise. Carlo Carletti, “Nascita e sviluppo del formulario epigrafico cristiano: Prassi e ideologia,” in *Le iscrizioni dei cristiani in Vaticano: Materiali e contributi scientifici per una mostra epigrafica*, ed. Ivan Di Stefano Manzella (Roma: Edizioni Quasar, 1997), 159-60. For inscriptions not found *in situ*, and which cannot be dated by any means other than paleography, I think it safer to pursue the “extra-official” line of argument than a chronological one.



have made these inscriptions at the time of entombment.<sup>51</sup> Occasionally one finds irregular inscriptions committed to stone as well.

Almost all of the San Giovanni inscriptions can be classified as “highly regular” or “somewhat regular,” with only five falling into the “irregular” category. This division seems to reflect workers most of whom had substantial practice and experience in making inscriptions, plus a few inexperienced engravers. Of course, it is possible for a highly skilled worker to produce inscriptions of greater or lesser regularity, so there may be some overlap across categories. Eleven of the inscriptions have qualities associated with monumental styles of various periods, indicating that the patrons associated with this catacomb had local access to stonecutters of the highest level of skill.<sup>52</sup> At the other end of the regularity spectrum is the engraver of Museo Paolo Orsi inv. no. 14426, who made irregular letterforms with deep, narrow incisions finished with drill holes in place of serifs (see figs. 4.21, 4.24). No other inscription in the corpus shares this carving technique. Although the “regularity” metric has obvious limitations, examining a corpus of inscriptions in this way sheds light on the potential range of engravers and skills represented at a catacomb.

---

<sup>51</sup> Marucchi, *Christian epigraphy*, 53. Examples include an inscription scratched in mortar on the tomb of a barley-seller (*ICUR* 7751, Marucchi cat. no. 287), and another that specifies the exact position of the tomb on which it is scratched (“eleventh gallery, second wall”; *ICUR* 25230, Marucchi cat. no. 387). Cf. Liccardo cat. no. 112, a mortar inscription that combines some comprehensible text with an incomprehensible sequence of letters (in a different hand) in the place where the name of the decedent should be. Could this be a case of a practiced writer creating the first part of the inscription, and an unpracticed one attempting to complete it, using the letterforms that came to mind without, apparently, a clear grasp of what they were or what they meant?

<sup>52</sup> These are Museo Paolo Orsi inv. nos. 52, 131-X, 260, 263, 8733, 13042, 13061, 13069, 14462, 15532, 15548. Number 131-X is a small fragment with part of a single letter in monumental style on one side; it is not clear, therefore, if the monumental inscription was intended for use in the catacomb, or if a piece of stone with a monumental inscription was reused for a catacomb plaque.

## Conclusion

In this chapter I have approached catacomb epigraphy from two directions, taking the epigraphic corpora of whole catacombs together for quantitative analysis and site-to-site comparison, and examining the physical properties of inscriptions and their supports as artifacts. By comparing patterns in the use of words and images in inscriptions from multiple sites, we can note differences in site-specific epigraphic styles, which may reflect ongoing collaboration among the many workers and patrons active at each site over time. The materials used as supports for inscriptions—local or imported stone, new or reworked pieces—help us trace engravers' connections supplies and suppliers near and far. Close examination of the actual marks made by the engravers, as well as the overall effects of cutting style and inscription design, can shed light on the different types of workers who contributed inscriptions to a catacomb, from highly skilled professionals to relative novices. These are new directions in the study of catacomb epigraphy, and these methods have the potential to produce even more interesting results if applied systematically to other corpora.

| Epithet  | Domitilla<br>(n = 2875) | San Giovanni<br>(n = 151) |
|--|-------------------------|---------------------------|
| <i>Benemerens</i>  | 13%                     | 0%                        |
| <i>Filius/a</i>  | 9%                      | 3%                        |
| <i>Coniunx</i>   | 9%                      | 3%                        |
| <i>Dulcis</i>  | 7%                      | 0%                        |
| <i>Innox</i>   | 1%                      | 3%                        |
| <i>Carus</i>   | 1%                      | 0%                        |
| <i>Mater/pater</i>   | 1%                      | 0%                        |
| <i>Virgo</i>   | 1%                      | 2%                        |
| <i>Infans</i>  | <1%                     | 1%                        |
| “Christian”  | <1%*                    | 3%                        |
| Occupational title   | <1%                     | 2%                        |
| * Although “Christian” (χριστιανός) does not appear in Domitilla, there are 27 uses of other epithets reflecting Christian affiliation ( <i>neofitus</i> , <i>presbyter</i> , etc.). |                         |                           |

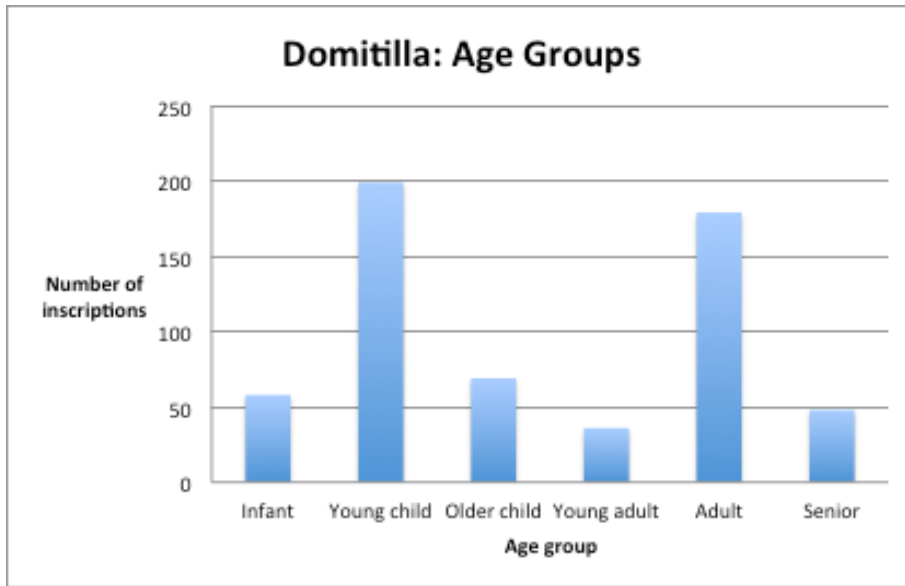
**Table 4.1. Use of epithets across all inscriptions from Domitilla and San Giovanni.** A given inscription may contain more than one epithet.

| Formula                              | Domitilla<br>(n = 2875) | San Giovanni<br>(n = 151) |
|--------------------------------------|-------------------------|---------------------------|
| <i>In pace</i>                       | 30%                     | 3%                        |
| <i>Quiescere</i>                     | 2%                      | 1%                        |
| <i>Dormire</i>                       | 1%                      | 3%                        |
| <i>Vivere</i>                        | 1%                      | 0%                        |
| <i>In Deo</i>                        | 1%                      | 1%                        |
| <i>In Christo</i>                    | 1%                      | 3%                        |
| <i>In Iesu</i>                       | <1%                     | 0%                        |
| <i>Enthade kitai</i>                 | <1%                     | 44%                       |
| <i>Locus/τόπος</i> + genitive        | <1%                     | 10%                       |
| Various expressions of purchase/sale | <1%                     | 5%                        |

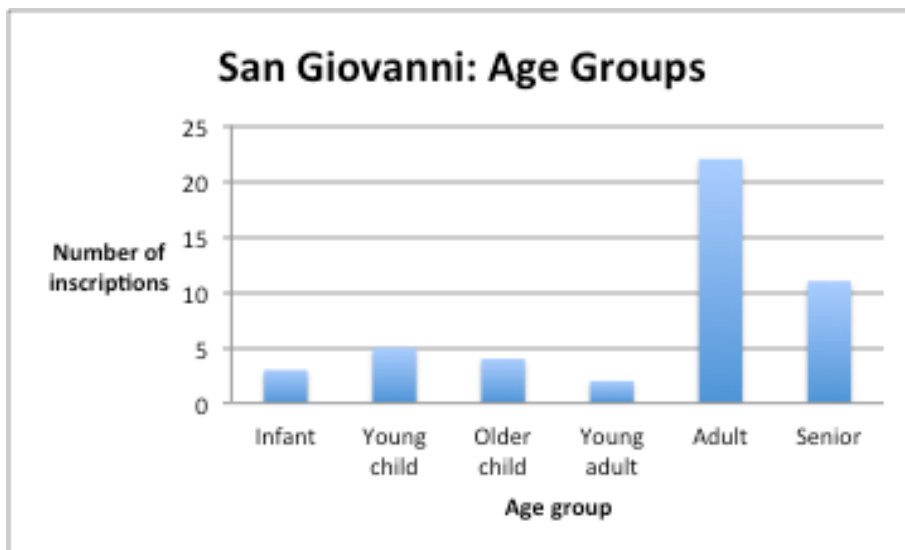
**Table 4.2. Use of formulaic phrases across all inscriptions in Domitilla and San Giovanni.**

| Motif          | Domitilla<br>(n = 2875) | San Giovanni<br>(n = 151) |
|----------------|-------------------------|---------------------------|
| Bird           | 10%                     | 7%                        |
| <i>Chi-rho</i> | 8%                      | 46%                       |
| Palm frond     | 8%                      | 8%                        |
| Ivy leaf       | 7%                      | 5%                        |

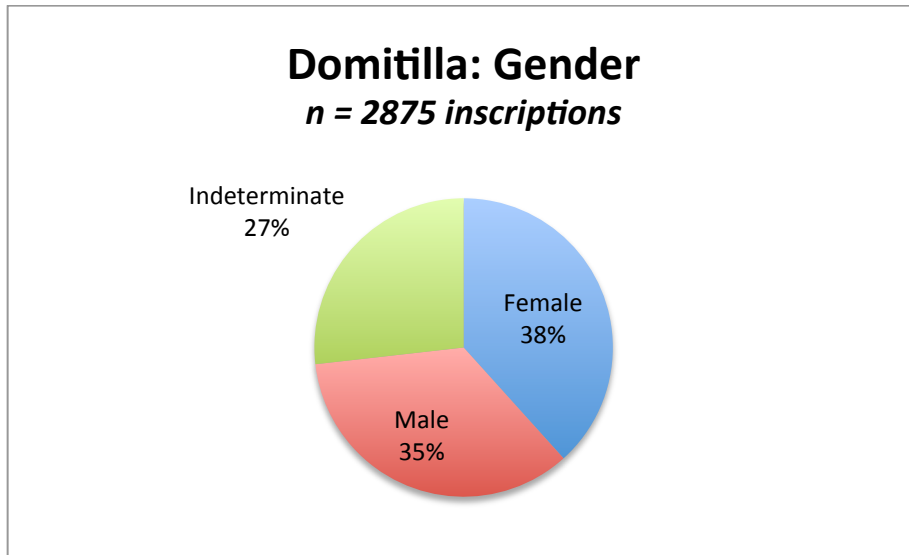
**Table 4.3. Use of the most popular engraved motifs among all inscriptions from Domitilla and San Giovanni.**



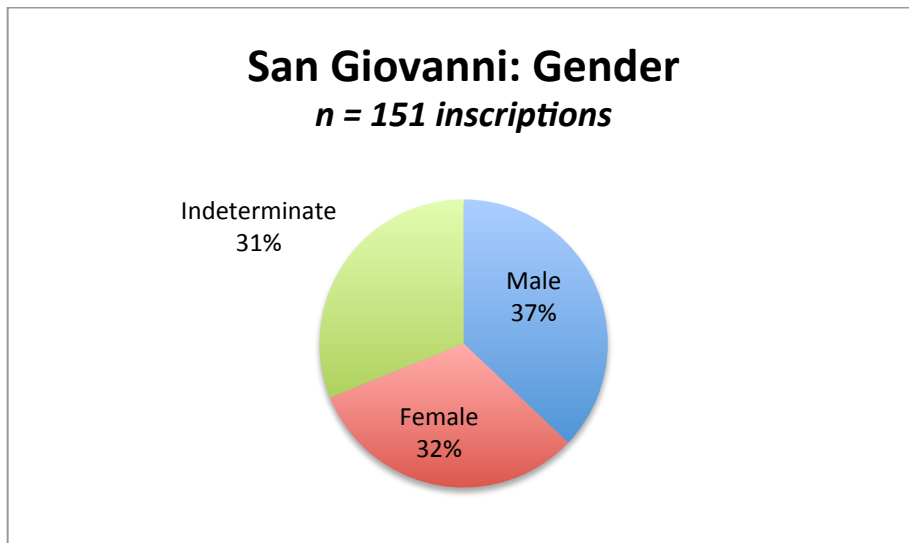
**Figure 4.1. Ages recorded in Domitillan inscriptions, by age group.** “Infant” = 0 to 1 year; “young child” = 0 to 7 years; “older child” = 8 to 14 years; “young adult” = 15 to 19 years; “adult” = 20 to 49 years; “senior” = 50 years or more.



**Figure 4.2. Ages recorded in inscriptions at San Giovanni, by age group.** “Infant” = 0 to 1 year; “young child” = 0 to 7 years; “older child” = 8 to 14 years; “young adult” = 15 to 19 years; “adult” = 20 to 49 years; “senior” = 50 years or more.



**Figure 4.3. Gender as represented in Domitillan inscriptions.**



**Figure 4.4. Gender as represented in inscriptions from San Giovanni.**

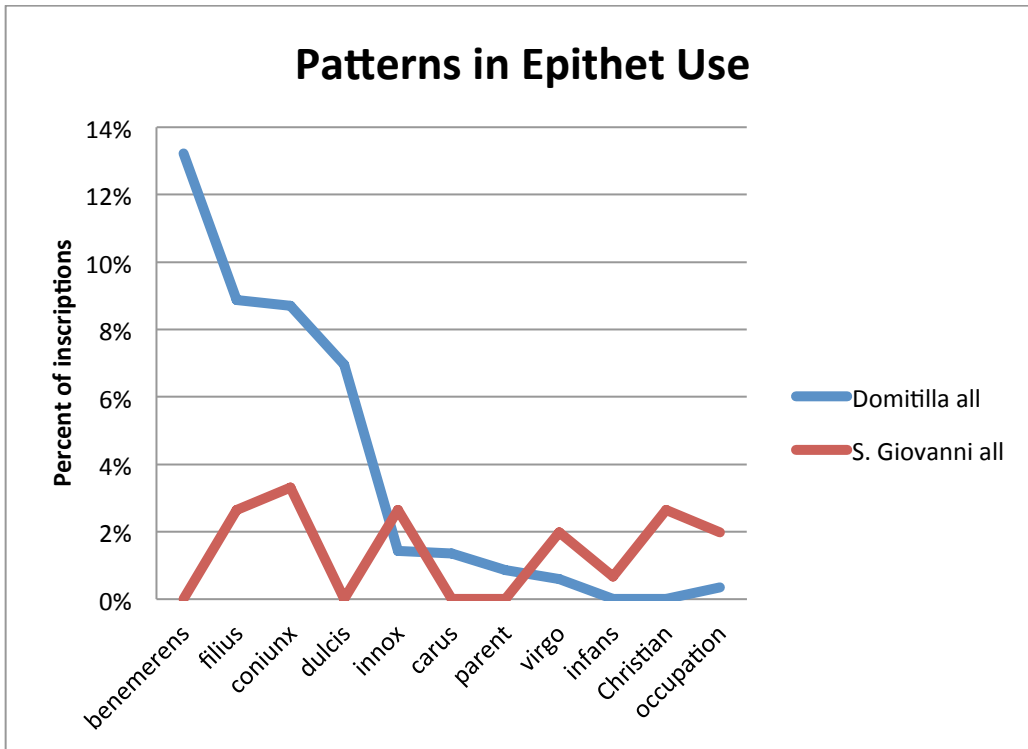


Figure 4.5. Graphic representation of patterns of epithet use in Domitilla and S. Giovanni.

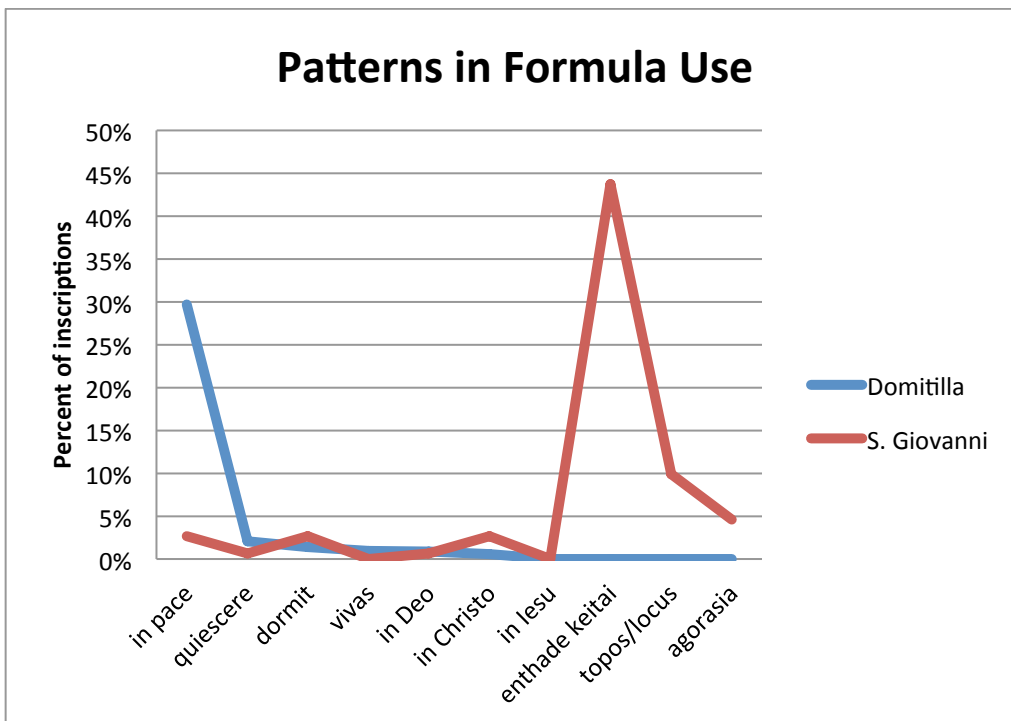


Figure 4.6. Graphic representation of patterns of formulaic phrase use in Domitilla and S. Giovanni.

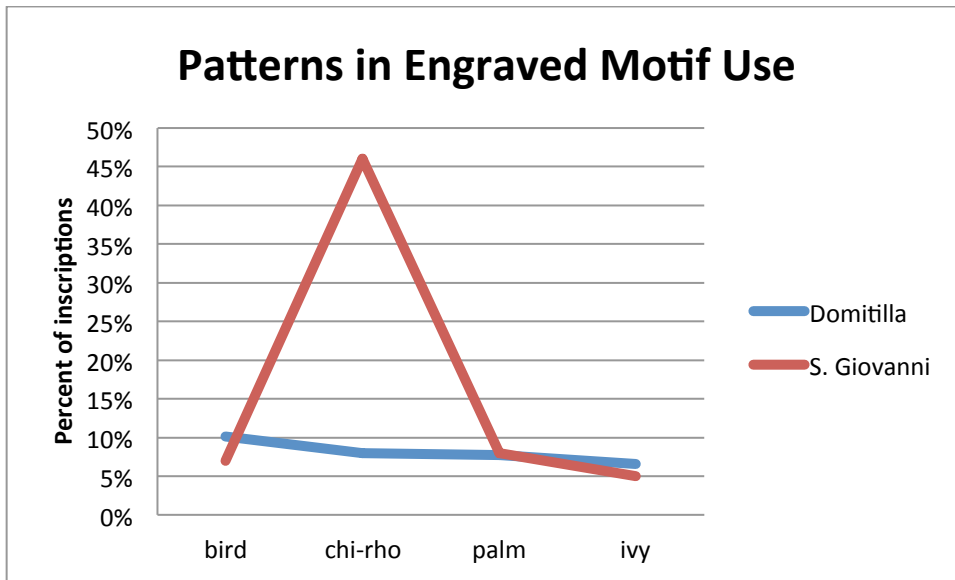


Figure 4.7. Graphic representation of engraved motif use in Domitilla and S. Giovanni.

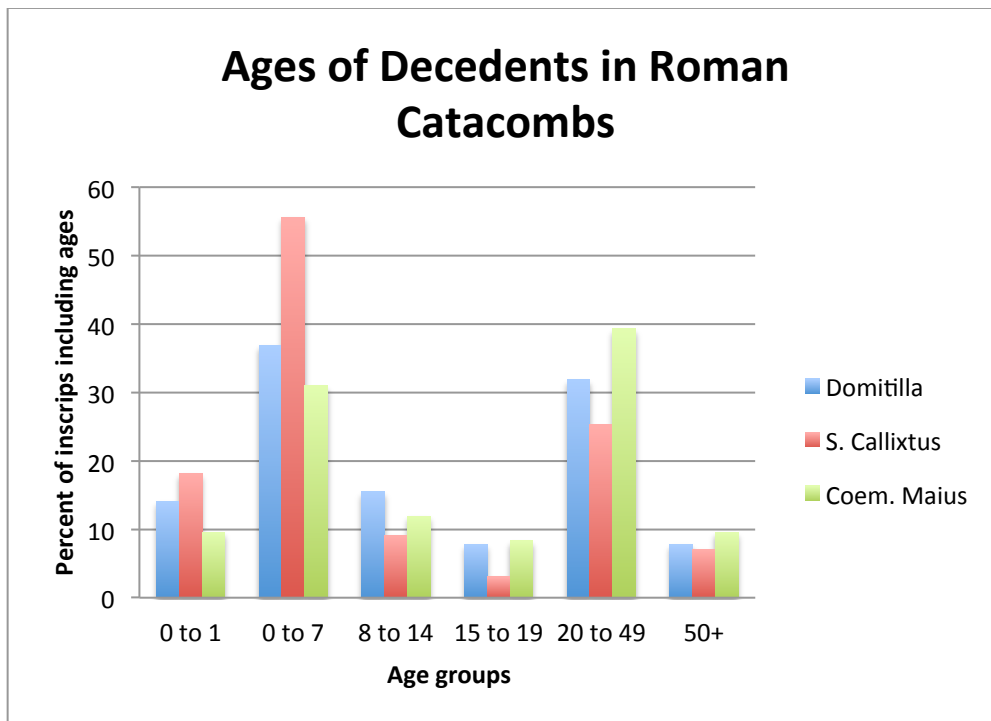


Figure 4.8. Ages recorded in inscriptions from Domitilla, S. Callixtus, and the Coemeterium Maius.

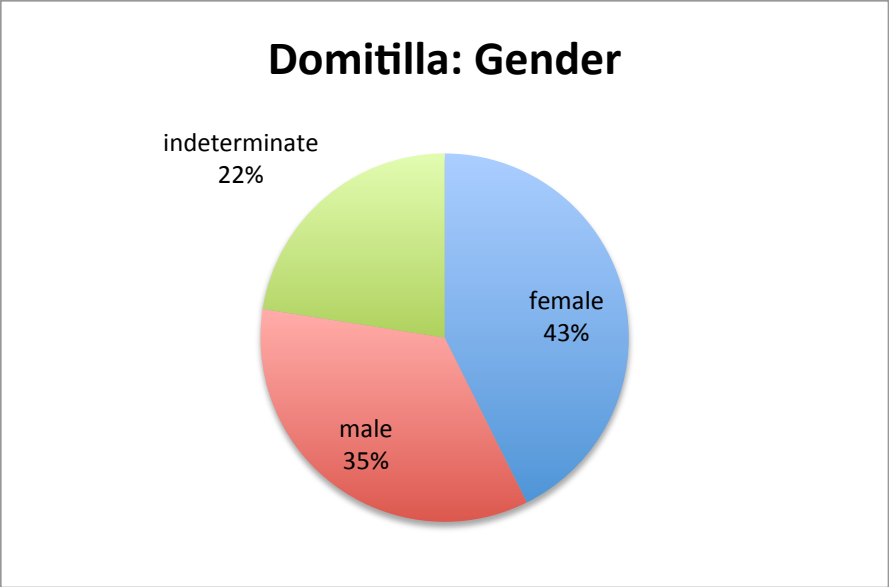


Figure 4.9. Genders represented in inscriptions from Domitilla.

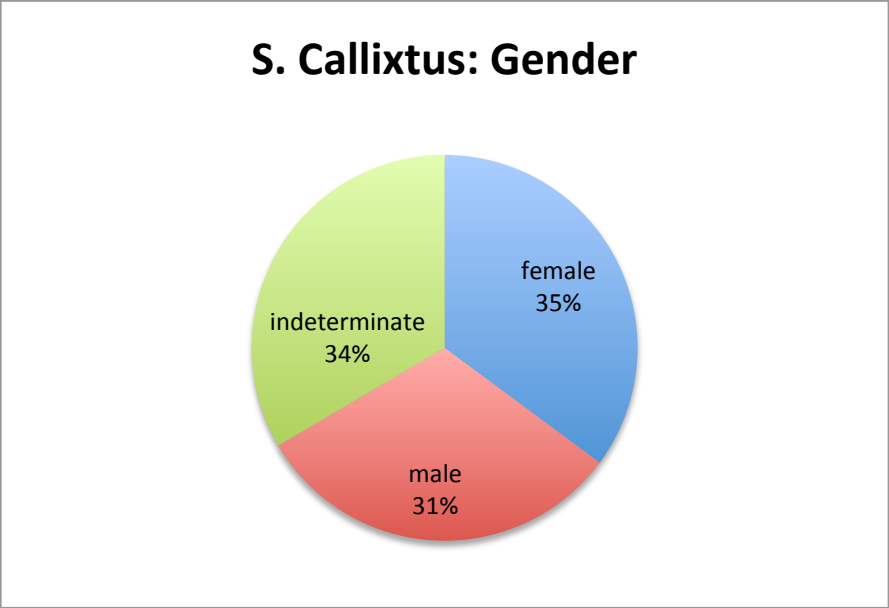


Figure 4.10. Genders represented in inscriptions from S. Callixtus.



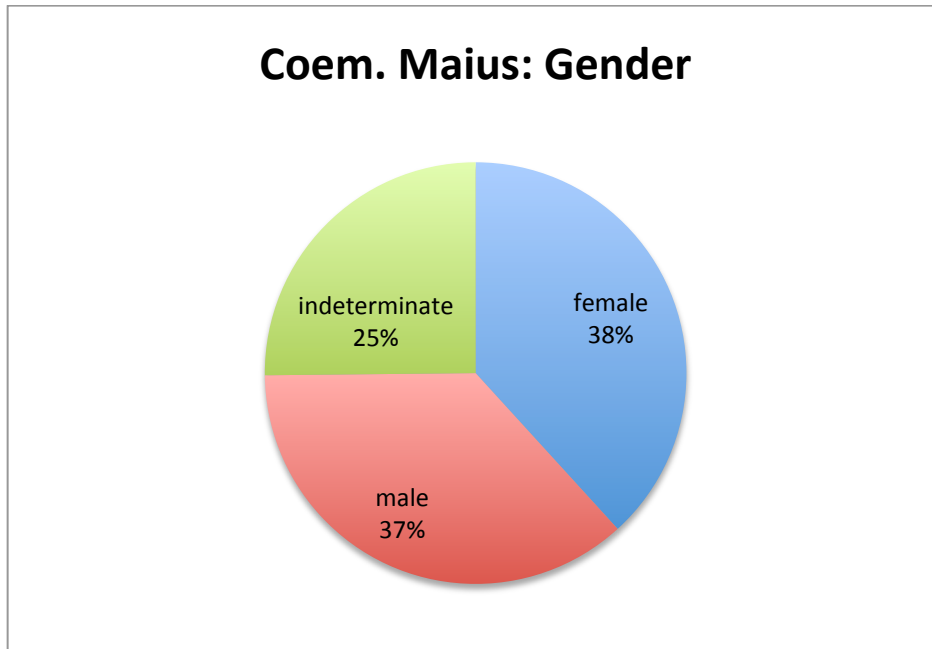


Figure 4.11. Genders represented in inscriptions from the Coemeterium Maius.

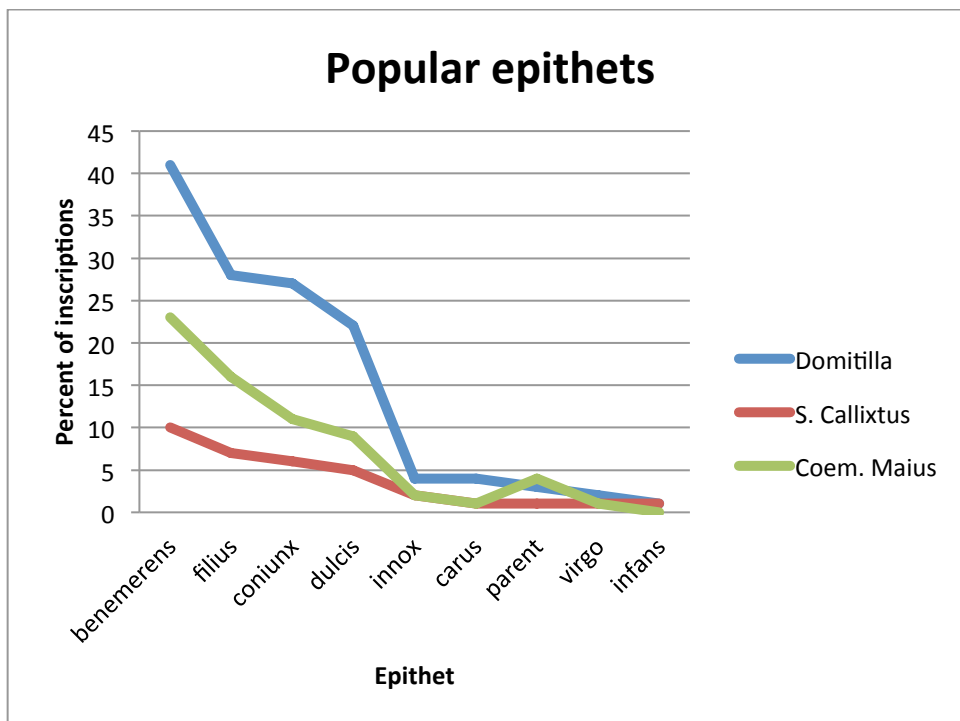
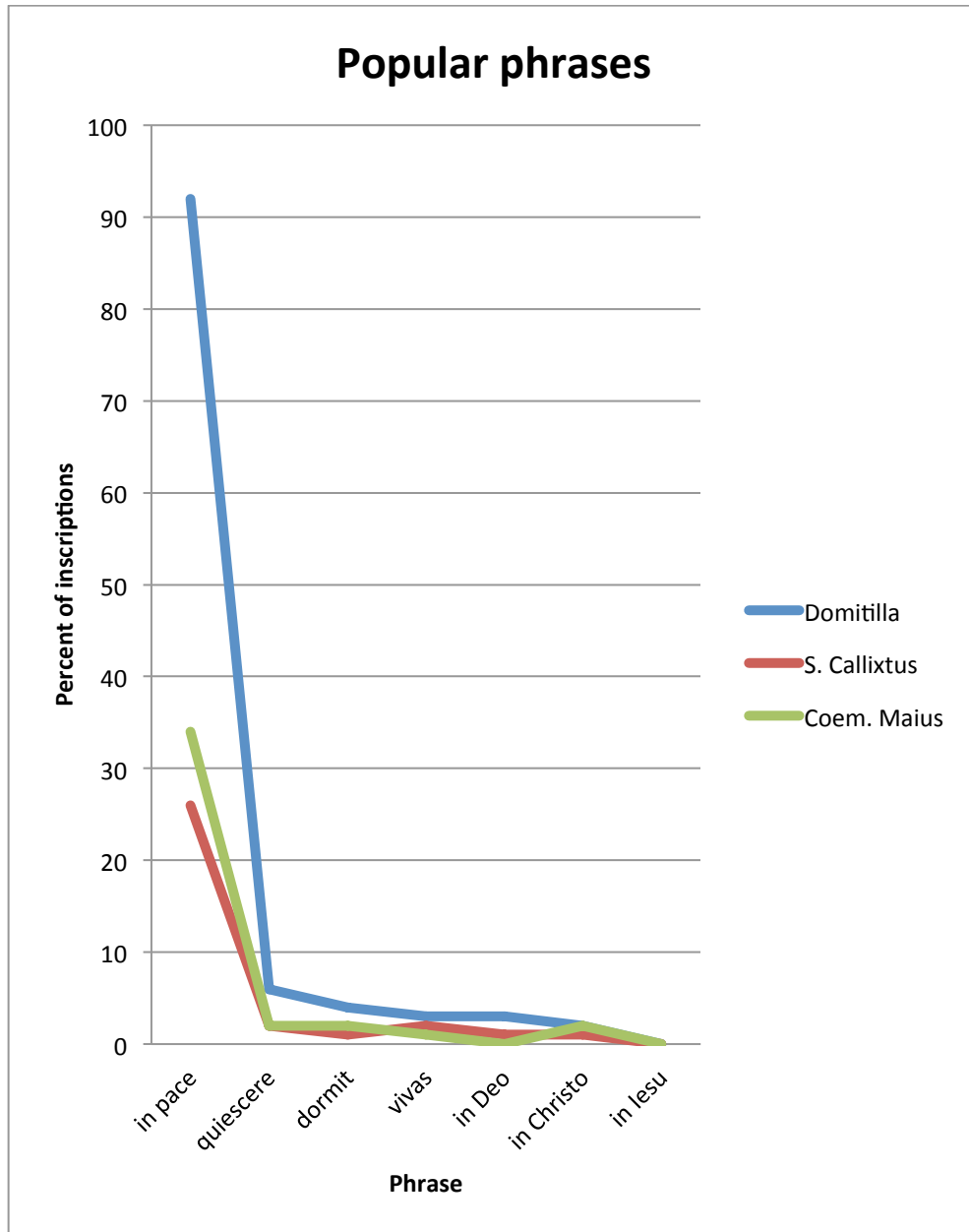


Figure 4.12. Graphic representation of patterns of epithet use in Domitilla, S. Callixtus, and the Coemeterium Maius.



**Figure 4.13. Graphic representation of patterns of formulaic phrase use in Domitilla, S. Callixtus, and the Coemeterium Maius.**

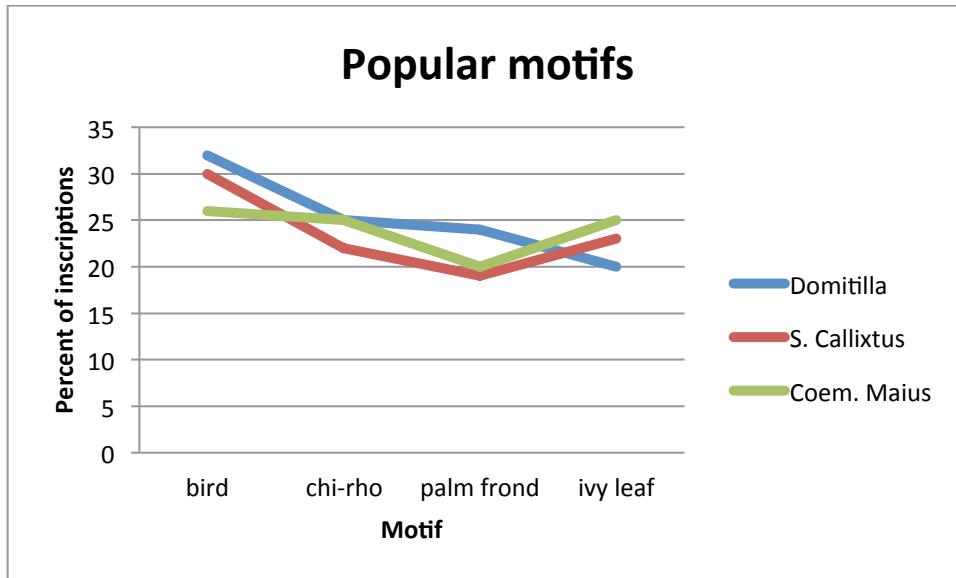


Figure 4.14. Graphic representation of patterns of engraved motif use in Domitilla, S. Callixtus, and the Coemeterium Maius.

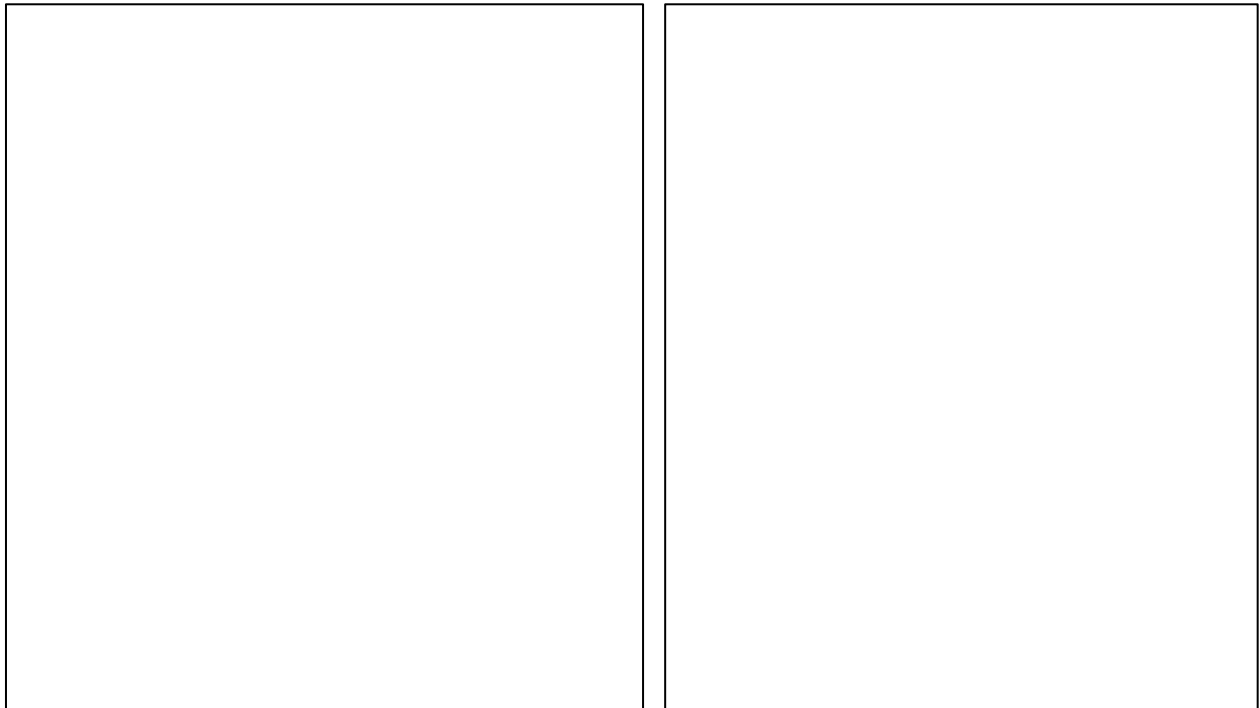
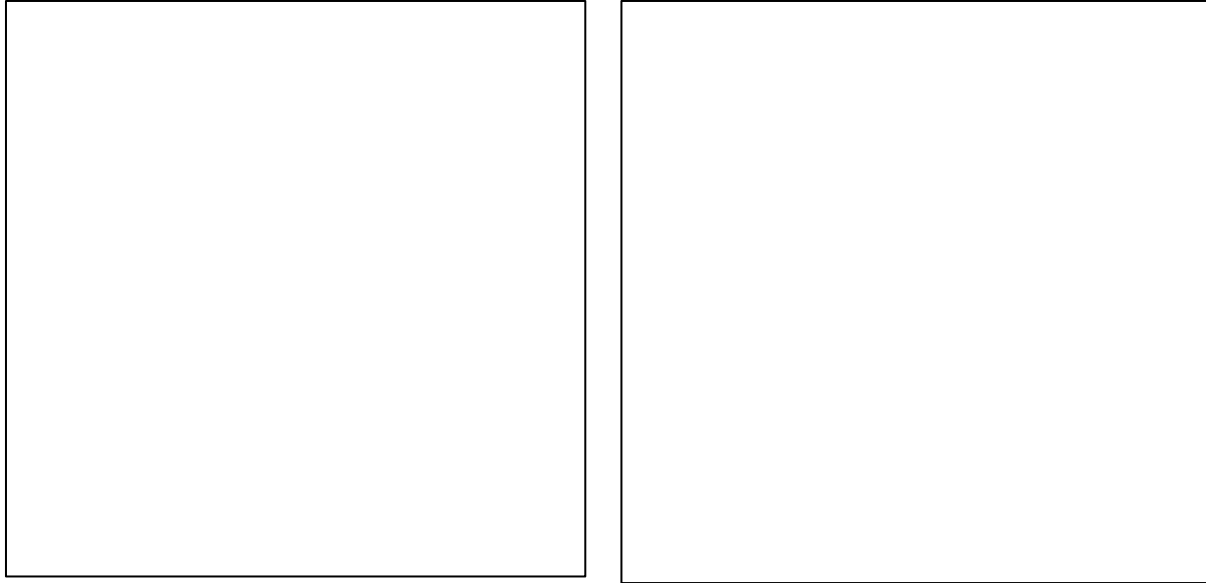
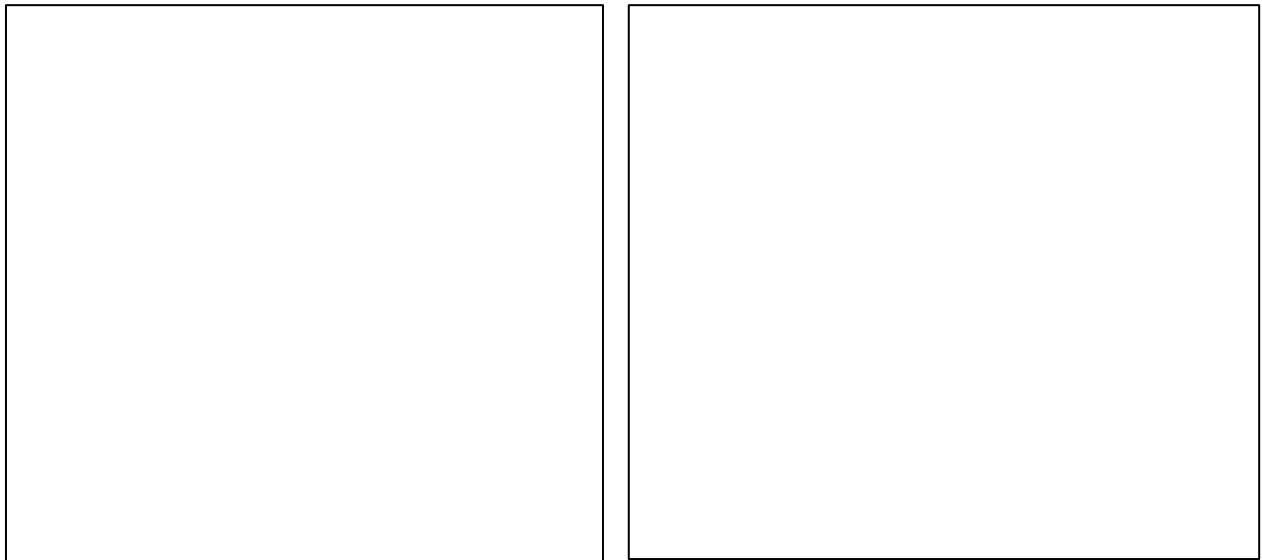


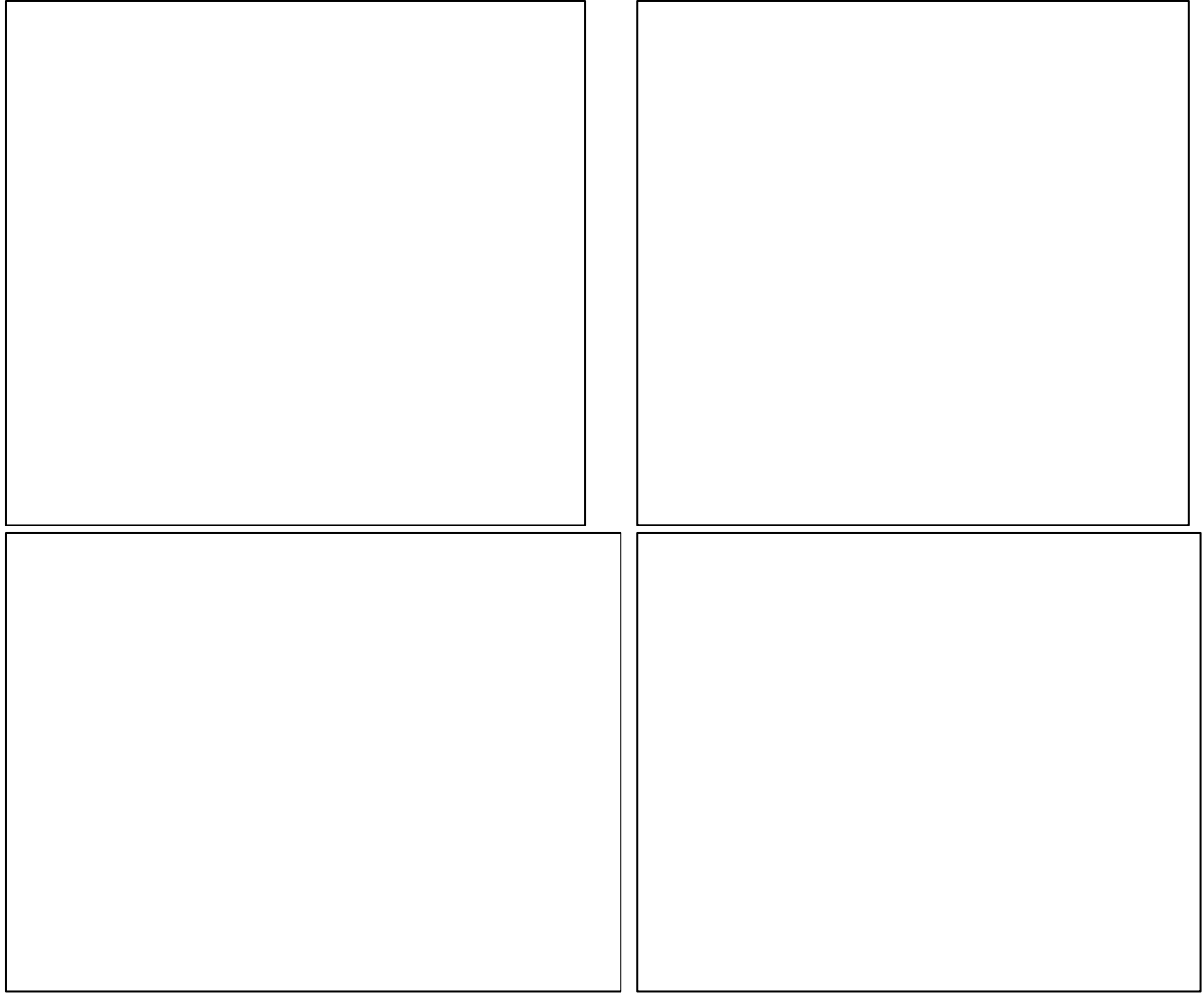
Figure 4.15. Museo Archeologico Regionale Paolo Orsi (MARPO) inv. no. 33, showing reuse of a piece of sculpted marble for a funerary inscription. Photo: author.



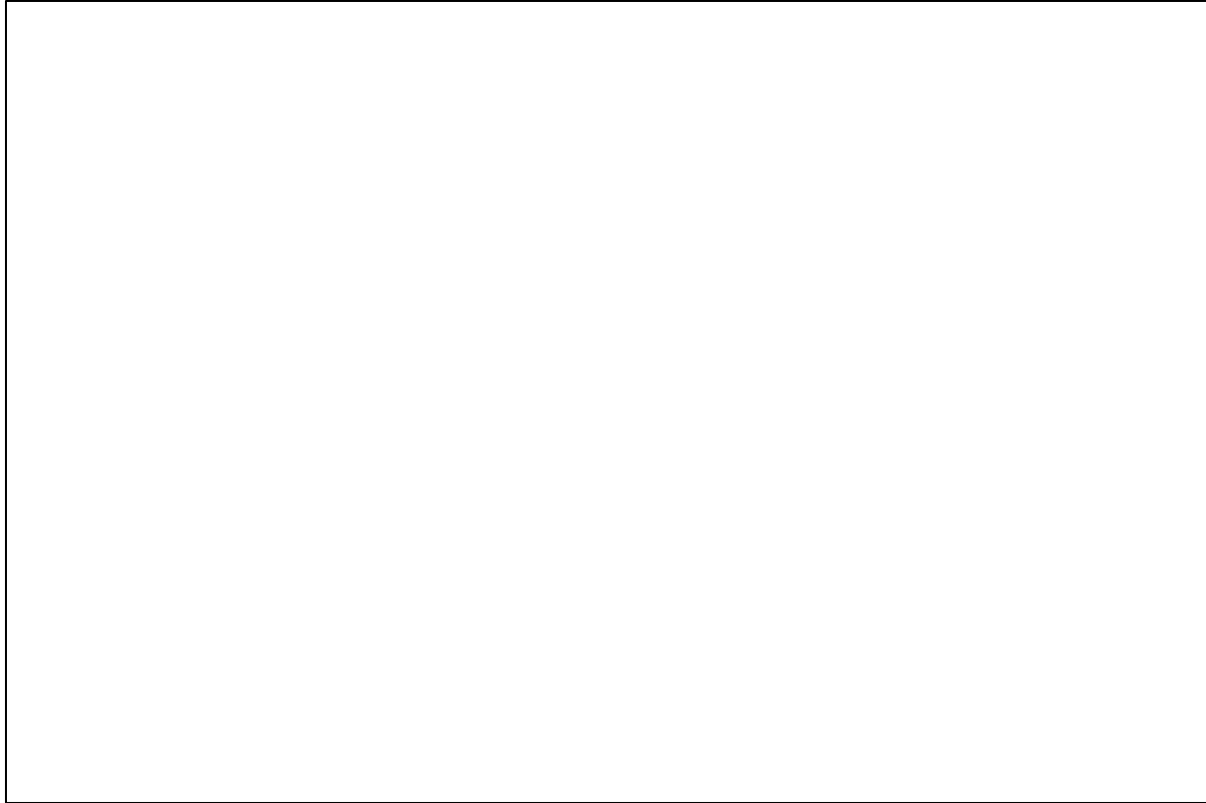
**Figure 4.16. MARPO inv. no. 14439, showing reuse of a piece of sculpted marble for a funerary inscription. Photo: author.**



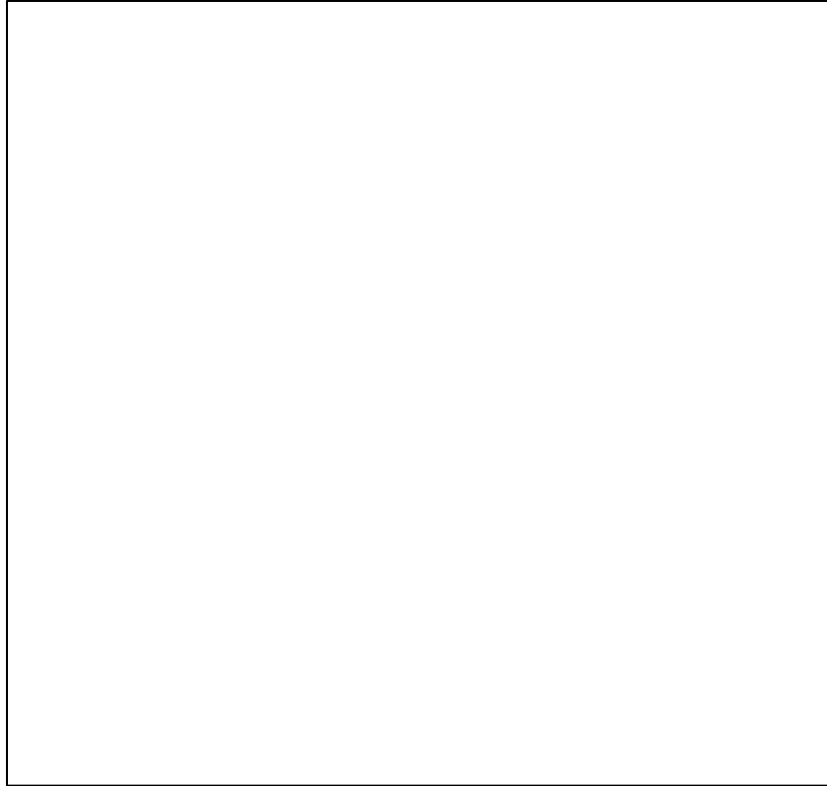
**Figure 4.17. MARPO inv. no. 39, an example of a plaque used twice for funerary inscriptions (once on each side). Photo: author.**



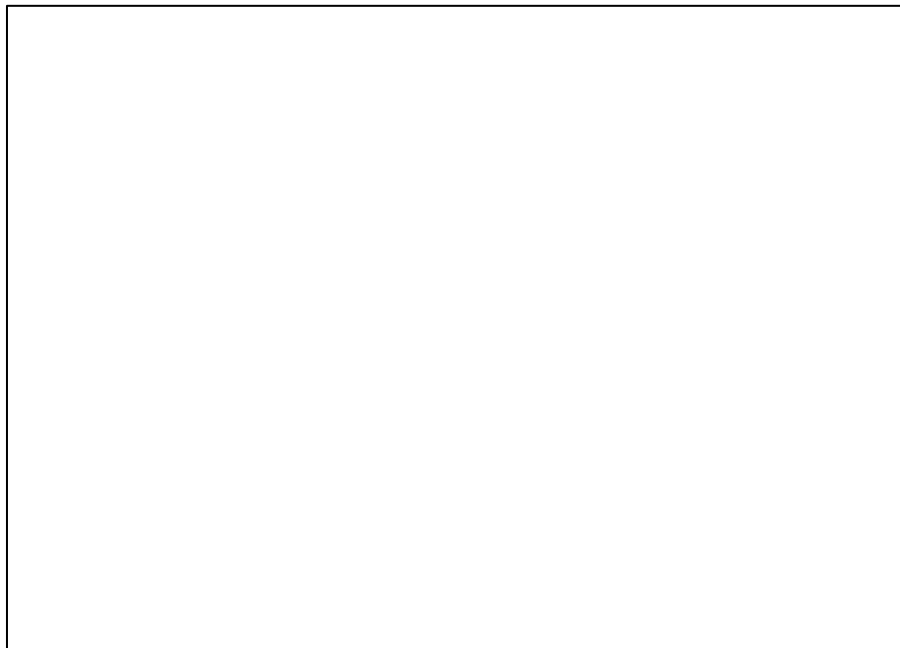
**Figure 4.18. Examples of inscriptions on pieces of reused marble.** In each case, the inscription follows the unusual contours of the support. Clockwise from top left: MARPO inv. no. 51, 53, 96, and 15528. Photo: author.



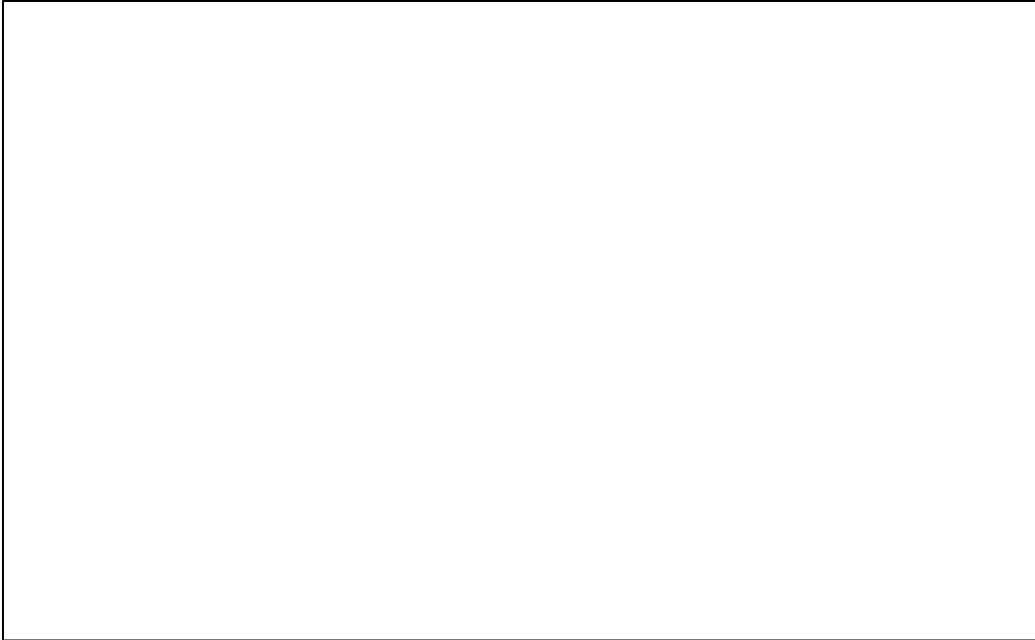
**Figure 4.19. Detail MARPO inv. no. 13042, showing letters incised with a flat chisel.** Lightly incised guidelines are visible running nearly horizontally across the image. Photo: author.



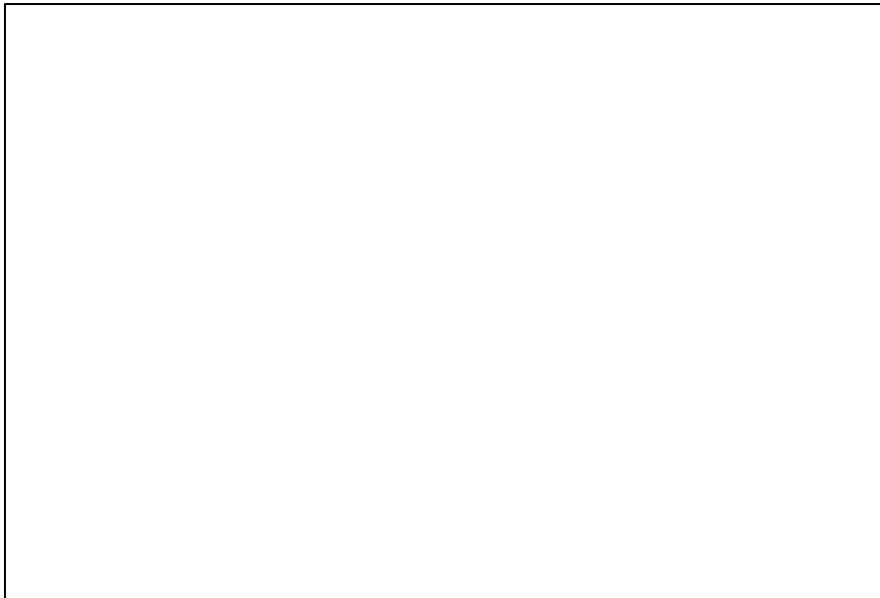
**Figure 4.20. Detail of MARPO inv. no. 33, showing possible use of a round chisel. See especially the crescent-shaped percussion marks visible in the T at the beginning of the third line. Photo: author.**



**Figure 4.21. Detail of MARPO inv. no. 14426 showing use of a drill at the ends of letter strokes. Photo: author.**

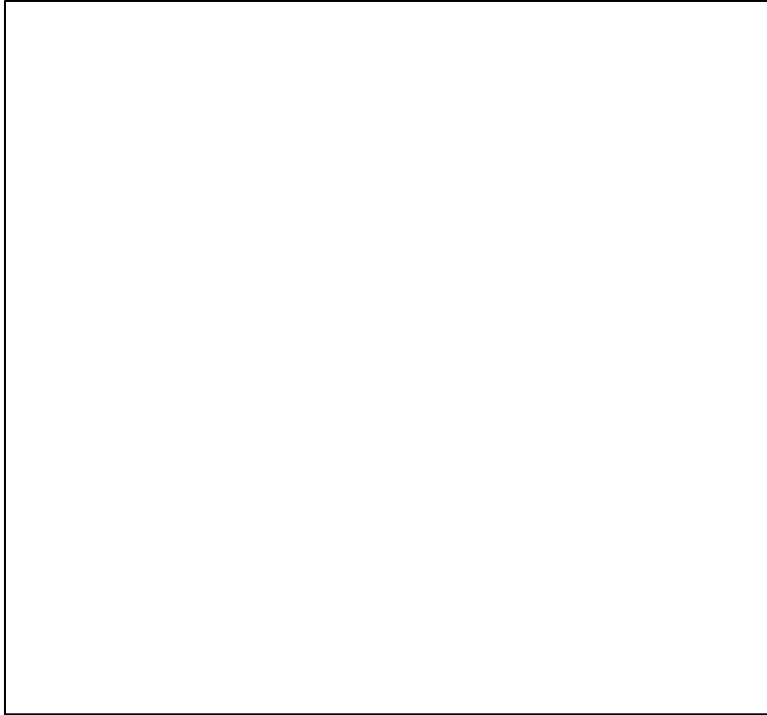


**Figure 4.22.** Example of a “highly regular” inscription (MARPO inv. no. 13042). Photo: author.



**Figure 4.23.** Example of a “somewhat regular” inscription (MARPO inv. no. 14437). Photo: author.





**Figure 4.24.** Example of an “irregular” inscription (MARSPO inv. no. 14426). Photo: author.

## CHAPTER 5

### Toward a social-network theory of catacomb cultural production

As a final, more experimental approach to *fossores*, painters, and engravers in the catacombs, I take interpretive methods from the field of social network analysis and use them to develop models for a catacomb social network. As I have argued throughout the preceding chapters, social agents made catacomb architecture, painting, and epigraphy collectively in interaction with one another. Viewing catacombs as the products of social networks—or collective, rather than individual, agents—allows us to approach these sites and their contents in new ways, and even to open new lines of inquiry into material that remains understudied. This chapter returns to the models presented in Chapter 1, reinterpreting them through the lens of social network analysis, and considering how they might inform our understanding of interactions among catacomb patrons, *fossores*, painters, and engravers. I then propose several potential models for a catacomb social network in which these principal agents and other related parties interacted repeatedly over time. Finally, I approach catacombs as a “visual world,” considering motifs from painting and engraving in their spatial contexts. Interactions among funerary workers and their patrons created this “visual world”; the social and material aspects of catacombs should be considered together.

## Methods

The field of social network analysis offers both quantitative and qualitative ways to study interactions among human and material agents.<sup>1</sup> Because I am proposing possible network models more than measuring empirically observed interactions, the qualitative forms of social network analysis will take precedence here.<sup>2</sup> Using Gephi, an open-source network visualization program, I created diagrams to represent interactions among agents.<sup>3</sup> These diagrams serve partly to illustrate my interpretations of the networks being examined or proposed, and partly as interpretive aids, since Gephi is able to represent key network metrics through the sizes and colors of graphic elements.

In the diagrams presented throughout this chapter, circles and lines represent *nodes* and *edges*, the key elements of a network graph. *Nodes* are typically used in network visualization to represent agents or objects, while *edges* represent links among the agents or objects—social ties, information exchange, or shared material or iconographic qualities, for example.<sup>4</sup> In the diagrams below, nodes will represent human agents, and edges will represent the exchange of money, other goods, or information, as indicated. A node's *degree*—represented here by size—is the number of edges it shares with other nodes, an indicator of how “well connected” an agent is to other agents nearby.<sup>5</sup> *Betweenness centrality* (which I examined only minimally) reflects a node's importance in the network; a node with high betweenness centrality serves as a hub

---

<sup>1</sup> For a clear introduction to actor-network theory and social network analysis—especially as they can be applied to craft production in the ancient Mediterranean—see Knappett, *An archaeology of interaction*.

<sup>2</sup> Knappett's work represents a mix of quantitative and qualitative uses of network analysis, perhaps leaning toward the quantitative. For an example of how network thinking can be applied in a solely qualitative way, see Remus' analysis of the social network represented by participants in a healing cult in Pergamon. Remus, “Voluntary associations and networks.”

<sup>3</sup> Gephi is maintained by the Gephi Consortium (<https://gephi.org>).

<sup>4</sup> Knappett, *An archaeology of interaction*, 38-41.

<sup>5</sup> *Ibid.*, 41-42.

connecting many other nodes, and without such a node the network is at risk of disintegrating.<sup>6</sup>

These basic metrics form the only quantitative considerations given to the networks discussed in this chapter, since they are able to reflect an actor's potential influence on others even in the absence of more sophisticated numerical data.

### **Models for social interaction in the funerary industry**

#### Model 1: *Mancipes*, choachytes, and personal relationships

As we saw in Chapter 1, the *manceps* was a funerary professional attested at Puteoli and Cumae, where he held a public contract giving him a monopoly on burial services in exchange for certain other services to the city.<sup>7</sup> The *manceps* did not perform all these services alone; instead, he managed teams of specialized workers who transported bodies, dug graves, and executed criminals.<sup>8</sup> We can represent the *manceps*' relationships with his employees and his patrons as a network graph with the *manceps* in the middle (see fig. 5.1), serving as the node that connects all other nodes. A patron requiring any of the services offered by members of the *manceps*' organization seems to have commissioned those services from the *manceps* (or perhaps his appointed agent, if he had one), rather than approaching specialized laborers individually.<sup>9</sup> This model thus revolves around a "middleman" who connects patrons to a range of services.

If the relationships among patrons and funerary workers in the catacombs followed a similar model, it might look something like Figure 5.2. Of the four principal personages under

---

<sup>6</sup> Ibid.

<sup>7</sup> Bodel, "The organization of the funerary trade at Puteoli and Cumae"; Bodel, *Graveyards and groves*, 16.

<sup>8</sup> Bodel, "The organization of the funerary trade at Puteoli and Cumae," 154.

<sup>9</sup> Plutarch says that everything needed for a funeral can be bought at the *lucus Libitinae*, which Bodel suggests is the place where the *manceps*' office may have been. *Quaest. Rom.* 23 (*Moralia* 269a-b); *ibid.*, 159.

consideration—patrons, *fossores*, painters, and engravers—*fossores* seem to have had the closest ties to catacomb sites themselves, so perhaps they can be assigned the central role. In this model, patrons would approach *fossores* in order to gain access not only to the *fossores*' own products and services (tombs and cemetery management), but also to those of the other funerary workers. Mazzoleni and others have proposed that *fossores* exercised a high level of control over day-to-day operations in catacombs, and beyond my broad argument for site-specific groups of workers, Carletti and Zimmermann have suggested that there may have been specific stonecutting or painting workshops associated with catacomb sites.<sup>10</sup> A network of catacomb patrons and workers based on the *manceps* model seems like a logical extension of these arguments, as well as a fitting expression of the argument made in Chapter 2 for the primacy of *fossores*' agency in catacomb management.

The choachyte offers a different model for interaction among patrons and a few key funerary workers. As discussed in detail in Chapter 1, choachytes were one of several funerary workers contracted by a patron to perform services relating to burial and commemoration. The choachyte's particular responsibility was the performance of rituals at the tomb, as well as the long-term care of the tomb and its contents.<sup>11</sup> Expressed as a network graph, the choachyte's relationships to patrons and other funerary workers did not revolve around the choachyte, but rather around the patron, whose direct relationship to each funerary worker put him or her at the center of the network (see fig. 5.3). The choachyte, however, had a secondary relationship with

---

<sup>10</sup> Mazzoleni, "Fossori e artigiani nella società cristiana," 251; Carletti, "Littera et figura," 25; Zimmermann, *Werkstattgruppen*, 38. Finney suggests something similar: that *fossores* may have belonged to painting workshops, making them doubly dedicated to funerary work, both as diggers and as painters. Paul Corby Finney, *The invisible god: The earliest Christians on art* (New York: Oxford University Press, 1997), 153.

<sup>11</sup> Derda, "Necropolis workers in Graeco-Roman Egypt," 23-25; Vleeming, "The office of a choachyte in the Theban area," 245-47.

several of the other funerary workers, including the gravedigger and lector-priest, who handed over the body to the choachyte's care, as well as the tomb builder (if different from the choachyte) and any dealers who supplied grave goods or other materials for ritual use, with whom the choachyte would have had some contact.<sup>12</sup> The edges in this network are thus of two types: those connecting the patron to the workers represent the exchange of money for goods and services, while those linking workers to each other represent social ties or other forms of exchange among peers.

Rearranged according to the choachyte model, the catacomb network could look like Figure 5.4. In such a network, the patron and the *fossor* have roughly equal degrees of influence, but their influences are of different sorts. The patron connects to all of the workers through monetary transactions, commissioning each to contribute a different product or service toward a burial. The *fossor* has separate, social exchanges with the other workers as they all come into contact with him at the catacomb. This model reflects the possibility that painting and engraving workshops involved with catacombs were not limited to catacomb work: they did some of their work for catacomb-related patrons, and the rest of it elsewhere.<sup>13</sup> In this model, laborers who did only part of their work in catacombs would access those sites only through other parties—either a patron commissioning a painting or engraving, or a *fossor* facilitating the delivery or installation of such a work. This model still allows the *fossor* maximum agency inside the catacomb, while balancing it with greater social influence on the part of the patron.

---

<sup>12</sup> Vleeming, “The office of a choachyte in the Theban area,” 244-47.

<sup>13</sup> The phenomenon of one workshop making objects for both funerary and non-funerary consumption is well documented for sculpture; see, for example, Spier, *Picturing the Bible*, 211, cat. no. 43. For other types of objects—lamps, for instance—it seems unlikely that shops would specialize for funerary production, since the same sorts of lamps are found in catacombs as outside of them.

## Model 2: The Roman stone trade and funerary consumption

The imperial-period Roman stone trade provides a model for how certain aspects of funerary production may have fit into the broader economy. As outlined in Chapter 1, stone—especially marble—moved along a relatively straight path from its source to a distribution point near its final destination, where it could then get caught up in cycles of use and reuse.<sup>14</sup> After receiving an order from a buyer or a stonecutting workshop, quarriers transferred stone (in blocks or semi-finished products) to shippers, who carried it over land and sea to a port near the intended consumer. At this point, the stone could be claimed by a buyer and moved to a stonecutting workshop or even directly to the site where it was to be used.<sup>15</sup> If at any point something went wrong—the stone was damaged, or the buyer no longer wanted it, for example—the stone might remain at or be transferred to a distribution point (stoneyard), where it could be claimed for some other use. Two such points have been found in the vicinity of Rome: one at Portus, and the other at the “Emporium” site on the east bank of the Tiber near the Ponte Sublicio.<sup>16</sup> It seems that some shipments of stone may have stopped at these sites before moving on to stonecutting workshops, and damaged or unwanted pieces simply remained there until they were wanted again. At the “Emporium” site several thousand small pieces of colored marble may reflect a reclaiming operation that gathered stone from demolition sites or other sources and saved it for reuse.<sup>17</sup> Individual stonecutting workshops are likely to have kept their own collections of “odds and ends” for use as needed.<sup>18</sup> In the diagram presented below (see fig. 5.5),

---

<sup>14</sup> Russell, *The economics of the Roman stone trade*, 118-23, 234-37, 53.

<sup>15</sup> *Ibid.*, 234-35.

<sup>16</sup> *Ibid.*, 235-37; Bruzza, “Gli scavi dell’Emporio.”

<sup>17</sup> Bruzza, “Gli scavi dell’Emporio.”

<sup>18</sup> For example, Bartman discusses a group of sarcophagi with practice carvings on their backs, suggesting that these objects spent some time as unpurchased pieces in a workshop. Elizabeth Bartman, “Carving the Badminton sarcophagus,” *Metropolitan Museum Journal* 28 (1993).

all of these possible distribution points have been consolidated in the person of a hypothetical “distributor,” who connects local consumers to the interregional stone trade.

The stone trade serves as a model for how certain types of funerary workers—specifically, those who could produce for both funerary and non-funerary consumption—may have related to other segments of urban economies (see fig. 5.6). Although it is possible that some painters or engravers worked solely in funerary contexts, it seems more likely that these laborers would work in a variety of contexts over the course of a career, and that a painting or engraving workshop would serve a variety of patrons at the same time or in succession.<sup>19</sup>

Workers who served both funerary and non-funerary patrons linked the funerary industry to other industries: they were the points at which a single supply stream (of stone, for instance) diverged to flow toward different contexts of consumption. The same is true for the makers and vendors of goods that were consumed in both funerary and non-funerary contexts—lamps, flowers, food, and wine, for example.<sup>20</sup> Such “part-time” funerary labor seems to have become enmeshed with non-funerary labor in flexible workshop contexts, which in turn bridged the gap between “full-time” funerary workers—undertakers, gravediggers, and so on—and the non-funerary segments of the economy.

### Model 3: *Columbaria* and patron-side management

*Columbaria*—in particular those managed by representatives of the social group to whom the tombs belonged—offer a model for the administration of a collective tomb by individuals

---

<sup>19</sup> See note 12, above.

<sup>20</sup> On the many products that could be consumed during a Roman funeral, see Hugh M. Lindsay, “Eating with the dead: The Roman funerary banquet,” in *Meals in a social context: Aspects of the communal meal in the Hellenistic and Roman world*, ed. Inge Nielsen and Hanne Sigismund Nielsen (Aarhus: Aarhus University Press, 1998); Lindsay, “The cost of dying at Rome”; Robert Couzin, “The Christian sarcophagus population of Rome,” *Journal of Roman Archaeology* 27 (2014): n. 40-44.



who were not otherwise involved in funerary work. Hasegawa discusses several inscriptions that mention managers elected from among the household or collegium that owned a *columbarium*. In addition to their regular employment, whatever it was, the managers took responsibility for allotting burial niches to individuals or families, collecting and distributing funds for the maintenance of the tomb, and selling unused space to outsiders.<sup>21</sup> In the network diagram (see fig. 5.7), the managers' high degree (number of *edges* linking them to other *nodes*) derives from their position as “gatekeepers” of the *columbarium*; any patron or worker needing access to the tomb probably had to gain it through the managers. The patrons also play an important role in this network, since it is their money (either paid directly to various workers, or indirectly through the common purse controlled by the managers) that funds the whole operation. Like the choachyte network, this one depends on both monetary and social transactions, but with the key difference of a “middleman” role filled by members of a group of patrons rather than by a funerary professional.

As discussed in Chapter 1, *columbaria* and catacombs share two characteristics despite differences in their forms: a) a suite of basically uniform tombs with options for personalization, and b) a need for management.<sup>22</sup> Although I have argued for the *fossores*' probable influence over catacomb management, there comes a point (around the mid-fourth century) when the existence of clerical managers becomes likely.<sup>23</sup> In such a context, the *columbarium* model could help explain how members of the clergy might have fit into the social networks of catacombs—as “middlemen” drawn from the patron base, as it were, rather than from among the funerary workers. This network diagram (see fig. 5.8) puts clergy of unknown rank in the place of the

---

<sup>21</sup> Hasegawa, *The familia urbana during the early Empire*, 82-88.

<sup>22</sup> *Ibid.*, 4, 82-88; Borbonus, *Columbarium tombs*, 67-68.

<sup>23</sup> See Chapter 2.

*columbarium* managers, at least for those catacombs or parts of catacombs where clergy are likely to have been involved anyway, such as those associated with funerary basilicas or martyrs' tombs. With clergy occupying this position, *fossores* might be pushed deeper into the catacombs, so to speak, out of direct communication with patrons, but probably still in contact with painters and engravers who came to deliver or install their products in tombs. This model might be best suited to the situation Guyon describes in the sixth century, when professional manager-caretakers (*mansionarii*) usurped *fossores*' position as burial activity declined, becoming the "gatekeepers" of catacombs that served as sites for martyr cult rather than for ongoing burial activity.<sup>24</sup>

Considering catacomb workers and patrons in the light of these models offers clear benefits, but this approach is not without problems. Network models like the ones above allow us to imagine relationships for which there is (so far) not much evidence, helping to flesh out a social context for the evidence we do have. While opening up new lines of inquiry, however, this exercise leans heavily on speculation, which is not without risks. Comparing the social networks tied to catacombs with similar networks in previous periods allows us to approach late antiquity from a perspective of continuity, tracing slow developments rather than leaping to conclusions about the "newness" of a phenomenon.<sup>25</sup> On the other hand, it is important not to discount the possibility of radical change, even in the often conservative realm of funerary practice. We should take these models for what they are: possibilities that can inform our interpretations without binding them.

---

<sup>24</sup> Guyon, "La vente des tombes," 578.

<sup>25</sup> Brown argues that in some ways funerary practice, especially among the sub-elite, was highly conservative through the fourth century. Brown, *The cult of the saints*, 26-30. If lower-class Roman Christians were still carrying on the commemorative rituals of their pagan forbears, then perhaps the economic systems underlying funerary practice remained in place from earlier in the Imperial period, at least in part.

Informed by the models above, I propose three holistic models for a catacomb social network incorporating patrons, *fossores*, painters, and engravers, in addition to other types of workers with whom these principal ones would have had contact. The first of these networks centers on *fossores*, attributing to them the greatest social influence among patrons and other workers. The second network has patrons as its center and the exchange of money for goods and services as the dominant type of relationship. In the third network model, I explore other distributions of influence: this network does not revolve around one type of agent, but rather reflects collaboration among several principal agents. While each of these models involves a certain amount of speculation, their purpose is to raise questions about agency and interaction as much as to answer them.

### **Models for a catacomb social network**

In a *fossor*-centered network, *fossores* would serve as the main point of contact between patrons and various types of workers, and social contact (more than the exchange of money for services) would be the engine driving these interactions. As represented in this network diagram (see fig. 5.9), *fossores* would serve not just as “middlemen” negotiating contact among others, but also as “gatekeepers,” mediating access to the catacomb itself. *Fossores* would likely hold these positions on an informal basis; after all, the epigraphic evidence for *fossores*’ activities reflects their roles as diggers and vendors of tombs, but payments for broader funerary services are not mentioned.<sup>26</sup> As the persons most directly connected to the physical site of a catacomb, *fossores* would have possessed local knowledge not just of the catacomb itself, but also of the other workers coming and going at the site. This knowledge could have made *fossores* valuable

---

<sup>26</sup> Guyon, “La vente des tombes.”

sources of advice for patrons seeking connections to other workers' goods and services. Bodel suggests that Roman funerary workers could refer their own patrons to workers in related trades, and that workers of various funerary and funerary-adjacent professions may have chosen to locate their offices near one another for this purpose.<sup>27</sup> If it is true that *fossores* not only made and sold tombs, but also handled bodies on their way to burial,<sup>28</sup> assisted in the sealing up of tombs,<sup>29</sup> made some inscriptions and paintings,<sup>30</sup> and even played symbolic roles in patrons' conceptions of the tomb as a liminal space,<sup>31</sup> then it seems reasonable to think of them as potentially influential figures in the catacombs. Even if *fossores* were not actively coordinating other types of workers, at the very least they seem to have been personally involved in many types of work.

In a patron-centered network (see fig. 5.10), the exchange of goods and services for money would drive most interactions, as patrons would contract separately with various workers. Non-monetary exchanges—in the form of information shared among patrons, or social contact among workers—would create secondary links among the agents. This model balances the agency of workers with the choices of patrons; many separate negotiations would have to take place to produce a burial and its accouterments. As in the choachyte model, here it is also possible that patrons (or groups of patrons) would form long-term relationships with certain workers, and these ongoing relationships could lead to the development of localized styles like

---

<sup>27</sup> He makes this suggestion on the basis of an architrave block inscribed with the phrase “college of flute-players” near the Roman *lucus Libitinae*, the hub for funerary professionals and services. It seems that the flute-players may have made their office near the *lucus Libitinae* in order to benefit from the traffic of potential customers in the area. Bodel, *Graveyards and groves*, 50.

<sup>28</sup> See, for example, an engraved image of a *fossor* with a dead body from the catacomb of Commodilla (*ICUR* 6446; fig. 2.4); Zimmermann, *Werkstattgruppen*, 38.

<sup>29</sup> Fiocchi Nicolai, Bisconti, and Mazzoleni, *The Christian catacombs of Rome*, 79-80.

<sup>30</sup> Charles-Murray, “The emergence of Christian art,” 55.

<sup>31</sup> Conde Guerri, *Los “fossores,”* 104-23.

the ones reflected in catacomb epigraphy.<sup>32</sup> One might wonder, however, how new patron-worker relationships would be formed in such network: would new patrons seek recommendations from among their acquaintances, or would funerary workers advertise their availability in some way? While this model attributes more direct influence over funerary labor to patrons, it also places on them the onus of making all of their funerary arrangements individually. The emergence of some sort of “middleman” to facilitate these interactions seems likely.

A third and final model for a social network tied to a catacomb distributes influence more broadly among patrons, workers, and possible “middlemen.” The purpose of this model is not so much to explain known interactions as to imagine possible interactions that could be investigated in future research. In this network, the role of “middleman” could be played by one or more figures drawn from among the patrons, the workers, or even a third party—the clergy. In one version of this network (fig. 5.11), a hypothetical “funeral director” makes arrangements with various workers on behalf of the patron. If this personage comes from among the patrons, he or she might perform this role as a social responsibility; otherwise, this might be a paid position, like that of the *manceps*. Between the mid-fourth century and the late fifth or early sixth centuries (when catacombs stopped being used for burial), we might look for evidence of clergy performing this role—not just of participating in funerary rituals, or of giving access to certain Church-controlled cemeteries, but of putting patrons in contact with the makers and vendors of all the other funerary necessities (see fig. 5.12).<sup>33</sup> We might even add nodes for vendors who

---

<sup>32</sup> On choachytes’ long-term relationships with patrons, see Vleeming, “The office of a choachyte in the Theban area,” 246. On ongoing relationships between *fossores* (and engravers) and patrons, see Conde Guerri, *Los “fossores,”* 179, cat. nos. 12, 14.

<sup>33</sup> For an indication of the range of products that could be required for a Roman funeral, see Lindsay, “Eating with the dead”; Lindsay, “The cost of dying at Rome.”

positioned themselves physically near cemeteries so that they could sell products like food or flowers directly to people participating in funerary or commemorative rituals.<sup>34</sup> Such vendors would both offer what they thought buyers would want and also constrain buyers' choices through their offerings, giving the vendors some influence over the material forms of commemoration. This imaginary network of mostly invisible people is highly speculative, of course, but even speculation has the potential to raise new questions about funerary labor.

The exact structure of a catacomb social network remains difficult to discern given the available evidence. In all likelihood, there existed many viable arrangements of patrons and workers; perhaps each catacomb had its own distinctive network. The details of these networks aside, their existence seems certain, and their impact ought to be observable in catacomb architecture, painting, and epigraphy. Each of the three network models proposed above has its merits and demerits, but approaching catacomb material with networks like these in mind could open new routes of inquiry. Below, I explore an example of what catacomb scholarship might look like if it were based on the premise that catacombs can be studied holistically as the products of social and economic interactions between workers and their patrons over generations.

### **Network thinking and “motif maps”**

Taking a catacomb and all its contents as the product of a collective effort by a network of workers and patrons, we can look for patterns that might reflect that network's internal

---

<sup>34</sup> Holleran notes that sellers of food, flowers and other items good for eating or for sacrificing often congregated near potential customers, e.g., near temples, at baths, at amphitheaters, and so on. One can easily imagine that these vendors would have taken advantage of the major festivals during which people visited cemeteries for commemorative feasts and offerings (the *Parentalia* and *Lemuria*) and positioned themselves in or near cemeteries. Holleran, *Shopping in ancient Rome*, 209-11; Lindsay, “Eating with the dead,” 74-75.

negotiations and its interactions with the physical plant of the catacomb. Borbonus has suggested that in collective tombs like *columbaria*, we should view each burial as having been made in awareness of all the others that preceded it; a collective tomb served as a cumulative monument, with each addition a sort of response to what came before.<sup>35</sup> This line of thinking—combined with the sheer impracticability of dating most catacomb inscriptions or paintings with precision—has led me to think of a catacomb as the sum of many small cumulative actions whose effects can be observed even if their exact sequence cannot be known. To see how this thinking might play out in a catacomb, I collected data on the motifs represented in the catacomb of Domitilla, both the engraved motifs accompanying inscriptions, and the painted motifs incorporated into fresco decoration.<sup>36</sup> I then plotted the motifs on plans of the site (“motif maps”), making it possible to examine the motifs’ spatial distributions. Finally, I interpreted how motifs were distributed in relation to the following:

- **architectural features**, such as entry stairways and major martyrs’ tombs;
- broadly **datable regions** of the catacomb, comparing third-century and fourth-century regions;
- **medium**, noting areas where one medium dominated to the exclusion of the other;
- and **duplication**, or instances of a motif in each medium in close proximity to one another.

Naturally, these “motif maps” are neither exhaustive nor unbiased in their composition; I outline their potential pitfalls along with my interpretations below.

---

<sup>35</sup> Borbonus, *Columbarium tombs*, 49.

<sup>36</sup> Data on engraved motifs came from de Rossi, Silvagni, and Ferrua, *Inscriptiones christianae urbis Romae*. Data on painted motifs came from Aldo Nestori, *Repertorio topografico delle pitture delle catacombe Romane* (Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 1975), 117-35.

The first set of plans (see figs. 5.13, 5.14, 5.15) shows the most common engraved motifs from those inscriptions whose original locations in the catacomb of Domitilla were noted in the *Inscriptiones Christianae Urbis Romae* (ICUR vol. III).<sup>37</sup> Each dot represents an instance of a motif; in total there are 763 dots representing the motifs accompanying 588 inscriptions (some inscriptions include multiple motifs). Despite the fact that this motif map represents only those inscriptions that a) commemorated a deceased person, and b) were found *in situ*, an interesting pattern emerges. Nearly one-third of all the engraved *chi-rhos* occur in a dense region of galleries and cubicula developed in the fourth century near the tombs of the martyrs SS. Nereus and Achilleus (see fig. 5.22).<sup>38</sup> Fourth-century intensification of burial near saints' tombs has been observed in many cases, and a number of tomb buyers took pains in their inscriptions to specify that the space they purchased lay near the tomb of a particular saint.<sup>39</sup> The predominance of *chi-rho* motifs in this region could perhaps be interpreted as the epigraphic corollary of the *retrosanctos* phenomenon, in which *fossores* created many new tombs in a short time to accommodate patrons eager to be buried near the saints (*ad* or *retro sanctos*) for the spiritual benefits this proximity was supposed to convey.<sup>40</sup> While there is a slim possibility that the many *chi-rhos* in this part of the Domitilla catacomb could have been the work of a single agent, it seems much more probable that they result from the choices of many patrons and workers interacting in this specific architectural context.

---

<sup>37</sup> de Rossi, Silvagni, and Ferrua, *Inscriptiones christianae urbis Romae*.

<sup>38</sup> Regions R, S, and T on the lower level. Nuzzo, *Tipologia sepolcrale delle catacombe romane*, 59.

<sup>39</sup> Danilo Mazzoleni, "The rise of Christianity," in *The Oxford handbook of Roman epigraphy*, ed. Christer Bruun and Jonathan Edmondson (New York: Oxford University Press, 2015), 459.

<sup>40</sup> Brown, *The cult of the saints*, 34-35. On the general increase in popularity of the *chi-rho* as an engraved motif accompanying inscriptions in the time of Constantine, see Felle, "Prassi epigrafiche nella catacomba di Domitilla a Roma," 101.



The second set of plans shows a representative sample of painted motifs in Domitilla as recorded in Nestori's topographic catalog of Roman catacomb painting.<sup>41</sup> Nestori documents the motifs painted in 77 galleries, *cubicula*, and *arcosolia* throughout the catacomb; each dot on these plans (see figs. 5.16, 5.17) indicates that a motif is represented, but the dot may represent multiple instances of that motif.<sup>42</sup> While the painted repertoire includes several of the most popular engraved motifs, there are notable differences. The most common of the painted motifs is a flower or floral garland; among the engraved motifs, on the other hand, flowers are extremely rare. The painted repertoire also contains many more narrative figural scenes representing a range of themes, including biblical episodes, Good Shepherds, *orantes*, *putti* and other mythological characters, and scenes of daily life. One of the most densely painted areas of the catacomb is the "Region of the *Mensores*," an early fourth-century set of *cubicula* and galleries that seems to have belonged to a college of officials associated with the grain dole (see fig. 5.24).<sup>43</sup> The paintings in this area combine biblical imagery with motifs specific to the interests of these patrons: scenes of baking and the handling of grain.<sup>44</sup> While genre scenes like these occasionally occur in the regular catacomb painting repertoire, these particular images form part of a decorative scheme created specifically for these patrons.

The third set of plans shows both the engraved and the painted motifs together, and here we can begin to speculate about how these two media and their makers interacted (see figs. 5.18, 5.19). First of all, although both media were being produced over roughly the same span of time, they are not distributed evenly over space. Regions D, F, G, H, L, R, S, and T (lower level)

---

<sup>41</sup> Nestori, *Repertorio topografico*, 117-35.

<sup>42</sup> This approach seemed best because Nestori's catalog does not specify *how many times* a motif appears on a wall, vault, or other surface, simply that it does appear.

<sup>43</sup> Nuzzo, *Tipologia sepolcrale delle catacombe romane*, 55; Pergola, "*Mensores frumentarii christiani* et annone."

<sup>44</sup> See especially Nestori, *Repertorio topografico*, 129, cat. no. 74.

contain abundant engraving but little or no painting; more painting than engraving can be seen in region P (lower level) and the “Region of the *Mensores*” (upper level; see figs. 5.25, 5.26). These patterns could reflect different priorities or tastes among the patrons, which would then be reflected in the paintings and engravings commissioned. Both region P, at whose core lies the “Hypogeum of the Flavii,” and the “Region of the *Mensores*” were associated with clearly defined social groups who seem to have invested in elaborate painted decoration for their collective tombs.<sup>45</sup> It is important to note that both of these regions are characterized by highly customized architecture: region P contains a dining room and well to supply water for funerary banqueting, and the “Region of the *Mensores*” contains highly unusual hexagonal *cubicula*. Engraved motifs incorporated into individual inscriptions may have been less important to these patrons, who had already customized their tombs through architecture and painting.

The opposite may have been true in regions F, G, and H, where we see no painting but many engraved motifs. In these regions, there are few *cubicula*—which are usually taken to reflect a wealthier patron, or at least a group of patrons buying a tomb together<sup>46</sup>—and many individual *loculi* in the gallery walls. If these *loculi* belonged to individual patrons of modest means, then the preference for engraving over painting could be attributed to either economic or practical motives. It could be that an individual inscription cost less than a suite of painted decoration; it could also be that the small margin of wall face around a single *loculus* surrounded by other, unrelated *loculi*, was not deemed worth the trouble of painting. At any rate, the combined “motif map” shows a very rough correspondence between highly customized

---

<sup>45</sup> The “Hypogeum of the Flavii” is in region P at the north end of the lower level in the Ferrua-Silvagni plan; this area is represented by Nestori’s cat. nos. 1 through 10. The “Region of the *Mensores*” is located in region S in the upper level in the Ferrua-Silvagni plan; it is represented by Nestori’s cat. nos. 64 to 75.

<sup>46</sup> Fiocchi Nicolai, *Strutture funerarie*, 15-32.

architecture, collective patrons, and painting on the one hand; and uniform architecture, individual patrons, and engraved motifs on the other.

The combined “motif map” also raises questions about the potential equivalency or interchangeability of motifs across media. For example, as noted above, the regions R, S, and T (lower level) contain many engraved *chi-rhos*, but painted *chi-rhos* appear only in one place (see figs. 5.23).<sup>47</sup> Granted that there does not seem to have been much painting in these regions, it still seems peculiar that a motif so popular in association with inscriptions should not appear more frequently in painting. In the accumulation of both painted and engraved images in this area over time, could an abundance of a motif in one medium preclude its popularity in the other? There are, of course, many factors at play here, and regions R, S, and T are just one part of a large cemetery complex. It is worth considering, however, that this pattern could have resulted from interactions among workers and patrons whose many small choices eventually “added up” to a highly localized style.

The rare painted *chi-rhos* in an area full of engraved ones could be read another way—as a duplication of motifs across media. A final set of plans (see figs. 5.20, 5.21) indicates places where instances of the same motif in different media appear in close proximity. Any single instance of such doubling could be dismissed as coincidence; these are, after all, the most common motifs, and they are bound to co-occur from time to time. Taken together, perhaps they represent a larger pattern—not necessarily a pattern of workers and patrons consciously juxtaposing similar motifs in different media, but at the very least a sort of visual echo that people passing through those spaces may have sensed, if not perceived consciously. The visual environment of catacombs would have been based on a principle of repetition with subtle

---

<sup>47</sup> Two *chi-rhos* appear in the transitional space where galleries S and T meet (Nestori’s cat. no. 16).

differences; the catacomb of Domitilla, for one, is filled with rows of identical *loculi* customized with individual inscriptions, many similar linear-style paintings interspersed with innovative figural scenes, and kilometers of dark galleries punctuated by lightwells. The repetition of motifs across media and throughout a catacomb would have contributed to an effect of visual interconnectedness that emerged from many individual actions accumulating over a period of two centuries or more.

### **Conclusion**

The application of methods from social network analysis to catacombs has the potential to open up new avenues of research. By comparing catacombs to other relevant systems of funerary production, it is possible to develop models that help illustrate and explain the networks of patrons and workers who made catacombs and everything in them. Although the models presented in this chapter are speculative in many respects, they offer ways of looking at catacombs that emphasize the agency of workers and their interactions with patrons. By viewing catacombs as the material manifestations of social networks, we elide issues of chronology; while this practice makes interpretation less precise in some ways, it also allows us to view everything inside the architectural limits of a catacomb site as the cumulative product of a collective agent. The analysis of “motif maps” is just one example of how we might examine catacombs differently from a social-network perspective.

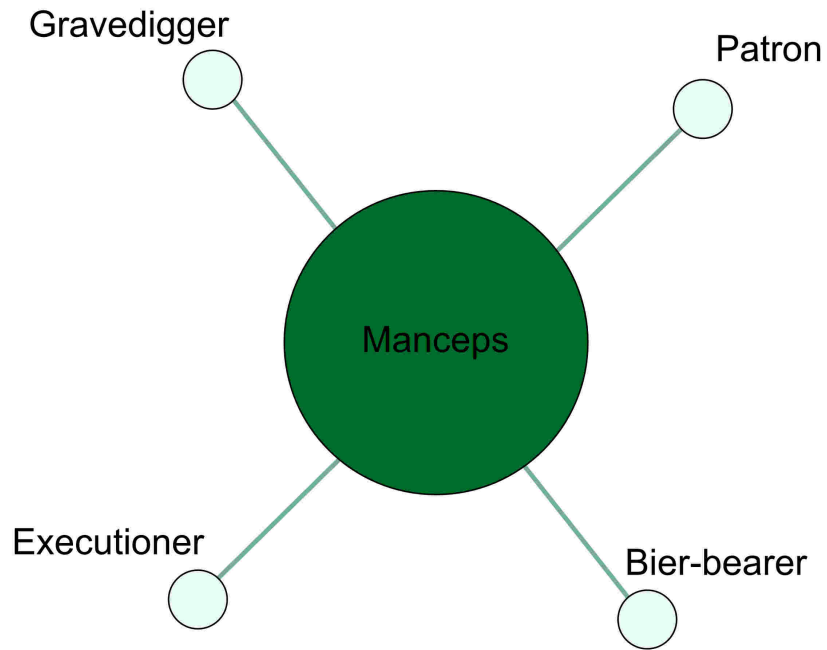


Figure 5.1. A network model based on the *manceps*.

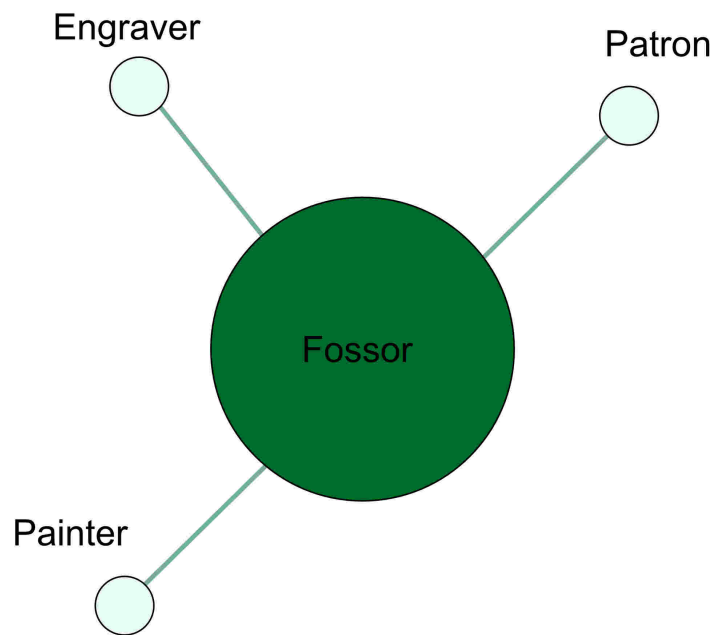
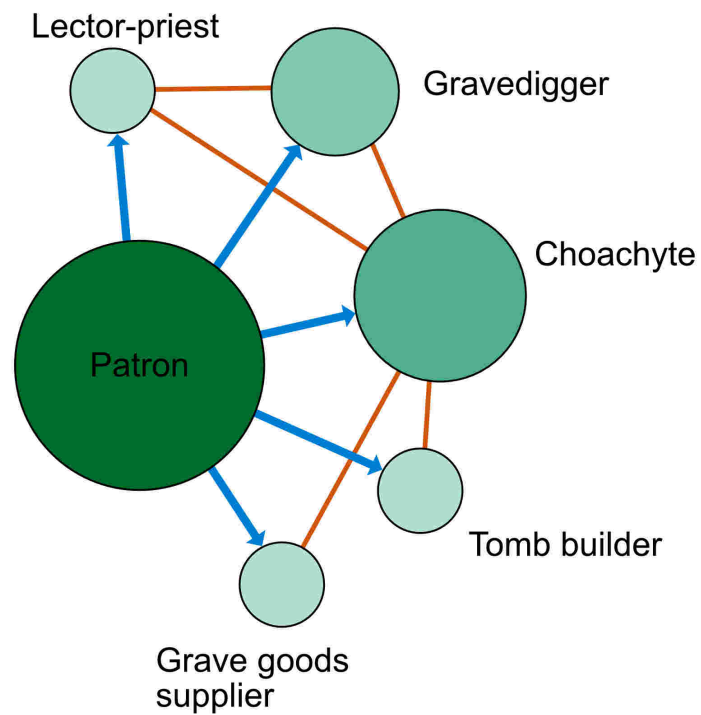
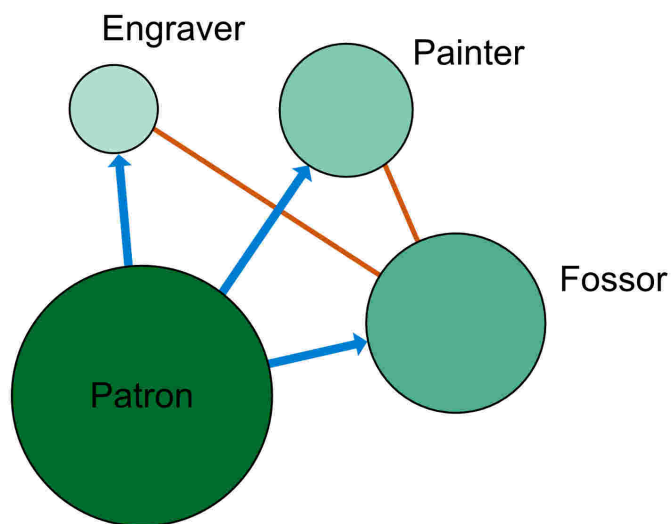


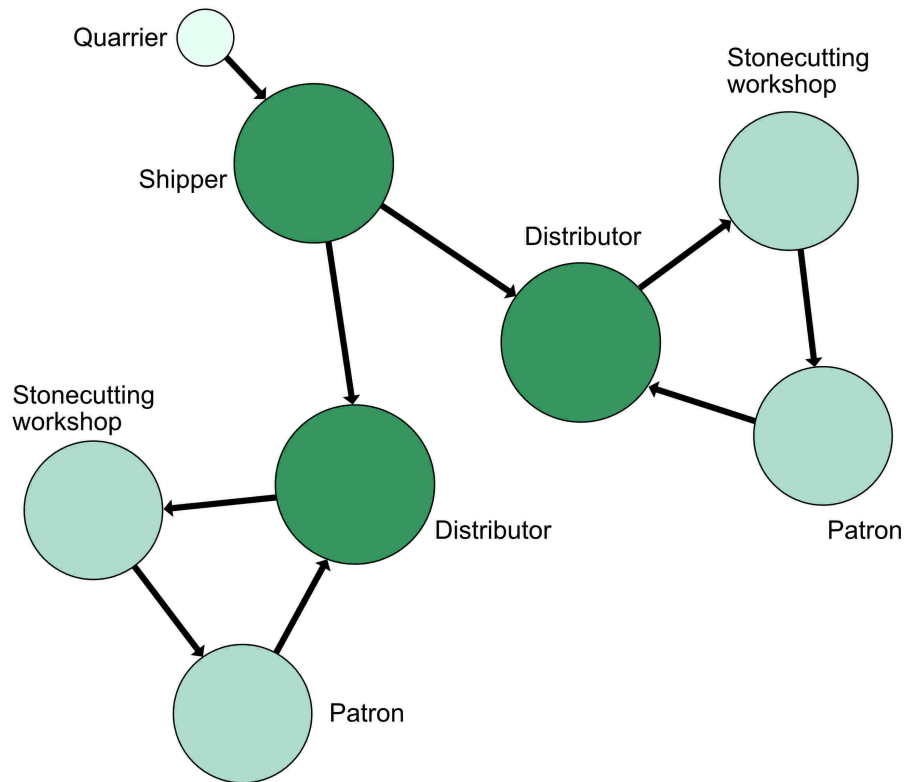
Figure 5.2. A catacomb social network based on the *manceps* model.



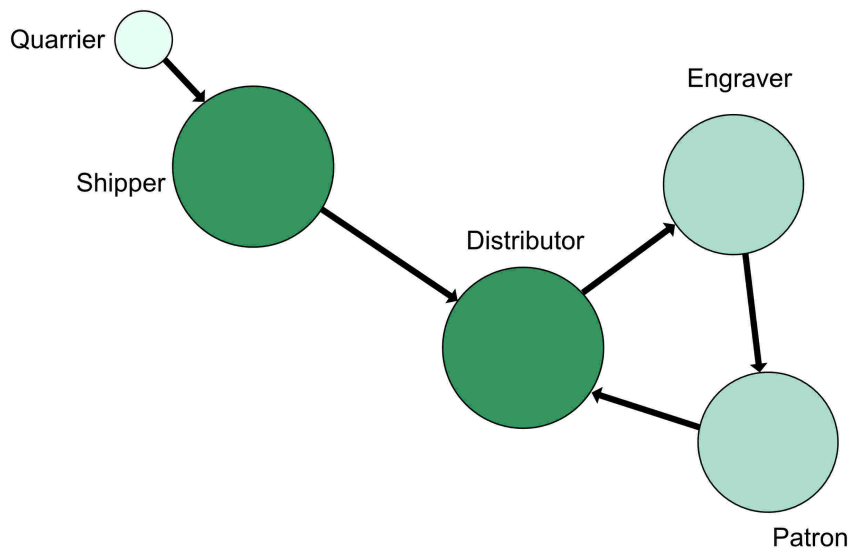
**Figure 5.3. A network model based on the choachyte.** Blue arrows represent the payment of money for goods and services. Orange lines represent social contact among workers.



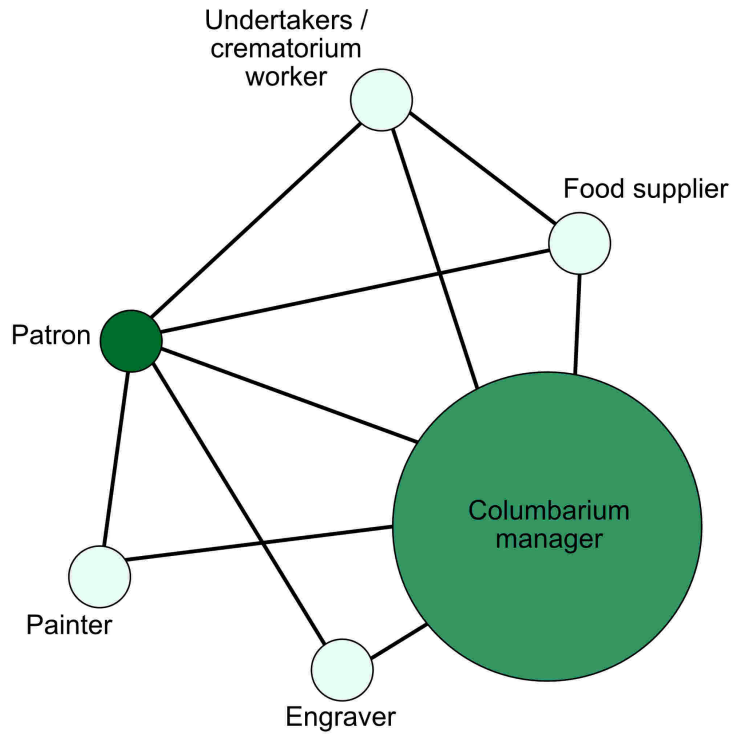
**Figure 5.4. A catacomb social network based on the choachyte model.**



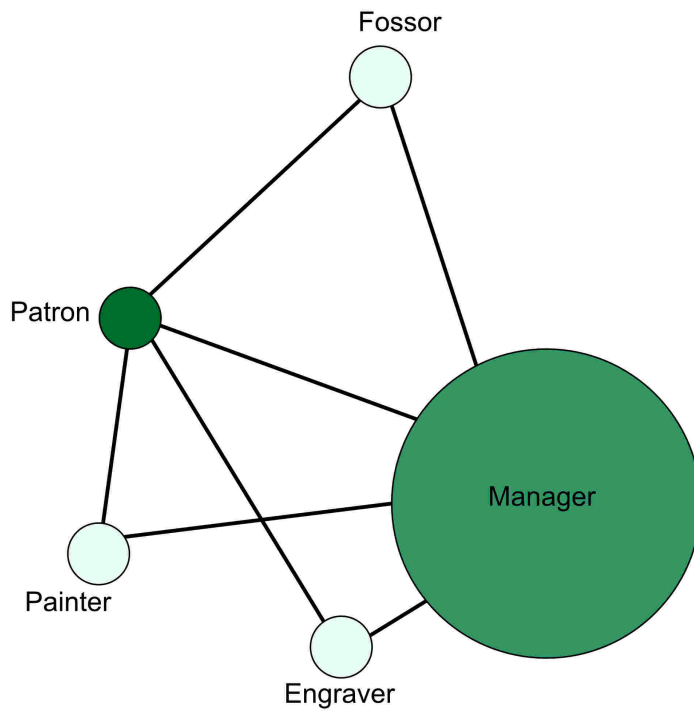
**Figure 5.5. A network model based on the Roman stone trade.** Arrows represent the movement of stone from agent to agent.



**Figure 5.6. A network based on the Roman stone trade model, showing how a catacomb engraver and patron could connect to the broader stone trade.**

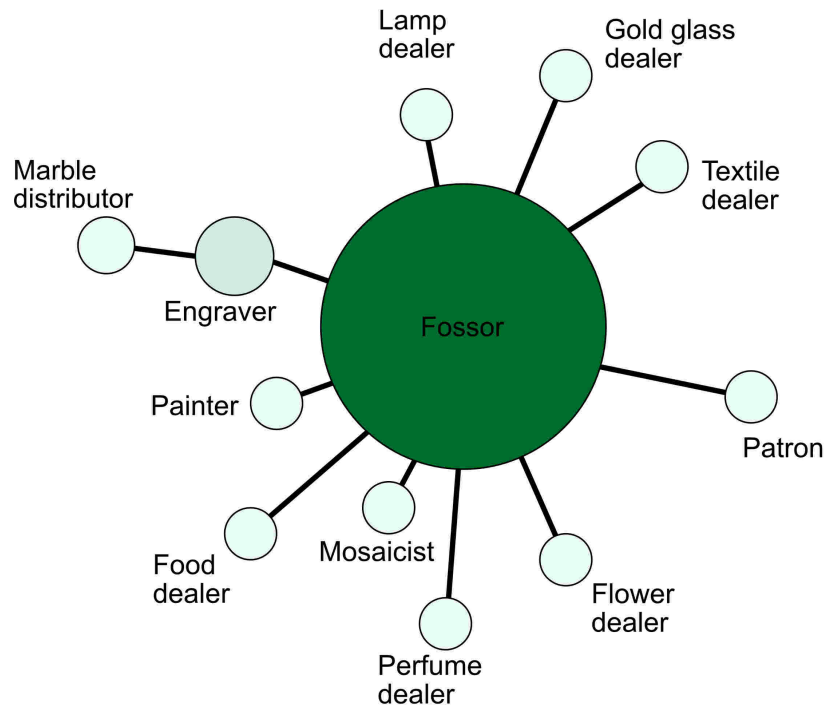


**Figure 5.7.** A network model based on the *columbarium*.

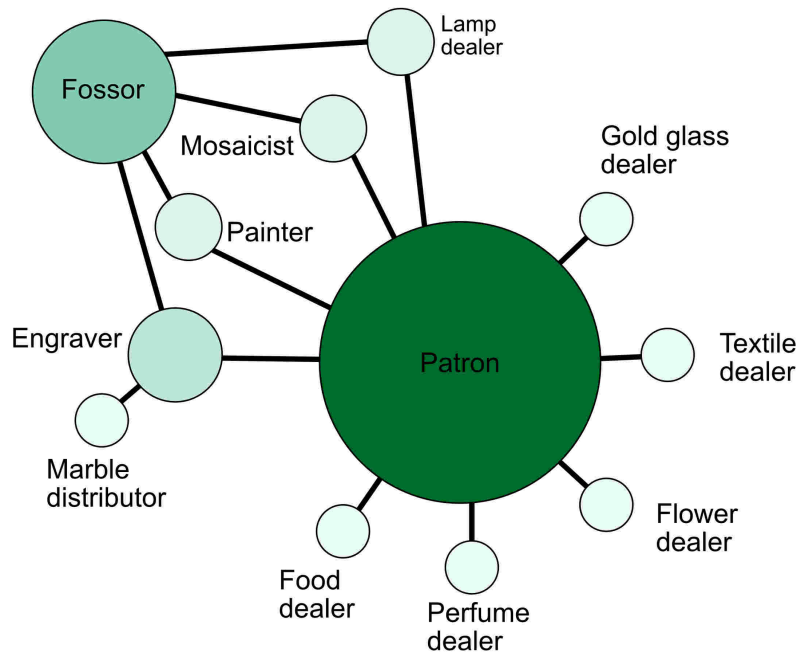


**Figure 5.8.** A catacomb social network modeled on the *columbarium*. Note that in this case, the “manager” role is performed by an agent drawn from among the patron group.

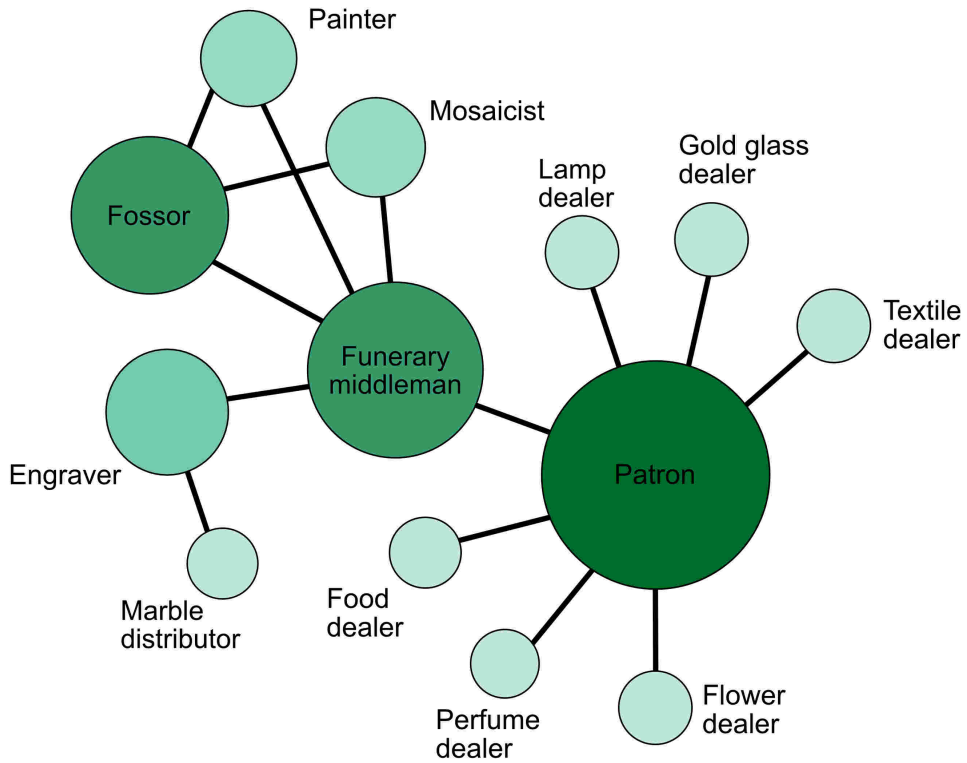




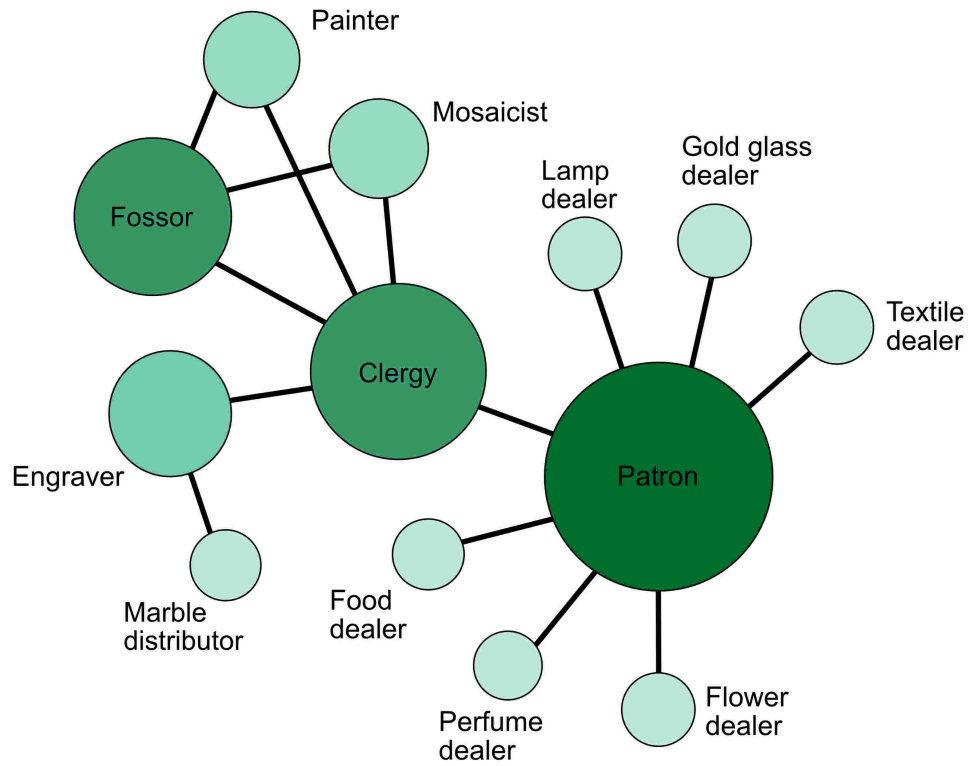
**Figure 5.9. A hypothetical catacomb social network centered on the *fossor*.** Here the *fossor* serves as the patron's connection to a wide range of other workers, some dedicated to funerary labor, others working in both funerary and non-funerary contexts. The *fossor*'s relationship to these other workers would take the form of social contact; the *fossor* would not manage or employ the other workers.



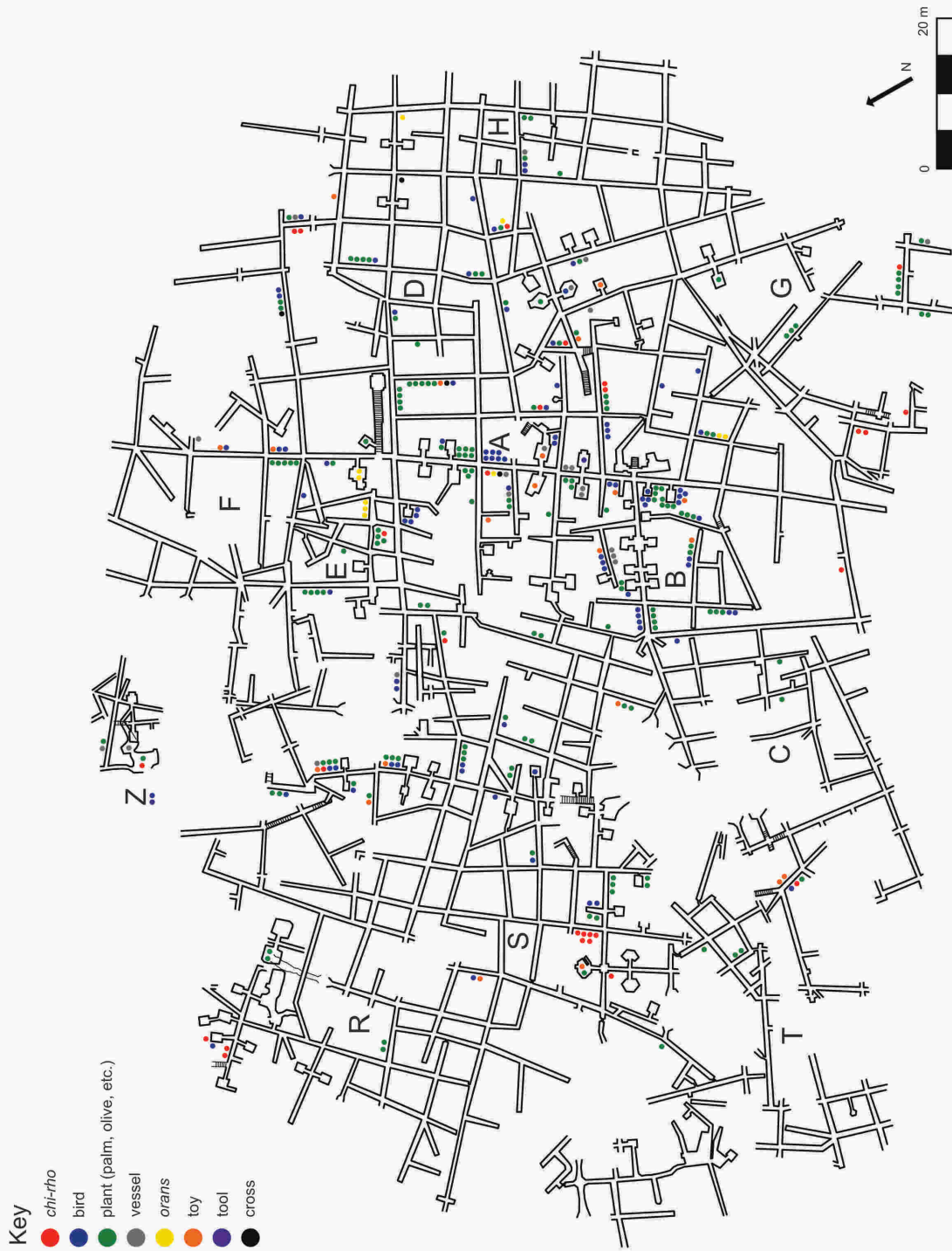
**Figure 5.10. A hypothetical catacomb social network centered on the patron.** Here the patron has a direct connection to many different workers, and the *fossor* has social contact with those workers who probably supplied their products directly at the catacomb.



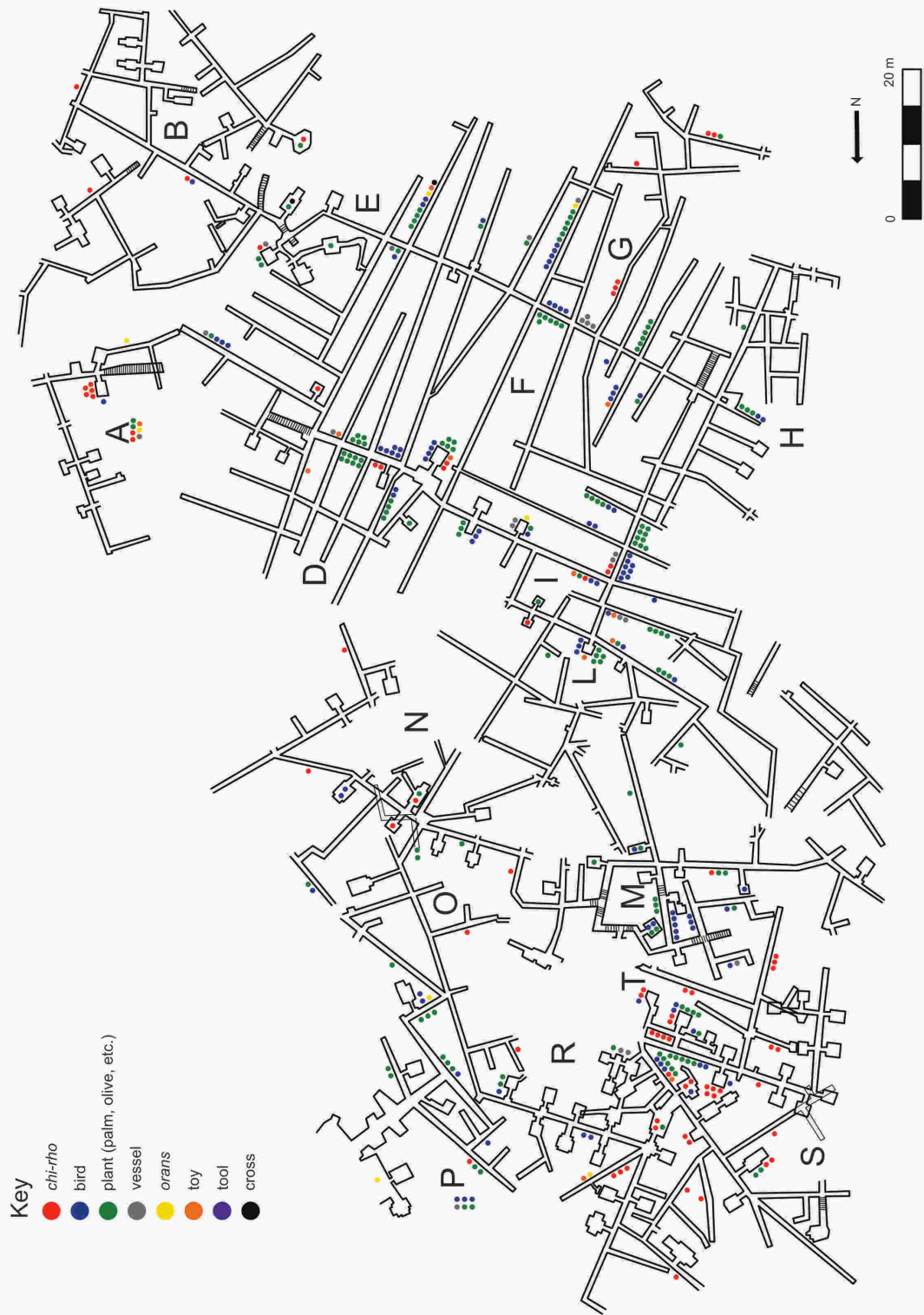
**Figure 5.11. A catacomb social network featuring a “funerary middleman,” a hypothesized worker who would have connected a patron to funerary workers.** The patron would have had direct connections to workers who made goods that were used in both funerary and non-funerary contexts.



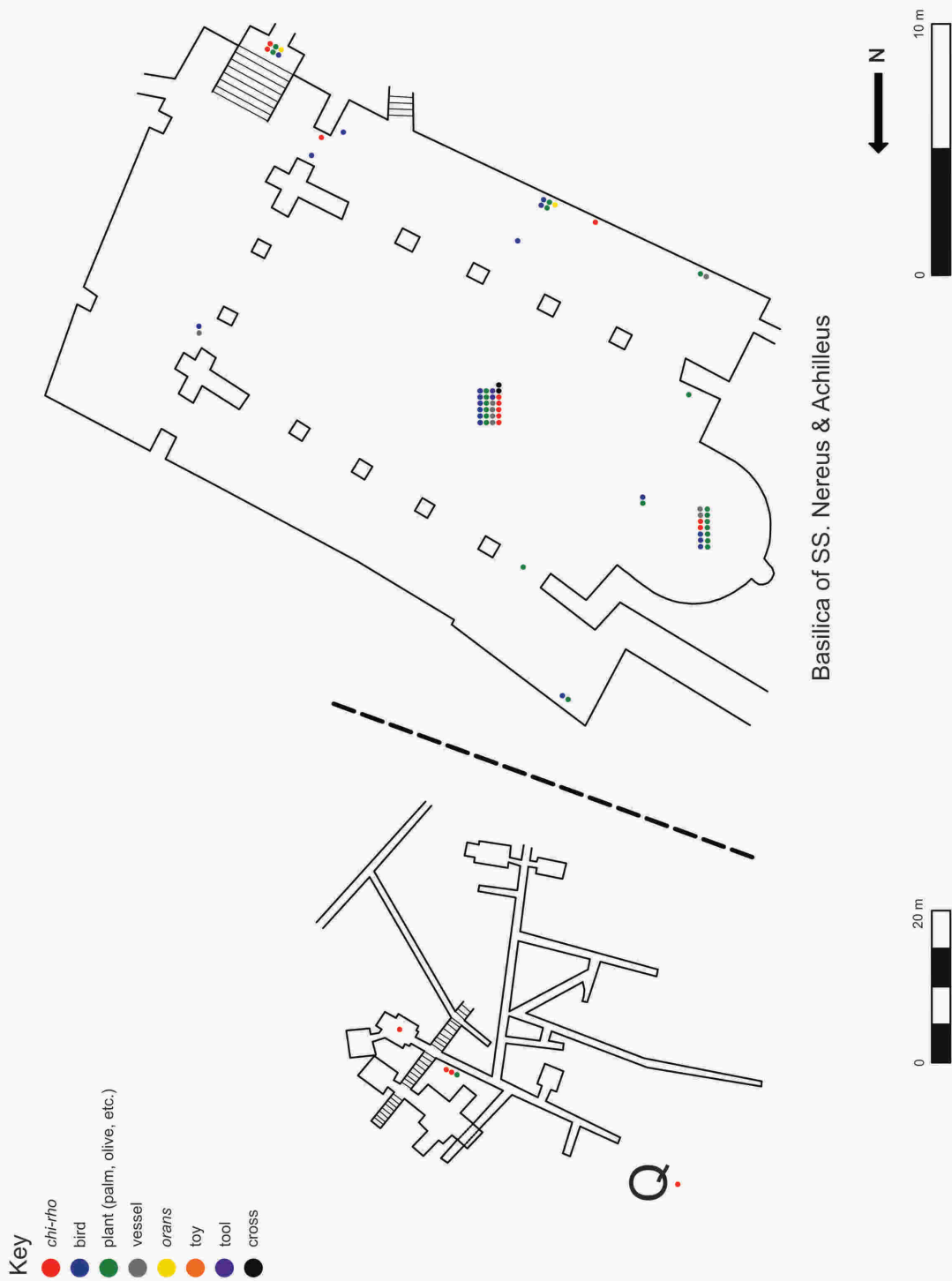
**Figure 5.12. A catacomb social network with the role of “funerary middleman” played by a member of the clergy.**



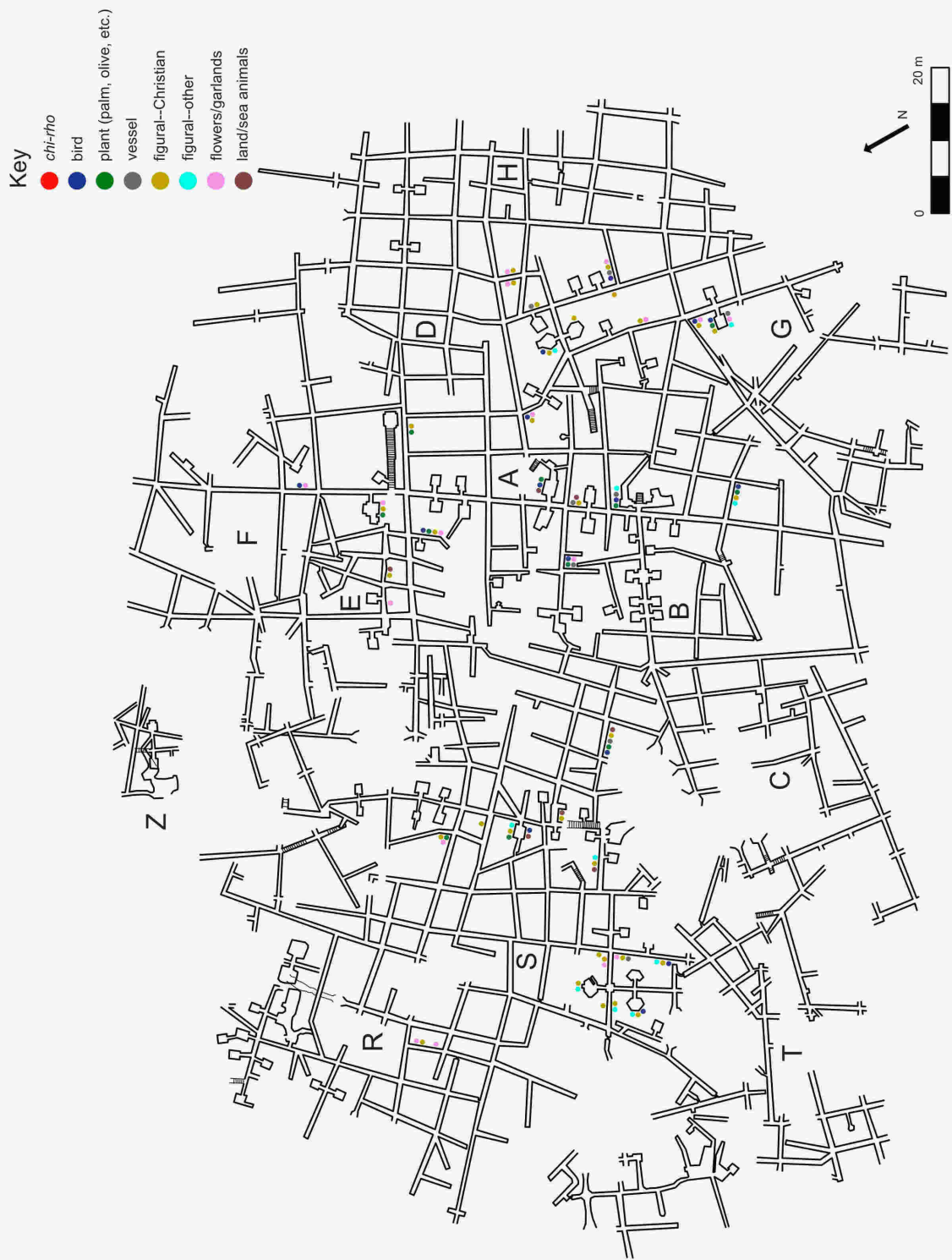
**Figure 5.13. “Motif map” showing engraved images, upper level, catacomb of Domitilla (Rome).**



**Figure 5.14. “Motif map” showing engraved images, lower level, catacomb of Domitilla (Rome).**

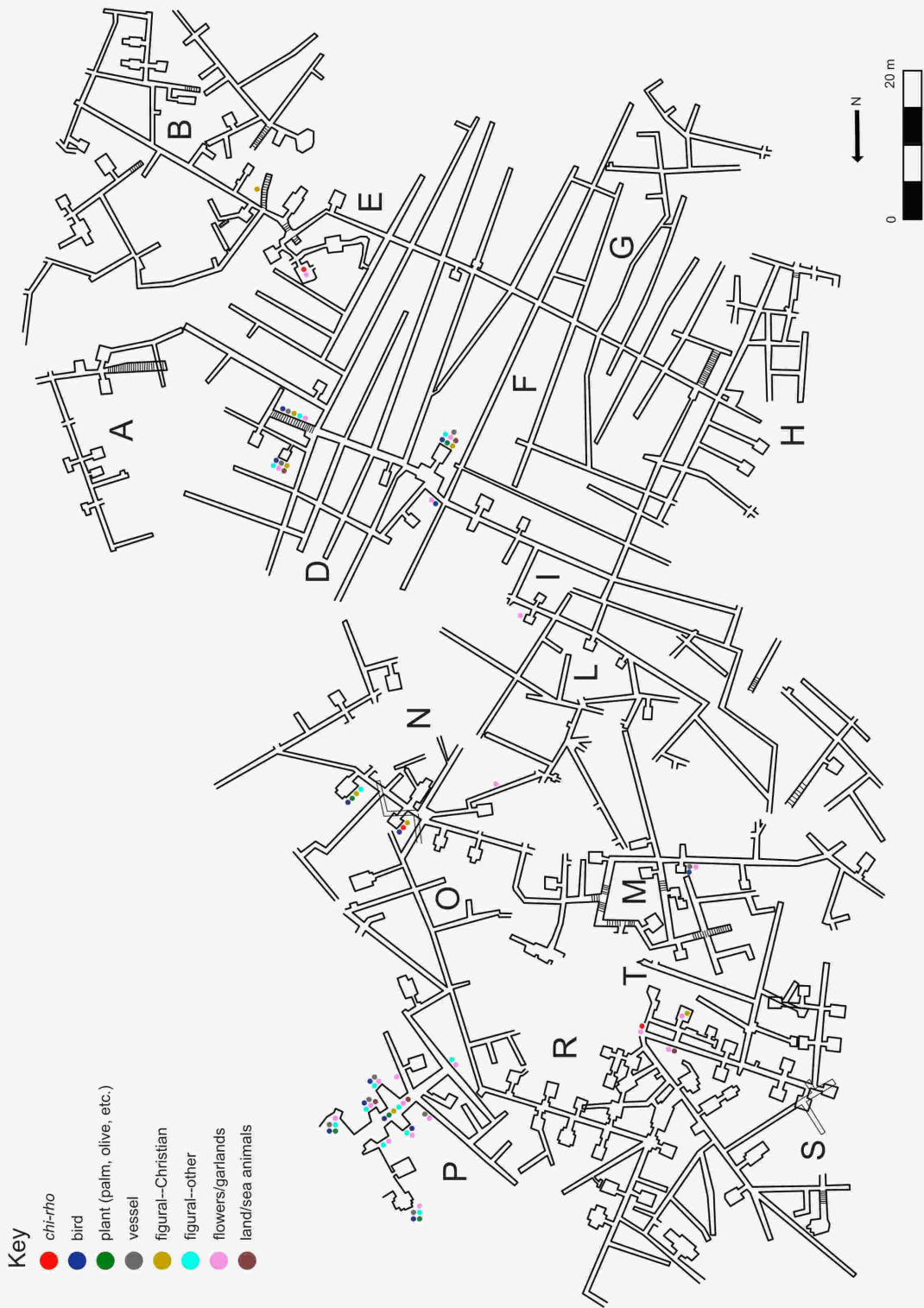


**Figure 5.15. “Motif map” showing engraved images, regions Pi, Q, and Basilica, catacomb of Domitilla (Rome).**

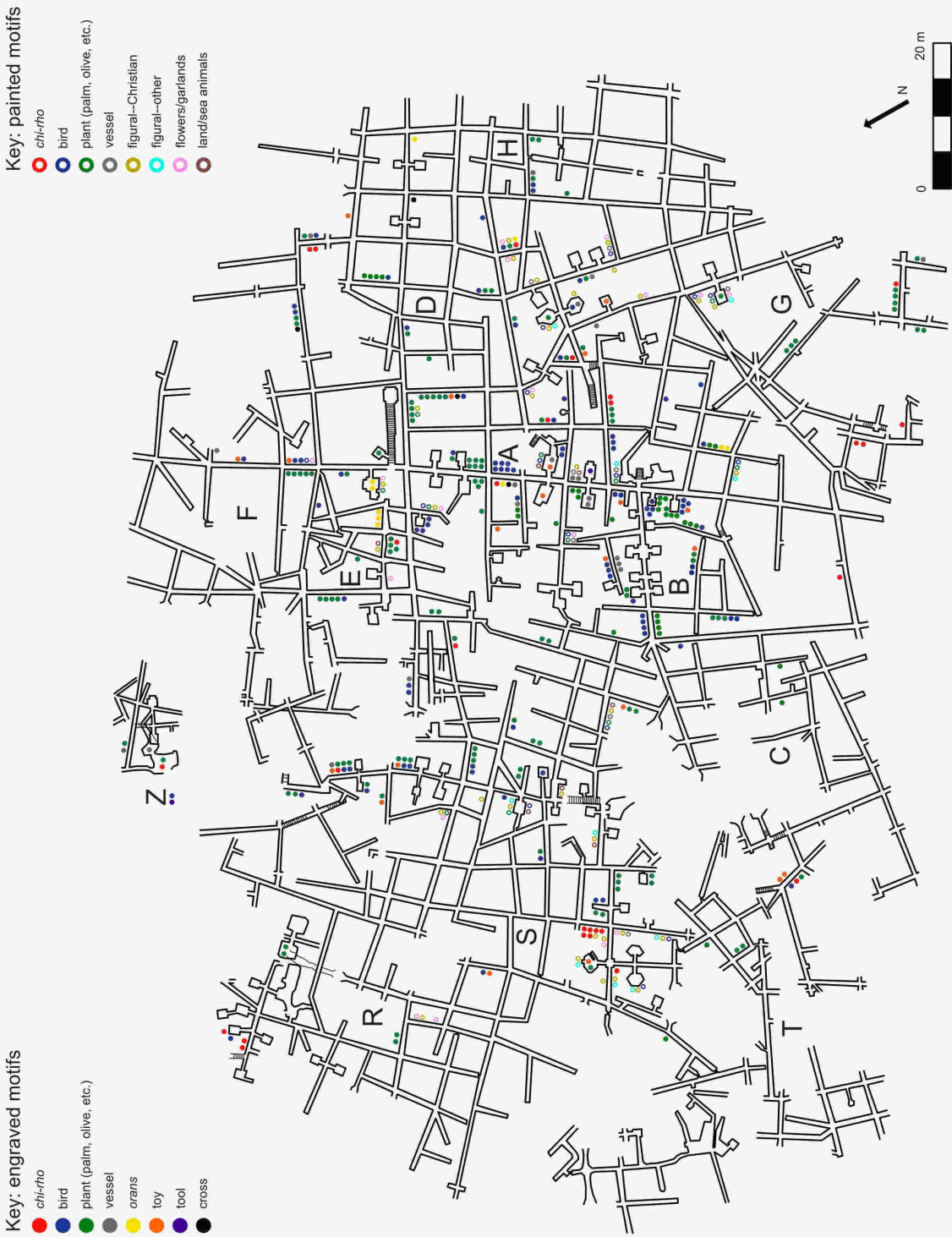


**Figure 5.16. “Motif map” showing painted images, upper level, catacomb of Domitilla (Rome).**



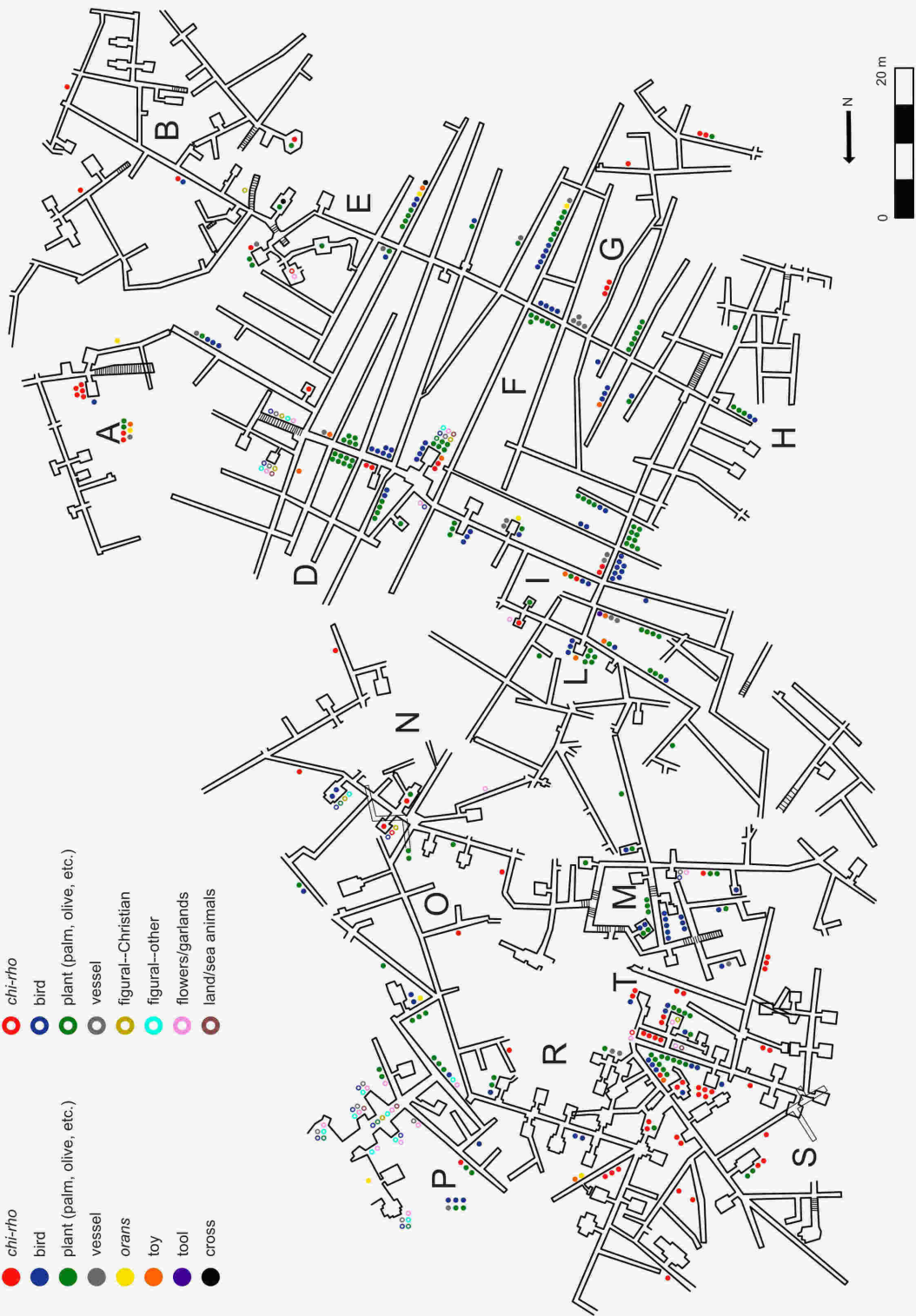


**Figure 5.17. “Motif map” showing painted images, lower level, catacomb of Domitilla (Rome).**

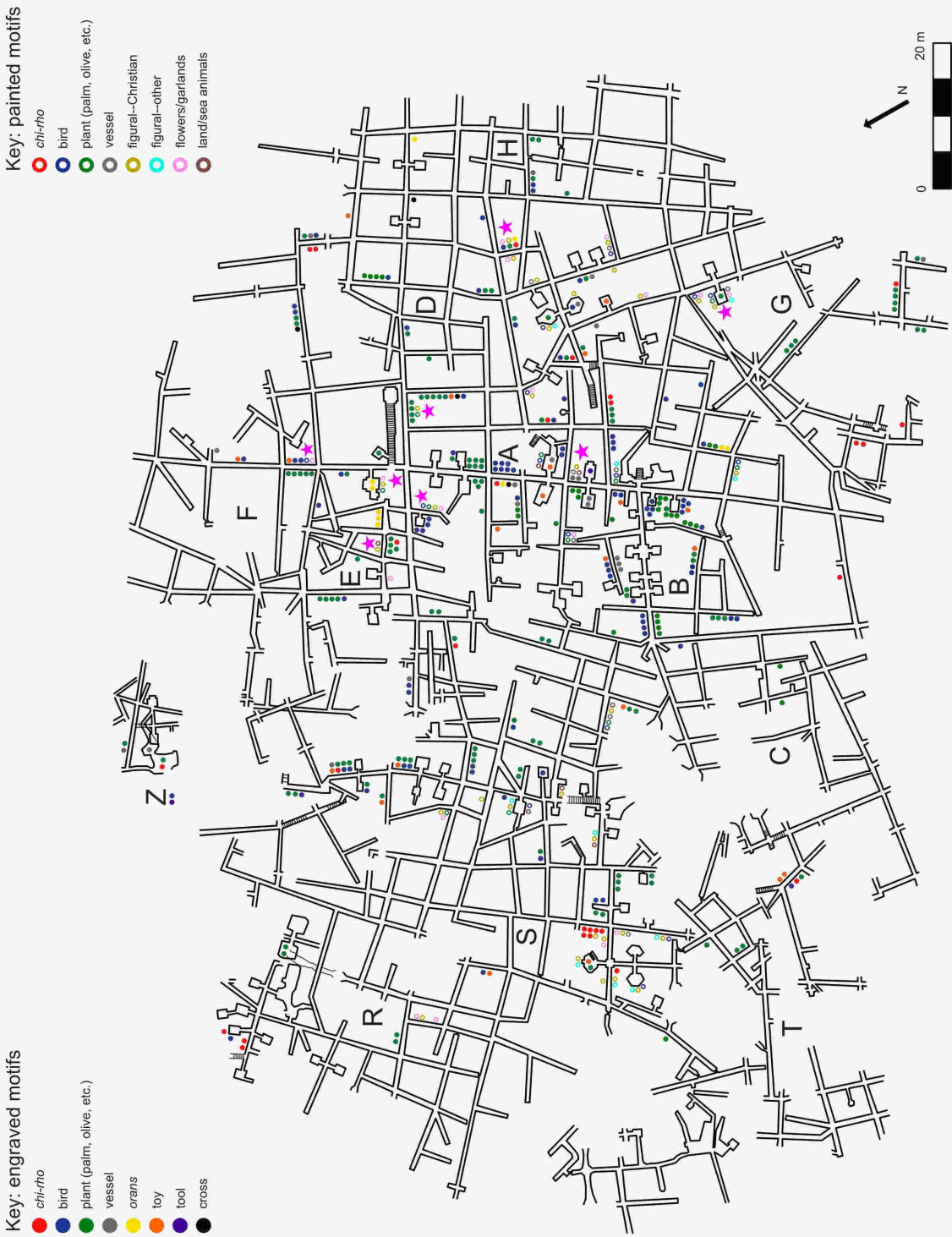


**Figure 5.18. “Motif map” showing engraved and painted images, upper level, catacomb of Domitilla (Rome).**

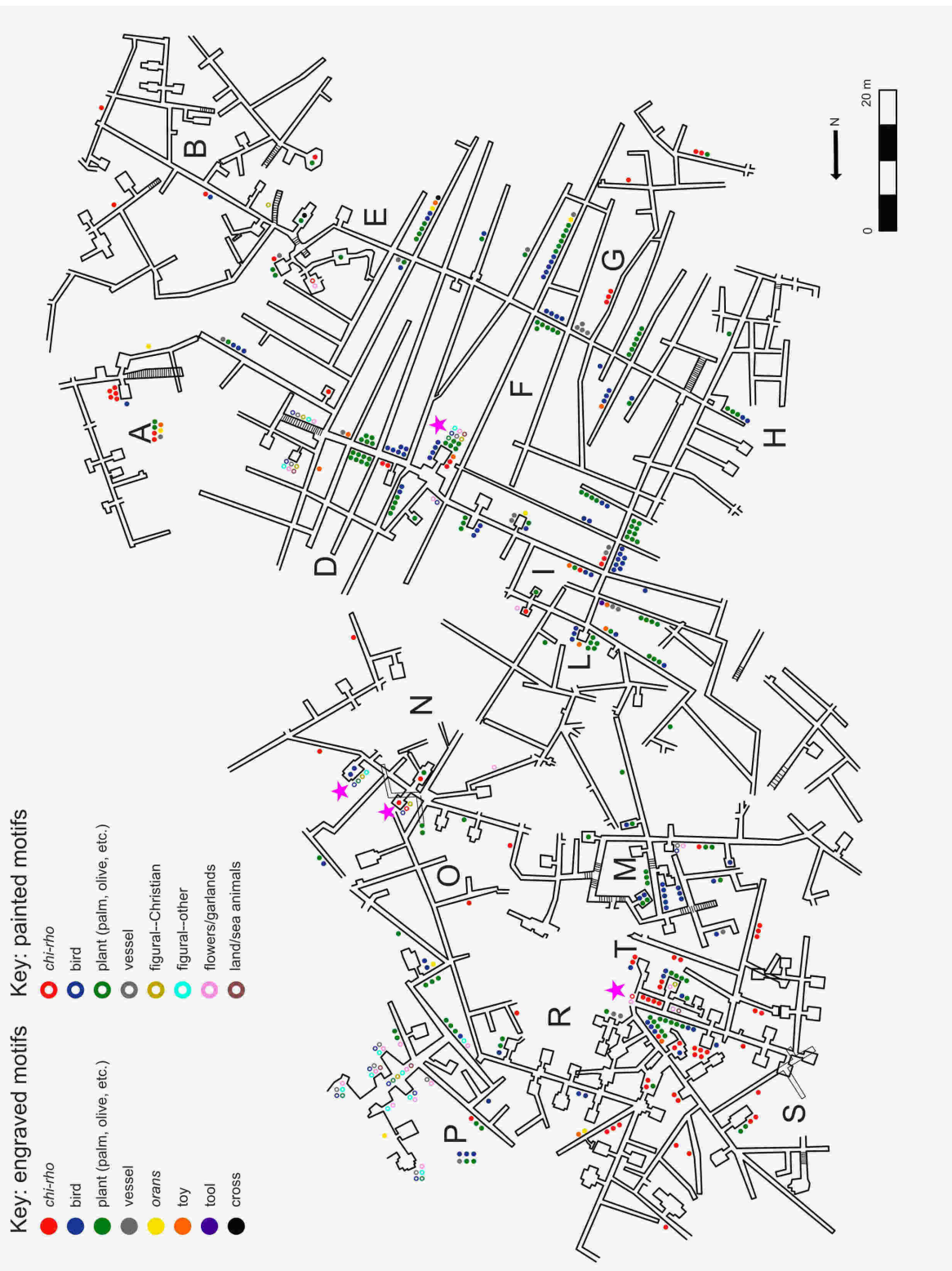
- |                             |                             |
|-----------------------------|-----------------------------|
| <b>Key: engraved motifs</b> | <b>Key: painted motifs</b>  |
| ● <i>chi-rho</i>            | ● <i>chi-rho</i>            |
| ● bird                      | ● bird                      |
| ● plant (palm, olive, etc.) | ● plant (palm, olive, etc.) |
| ● vessel                    | ● vessel                    |
| ● orans                     | ● figural-Christian         |
| ● toy                       | ● figural-other             |
| ● tool                      | ● flowers/garlands          |
| ● cross                     | ● land/sea animals          |



**Figure 5.19. “Motif map” showing engraved and painted images, lower level, catacomb of Domitilla (Rome).**



**Figure 5.20. “Motif map” showing engraved and painted images, upper level, catacomb of Domitilla (Rome).** Stars indicate places where a motif occurs in both media in close proximity.



**Figure 5.21. “Motif map” showing engraved and painted images, lower level, catacomb of Domitilla (Rome).** Stars indicate places where a motif occurs in both media in close proximity.

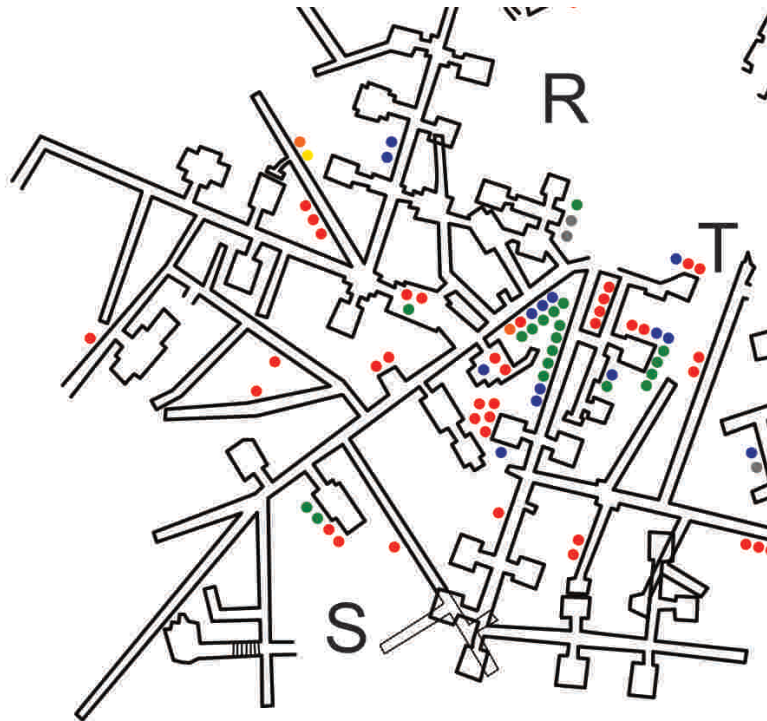


Figure 5.22. Detail of “motif map” showing engraved motifs in regions R, S, and T (the *retrosanctos* area), lower level, catacomb of Domitilla (Rome).

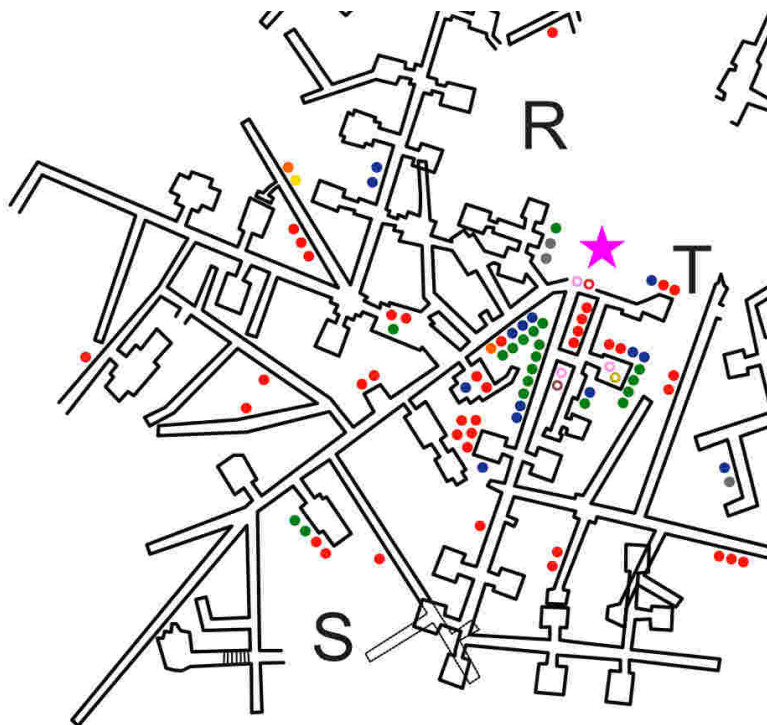


Figure 5.23. Detail of “motif map” showing engraved and painted motifs in regions R, S, and T (the *retrosanctos* area), lower level, catacomb of Domitilla (Rome).



Figure 5.24. Detail of “motif map” showing painted motifs in “Region of the *Mensores*,” upper level, catacomb of Domitilla (Rome).



Figure 5.25. Detail of “motif map” showing engraved and painted motifs in “Region of the *Mensores*,” upper level, catacomb of Domitilla (Rome).



**Figure 5.26. Detail of “motif map” showing painted motifs in region P (including the “Hypogeum of the Aurelii”), lower level, catacomb of Domitilla (Rome).**



## CONCLUSION

In his 1978 essay on “The role of craftsmanship in the formation of early Christian art,” J. B. Ward-Perkins calls for a greater appreciation of the contributions of craftsmen—painters, sculptors, mosaicists, and the like—in the development of the Christian visual culture of late antiquity.<sup>1</sup> He emphasizes these workers’ ability to constrain their patrons’ choices through what the workers were able or willing to produce, as well as patrons’ power to stimulate the creation of new motifs (or assign new meanings to old motifs).<sup>2</sup> Negotiation between workers and patrons, in his view, is an essential part of the process of craft production, and economic behavior is intertwined with artistic innovation. Nearly forty years later, late antique craft workers—especially those working in the funerary realm—remain undervalued. In this study, I try to approach the funerary workers associated with catacombs as agents of artistic creation despite their humble social status, who, in negotiation with their patrons, participated in the production of catacomb architecture, painting, and inscriptions.

This project begins with five premises. First of all, workers exercise agency over (and through) their products. Those products carry with them information about their makers, making it possible to learn about the laborer through the artifact. Repetitive actions undertaken in the contexts of craft production grow over time into habits shared by workers who trained and practiced together; when many workers share habits and aesthetics, styles develop. To approach

---

<sup>1</sup> Ward-Perkins, “The role of craftsmanship in the formation of early Christian art.”

<sup>2</sup> *Ibid.*, 643, 51.

anonymous workers collectively, it is best to work with large datasets, where the influence of collective agents can be more readily observed. Finally, because workers' principal relationship to their patrons was an economic one, the religious identities of the workers would not be of primary concern in this study, if it were even possible to determine them. Starting from these premises, it is possible to study catacomb *fossores* (diggers), painters, and engravers in terms of agency and social interaction.

Looking for evidence of these workers' habits, organization, and relationships with their patrons, I select three large catacomb sites on which to focus, one from each of three major late antique urban centers in Italy, all in use primarily between the late third and early sixth century CE. The architecture, paintings, and inscriptions from these three sites form the dataset to which I apply a range of analytical methods drawn from the fields of art history, archaeology, and classical philology. Funerary workers are not well represented in historical sources, and interdisciplinary approaches are essential if we are to learn about these workers from their products.

*Fossores* not only dug the catacombs; there is good evidence to suggest that they may have performed multiple functions, from helping visitors navigate the sites to creating some of the inscriptions. Because of their intimacy with the catacomb site and the unavoidable social contacts between *fossores*, their patrons, and certain other workers (especially painters and engravers), I argue that the *fossores*' agency should be given primacy in debates on how catacombs were managed. While Focchi Nicolai's vision of Church management becomes more persuasive after the mid-fourth century CE,<sup>3</sup> it overlooks the important role that *fossores* must have played as the ones with the practical knowledge to engineer catacombs and the power to

---

<sup>3</sup> See Chapter 2.

create and sell tomb spaces. *Fossores* helped to develop a funerary architecture that would not only address cities' needs for practical and economical burial space, but also serve as a frame for social interaction and artistic production.

As Ward-Perkins pointed out in 1978, scholars of catacomb painting have focused on figural scenes to the exclusion of the “decorative frameworks,” which are “often far more likely to tell us something about the personality and preparation of the artist.”<sup>4</sup> This remains true today, and, for this reason, I try to refine a practical approach to learning about catacomb painters from their products. The first step is to consider the material conditions in which the painting was made—the architecture to be painted, as well as the tools and pigments available or in common use. Then the painting can be analyzed for the influences of the broader style, the particular workshop, and finally, the painter's personal choices and negotiations with the patron. Using four criteria—the use of tools, the use of colors, the composition of the line frameworks, and the execution of fill motifs—we can define a workshop's “signature,” or its responses to the particular physical and social contexts in which the work took place. Any aspects of the painting not attributable to any of these factors could derive from innovation on the part of the painter, or special requests on the part of the client. Using this step-by-step procedure, I analyze the painted *arcosolia* in a small region in the catacomb of San Gennaro (Naples), drawing inferences about the painters' embodied practices, workshop habits, and responses to social stimuli. Applied to the painting corpus of a whole catacomb, this method has the potential to uncover not only the details of individual painters' or workshops' practices, but also the interactions, imitations, and referencing that must have occurred among workshops who encountered each others' painting in the catacombs.

---

<sup>4</sup> Ward-Perkins, “The role of craftsmanship in the formation of early Christian art,” 643.

Epigraphy can shed light on social interaction in catacombs. Site-specific epigraphic styles reflect not just the possible involvement of distinct stonecutting workshops at different catacomb sites, but also the development of local vocabularies over time through repeated interactions of patrons and workers at a catacomb. Using nearly 4,000 inscriptions from catacombs in Rome and Syracuse, I compare patterns in the use of words and images from site to site to highlight the differences in style that could develop between catacombs in different regions, as well as among catacombs associated with a single city. Having de-materialized catacomb inscriptions for the purposes of this quantitative analysis, I then take an opposite approach, studying a small group of inscriptions on stone as artifacts. Even a cursory analysis of their materials and workmanship reveals that engravers tapped into the stone trade to find reusable pieces of marble for the smaller inscriptions. The carving of the inscriptions exhibits a range of skill levels; it seems that the patrons had access to workers of various levels of professionalism, from highly skilled to inexperienced. By applying these two methods—quantitative and artifactual analysis—it is possible to expose some of the social interactions that framed the production of catacomb epigraphy.

Finally, I apply network thinking to labor in catacombs. Catacombs and their contents—their architecture, painting, and epigraphy, not to mention the other objects found inside—can be viewed as the products of social interaction among many agents over time. In order to better understand these agents collectively, I reframe the models presented in Chapter 1 as social networks, considering how each can inform potential models of a “catacomb social network.” Starting from four types of agents—patrons, *fossores*, painters, and engravers—I expand the catacomb social network to encompass select others, including vendors of other funerary products and Christian clergy, who contributed to the social lives of catacombs. I then explore an

example of the kind of study that might be possible if we treat catacombs as the products of many networked agents—a very flexible sort of “workshop”—while eliding chronology inside the architectural limits of a catacomb. My “motif maps” place painting, epigraphy, and architecture in dialogue in an innovative way, suggesting new potential avenues of research.

Christian archaeology, the subfield to which the study of catacombs and early Christian sites belongs, “has remained largely insulated from literary, anthropology or archaeology-based theoretical models that have so transformed its sister disciplines,” in Bowes’ assessment.<sup>5</sup> This conservatism manifests itself in a tendency toward empirical approaches and an ongoing interest in reconciling textual and archaeological evidence.<sup>6</sup> I have tried to approach catacombs with theories and methods from classical archaeology, philology, and art history, in the hope that perspectives from these neighboring disciplines might yield new and interesting results. Despite their many problems of chronology, preservation, and interpretation, catacombs have the potential to serve as highly valuable sources for the social historiography of Rome, Naples, and Syracuse in late antiquity.

---

<sup>5</sup> Bowes, “Early Christian archaeology,” 578.

<sup>6</sup> *Ibid.*, 576-79.

## **APPENDICES**

## APPENDIX A

### Glossary of key terms

***Arcosolium***: a niche-like tomb excavated from a catacomb wall, consisting of a barrel vault over an excavated or masonry-built rectangular space in which the body (or bodies) lies. Fresco decoration may occur on the vault, the lunette (the back wall of the niche opposite its opening), and any part of the wall face into which the arcosolium was cut. Arcosolia may be positioned at floor level or elsewhere in the wall face, and they may occur in two or more registers in a chamber or gallery.

***Arcosolium of “Syracusan” type (or arcosolium polisomum)***: an arcosolium excavated farther back into the rock wall than usual, with many shaft tombs arranged side-by-side in its floor. Used extensively at San Giovanni in Syracuse, but a few examples may be found in San Gennaro in Naples as well.

***Catacomb***: a subterranean network of galleries and chambers excavated in rock for use as a cemetery. Distinguished from a hypogeum (underground chamber tomb) by its greater scale and architectural complexity.

***Chi-rho or christogram***: the Greek letters *chi* and *rho*, the first two characters of “Christ” in Greek (χριστός). Combined into a single symbol, these letters may be used in place of the name of Christ in a phrase (e.g., *in [chi-rho]* for “in Christ”).

***Cubiculum or chamber***: a room excavated in a catacomb, often intended to be a private tomb for a household or other social group.

***Fossa***: a shallow trench-like grave in the floor of a *cubiculum* or gallery.

***Fossor***: “digger,” usually applied to those who excavated (and perhaps managed) catacombs.

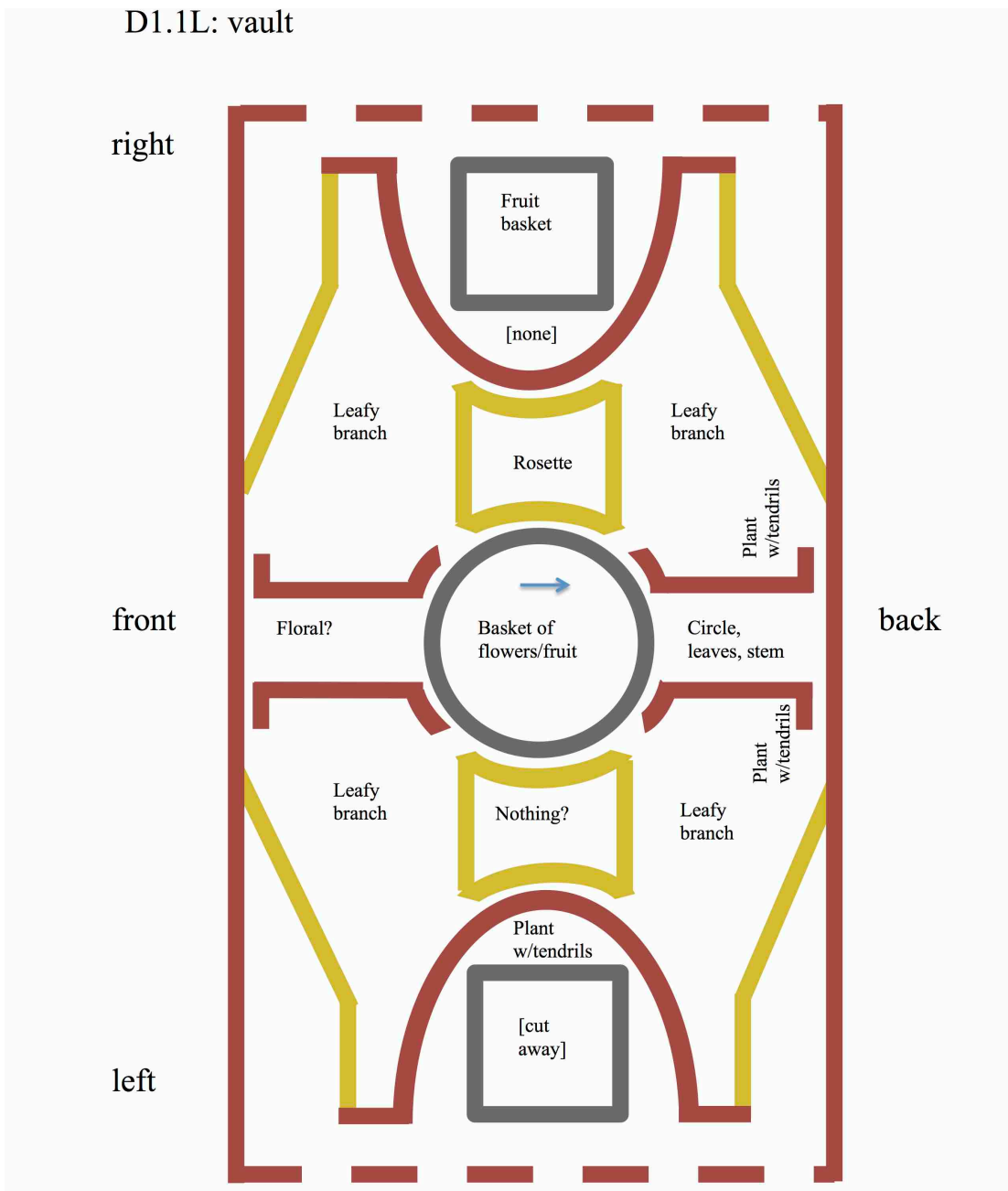
***Gallery***: a hallway excavated in a catacomb, usually with tombs cut into the walls.

***Loculus***: a horizontal shelf-like tomb space excavated from a catacomb wall (or sometimes built in masonry abutting a catacomb wall). Holds one body (sometimes two) laid flat and parallel to the wall face. Closed by bricks, tiles, or stone slabs and mortar.

***Tomba a mensa***: a tomb incorporating a horizontal surface in front of or above the burial itself where grave goods or offerings could be left.

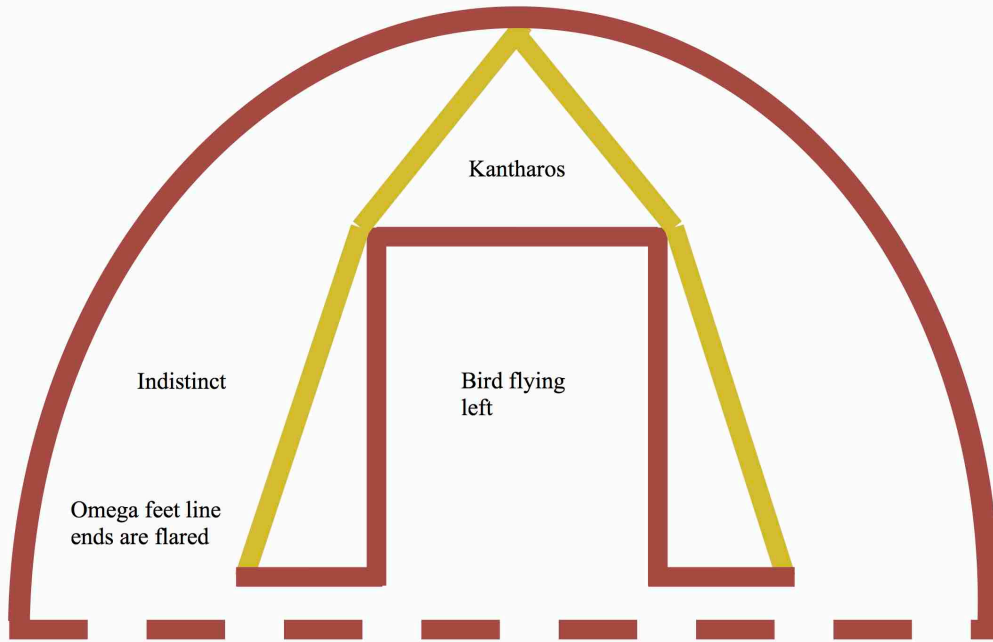
## APPENDIX B

### Schematic diagrams of *Zona Greca arcosolium* paintings

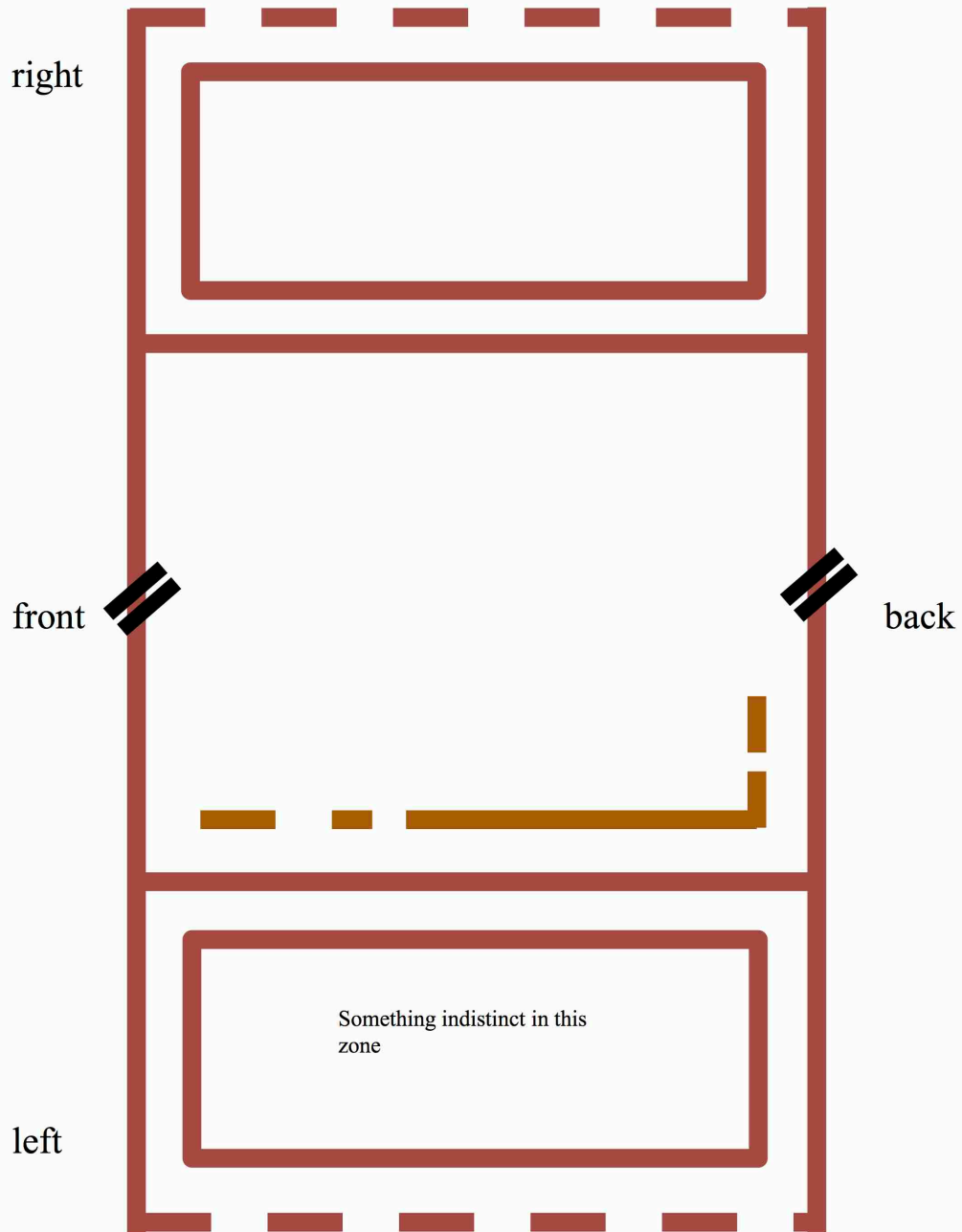




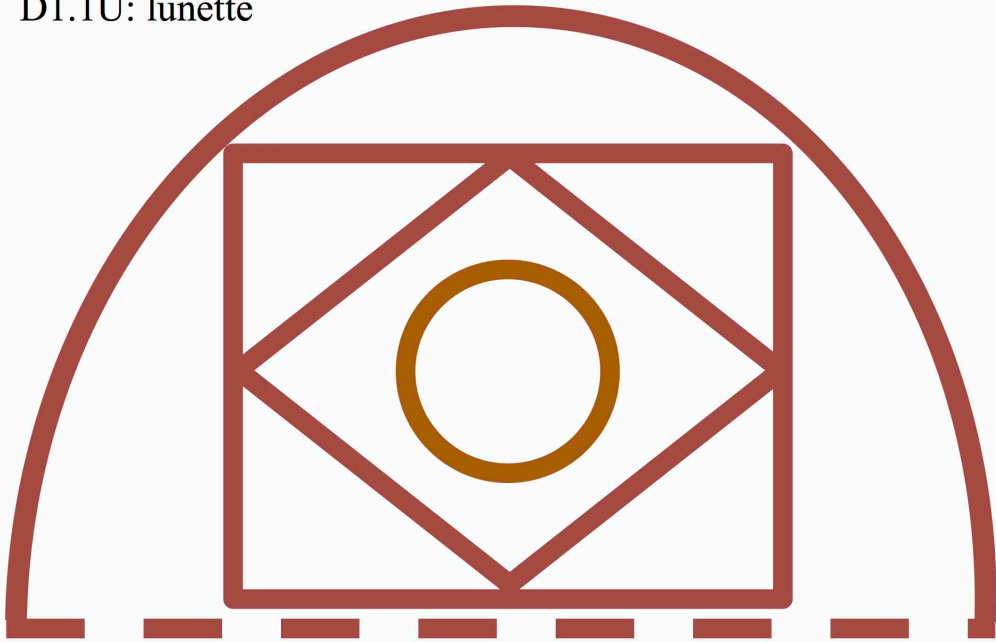
D1.1L: lunette



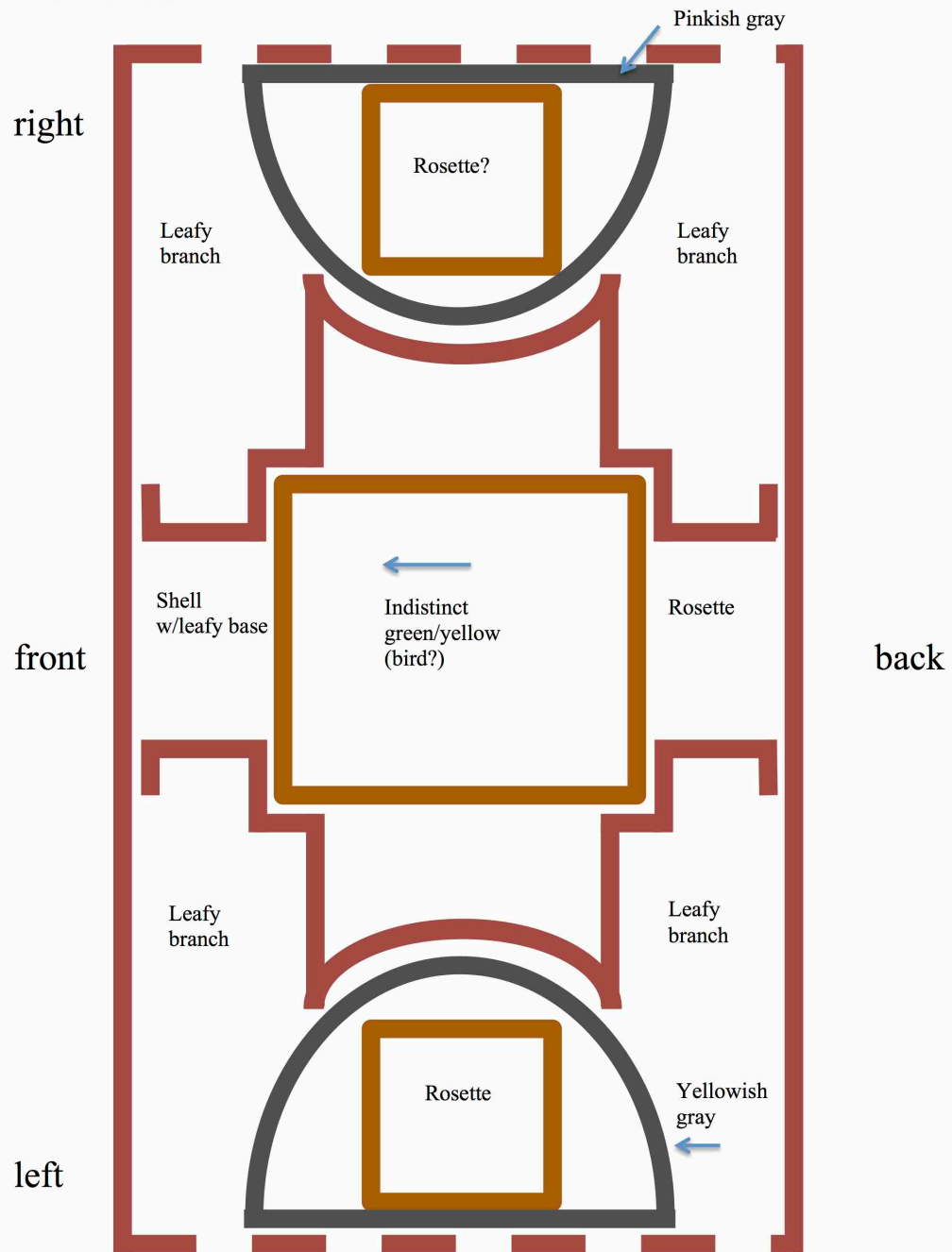
D1.1U: vault



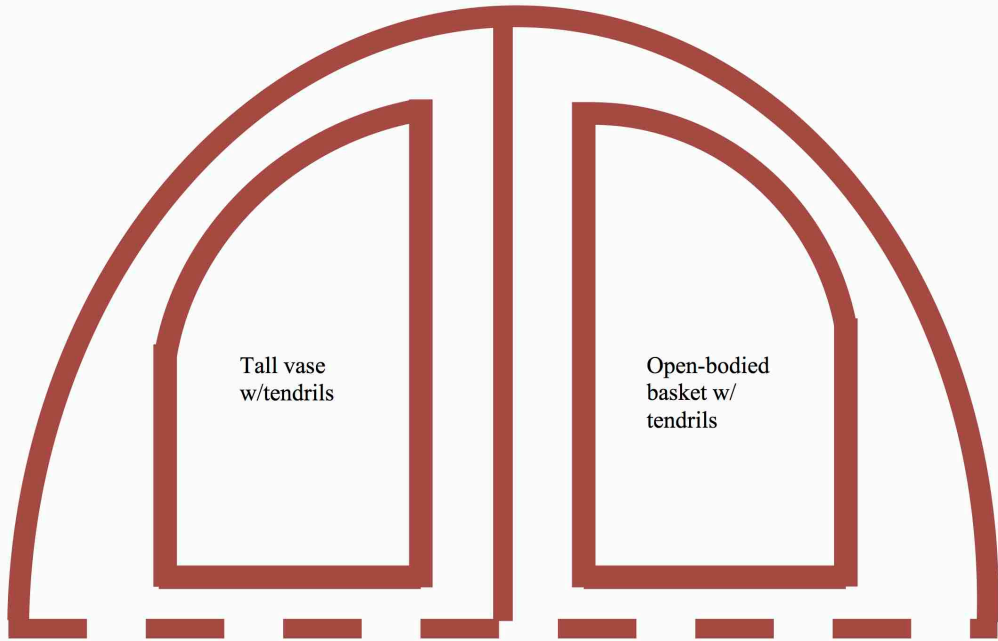
D1.1U: lunette



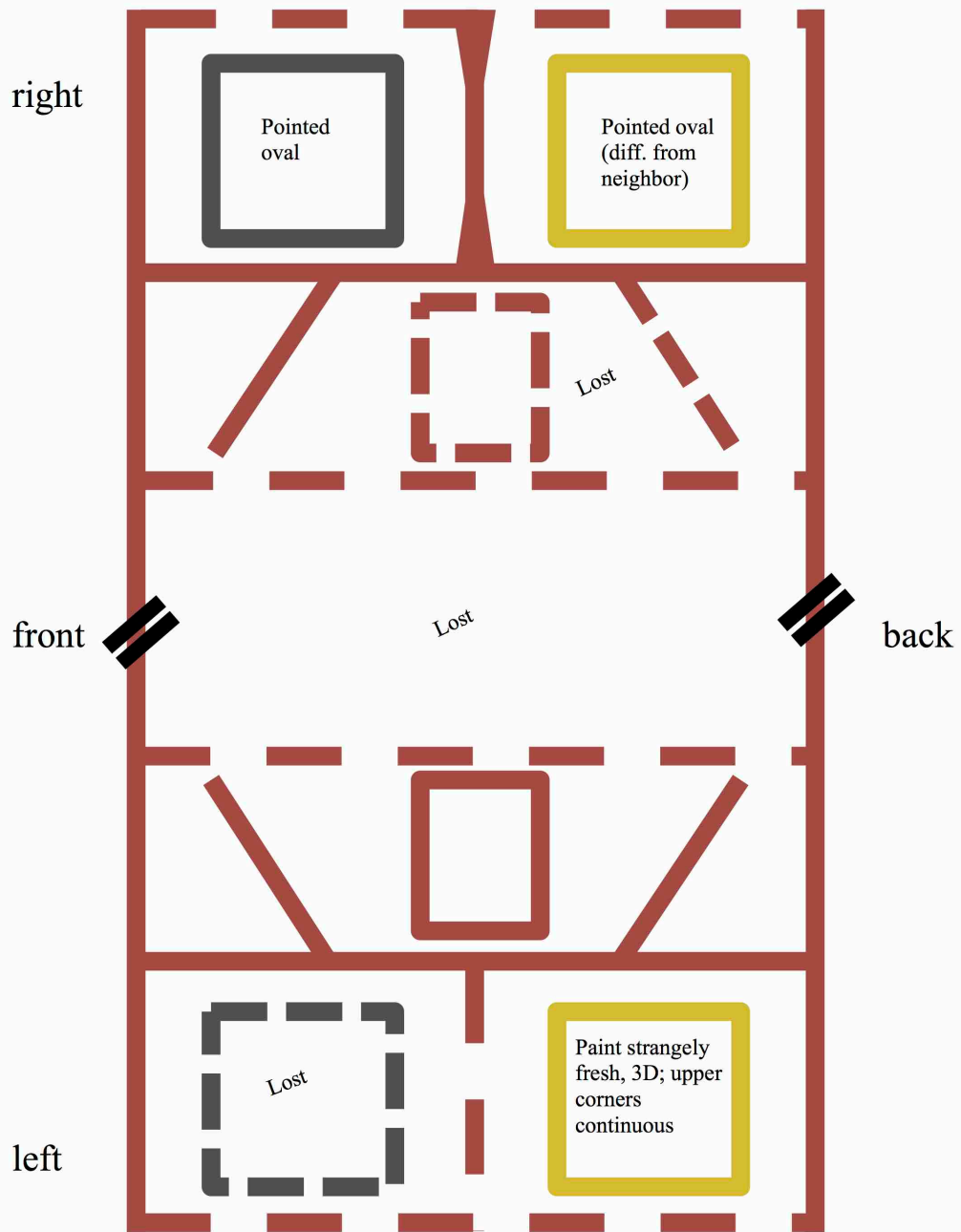
D2.1L: vault



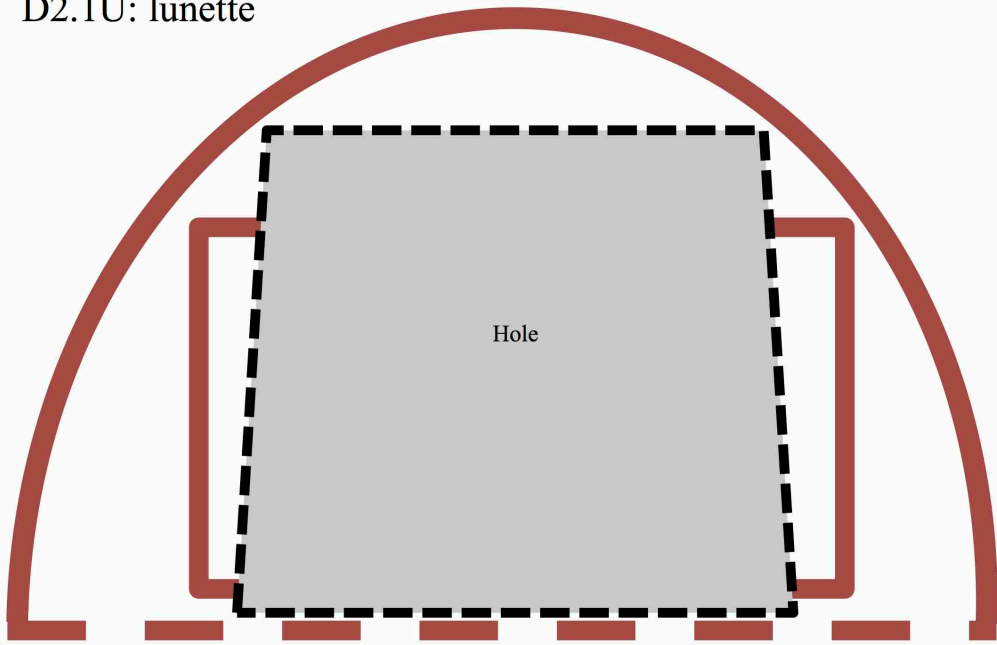
D2.1L: lunette



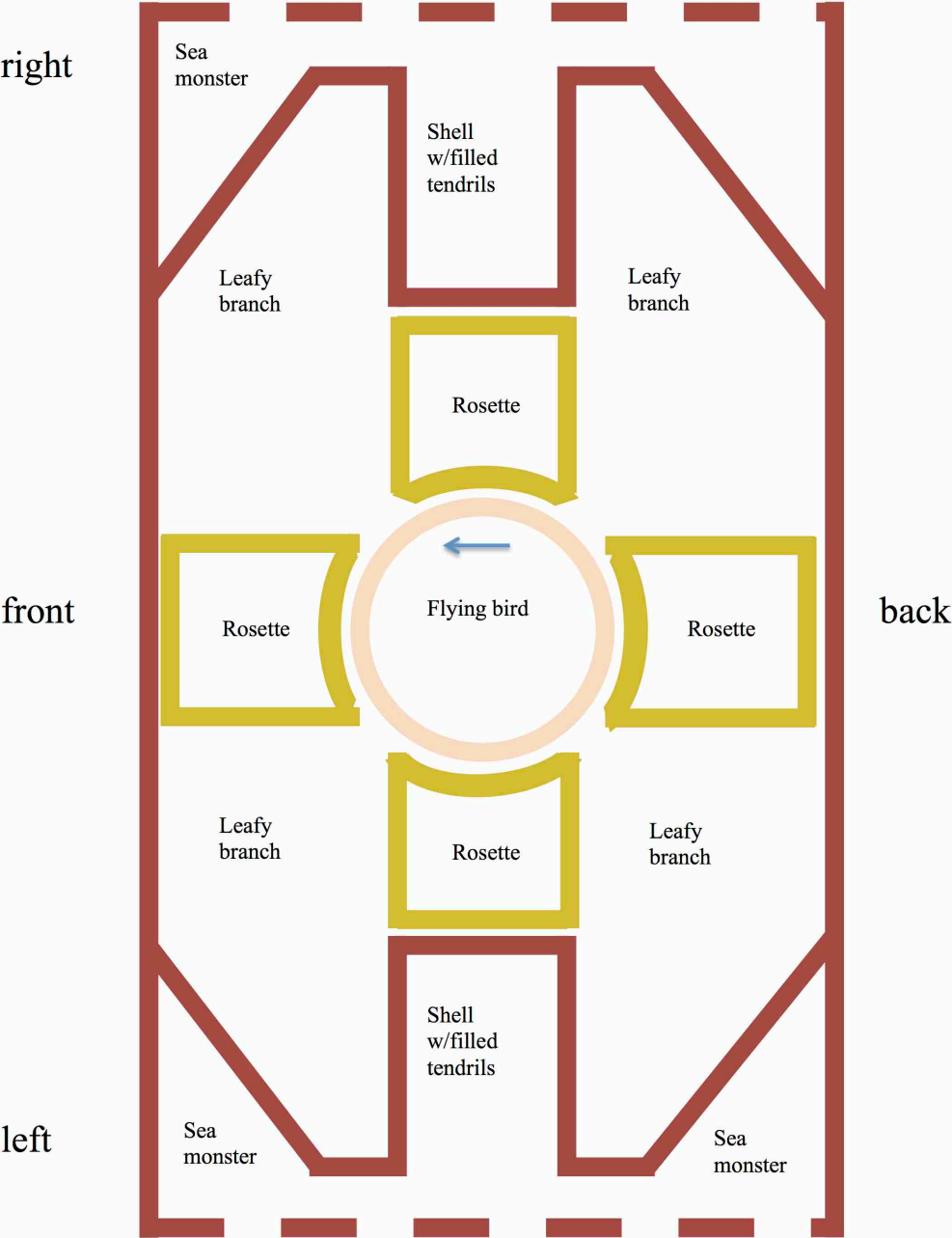
D2.1U: vault



D2.1U: lunette

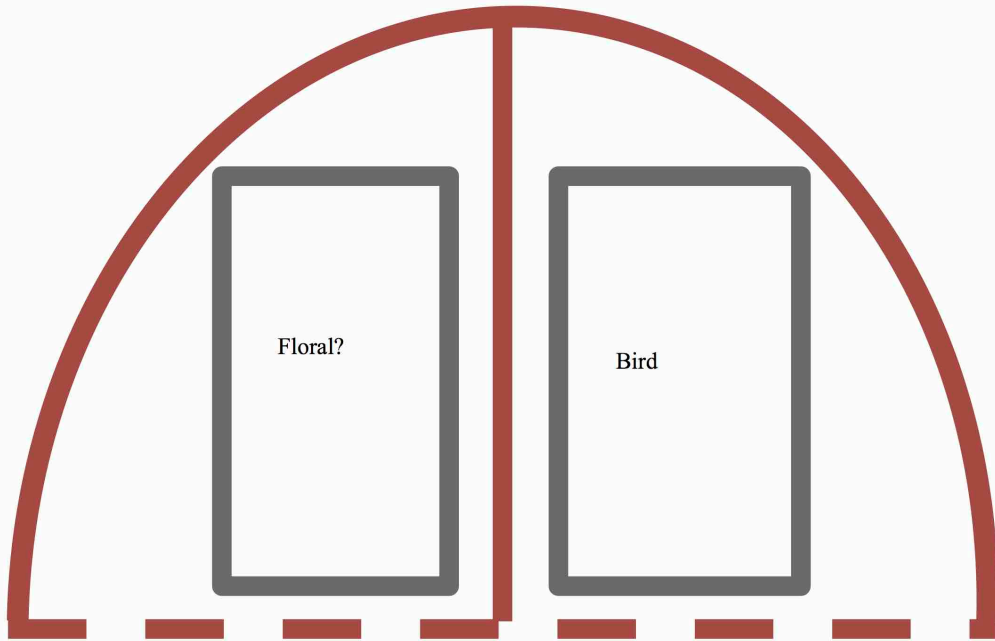


D2.2L: vault

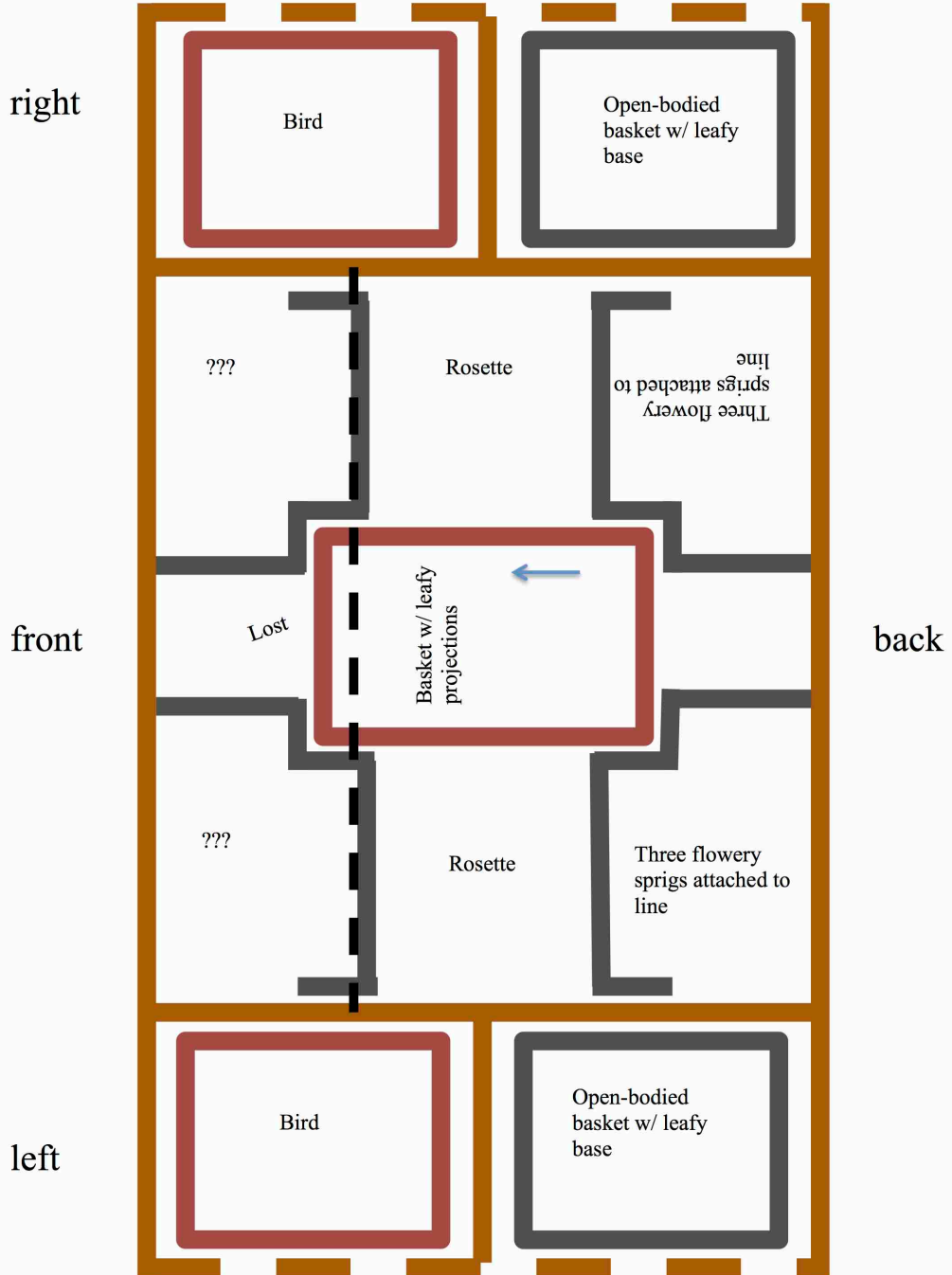




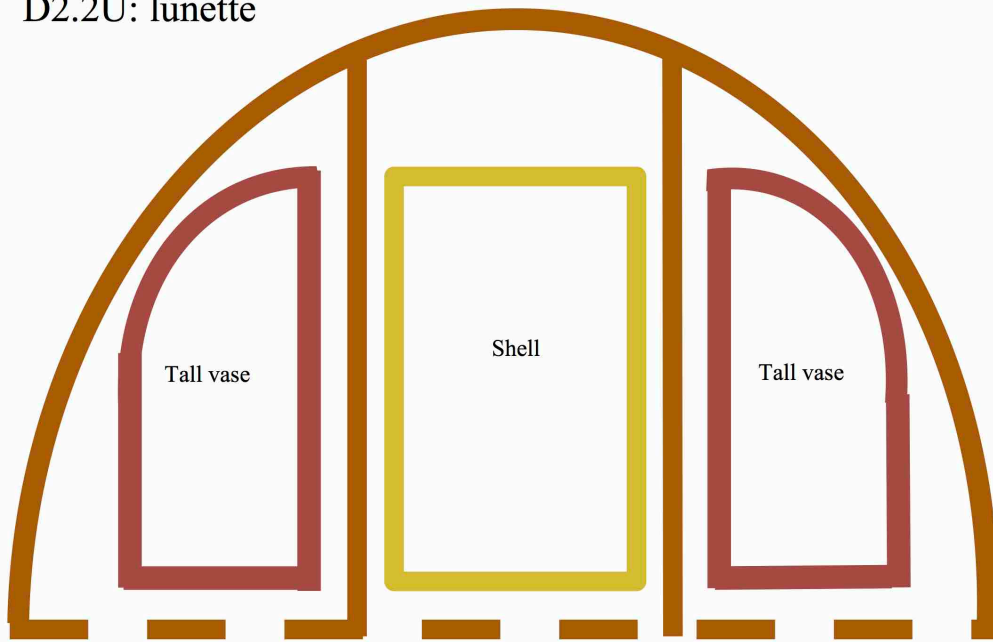
D2.2L: lunette

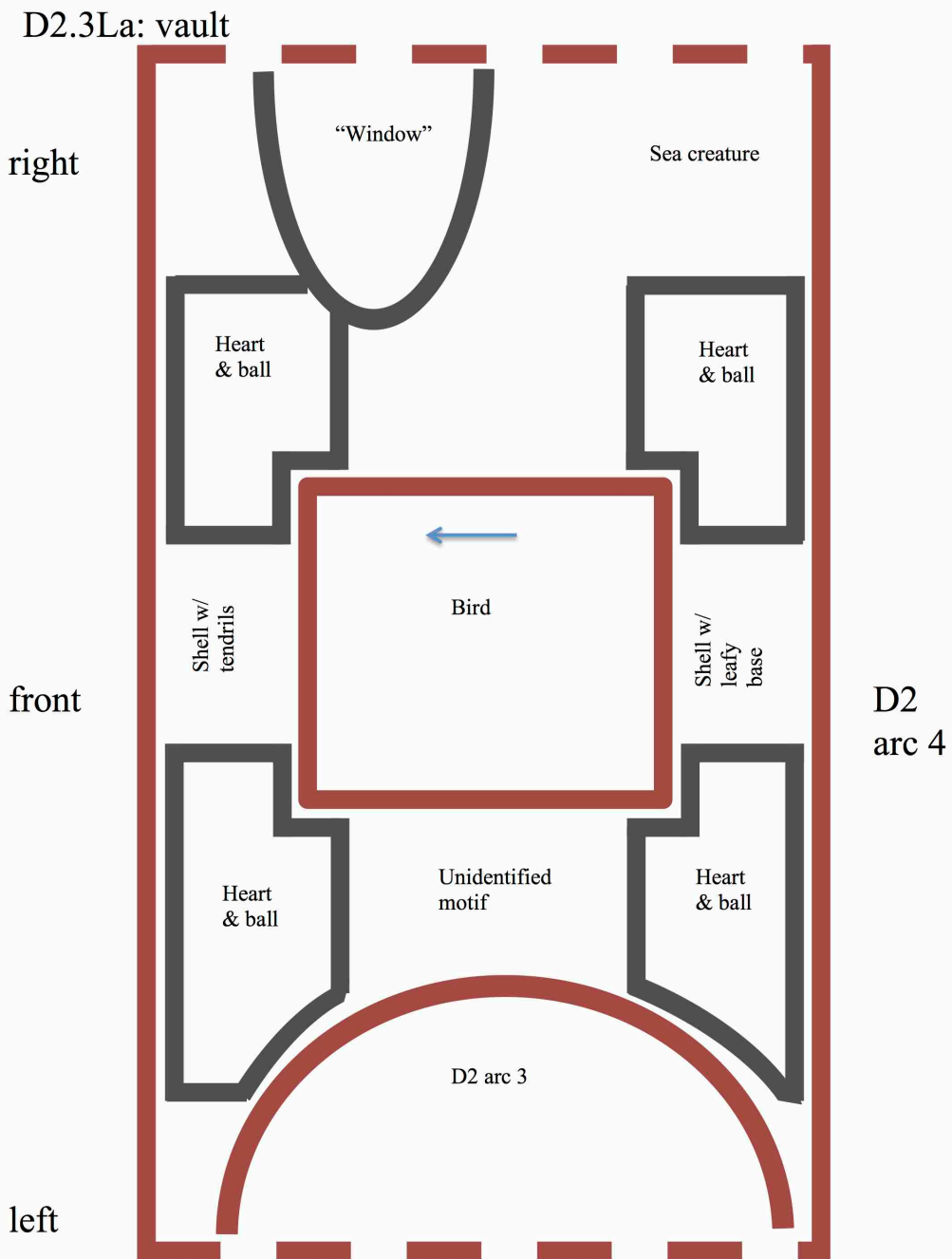


D2.2U: vault

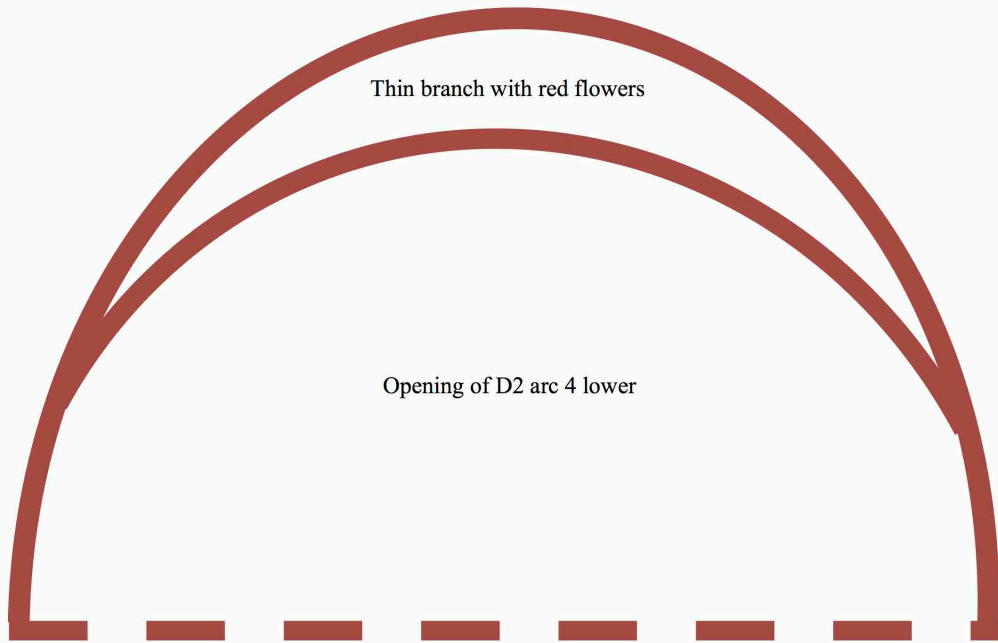


D2.2U: lunette

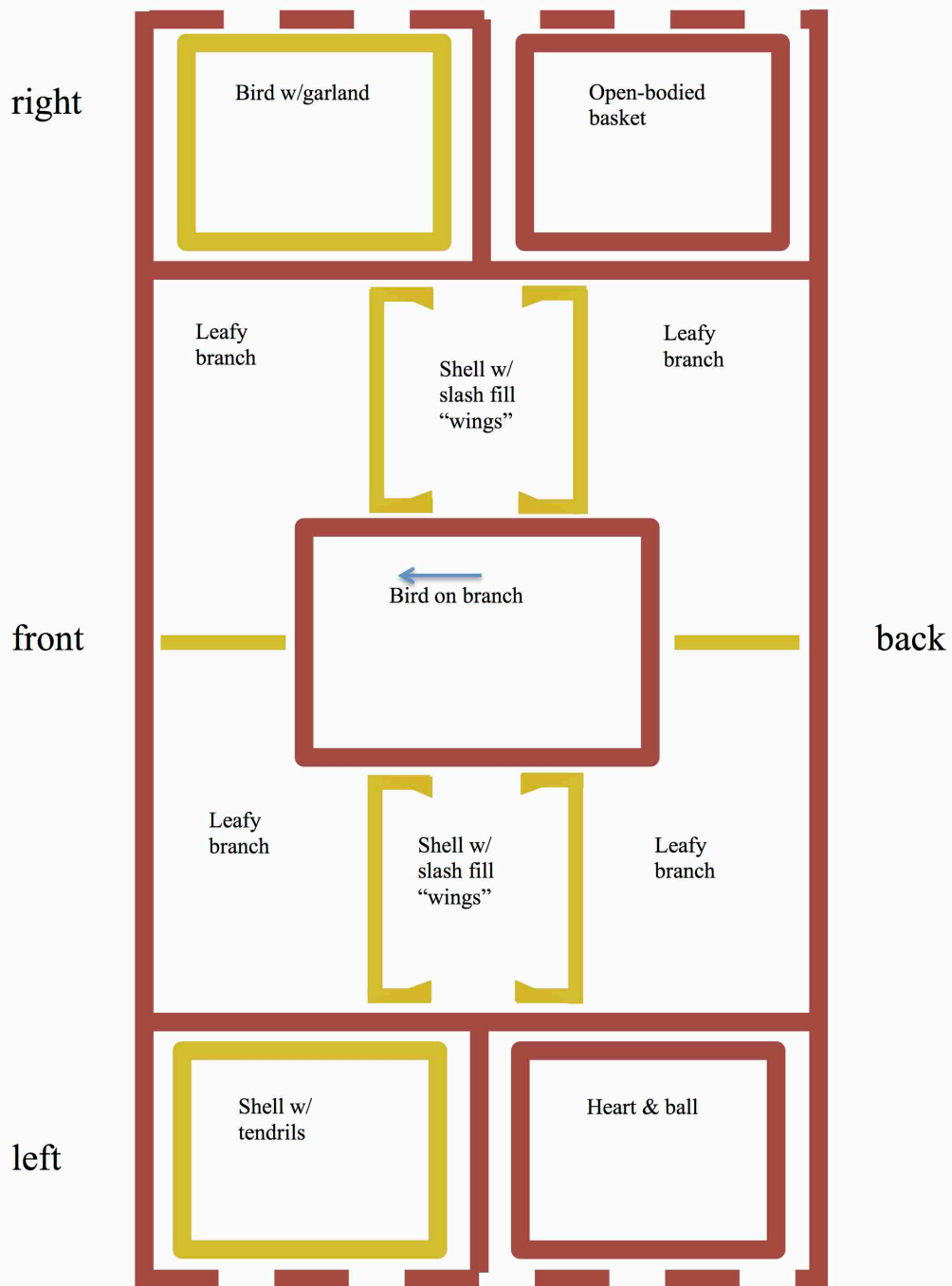




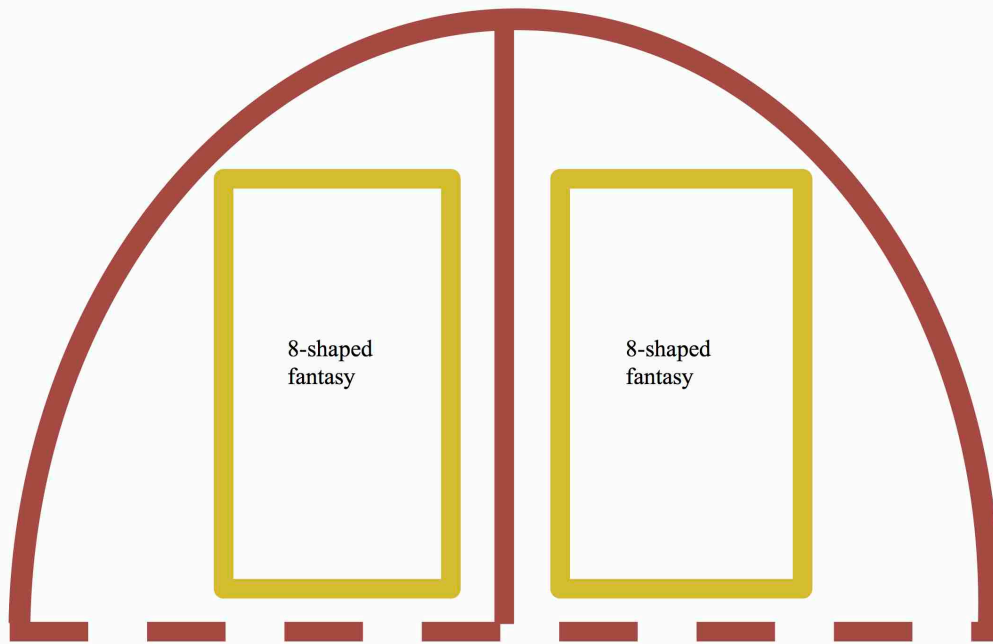
D2.3La: lunette



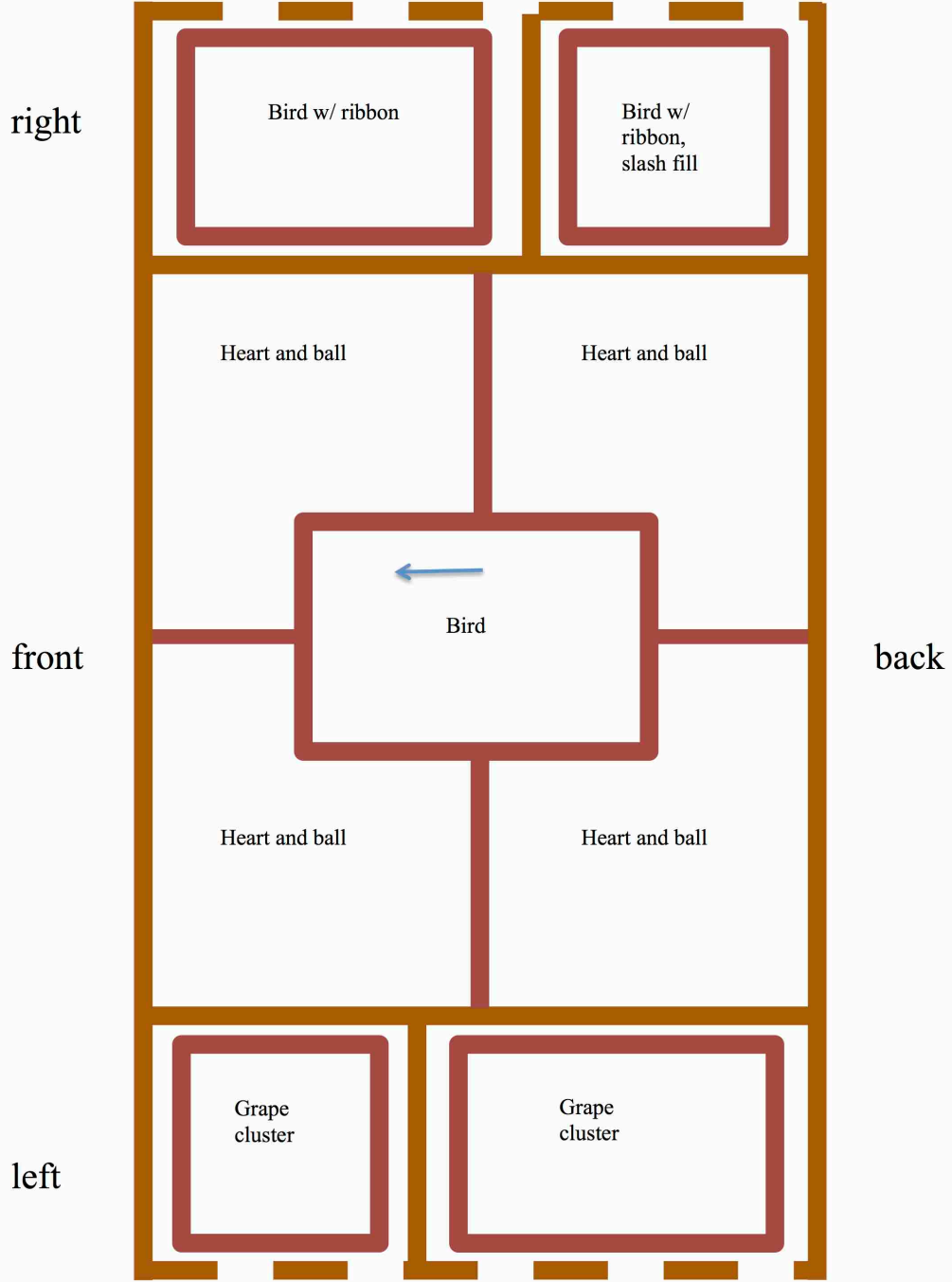
D2.3Lb: vault



D2.3Lb: lunette

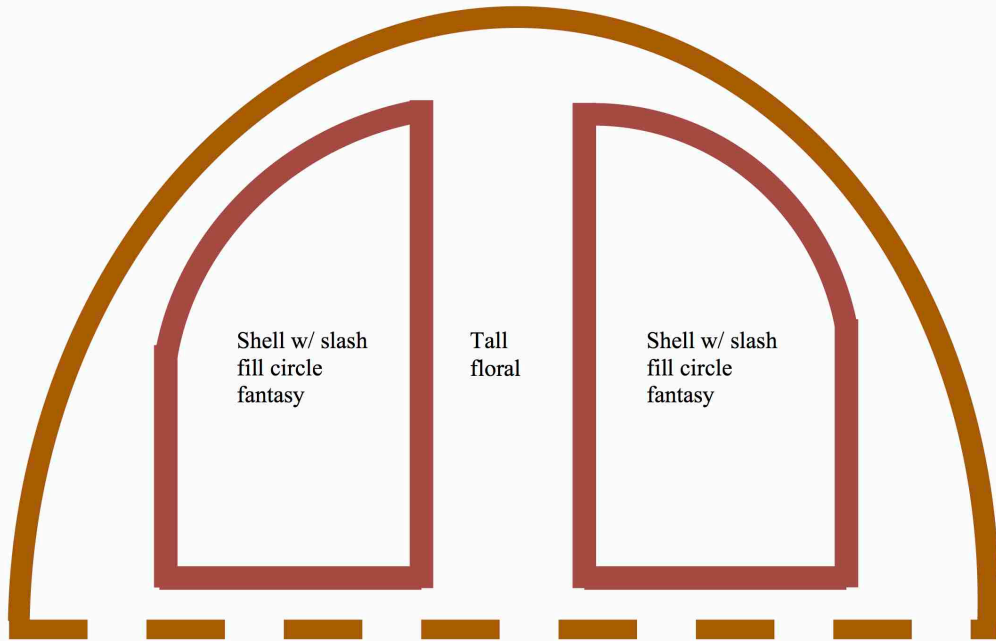


D2.3Lc: vault

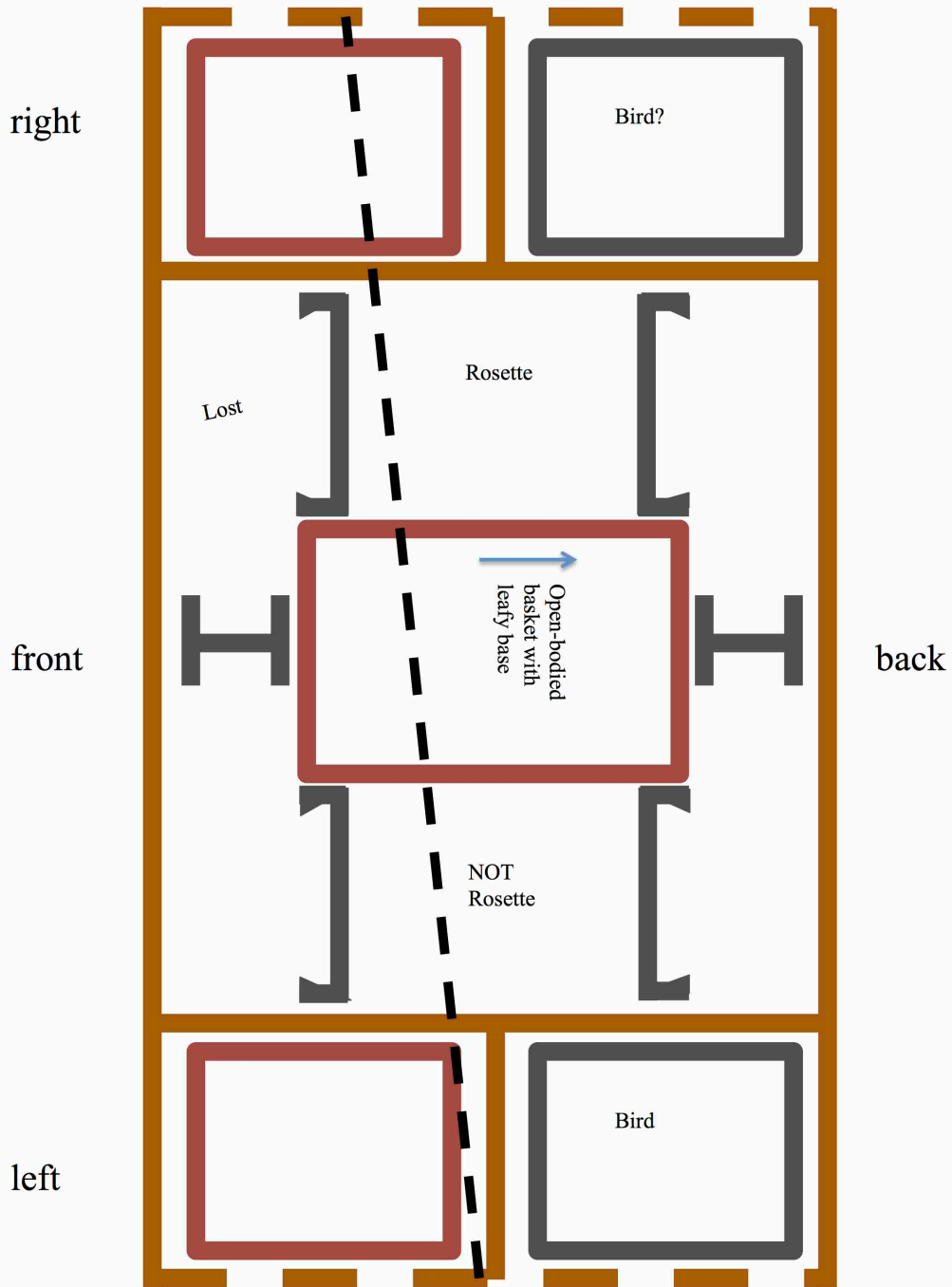




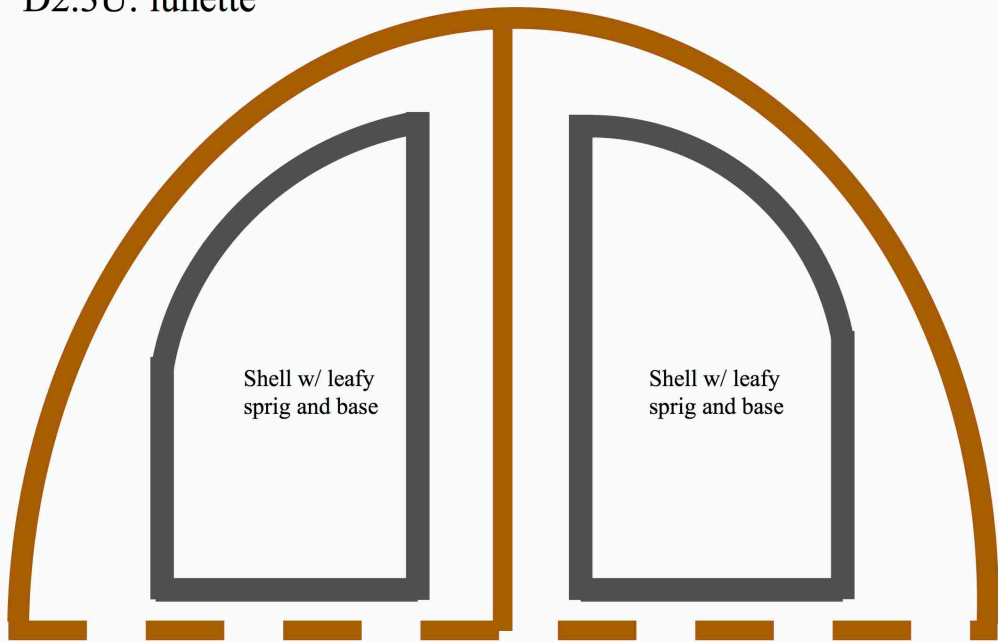
D2.3Lc: lunette



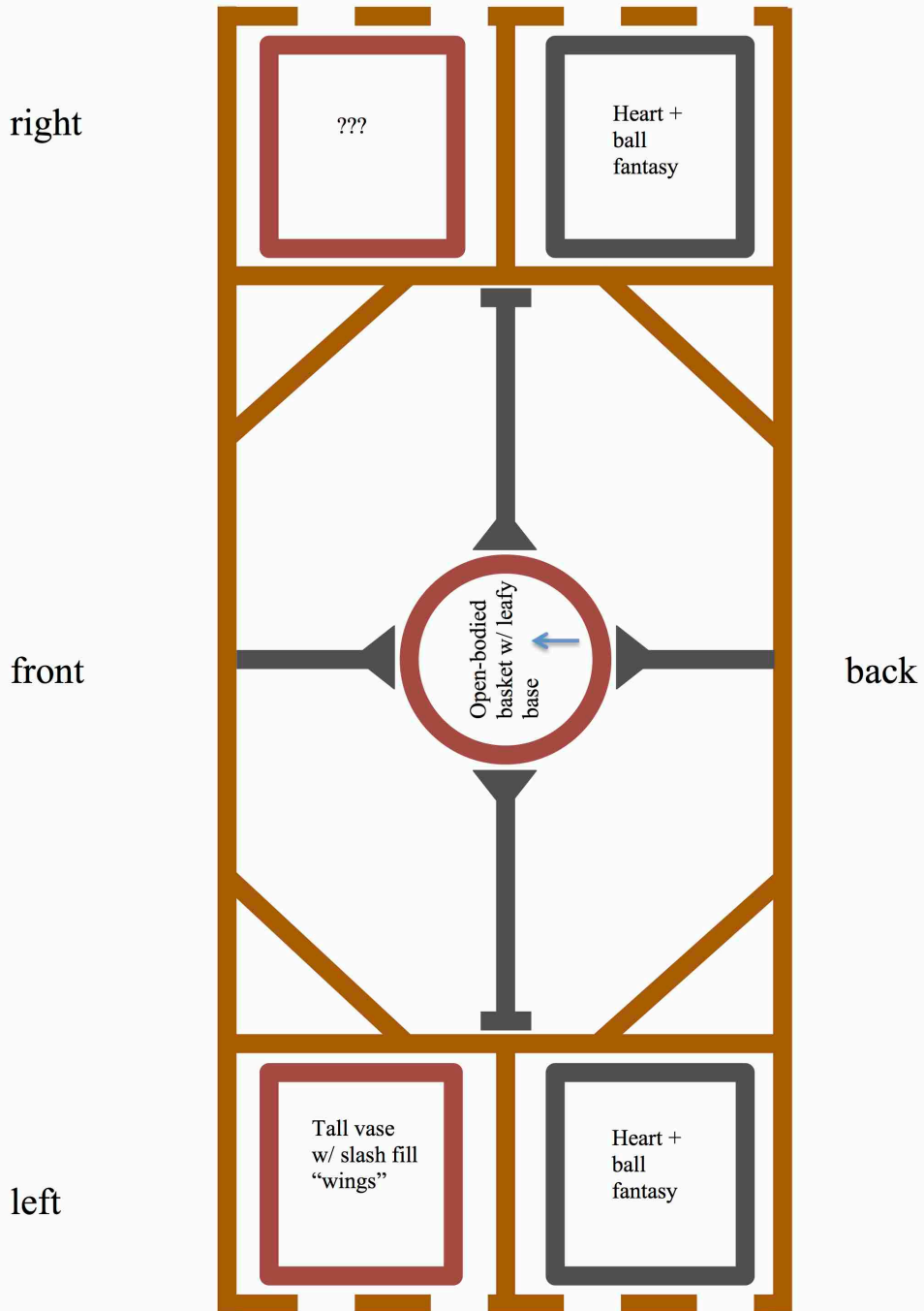
D2.3U: vault



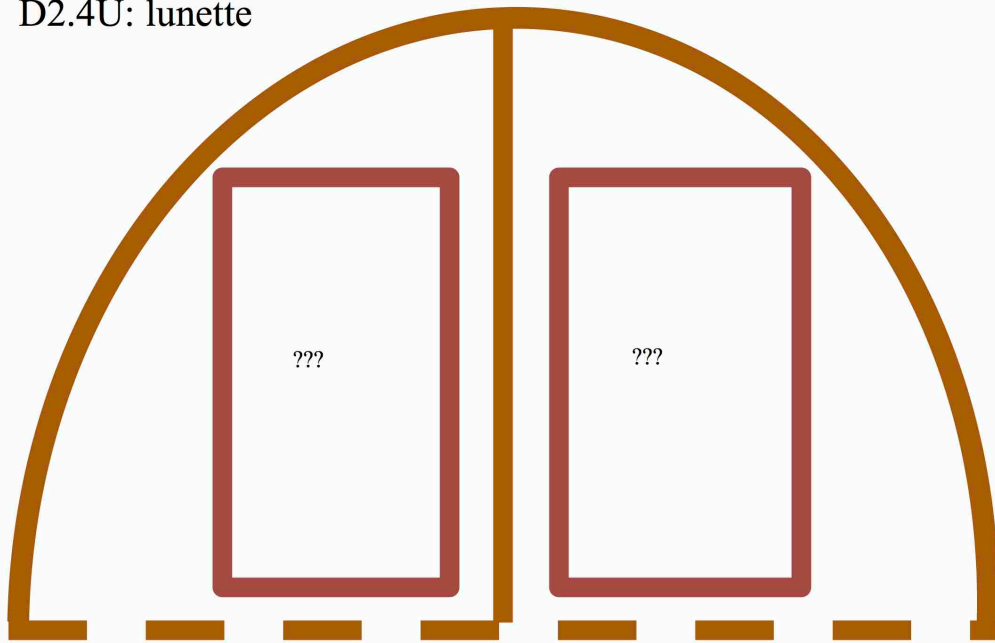
D2.3U: lunette



D2.4U: vault



D2.4U: lunette



## APPENDIX C

### Catalog of inscriptions from Roman catacombs

The following are the inscriptions selected from selected catacombs Rome, listed by their numbers in *Inscriptiones Christianae Urbis Romae*.

#### Domitilla (ICUR III)

|      |       |          |       |       |
|------|-------|----------|-------|-------|
| 6496 | 6530  | 6564     | 6596  | 6630  |
| 6496 | 6531  | 6565     | 6597  | 6631  |
| 6497 | 6532  | 6566     | 6598  | 6632  |
| 6498 | 6533  | 6567     | 6599  | 6633  |
| 6499 | 6534  | 6568     | 6600a | 6634e |
| 6500 | 6535  | 6569     | 6601  | 6635a |
| 6501 | 6536  | 6570c    | 6602  | 6635d |
| 6502 | 6537  | 6571     | 6603  | 6636  |
| 6503 | 6538  | 6572     | 6604  | 6637  |
| 6504 | 6539  | 6573     | 6605b | 6638  |
| 6505 | 6540  | 6574     | 6606  | 6639  |
| 6506 | 6541  | 6575     | 6607  | 6640  |
| 6507 | 6542  | 6576     | 6608  | 6641  |
| 6508 | 6543  | 6577     | 6609  | 6642  |
| 6509 | 6544  | 6578     | 6610  | 6643  |
| 6510 | 6545  | 6579     | 6611  | 6644  |
| 6511 | 6546  | 6580     | 6612  | 6646  |
| 6512 | 6547  | 6581     | 6613  | 6647  |
| 6513 | 6548  | 6582     | 6614  | 6648  |
| 6514 | 6549  | 6583a    | 6615  | 6649  |
| 6515 | 6550  | 6584     | 6616  | 6650  |
| 6516 | 6551d | 6585     | 6617  | 6651  |
| 6517 | 6552  | 6586     | 6618  | 6652d |
| 6518 | 6553  | 6587a, b | 6619  | 6653  |
| 6519 | 6554  | 6587c    | 6620  | 6654  |
| 6520 | 6555  | 6587i    | 6621  | 6655  |
| 6521 | 6556  | 6588     | 6622  | 6656  |
| 6523 | 6557  | 6589     | 6623  | 6657  |
| 6524 | 6558  | 6590     | 6624  | 6658  |
| 6525 | 6559  | 6591     | 6625  | 6659  |
| 6526 | 6560  | 6592     | 6626  | 6660  |
| 6527 | 6561  | 6593     | 6627  | 6661a |
| 6528 | 6562  | 6594     | 6628  | 6661b |
| 6529 | 6563  | 6595     | 6629  | 6662  |

|             |       |       |       |           |
|-------------|-------|-------|-------|-----------|
| 6663        | 6712  | 6763  | 6814  | 6864      |
| 6664        | 6713a | 6764  | 6815  | 6865      |
| 6664b, c, d | 6714  | 6765  | 6816  | 6866      |
| 6665        | 6715  | 6766  | 6817  | 6867      |
| 6666        | 6716  | 6767  | 6818  | 6868a     |
| 6667        | 6717  | 6768  | 6819  | 6868c     |
| 6668        | 6718  | 6769  | 6820  | 6869      |
| 6669        | 6719  | 6770  | 6821  | 6870      |
| 6670        | 6720  | 6771  | 6822a | 6871a     |
| 6671        | 6721  | 6772  | 6823  | 6871c, c' |
| 6672        | 6722  | 6773  | 6824  | 6872      |
| 6673        | 6723  | 6774  | 6825  | 6873      |
| 6674        | 6724  | 6775  | 6826  | 6874      |
| 6675        | 6725  | 6776  | 6827  | 6875      |
| 6676        | 6726  | 6777  | 6828  | 6876      |
| 6677        | 6727  | 6778  | 6829  | 6877      |
| 6678        | 6728  | 6779c | 6830  | 6878      |
| 6679        | 6729  | 6780  | 6831  | 6879      |
| 6680        | 6730  | 6781c | 6832  | 6880      |
| 6681        | 6731  | 6782  | 6833  | 6881      |
| 6682        | 6732  | 6783  | 6834  | 6882      |
| 6683c       | 6733  | 6784  | 6835  | 6883      |
| 6684        | 6734  | 6785  | 6836  | 6884c     |
| 6685        | 6735  | 6786a | 6837  | 6885      |
| 6686        | 6736  | 6787  | 6838  | 6886      |
| 6687        | 6737  | 6788  | 6839  | 6887      |
| 6688        | 6738  | 6789  | 6840  | 6888      |
| 6689        | 6739  | 6790  | 6841  | 6889      |
| 6690        | 6740  | 6791  | 6842  | 6890      |
| 6691        | 6741  | 6792  | 6843  | 6891      |
| 6692        | 6742  | 6793  | 6844  | 6892d     |
| 6693        | 6743  | 6794  | 6845  | 6893      |
| 6694        | 6744  | 6795  | 6846  | 6894      |
| 6695        | 6745  | 6796  | 6847  | 6895      |
| 6696        | 6746  | 6797  | 6848  | 6896      |
| 6697        | 6747  | 6798  | 6849  | 6897      |
| 6698        | 6748  | 6799  | 6850  | 6898      |
| 6699        | 6749  | 6800  | 6851  | 6899      |
| 6700        | 6750  | 6801  | 6852  | 6900      |
| 6701a       | 6751  | 6802  | 6853  | 6901      |
| 6701c       | 6752  | 6803  | 6854  | 6902      |
| 6702        | 6753  | 6804  | 6854a | 6903      |
| 6703        | 6754  | 6805  | 6855  | 6904      |
| 6704        | 6755e | 6806  | 6856  | 6905      |
| 6705        | 6756  | 6807  | 6857  | 6906      |
| 6706        | 6757  | 6808  | 6858  | 6907      |
| 6707        | 6758  | 6809  | 6859  | 6908      |
| 6708        | 6759  | 6810  | 6860  | 6909d     |
| 6709        | 6760  | 6811  | 6861  | 6910      |
| 6710        | 6761  | 6812  | 6862c | 6911      |
| 6711        | 6762  | 6813  | 6863  | 6912      |

|       |       |       |       |          |
|-------|-------|-------|-------|----------|
| 6913  | 6962  | 7014  | 7067  | 7105c    |
| 6914  | 6963  | 7015  | 7068b | 7105d    |
| 6915  | 6964  | 7016  | 7069  | 7106     |
| 6916  | 6965  | 7017  | 7070  | 7107     |
| 6917  | 6966  | 7018  | 7071  | 7108     |
| 6918  | 6967  | 7019b | 7072  | 7109     |
| 6919  | 6968  | 7020  | 7073b | 7110     |
| 6920  | 6969  | 7021  | 7074a | 7111a    |
| 6921  | 6970  | 7022a | 7075  | 7111b    |
| 6922a | 6971  | 7022b | 7076  | 7112     |
| 6923  | 6972  | 7023  | 7077a | 7113a    |
| 6924  | 6973  | 7024  | 7077b | 7113b    |
| 6925  | 6974  | 7025  | 7078a | 7114     |
| 6926  | 6975  | 7026  | 7078b | 7115a    |
| 6927  | 6976c | 7027  | 7078c | 7115b    |
| 6928  | 6977  | 7028  | 7079a | 7115d    |
| 6929  | 6978  | 7029  | 7079b | 7115e    |
| 6930a | 6979  | 7030  | 7080  | 7116a    |
| 6931  | 6980  | 7031  | 7081a | 7116b    |
| 6932  | 6981  | 7032  | 7081b | 7117     |
| 6933  | 6982  | 7033b | 7082  | 7118     |
| 6934  | 6983  | 7034  | 7083a | 7119     |
| 6935  | 6984  | 7036a | 7083c | 7120a    |
| 6936  | 6985  | 7036b | 7084  | 7120b    |
| 6937  | 6986  | 7037  | 7085  | 7121a    |
| 6938  | 6987  | 7038a | 7086b | 7121b    |
| 6939  | 6988  | 7039b | 7087a | 7122     |
| 6940  | 6989  | 7040  | 7087b | 7123     |
| 6941  | 6990  | 7041  | 7088c | 7124     |
| 6942  | 6991  | 7042b | 7089  | 7125a    |
| 6943  | 6992  | 7043b | 7090  | 7125b    |
| 6944b | 6993  | 7044  | 7091  | 7126     |
| 6944c | 6994  | 7045  | 7092a | 7126b    |
| 6945  | 6995  | 7046b | 7093  | 7126c, d |
| 6946  | 6997  | 7047  | 7094a | 7127b    |
| 6947  | 6998  | 7048a | 7094b | 7128     |
| 6948  | 6999  | 7049  | 7095a | 7129     |
| 6949  | 7000  | 7050a | 7095b | 7130a, c |
| 6950  | 7001  | 7051b | 7096  | 7131     |
| 6951  | 7002  | 7052  | 7097a | 7132     |
| 6952  | 7003  | 7053  | 7097b | 7133a    |
| 6953  | 7004  | 7054e | 7098  | 7134     |
| 6954b | 7005  | 7055  | 7099a | 7135b    |
| 6954e | 7006  | 7056  | 7100a | 7136a    |
| 6955  | 7007  | 7057  | 7101  | 7136b    |
| 6956  | 7008  | 7058a | 7102  | 7137     |
| 6957  | 7009  | 7059c | 7103  | 7138c    |
| 6958  | 7010  | 7063  | 7104a | 7139a    |
| 6959  | 7011  | 7064  | 7104c | 7139b    |
| 6960  | 7012  | 7065  | 7104d | 7139c    |
| 6961  | 7013  | 7066  | 7105a | 7140a, b |



|       |           |       |       |                |
|-------|-----------|-------|-------|----------------|
| 7140c | 7183      | 7234  | 7354b | 7407           |
| 7141a | 7184a     | 7235  | 7355a | 7408           |
| 7142a | 7185      | 7236  | 7356  | 7409           |
| 7142d | 7186a     | 7237  | 7357  | 7410           |
| 7142f | 7187      | 7238  | 7358  | 7411           |
| 7142g | 7188      | 7239  | 7359  | 7412           |
| 7143a | 7189      | 7240  | 7360  | 7413           |
| 7143b | 7190      | 7241  | 7361  | 7414           |
| 7143c | 7191      | 7242  | 7362  | 7415           |
| 7144f | 7192      | 7243  | 7363  | 7416           |
| 7145  | 7193      | 7244  | 7364  | 7417           |
| 7146b | 7194      | 7245  | 7365a | 7418           |
| 7146c | 7195      | 7246  | 7366  | 7419           |
| 7147  | 7196      | 7247b | 7367  | 7420           |
| 7148a | 7197      | 7248  | 7368a | 7422           |
| 7149  | 7198      | 7249  | 7368b | 7423           |
| 7150  | 7199      | 7250  | 7369a | 7424           |
| 7151b | 7200      | 7251  | 7370  | 7425           |
| 7152f | 7201      | 7252b | 7371b | 7426           |
| 7153e | 7202      | 7253  | 7375  | 7427           |
| 7153f | 7203      | 7254  | 7376  | 7428           |
| 7154a | 7204      | 7255  | 7377  | 7429           |
| 7155  | 7205      | 7256  | 7378  | 7430a          |
| 7156  | 7206a     | 7257  | 7379  | 7431           |
| 7157a | 7207      | 7258  | 7380  | 7432           |
| 7158  | 7208      | 7259  | 7381  | 7433           |
| 7159a | 7209a     | 7260  | 7382  | 7434           |
| 7160a | 7209b     | 7261  | 7383  | 7435           |
| 7161  | 7210      | 7262  | 7384  | 7436           |
| 7162  | 7211      | 7263  | 7385  | 7437           |
| 7163  | 7212      | 7264  | 7386  | 7438           |
| 7164b | 7213      | 7265  | 7387  | 7439           |
| 7165  | 7214      | 7266  | 7388  | 7440           |
| 7166  | 7215      | 7267  | 7389  | 7441           |
| 7167  | 7216      | 7268  | 7390  | 7442           |
| 7168b | 7217      | 7269  | 7391  | 7443           |
| 7169  | 7218      | 7270  | 7392  | 7444           |
| 7170  | 7219      | 7272  | 7393  | 7445           |
| 7171  | 7220      | 7273  | 7394  | 7446           |
| 7172  | 7221      | 7274  | 7395  | 7447           |
| 7173  | 7222      | 7275  | 7396  | 7448           |
| 7174  | 7223      | 7276  | 7397  | 7449           |
| 7175  | 7224      | 7277a | 7398  | 7450           |
| 7176  | 7225      | 7277c | 7399  | 7451           |
| 7177b | 7226      | 7278  | 7400  | 7452           |
| 7178  | 7227 obv. | 7279  | 7401  | 7453           |
| 7179  | 7228      | 7280  | 7402  | 7454e, f, g, h |
| 7180  | 7230      | 7281  | 7403  | 7454l          |
| 7181  | 7231      | 7282  | 7404  | 7455b          |
| 7182a | 7232      | 7283  | 7405  | 7456           |
| 7182b | 7233      | 7316a | 7406  | 7457           |

|       |       |             |       |           |
|-------|-------|-------------|-------|-----------|
| 7458  | 7509b | 7560        | 7606a | 7652      |
| 7459  | 7510  | 7561        | 7606b | 7653      |
| 7460  | 7511  | 7562        | 7607  | 7654      |
| 7461  | 7512  | 7563        | 7608  | 7655c     |
| 7462  | 7513  | 7564        | 7609a | 7655d     |
| 7463  | 7514  | 7565        | 7610  | 7656a     |
| 7464  | 7515  | 7566        | 7611  | 7657      |
| 7465  | 7516  | 7567        | 7612b | 7658      |
| 7466  | 7517a | 7568        | 7613  | 7659      |
| 7467  | 7517c | 7569        | 7614  | 7660a, a' |
| 7468  | 7571h | 7570        | 7615  | 7660e     |
| 7469  | 7518  | 7571g       | 7616  | 7661      |
| 7470  | 7519  | 7572b       | 7617  | 7662      |
| 7471  | 7520  | 7573        | 7618  | 7663      |
| 7472a | 7521  | 7574        | 7619  | 7664      |
| 7473  | 7522  | 7575        | 7620  | 7665a     |
| 7474  | 7523  | 7576        | 7621  | 7665b     |
| 7475  | 7524  | 7577        | 7622c | 7666      |
| 7476  | 7525  | 7578        | 7623  | 7667      |
| 7477  | 7526  | 7579        | 7624  | 7668      |
| 7478  | 7527  | 7580a       | 7625  | 7669      |
| 7479  | 7528  | 7580e       | 7626b | 7670      |
| 7480  | 7529  | 7580h       | 7627  | 7671      |
| 7481  | 7530  | 7581        | 7628  | 7672      |
| 7482  | 7531  | 7582        | 7629a | 7673      |
| 7483  | 7532  | 7583        | 7629b | 7674b     |
| 7484  | 7533  | 7584        | 7630  | 7675      |
| 7485  | 7534  | 7585        | 7631b | 7676      |
| 7486  | 7535  | 7586        | 7632  | 7677a     |
| 7487  | 7536  | 7587a       | 7633  | 7677b     |
| 7488  | 7537  | 7587b       | 7634  | 7678      |
| 7489  | 7538  | 7588a       | 7635  | 7679      |
| 7490a | 7540  | 7588b       | 7636  | 7680      |
| 7491  | 7542  | 7589        | 7637b | 7681a     |
| 7492  | 7543  | 7590        | 7637a | 7681b     |
| 7493  | 7544  | 7591        | 7638a | 7682      |
| 7494  | 7545  | 7592a       | 7638b | 7683      |
| 7495  | 7546  | 7592b       | 7639d | 7684      |
| 7496c | 7547  | 7593        | 7640  | 7685c     |
| 7498  | 7548  | 7594        | 7641  | 7685d     |
| 7499  | 7549  | 7595        | 7642  | 7686      |
| 7500  | 7550  | 7596        | 7643a | 7687      |
| 7501b | 7551a | 7597        | 7643b | 7688      |
| 7502  | 7552  | 7598        | 7644  | 7689      |
| 7503  | 7553  | 7599        | 7645  | 7690      |
| 7504  | 7554  | 7600b, d, e | 7646  | 7691      |
| 7505  | 7555  | 7601        | 7647  | 7692      |
| 7506  | 7556  | 7602        | 7648  | 7693      |
| 7507  | 7557  | 7603        | 7649c | 7694      |
| 7508  | 7558  | 7604        | 7650  | 7695      |
| 7509a | 7559  | 7605        | 7651  | 7696b     |

|       |                |       |          |          |
|-------|----------------|-------|----------|----------|
| 7697  | 7745           | 7796  | 7843c    | 7887a    |
| 7698  | 7746           | 7797a | 7844     | 7887b    |
| 7699  | 7747           | 7798  | 7845     | 7887c    |
| 7700a | 7749           | 7799  | 7846     | 7887e    |
| 7701b | 7750           | 7800  | 7847     | 7887f    |
| 7702  | 7751           | 7801  | 7848d    | 7888     |
| 7703  | 7752           | 7802a | 7849     | 7889a    |
| 7704a | 7753           | 7802d | 7850     | 7890     |
| 7704d | 7754Aa-g       | 7803  | 7851a    | 7891a    |
| 7705  | 7755           | 7804  | 7851b    | 7892     |
| 7706  | 7756           | 7805  | 7852     | 7893     |
| 7707  | 7757           | 7806  | 7853     | 7894b    |
| 7708  | 7758           | 7807  | 7854     | 7895c    |
| 7709  | 7759           | 7808  | 7855a, b | 7896b    |
| 7710  | 7760           | 7809  | 7856     | 7897a    |
| 7711  | 7761           | 7810  | 7857     | 7898     |
| 7712b | 7762           | 7811  | 7858     | 7899b    |
| 7713  | 7763a          | 7812  | 7859     | 7900a, b |
| 7714  | 7763c          | 7813  | 7860     | 7900c    |
| 7715  | 7764           | 7814  | 7861     | 7900d    |
| 7716  | 7765           | 7815  | 7862a    | 7901a    |
| 7717b | 7766a          | 7816a | 7862d    | 7902b    |
| 7718  | 7767           | 7817  | 7863     | 7903     |
| 7719  | 7768d, d', d'' | 7818  | 7864     | 7904a    |
| 7720a | 7769           | 7819  | 7865     | 7904b    |
| 7721  | 7770           | 7820e | 7866     | 7904d    |
| 7722  | 7771           | 7821  | 7867     | 7905a    |
| 7723  | 7772           | 7822  | 7868     | 7905b    |
| 7724a | 7774           | 7823a | 7869     | 7906a    |
| 7724b | 7775           | 7823c | 7870     | 7906b    |
| 7725  | 7776           | 7824  | 7871a    | 7907b    |
| 7726  | 7777           | 7825  | 7871b    | 7908a    |
| 7727b | 7778           | 7826  | 7871d    | 7908b    |
| 7728  | 7779c          | 7827  | 7871e    | 7909c    |
| 7729  | 7780           | 7828  | 7872     | 7909d    |
| 7730  | 7781           | 7829  | 7873     | 7909g    |
| 7731  | 7782           | 7830  | 7874a    | 7910a    |
| 7732  | 7783           | 7831  | 7874b    | 7910b    |
| 7733  | 7784           | 7832  | 7875     | 7911a    |
| 7734  | 7785           | 7833  | 7876     | 7911b    |
| 7735b | 7786           | 7834  | 7877     | 7912a    |
| 7735d | 7787           | 7835  | 7878     | 7912b    |
| 7736  | 7788           | 7836  | 7880     | 7913a    |
| 7737  | 7789           | 7837a | 7881a    | 7913b    |
| 7738  | 7790           | 7837b | 7881b    | 7914a    |
| 7739  | 7791           | 7838  | 7882b    | 7914b    |
| 7740a | 7792           | 7839  | 7882d    | 7914c    |
| 7740b | 7793           | 7840  | 7883     | 7915     |
| 7742  | 7794a          | 7841  | 7884     | 7916a    |
| 7743  | 7794d          | 7842  | 7885     | 7916b    |
| 7744  | 7795           | 7843a | 7886     | 7917a    |

|                         |          |       |       |       |
|-------------------------|----------|-------|-------|-------|
| 7917b                   | 7952d    | 7981e | 8013  | 8055  |
| 7918c                   | 7952e    | 7981f | 8014a | 8056  |
| 7919                    | 7952f    | 7982  | 8014b | 8057  |
| 7920                    | 7952g    | 7983a | 8015  | 8058  |
| 7921                    | 7952i    | 7983b | 8016a | 8059  |
| 7922                    | 7952l    | 7984  | 8016b | 8060  |
| 7923a                   | 7953a    | 7985a | 8017  | 8061  |
| 7924                    | 7953b, c | 7985b | 8018b | 8062  |
| 7925                    | 7953d    | 7985c | 8018c | 8063  |
| 7926                    | 7953e    | 7986a | 8019a | 8064b |
| 7927                    | 7954     | 7986b | 8019b | 8065  |
| 7928a, a'               | 7955a    | 7987a | 8019c | 8066  |
| 7928e, e'               | 7956a    | 7987b | 8020c | 8067  |
| 7929                    | 7956b    | 7988a | 8020d | 8068  |
| 7930                    | 7957a    | 7988b | 8021a | 8069  |
| 7931a                   | 7958a    | 7989a | 8021b | 8070  |
| 7931b                   | 7959a    | 7989b | 8021c | 8071  |
| 7934a                   | 7959c    | 7989c | 8022a | 8072  |
| 7935                    | 7960a    | 7989e | 8022b | 8073  |
| 7936a, a'               | 7960b    | 7990a | 8023a | 8074  |
| 7936b                   | 7961a    | 7990b | 8023b | 8075  |
| 7937b                   | 7961b    | 7991a | 8024  | 8076  |
| 7938a                   | 7962     | 7991b | 8025d | 8077a |
| 7938b                   | 7963a    | 7992a | 8025e | 8077b |
| 7939                    | 7963b    | 7992b | 8026c | 8078  |
| 7940a                   | 7964c    | 7993  | 8027b | 8079  |
| 7940b                   | 7965     | 7994  | 8028  | 8080  |
| 7940c, c', c'',<br>c''' | 7966     | 7995  | 8029  | 8081  |
| 7940d                   | 7967b    | 7996  | 8030  | 8082  |
| 7940e                   | 7968     | 7997  | 8031b | 8083b |
| 7941b                   | 7969     | 7998  | 8034  | 8084b |
| 7942                    | 7970b    | 7999  | 8035  | 8086  |
| 7943a                   | 7970c    | 8000  | 8036  | 8087a |
| 7943b                   | 7970d    | 8001  | 8037a | 8089f |
| 7944a                   | 7971a    | 8002  | 8038  | 8089g |
| 7944b                   | 7971b    | 8003e | 8039  | 8089h |
| 7945a                   | 7972b    | 8003f | 8040  | 8089i |
| 7945b                   | 7973a    | 8004a | 8041  | 8136  |
| 7946a                   | 7974     | 8004b | 8042a | 8137  |
| 7946b                   | 7975     | 8005  | 8043  | 8138  |
| 7946c                   | 7976     | 8006  | 8044a | 8139  |
| 7947                    | 7977a    | 8007  | 8045  | 8140  |
| 7948                    | 7977b    | 8008a | 8046  | 8141  |
| 7949                    | 7978a    | 8008b | 8047  | 8142  |
| 7949b                   | 7978b    | 8009a | 8048  | 8143  |
| 7950a                   | 7979     | 8009b | 8049a | 8144  |
| 7951a                   | 7980     | 8010h | 8050  | 8145  |
| 7951b                   | 7981a    | 8011a | 8051  | 8146  |
| 7952a                   | 7981b    | 8011b | 8052  | 8147  |
| 7952c, c'               | 7981c    | 8012a | 8053  | 8148  |
|                         | 7981d    | 8012b | 8054  | 8149  |

|                 |       |          |        |       |
|-----------------|-------|----------|--------|-------|
| 8150            | 8198  | 8249     | 8296   | 8333a |
| 8151            | 8199  | 8250     | 8297a  | 8333b |
| 8152            | 8200  | 8251     | 8298a  | 8334a |
| 8153            | 8201  | 8252     | 8300b  | 8334b |
| 8154            | 8203  | 8253     | 8300c  | 8335  |
| 8155            | 8204  | 8254a    | 8299   | 8336a |
| 8156            | 8205  | 8254b    | 8300b' | 8336b |
| 8157            | 8206  | 8255     | 8302   | 8337  |
| 8158            | 8207  | 8256     | 8303   | 8338a |
| 8159            | 8208  | 8257     | 8304   | 8339a |
| 8160            | 8209  | 8258     | 8305   | 8339f |
| 8161            | 8210  | 8259     | 8306   | 8340a |
| 8162            | 8211  | 8260b    | 8307   | 8341a |
| 8163            | 8212  | 8260c    | 8308   | 8341c |
| 8164            | 8213a | 8261d, e | 8309b  | 8341d |
| 8164 <i>bis</i> | 8214  | 8262     | 8310   | 8341g |
| 8165            | 8215  | 8263     | 8311   | 8342a |
| 8166            | 8216a | 8264     | 8312b  | 8342b |
| 8167            | 8217  | 8265     | 8312c  | 8343  |
| 8168a, a'       | 8218  | 8266     | 8313   | 8344a |
| 8168b           | 8219  | 8267     | 8314   | 8344b |
| 8169            | 8220  | 8268     | 8315   | 8345  |
| 8170            | 8221  | 8269     | 8316   | 8346a |
| 8171c           | 8222  | 8270a    | 8317   | 8346b |
| 8172            | 8223  | 8270b    | 8318   | 8347a |
| 8173            | 8224  | 8271     | 8319   | 8348c |
| 8174            | 8225  | 8272     | 8320b  | 8348b |
| 8175            | 8226a | 8273b    | 8321b  | 8349  |
| 8176            | 8226b | 8274c'   | 8321c  | 8349b |
| 8177a           | 8227  | 8275     | 8322a  | 8350  |
| 8178            | 8228  | 8276     | 8322b  | 8351a |
| 8179            | 8229a | 8277     | 8323a  | 8351b |
| 8180            | 8230  | 8278     | 8323b  | 8352a |
| 8181            | 8231  | 8279     | 8323c  | 8352b |
| 8182            | 8232  | 8280     | 8324a  | 8353b |
| 8183            | 8233a | 8281b    | 8324b  | 8354a |
| 8184            | 8234  | 8282     | 8325a  | 8354b |
| 8185            | 8235  | 8283d    | 8325b  | 8354c |
| 8186            | 8236  | 8284     | 8326a  | 8354d |
| 8187            | 8237  | 8285     | 8327a  | 8354e |
| 8188a           | 8238  | 8286     | 8327b  | 8354g |
| 8188c'          | 8239  | 8287     | 8327c  | 8355  |
| 8189            | 8240  | 8288     | 8328a  | 8356b |
| 8190            | 8241  | 8289     | 8328b  | 8357  |
| 8191            | 8242  | 8290     | 8328c  | 8358  |
| 8192            | 8243  | 8291     | 8328d  | 8359a |
| 8193            | 8244  | 8292     | 8328e  | 8360  |
| 8194            | 8246  | 8293a    | 8329   | 8361  |
| 8195            | 8247a | 8293b    | 8330   | 8362a |
| 8196            | 8247d | 8294     | 8331b  | 8362b |
| 8197            | 8248  | 8295     | 8332a  | 8362d |

|             |       |           |           |       |
|-------------|-------|-----------|-----------|-------|
| 8363        | 8416  | 8463      | 8511      | 8560  |
| 8364a       | 8417  | 8464      | 8512      | 8561  |
| 8364b       | 8418  | 8465      | 8513      | 8562  |
| 8365b       | 8419  | 8466      | 8514      | 8563  |
| 8366a       | 8420  | 8467a     | 8515      | 8564  |
| 8366b       | 8421  | 8467b     | 8516      | 8565  |
| 8367a       | 8422  | 8468      | 8517      | 8566  |
| 8367b, c, d | 8423  | 8468 rev. | 8518      | 8567a |
| 8368a, c    | 8424  | 8469      | 8519      | 8568  |
| 8368b       | 8425  | 8470      | 8520      | 8569  |
| 8369        | 8426  | 8471      | 8521      | 8570  |
| 8370        | 8427  | 8472      | 8522      | 8571  |
| 8371b       | 8428  | 8473      | 8523      | 8572  |
| 8372        | 8429  | 8474      | 8524      | 8573  |
| 8373a       | 8430  | 8475      | 8525      | 8574  |
| 8373b       | 8431  | 8476      | 8526      | 8575  |
| 8374        | 8432  | 8477      | 8527      | 8576  |
| 8375a       | 8433  | 8478      | 8528      | 8577  |
| 8375b       | 8434  | 8479      | 8529      | 8578  |
| 8376a       | 8435  | 8480      | 8530      | 8579  |
| 8376b       | 8436  | 8481      | 8531      | 8580  |
| 8377a       | 8437  | 8482      | 8532      | 8581  |
| 8377f       | 8437b | 8483      | 8533      | 8582a |
| 8378        | 8438a | 8484      | 8534      | 8582b |
| 8379a       | 8438b | 8485      | 8535      | 8583  |
| 8379b       | 8439  | 8486      | 8536      | 8584  |
| 8380        | 8440  | 8487      | 8537a     | 8585  |
| 8381        | 8441  | 8488      | 8538      | 8586  |
| 8382        | 8442  | 8489      | 8539      | 8587  |
| 8383        | 8443  | 8490      | 8540      | 8588  |
| 8384a       | 8444  | 8491      | 8541      | 8589  |
| 8385        | 8445  | 8492      | 8542      | 8590  |
| 8386        | 8446  | 8493      | 8543      | 8590A |
| 8387        | 8447  | 8494      | 8544      | 8591  |
| 8388        | 8448  | 8495      | 8545      | 8592  |
| 8389        | 8449  | 8496      | 8546      | 8593  |
| 8390        | 8450  | 8497      | 8547      | 8594  |
| 8391a       | 8451  | 8498      | 8548a     | 8595  |
| 8391b       | 8452  | 8499      | 8548b     | 8596  |
| 8392        | 8453  | 8500      | 8549      | 8597  |
| 8393        | 8454a | 8501      | 8550      | 8598  |
| 8394a       | 8454b | 8502      | 8551 rev. | 8599  |
| 8395        | 8455a | 8503      | 8551 obv. | 8600  |
| 8396        | 8455b | 8504      | 8552      | 8601  |
| 8398        | 8456  | 8505      | 8553      | 8602  |
| 8400        | 8457  | 8506      | 8554      | 8603  |
| 8402        | 8458  | 8507      | 8555      | 8608  |
| 8404        | 8459  | 8508      | 8556      | 8609b |
| 8406        | 8460  | 8509      | 8557      | 8610a |
| 8407        | 8461  | 8510a     | 8558      | 8610b |
| 8415        | 8462  | 8510b     | 8559      | 8611  |

|       |      |      |      |                 |
|-------|------|------|------|-----------------|
| 8612  | 8742 | 8793 | 8844 | 8895            |
| 8613  | 8743 | 8794 | 8845 | 8896            |
| 8614a | 8744 | 8795 | 8846 | 8897            |
| 8614b | 8745 | 8796 | 8847 | 8898            |
| 8615  | 8746 | 8797 | 8848 | 8899            |
| 8616  | 8747 | 8798 | 8849 | 8900            |
| 8617  | 8748 | 8799 | 8850 | 8901            |
| 8618  | 8749 | 8800 | 8851 | 8902            |
| 8619a | 8750 | 8801 | 8852 | 8903            |
| 8620  | 8751 | 8802 | 8853 | 8904            |
| 8620b | 8752 | 8803 | 8854 | 8905            |
| 8621  | 8753 | 8804 | 8855 | 8906            |
| 8622  | 8754 | 8805 | 8856 | 8907            |
| 8623  | 8755 | 8806 | 8857 | 8908            |
| 8624  | 8756 | 8807 | 8858 | 8909            |
| 8625  | 8757 | 8808 | 8859 | 8910            |
| 8626  | 8758 | 8809 | 8860 | 8911            |
| 8627  | 8759 | 8810 | 8861 | 8912            |
| 8628  | 8760 | 8811 | 8862 | 8913            |
| 8629  | 8761 | 8812 | 8863 | 8914            |
| 8630  | 8762 | 8813 | 8864 | 8915            |
| 8631  | 8763 | 8814 | 8865 | 8916            |
| 8632  | 8764 | 8815 | 8866 | 8917            |
| 8633  | 8765 | 8816 | 8867 | 8918            |
| 8634  | 8766 | 8817 | 8868 | 8919            |
| 8716  | 8767 | 8818 | 8869 | 8920            |
| 8717  | 8768 | 8819 | 8870 | 8921            |
| 8718  | 8769 | 8820 | 8871 | 8922            |
| 8719  | 8770 | 8821 | 8872 | 8922 <i>bis</i> |
| 8720  | 8771 | 8822 | 8873 | 8923            |
| 8721  | 8772 | 8823 | 8874 | 8924            |
| 8722  | 8773 | 8824 | 8875 | 8925            |
| 8723  | 8774 | 8825 | 8876 | 8926            |
| 8724  | 8775 | 8826 | 8877 | 8927            |
| 8725  | 8776 | 8827 | 8878 | 8928            |
| 8726  | 8777 | 8828 | 8879 | 8929            |
| 8727  | 8778 | 8829 | 8880 | 8930            |
| 8728  | 8779 | 8830 | 8881 | 8931            |
| 8729  | 8780 | 8831 | 8882 | 8932            |
| 8730  | 8781 | 8832 | 8883 | 8933            |
| 8731  | 8782 | 8833 | 8884 | 8934            |
| 8732  | 8783 | 8834 | 8885 | 8935            |
| 8733  | 8784 | 8835 | 8886 | 8936            |
| 8734  | 8785 | 8836 | 8887 | 8937            |
| 8735  | 8786 | 8837 | 8888 | 8938            |
| 8736  | 8787 | 8838 | 8889 | 8939            |
| 8737  | 8788 | 8839 | 8890 | 8940a           |
| 8738  | 8789 | 8840 | 8891 | 8940 rev.       |
| 8739  | 8790 | 8841 | 8892 | 8941            |
| 8740  | 8791 | 8842 | 8893 | 8942            |
| 8741  | 8792 | 8843 | 8894 | 8943            |

|           |      |      |      |      |
|-----------|------|------|------|------|
| 8944      | 8998 | 9050 | 9101 | 9153 |
| 8945      | 8999 | 9051 | 9102 | 9154 |
| 8946      | 9000 | 9052 | 9103 | 9155 |
| 8947      | 9001 | 9053 | 9104 | 9156 |
| 8948      | 9002 | 9054 | 9105 | 9157 |
| 8949      | 9003 | 9055 | 9106 | 9158 |
| 8950      | 9004 | 9056 | 9107 | 9159 |
| 8951      | 9005 | 9057 | 9108 | 9160 |
| 8953=8954 | 9006 | 9058 | 9109 | 9161 |
| 8955      | 9007 | 9059 | 9110 | 9162 |
| 8956      | 9008 | 9060 | 9111 | 9163 |
| 8957      | 9009 | 9061 | 9112 | 9164 |
| 8958      | 9010 | 9062 | 9113 | 9165 |
| 8959      | 9011 | 9063 | 9114 | 9166 |
| 8960      | 9012 | 9064 | 9115 | 9167 |
| 8961      | 9013 | 9065 | 9116 | 9168 |
| 8962      | 9014 | 9066 | 9117 | 9169 |
| 8963      | 9015 | 9067 | 9118 | 9170 |
| 8964      | 9016 | 9068 | 9119 | 9171 |
| 8965      | 9017 | 9069 | 9120 | 9172 |
| 8966      | 9018 | 9070 | 9121 | 9173 |
| 8967      | 9019 | 9071 | 9122 | 9174 |
| 8968      | 9020 | 9072 | 9123 | 9175 |
| 8969      | 9021 | 9073 | 9124 | 9176 |
| 8970      | 9022 | 9074 | 9125 | 9177 |
| 8971      | 9023 | 9075 | 9126 | 9178 |
| 8972      | 9025 | 9076 | 9127 | 9179 |
| 8973      | 9026 | 9077 | 9128 | 9180 |
| 8974      | 9027 | 9078 | 9130 | 9181 |
| 8975      | 9028 | 9079 | 9131 | 9182 |
| 8976      | 9029 | 9080 | 9132 | 9183 |
| 8978      | 9030 | 9081 | 9133 | 9184 |
| 8979      | 9031 | 9082 | 9134 | 9185 |
| 8980      | 9032 | 9083 | 9135 | 9186 |
| 8981      | 9033 | 9084 | 9136 | 9187 |
| 8982      | 9034 | 9085 | 9137 | 9188 |
| 8983      | 9035 | 9086 | 9138 | 9189 |
| 8984      | 9036 | 9087 | 9139 | 9190 |
| 8985      | 9037 | 9088 | 9140 | 9192 |
| 8986      | 9038 | 9089 | 9141 | 9193 |
| 8987      | 9039 | 9090 | 9142 | 9194 |
| 8988      | 9040 | 9091 | 9143 | 9195 |
| 8989      | 9041 | 9092 | 9144 | 9196 |
| 8990      | 9042 | 9093 | 9145 | 9197 |
| 8991      | 9043 | 9094 | 9146 | 9198 |
| 8992      | 9044 | 9095 | 9147 | 9199 |
| 8993      | 9045 | 9096 | 9148 | 9200 |
| 8994      | 9046 | 9097 | 9149 | 9201 |
| 8995      | 9047 | 9098 | 9150 | 9202 |
| 8996      | 9048 | 9099 | 9151 | 9203 |
| 8997      | 9049 | 9100 | 9152 | 9204 |



|      |      |       |      |       |
|------|------|-------|------|-------|
| 9205 | 9237 | 9273  | 9303 | 9334  |
| 9206 | 9238 | 9274  | 9304 | 9335  |
| 9207 | 9239 | 9275  | 9305 | 9339  |
| 9208 | 9240 | 9276  | 9306 | 9340  |
| 9209 | 9241 | 9277  | 9307 | 9341b |
| 9210 | 9242 | 9278a | 9308 | 9342  |
| 9212 | 9243 | 9278b | 9309 | 9343  |
| 9213 | 9244 | 9279  | 9310 | 9344d |
| 9214 | 9245 | 9280c | 9311 | 9346  |
| 9215 | 9246 | 9281  | 9312 | 9347  |
| 9216 | 9247 | 9282  | 9313 | 9348  |
| 9217 | 9248 | 9283  | 9314 | 9350  |
| 9218 | 9249 | 9284  | 9315 | 9351  |
| 9219 | 9250 | 9285  | 9316 | 9352  |
| 9220 | 9251 | 9286  | 9317 | 9353  |
| 9221 | 9252 | 9287  | 9318 | 9354a |
| 9222 | 9253 | 9288  | 9319 | 9355a |
| 9223 | 9254 | 9289  | 9320 | 9355b |
| 9224 | 9255 | 9290  | 9321 | 9356  |
| 9225 | 9256 | 9291  | 9322 | 9357  |
| 9226 | 9257 | 9292  | 9323 | 9358  |
| 9227 | 9258 | 9293  | 9324 | 9359  |
| 9228 | 9259 | 9294  | 9325 | 9360  |
| 9229 | 9260 | 9295  | 9326 | 9361  |
| 9230 | 9261 | 9296  | 9327 | 9362  |
| 9231 | 9262 | 9297  | 9328 | 9363  |
| 9232 | 9263 | 9298  | 9329 | 9364  |
| 9233 | 9264 | 9299  | 9330 | 9365  |
| 9234 | 9269 | 9300  | 9331 | 9649  |
| 9235 | 9270 | 9301  | 9332 |       |
| 9236 | 9272 | 9302  | 9333 |       |

S. Callixtus (ICUR IV)

|       |       |       |       |       |
|-------|-------|-------|-------|-------|
| 9375  | 9427  | 9479  | 9609  | 9675  |
| 9378  | 9431  | 9484  | 9612  | 9676  |
| 9738c | 9432  | 9495  | 9613  | 9680  |
| 9379  | 9433  | 9496  | 9614  | 9682  |
| 9384  | 9434  | 9499  | 9615  | 9685  |
| 9385  | 9436  | 9506  | 9620  | 9690  |
| 9386  | 9439  | 9559  | 9632  | 9691  |
| 9389  | 9440  | 9561  | 9639  | 9692  |
| 9394  | 9444  | 9563  | 9642  | 9694  |
| 9397  | 9447  | 9567  | 9644a | 9696  |
| 9399  | 9450  | 9568  | 9647  | 9698  |
| 9402a | 9453  | 9572  | 9648  | 9700  |
| 9413b | 9454  | 9586c | 9650  | 9705  |
| 9415  | 9455  | 9595  | 9658  | 9706  |
| 9418  | 9459b | 9596  | 9659  | 9707  |
| 9419  | 9463b | 9597  | 9661a | 9714  |
| 9420b | 9475  | 9598  | 9663  | 9722  |
| 9425  | 9478  | 9603  | 9673  | 9725b |

|           |        |           |                 |                 |
|-----------|--------|-----------|-----------------|-----------------|
| 9727      | 9913   | 10054c    | 10261           | 10389b          |
| 9731      | 9914   | 10054e    | 10262           | 10393b          |
| 9735a     | 9915   | 10056     | 10263           | 10395a          |
| 9738b     | 9918   | 10057b    | 10264b          | 10395b          |
| 9739      | 9919   | 10064     | 10269           | 10407           |
| 9740      | 9922   | 10066b    | 10270           | 10408c          |
| 9745      | 9923   | 10072     | 10271           | 10417b          |
| 9756      | 9926   | 10073b    | 10273           | 10420b          |
| 9760      | 9927   | 10073a    | 10279           | 10421           |
| 9764a     | 9928a  | 10081     | 10280           | 10424b          |
| 9772      | 9930   | 10082     | 10284           | 10426           |
| 9776      | 9934   | 10083     | 10286           | 10428b          |
| 9781      | 9936b  | 10088     | 10289           | 10452b          |
| 9783a     | 9941   | 10092     | 10291           | 10461d          |
| 9784      | 9945   | 10093     | 10293           | 10462           |
| 9786      | 9946   | 10102     | 10298           | 10465           |
| 9787      | 9951   | 10105     | 10300           | 10471a          |
| 9791      | 9953   | 10111     | 10303a          | 10471b          |
| 9794      | 9957a  | 10123     | 10303l          | 10472b          |
| 9801      | 9957b  | 10124     | 10303t          | 10473a          |
| 9804      | 9958   | 10128     | 10305           | 10474a          |
| 9807      | 9963   | 10139     | 10307b          | 10474b          |
| 9808      | 9965a  | 10140b    | 10308a          | 10474c          |
| 9809      | 9966   | 10144     | 10310a          | 10479a          |
| 9828      | 9967   | 10145     | 10313a          | 10480b          |
| 9831      | 9969   | 10148     | 10314b          | 10483b          |
| 9833      | 9970   | 10152     | 10315a          | 10484b, b', b'' |
| 9838      | 9973   | 10153     | 10316           | 10486c, d       |
| 9840      | 9979   | 10159     | 10321c          | 10494           |
| 9841      | 9980   | 10161     | 10321e          | 10495a          |
| 9842      | 9982   | 10163     | 10321c'         | 10497a          |
| 9843      | 9993   | 10171c    | 10321r, r', r'' | 10507c          |
| 9844c     | 9994   | 10172     | 10322a          | 10510a          |
| 9845      | 9995   | 10176     | 10323b          | 10513b          |
| 9848      | 9996   | 10183     | 10328b          | 10514b          |
| 9850a     | 9997   | 10184     | 10335c          | 10517f          |
| 9860      | 9999   | 10186     | 10337           | 10517q          |
| 9861      | 10007  | 10188a    | 10339a          | 10518b          |
| 9868      | 10008  | 10193     | 10341a          | 10523a          |
| 9870      | 10009  | 10197     | 10342b          | 10526b          |
| 9878      | 10014  | 10199     | 10349b          | 10529a          |
| 9884a     | 10015  | 10200b-b' | 10354a          | 10529v          |
| 9884b     | 10024  | 10203b    | 10356b          | 10529x          |
| 9893      | 10025  | 10215     | 10356d          | 10529f          |
| 9894      | 10031  | 10219     | 10356e          | 10530Ab         |
| 9896q     | 10036  | 10225     | 10359b          | 10531b          |
| 9896I-I'' | 10040  | 10238d    | 10361b          | 10534c          |
| 9903      | 10041  | 10243     | 10367           | 10534c'         |
| 9906      | 10044  | 10249     | 10372b          | 10539b          |
| 9908      | 10049  | 10251     | 10380           | 10544           |
| 9912      | 10054b | 10260b    | 10389a          | 10546           |

|            |            |        |        |            |
|------------|------------|--------|--------|------------|
| 10561      | 10809      | 10967  | 11317  | 11549      |
| 10566      | 10812      | 10969  | 11319  | 11560m     |
| 10567      | 10820      | 10972b | 11336  | 11572      |
| 10569c, c' | 10824      | 10973  | 11352  | 11597      |
| 10571      | 10826      | 10974  | 11357  | 11598b     |
| 10574      | 10829      | 10976b | 11362  | 11602a     |
| 10576      | 10830      | 10981  | 11364  | 11608b     |
| 10585      | 10831      | 10989  | 11368  | 11610a     |
| 10598      | 10834a     | 10991  | 11371  | 11611b     |
| 10599      | 10834b, b' | 10994  | 11375  | 11624b     |
| 10600      | 10842c     | 11005  | 11382  | 11632d     |
| 10607      | 10845a     | 11006a | 11383a | 11633b     |
| 10612      | 10854      | 11010l | 11387  | 11633c     |
| 10615      | 10855      | 11013b | 11389  | 11634b     |
| 10617      | 10857a     | 11014  | 11392  | 11635a     |
| 10624      | 10858      | 11015  | 11396  | 11635b     |
| 10625a     | 10860      | 11016b | 11397  | 11640a     |
| 10625l     | 10865      | 11020b | 11407  | 11640b     |
| 10627      | 10874b     | 11024a | 11409  | 11649d     |
| 10630      | 10876      | 11034  | 11423  | 11651f     |
| 10636b     | 10879      | 11036  | 11426b | 11677v     |
| 10638      | 10882      | 11038  | 11432  | 11677a'    |
| 10639      | 10885      | 11040  | 11439  | 11677b'    |
| 10643      | 10886      | 11051  | 11443  | 11681      |
| 10648      | 10889      | 11052  | 11447  | 11686      |
| 10649      | 10892      | 11056b | 11449  | 11688      |
| 10650      | 10893      | 11104  | 11450  | 11696a     |
| 10658      | 10897      | 11105  | 11451  | 11698      |
| 10659      | 10907      | 11137  | 11452h | 11699      |
| 10661a     | 10909      | 11140  | 11454  | 11700      |
| 10664      | 10912      | 11151  | 11455  | 11701      |
| 10671      | 10914      | 11157  | 11458  | 11702      |
| 10679      | 10923      | 11200  | 11466  | 11709a     |
| 10685      | 10924      | 11202  | 11468  | 11718b     |
| 10692      | 10925      | 11220  | 11470  | 11723c, c' |
| 10699      | 10928      | 11225  | 11472  | 11725a     |
| 10701      | 10933      | 11232c | 11473  | 11725c     |
| 10702b     | 10934      | 11233  | 11476a | 11725d     |
| 10709a     | 10936      | 11234  | 11479  | 11725e     |
| 10714      | 10941      | 11236  | 11489a | 11733      |
| 10725f     | 10942      | 11241  | 11495  | 11739b     |
| 10729b     | 10944      | 11244  | 11499  | 11739c     |
| 10731b     | 10950      | 11274  | 11507  | 12873      |
| 10737b     | 10951b     | 11276  | 11509a | 12878      |
| 10739b     | 10954      | 11285  | 11510  | 12879      |
| 10743a     | 10959      | 11286b | 11514  | 12882      |
| 10744f     | 10960      | 11291b | 11532b | 12884      |
| 10745l     | 10964      | 11304  | 11537  | 12886      |

Coemeterium Maius (*ICUR VIII*)

|             |        |            |            |            |
|-------------|--------|------------|------------|------------|
| 21591       | 21871  | 22125b     | 22344a     | 22497      |
| 21597       | 21873  | 22127b     | 22344b     | 22499      |
| 21600       | 21875  | 22141a, a' | 22346      | 22501      |
| 21601       | 21876b | 22145a     | 22359      | 22506      |
| 21603       | 21882c | 22147      | 22364      | 22508      |
| 21604       | 21897  | 22158      | 22368      | 22509      |
| 21609a      | 21898  | 22171      | 22369      | 22515      |
| 21616b      | 21900a | 22180      | 22370      | 22519      |
| 21621a      | 21900b | 22183      | 22371      | 22520      |
| 21630       | 21914  | 22195      | 22376      | 22523      |
| 21647       | 21921  | 22199b     | 22377      | 22531      |
| 21653       | 21929  | 22210a     | 22383      | 22532      |
| 21657       | 21936a | 22216a     | 22388      | 22535      |
| 21659a      | 21939  | 22223      | 22389      | 22540      |
| 21667       | 21944  | 22228a     | 22394      | 22541      |
| 21676       | 21950  | 22232      | 22395      | 22544      |
| 21678       | 21952a | 22234      | 22396      | 22545      |
| 21691       | 21961  | 22235      | 22398      | 22549      |
| 21692       | 21962  | 22243b     | 22399      | 22553      |
| 21697       | 21963  | 22243e     | 22402      | 22557      |
| 21699       | 21964c | 22244a     | 22407      | 22560      |
| 21700b      | 21974  | 22252      | 22408      | 22561      |
| 21702a', b' | 21976  | 22253      | 22409      | 22564      |
| 21707       | 21981  | 22255a     | 22411      | 22566      |
| 21709       | 21982  | 22258a     | 22413      | 22570      |
| 21715       | 21991  | 22262      | 22417      | 22577      |
| 21726       | 21996  | 22263      | 22421a, a' | 22579      |
| 21728a      | 22001b | 22266      | 22424      | 22584      |
| 21730d      | 22003  | 22274      | 22428      | 22586      |
| 21739g      | 22005  | 22276b     | 22433a     | 22589      |
| 21760b      | 22013  | 22289b     | 22437      | 22592      |
| 21762b      | 22015  | 22293      | 22442      | 22595      |
| 21769       | 22022  | 22300d     | 22448      | 22598      |
| 21784a      | 22023  | 22302b     | 22449      | 22599      |
| 21786       | 22026  | 22302f     | 22468      | 22605      |
| 21789       | 22038  | 22302h     | 22474      | 22607      |
| 21796       | 22040  | 22302m     | 22476      | 22615      |
| 21803       | 22041a | 22302o     | 22478      | 22618      |
| 21812       | 22046  | 22303b     | 22478b     | 22625      |
| 21813       | 22060b | 22303f     | 22480      | 22626      |
| 21814       | 22067  | 22303g     | 22483      | 22627      |
| 21816b      | 22071f | 22308      | 22485      | 22632      |
| 21822a      | 22072  | 22314      | 22486      | 22635      |
| 21832       | 22074  | 22316      | 22489      | 22636      |
| 21837       | 22077  | 22323      | 22490      | 22637      |
| 21842       | 22090a | 22324      | 22491      | 22638      |
| 21850b      | 22090b | 22330      | 22492      | 22645a, a' |
| 21853       | 22099  | 22333      | 22493a     | 22647      |
| 21855       | 22100  | 22334      | 22493b     | 22648      |
| 21863a      | 22117a | 22338      | 22494      | 22655      |

|       |        |        |       |            |
|-------|--------|--------|-------|------------|
| 22656 | 22706  | 22751  | 22798 | 22868b, b' |
| 22657 | 22707  | 22753  | 22807 | 22869      |
| 22669 | 22709  | 22755  | 22811 | 22877      |
| 22677 | 22712  | 22762b | 22817 | 22892      |
| 22680 | 22717  | 22766  | 22821 | 22909c     |
| 22685 | 22719  | 22767  | 22823 | 22909m     |
| 22688 | 22726b | 22771  | 22833 | 22909t     |
| 22689 | 22728  | 22776  | 22838 | 22987      |
| 22697 | 22731  | 22781  | 22839 |            |
| 22700 | 22738  | 22783  | 22858 |            |
| 22701 | 22741  | 22789  | 22863 |            |
| 22703 | 22748b | 22792  | 22865 |            |

Vibia (ICUR V)

|       |       |         |        |       |
|-------|-------|---------|--------|-------|
| 15283 | 15293 | 15301d' | 15308  | 15318 |
| 15288 | 15297 | 15303   | 15316b |       |

Sancta Crux (ICUR V)

15328  
15331  
15341

## APPENDIX D

### Catalog of inscriptions from the catacomb of San Gennaro (Naples)

The following are the inscriptions selected from the catacomb of San Gennaro, Naples, listed by their catalog numbers in Liccardo (2008).

|    |    |     |
|----|----|-----|
| 1  | 34 | 71  |
| 2  | 35 | 72  |
| 3  | 36 | 73  |
| 4  | 37 | 74  |
| 5  | 38 | 75  |
| 6  | 39 | 76  |
| 7  | 40 | 77  |
| 8  | 41 | 78  |
| 9  | 42 | 79  |
| 10 | 43 | 80  |
| 11 | 45 | 81  |
| 12 | 46 | 82  |
| 13 | 48 | 86  |
| 14 | 49 | 87  |
| 15 | 50 | 88  |
| 16 | 51 | 90  |
| 17 | 52 | 91  |
| 18 | 53 | 92  |
| 19 | 54 | 93  |
| 20 | 55 | 95  |
| 21 | 56 | 96  |
| 22 | 57 | 97  |
| 23 | 58 | 98  |
| 24 | 59 | 99  |
| 25 | 60 | 100 |
| 26 | 61 | 101 |
| 27 | 62 | 102 |
| 28 | 63 | 103 |
| 29 | 64 | 107 |
| 30 | 65 | 109 |
| 31 | 66 | 112 |
| 32 | 67 | 120 |
| 33 | 70 | 121 |

## APPENDIX E

### Catalog of inscriptions from the catacomb of San Giovanni (Syracuse)

The following are the inscriptions selected from the catacomb of San Giovanni, Syracuse, listed by their inventory numbers in the Museo Archeologico Regionale Paolo Orsi.

|        |         |             |       |       |
|--------|---------|-------------|-------|-------|
| 26     | 126     | 14427       | 14485 | 15554 |
| 31     | 131     | 14428       | 14600 | 15555 |
| 32     | 131-X   | 14430       | 14603 | 15556 |
| 28     | 134     | 14431       | 14614 | 15558 |
| 30     | 140     | 14432       | 15462 | 15560 |
| 33     | 143?    | 14433       | 15500 | 15562 |
| 39     | 147     | 14434       | 15502 | 15563 |
| 45     | 176-162 | 14435       | 15506 | 15564 |
| 45--9? | 192     | 14436       | 15507 | 15568 |
| 46     | 222     | 14437       | 15509 | 15570 |
| 47     | 260     | 14439       | 15513 | 15576 |
| 49     | 263     | 14440       | 15512 | 15577 |
| 51     | 270     | 14441       | 15511 | 15585 |
| 52     | 1305_?  | 14442       | 15514 | 15588 |
| 53     | 5991    | 14443       | 15519 | 15589 |
| 55     | 8733    | 14444       | 15521 | 15591 |
| 75     | 9070    | 14447       | 15524 | 15592 |
| 80     | 13042   | 14448       | 15525 | 16275 |
| 83     | 13045   | 14449       | 15528 | 26631 |
| 88     | 13047   | 14450       | 15530 | 26637 |
| 93     | 13048   | 14456       | 15532 | 26694 |
| 96     | 13049   | 14457       | 15536 | 26698 |
| 105    | 13051   | 14458       | 15538 | 26701 |
| 106    | 13057   | 14460       | 15540 | 28346 |
| 110    | 13060   | 14461       | 15541 | 37209 |
| 111    | 13061   | 14462       | 15542 | 50775 |
| 114    | 13062   | 14464       | 15544 | 50777 |
| 118    | 13063   | 14465       | 15545 |       |
| 120    | 13069   | 14469       | 15546 |       |
| 121    | 13075   | 14472-14490 | 15548 |       |
| 122    | 14426   | 14482       | 15553 |       |

## **BIBLIOGRAPHY**



## BIBLIOGRAPHY

- The Digest of Justinian, vol. 1.* Edited by Alan Watson. Philadelphia: University of Pennsylvania Press, 2011.
- The Digest of Justinian, vol. 4.* Edited by Alan Watson. Philadelphia: University of Pennsylvania Press, 2011.
- Achelis, Hans. *Die Bedeutung der Katakomben von Neapel für die Christliche Kunstgeschichte.* Leipzig: Druck von Aleksander Edelmann, 1932.
- Achelis, Hans. *Die Katakomben von Neapel.* Leipzig: K. W. Hiersemann, 1936.
- Ahlqvist, Agneta. *Pitture e mosaici nei cimiteri paleocristiani di Siracusa: Corpus iconographicum.* Venezia: Istituto Veneto di Scienze, Lettere ed Arti, 1995.
- Allason-Jones, Lindsay. "Women and the Roman army in Britain." In *The Roman army as a community*, edited by Adrian Goldsworthy and Ian Haynes, 41-51. Portsmouth, RI: Journal of Roman Archaeology, 1999.
- Allison, Penelope. "'Painter-workshops' or 'decorators' teams'?" *Mededelingen van het Nederlands Historisch Instituut te Rome* 54 (1995): 98-109.
- Amodio, Maria. "Gli studi di archeologia cristiana a Napoli dal '600 ad oggi." In *Roma, la Campania e l'oriente cristiano antico*, edited by Luigi Cirillo and Giancarlo Rinaldi, 229-54. Napoli: Università degli Studi di Napoli "L'Orientale," 2004.
- Amodio, Maria. "Riflessi monumentali del culto ianuario: Le catacombe di San Gennaro a Capodimonte." In *San Gennaro nel XVII centenario del martirio (305-2005). Atti del convegno internazionale (Napoli, 21-23 settembre 2005)*, edited by Gennaro Luongo, vol. I, 123-46. Napoli: Editoriale Comunicazioni Sociali, 2006.
- Amodio, Maria and Anita Rocco. *La componente africana nella civiltà napoletana tardo-antica: Fonti letterarie ed evidenze archeologiche.* Atti della Pontificia Accademia Romana di Archeologia. Roma: Edizioni Quasar, 2006.
- Arbabszadah, Moreed. "A note on Jewish and Christian funerary formulae (addendum to McKechnie, zpe 169)." *Zeitschrift für Papyrologie und Epigraphik* 175 (2010): 165-66.

- Arthur, Paul. *Naples, from Roman town to city-state: An archaeological perspective*. Archaeological monographs of the British School at Rome, 12. London: British School at Rome, in association with the Dipartimento di Beni Culturali, Università degli Studi di Lecce, 2002.
- Ascough, Richard S., Philip A. Harland, and John S. Kloppenborg. *Associations in the Greco-Roman world: A sourcebook*. Waco, TX: Baylor University Press, 2012.
- Aubert, Jean-Jacques. *Business managers in ancient Rome: A social and economic study of institores, 200 B.C.-A.D. 250*. Leiden: Brill, 1994.
- Aubert, Jean-Jacques. "The fourth factor: Managing non-agricultural production in the Roman world." In *Economies beyond agriculture in the classical world*, edited by David J. Mattingly and John Salmon, 90-111. New York: Routledge, 2001.
- Baldassarre, Ida. *Archeologia urbana e centro antico di Napoli: Documenti*. Taranto: Istituto per la Storia e l'Archeologia della Magna Grecia, 1984.
- Baldassarre, Ida, Angela Pontrandolfo, Agnes Rouveret, and Monica Salvadori. *Pittura romana: Dall'ellenismo al tardo-antico*. Milano: F. Motta, 2002.
- Barbet, Alix, ed. *La peinture funéraire antique: IVe siècle av. J.-C.--IVe siècle ap. J.-C. Actes du VIIe Colloque de l'Association internationale pour la peinture murale antique (AIPMA), 6-10 octobre 1998, Saint-Romain-en-Gal--Vienne*. Paris: Editions Errance, 2007.
- Bartman, Elizabeth. "Carving the Badminton sarcophagus." *Metropolitan Museum Journal* 28 (1993): 57-75.
- Baruffa, Antonio. "Giovanni Battista de Rossi." In *Centocinquanta anni di tutela delle catacombe cristiane d'Italia*, edited by Pontificia Commissione di Archeologia Sacra. Città del Vaticano: Pontificia Commissione di Archeologia Sacra, 2002.
- Beazley, John D. "Citharoedus." *Journal of Hellenic Studies* 42, no. 1 (1922): 70-98.
- Beazley, John D. *Potter and painter in ancient Athens*. London: Geoffrey Cumberlege, 1944.
- Beazley, John D. *Attic red-figure vase-painters*. Oxford: Clarendon Press, 1963.
- Beazley, John D. *Attic black-figure vase-painters*. New York: Hacker Art Books, 1978.
- Bellucci, Antonio. "La topografia dei cimiteri paleocristiani di Napoli." In *Atti del VI Congresso internazionale di archeologia cristiana. Ravenna, 23-30 settembre 1962*. Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 1965.
- Birk, Stine. "Carving sarcophagi: Roman sculptural workshops and their organization." In *Ateliers and artisans in Roman art and archaeology*, edited by Troels Myrup Kristensen

- and Birte Poulsen, *Journal of Roman Archaeology Supplementary Series 92*, 13-37. Portsmouth, RI: Journal of Roman Archaeology, 2012.
- Bisconti, Fabrizio. *Mestieri nelle catacombe romane: Appunti sul declino dell'iconografia del reale nei cimiteri cristiani di Roma*. Città del Vaticano: Pontificia Commissione di Archeologia Sacra, 2000.
- Bisconti, Fabrizio. *Temi di iconografia paleocristiana*. Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 2000.
- Bisconti, Fabrizio. *L'Ipogeo degli Aureli in Viale Manzoni: Restauri, tutela, valorizzazione e aggiornamenti interpretativi*. Città del Vaticano: Pontificia Commissione di Archeologia Sacra, 2011.
- Bisconti, Fabrizio. *Le pitture delle catacombe romane: Restauri e interpretazioni*. Todi: Tau, 2011.
- Bisconti, Fabrizio. "Simboli, stralci, scene complesse." In *Incisioni figurate della tarda antichità*, edited by Fabrizio Bisconti and Matteo Braconi, 11-20. Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 2013.
- Bisconti, Fabrizio and Matteo Braconi. *Incisioni figurate della tarda antichità: Atti del convegno di studi, Roma, Palazzo Massimo, 22-23 marzo 2012*. edited by Fabrizio Bisconti and Matteo Braconi. Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 2013.
- Bisconti, Fabrizio and Danilo Mazzoleni. *Alle origini del culto dei martiri: Testimonianze nell'archeologia cristiana*. Roma: Aracne, 2005.
- Bodel, John. "Dealing with the dead: Undertakers, executioners and potter's fields in ancient Rome." In *Death and disease in the ancient city*, edited by Valerie M. Hope and Eireann Marshall, 128-51. New York: Routledge, 2000.
- Bodel, John. "The organization of the funerary trade at Puteoli and Cumae." In *Libitina e dintorni: Atti dell'XI Rencontre franco-italienne sur l'épigraphie*, edited by Silvio Panciera, 147-72. Roma: Quasar, 2004.
- Bodel, John. "From *columbaria* to catacombs: Collective burial in pagan and Christian Rome." In *Commemorating the dead: Texts and artifacts in context. Studies of Roman, Jewish, and Christian burials*, edited by Laurie Brink and Deborah A. Green, 117-242. New York: Walter de Gruyter, 2008.
- Bodel, John P. *Graveyards and groves: A study of the Lex Lucerina*. Cambridge, MA: Harvard University, 1994.
- Boldetti, Marc'Antonio. *Osservazioni sopra i cimiteri de' santi martiri ed antichi cristiani di Roma*. Roma: G. M. Salvioni, 1720.

- Bond, Sarah E. "Mortuary workers, the Church, and the funeral trade in late antiquity." *Journal of Late Antiquity* 6, no. 1 (2013): 135-51.
- Borbonus, Dorian. *Columbarium tombs and collective identity in Augustan Rome*. New York: Cambridge University Press, 2014.
- Borda, Maurizio. *La decorazione pittorica del colombario di Pomponio Ila*. Roma, 1947.
- Bordignon, Celso. *Caratteri e dinamica della tecnica pittorica nelle catacombe di Roma*. Roma: Caxias do Sul, 2000.
- Borg, Barbara. *Crisis and ambition: Tombs and burial customs in third-century CE Rome*. Oxford: Oxford University Press, 2013.
- Borgatti, Stephen P., Ajay Mehra, Daniel J. Brass, and Giuseppe Labianca. "Network analysis in the social sciences." *Science* 323 (2009): 892-95.
- Bosio, Antonio. *Roma subterranea*. Edited by Giovanni Severano and Paolo Aringhi. Portland, OR: Collegium Graphicum, 1972.
- Bourdieu, Pierre. *Outline of a theory of practice*. Cambridge: Cambridge University Press, 1977.
- Bourdieu, Pierre. *The field of cultural production: Essays on art and literature*. Edited by Randal Johnson. New York: Columbia University Press, 1993.
- Boussac, Marie-Françoise and Jean-Yves Empereur. "Les inscriptions." In *Nécropolis I*, edited by Jean-Yves Empereur and Marie-Dominique Nenna, 225-42. Cairo: Institut Français d'Archéologie Orientale, 2001.
- Bowden, Ross. "A critique of Alfred Gell on art and agency." *Oceania* 74, no. 4 (2004): 309-24.
- Bowes, Kim. "Early Christian archaeology: A state of the field." *Religion Compass* 2, no. 4 (2008): 575-619.
- Bowman, Alan K. and Andrew Wilson. *Quantifying the Roman economy: Methods and problems*. Oxford: Oxford University Press, 2009.
- Brilliant, Richard and Dale Kinney, eds. *Reuse, value, erasure: Critical views on spolia and appropriation in art and architecture*. Farnham: Ashgate, 2011.
- Brink, Laurie and Deborah A. Green. *Commemorating the dead texts and artifacts in context: Studies of Roman, Jewish, and Christian burials*. New York: Walter de Gruyter, 2008.
- Brown, Peter. *The cult of the saints: Its rise and function in Latin Christianity*. Chicago: University of Chicago Press, 1982.

- Bruun, Christer and Jonathan Edmondson, eds. *The Oxford handbook of Roman epigraphy*. New York: Oxford University Press, 2015.
- Bruzelius, Caroline Astrid and William Tronzo. *Medieval Naples: An achitectural & urban history, 400-1400*. New York: Italica Press, 2011.
- Bruzza, Luigi Maria. "Gli scavi dell'Emporio." In *Triplice omaggio alla santità di Papa Pio IX*, 39-46. Rome, 1877.
- Buonocore, Marco. *Schiavi e liberti dei Volusi Saturnini: Le iscrizioni del colombario sulla Via Appia antica*. Studia archaeologica 39. Roma: "L'Erma" di Bretschneider, 1984.
- Burford, Alison. *Craftsmen in Greek and Roman society*. Ithaca, NY: Cornell University Press, 1972.
- Burnet, Gilbert. *Some letters containing an account of what seemed most remarkable in Switzerland, Italy, etc.* Rotterdam: Abraham Acher, 1686.
- Caldelli, M. L. and et al (eds.). "Iura sepulcrum a Roma: Consuntivi tematici ragionati." In *Libitina e dintorni: Atti dell'XI Rencontre franco-italienne sur l'épigraphie*, edited by Silvio Panciera, 309-427. Roma: Quasar, 2004.
- Cameron, Alan. "Filocalus and Melania." *Classical Philology* 87, no. 2 (Apr. 1992): 140-44.
- Cameron, Alan. *The last pagans of Rome*. New York: Oxford University Press, 2011.
- Camiruaga, Idoia. *La arquitectura del hipogeo de Via Latina en Roma*. Monumenti di antichità cristiana. Burgos: Colegio Oficial de Arquitectos de Castilla y León Este, Demarcación de Burgos, 1994.
- Carletti, Carlo. *Iscrizioni cristiane di Roma: Testimonianze di vita cristiana (secoli III-VII)*. Firenze: Nardini, 1986.
- Carletti, Carlo. "L'arca di Noè: Ovvero la chiesa di Callisto e l'uniformità della 'morta scritta'." *Antiquité Tardive* 9 (1997): 97-102.
- Carletti, Carlo. "Nascita e sviluppo del formulario epigrafico cristiano: Prassi e ideologia." In *Le iscrizioni dei cristiani in Vaticano: Materiali e contributi scientifici per una mostra epigrafica*, edited by Ivan Di Stefano Manzella, vol 143-164. Roma: Edizioni Quasar, 1997.
- Carletti, Carlo. "'Un mondo nuovo': Epigrafia funeraria dei cristiani a Roma in età postcostantiniana." *Vetera Christianorum* 35, no. 1 (1998): 39-68.

- Carletti, Carlo. *Epigrafia dei cristiani in occidente dal III al VII secolo: Ideologia e prassi*. Bari: Edipuglia, 2008.
- Carletti, Carlo. "Littera et figura: Osservazioni sulle dinamiche interattive nell'epigrafia funeraria tardoantica." In *Incisioni figurate della tarda antichità*, edited by Fabrizio Bisconti and Matteo Braconi, 21-35. Città del Vaticano: Pontificia Istituto di Archeologia Cristiana, 2014.
- Carrier, David. "In praise of connoisseurship." *Journal of Aesthetics and Art Criticism* 61 (2003): 159-69.
- Carroll, Maureen. *Spirits of the dead: Roman funerary commemoration in western Europe*. New York: Oxford University Press, 2006.
- Castagnetti, Sergio. *Le "leges libitinariae" flegree. Edizione e commento*. Napoli: Satura Editrice, 2012.
- Caterino, Antonio. *Bibliografia sulle catacombe napoletane*. Firenze: Sansoni, 1957.
- Charles-Murray, Mary. "The emergence of Christian art." In *Picturing the Bible: The earliest Christian art*, edited by Jeffrey Spier, 51-63. New Haven: Yale University Press, 2007.
- Ciavolino, Nicola. "Scavi e scoperte di archeologia cristiana in Campania dal 1983 al 1993." In *1983-1993: Dieci anni di archeologia cristiana in Italia. Atti del VII Congresso nazionale di archeologia cristiana (Cassino, 20-24 settembre 1993)*, edited by E. Russo, vol. 2, 615-69. Cassino: Edizioni dell'Università degli Studi di Cassino, 2003.
- Cipollone, Valeria and Vincenzo Fiocchi Nicolai. "Le lapidi con figurazioni incise nei cimiteri paleocristiani del Lazio." In *Incisioni figurate della tarda antichità*, edited by Fabrizio Bisconti and Matteo Braconi, 37-57. Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 2014.
- Clark, Gillian. "The fathers and the children." In *The Church and childhood. Papers read at the 1993 summer meeting and the 1994 winter meeting of the Ecclesiastical History Society*, edited by Diana Wood, 1-28. Cambridge, MA: Blackwell, 1994.
- Clark, John E. "In craft specialization's penumbra: Things, persons, action, value, and surplus." *APAA Archeological Papers of the American Anthropological Association* 17, no. 1 (2007): 20-35.
- Clover, Frank M. and R. Stephen Humphreys, eds. *Tradition and innovation in late antiquity*. Madison, WI: University of Wisconsin Press, 1989.
- Coarelli, Filippo and Mario Torelli. *Sicilia. Guide archeologiche Laterza* 13. Roma: Laterza, 1984.

- Conde Guerri, Elena. *Los “fossoreos” de Roma paleocristiana: Estudio iconográfico, epigráfico y social*. Studi di antichità cristiana. Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 1979.
- Conde Guerri, Elena. “Nuevas lapidas de ‘fossoreos’ en Roma.” *Quaeritur inventus colitur*, 1 (1989): 149-60.
- Cooley, Alison. *The Cambridge manual of Latin epigraphy*. 2012.
- Cooper, Kate. *The virgin and the bride: Idealized womanhood in late antiquity*. Cambridge, MA: Harvard University Press, 1996.
- Costambeys, Marios. “Burial topography and the power of the Church in fifth- and sixth-century Rome.” *Papers of the British School at Rome* 69 (2001): 169-89.
- Couzin, Robert. “The Christian sarcophagus population of Rome.” *Journal of Roman Archaeology* 27 (2014): 275-303.
- D’Ovidio, Stefano. “Devotion and memory: Episcopal portraits in the catacombs of San Gennaro in Naples.” In *The face of the dead and the early Christian world*, edited by Ivan Foletti, 85-106. Rome: Viella, 2013.
- Daszewski, Wiktor A. “The origins of Hellenistic hypogea in Alexandria.” In *Aspekte Spätägyptischer Kultur: Festschrift für Erich Winter zum 65. Geburtstag*, edited by Martina Minas and Jürgen Zeidler. Mainz am Rhein: Verlag Philipp von Zabern, 1994.
- Davis-Weyer, Caecilia. *Early medieval art, 300-1150: Sources and documents*. Englewood Cliffs, NJ: Prentice-Hall, 1971.
- de Angelis D’Ossat, Gioacchino. *La geologia delle catacombe romane*. Roma: Scuola Tipografia Pio X, 1938.
- de Jorio, Andrea. *Notizie sulle cripte mortuarie dette catacombe di S. Gennaro de’ poveri*. N.p., 1833.
- de Jorio, Andrea. *Guida per le catacombe di S. Gennaro de’ poveri*. Napoli: Tipografia del Vesuvio, 1839.
- de Rossi, Giovanni Battista. *La Roma sotterranea cristiana*. Roma: Cromo-Litografia Pontificia, 1864.
- de Rossi, Giovanni Battista, Angelo Silvagni, and Antonio Ferrua. *Inscriptiones christianae urbis Romae septimo saeculo antiquiores, nova series*. Roma: Ex Officina Libraria Doct. Befani, 1922.

- De Simone, Antonio and Salvatore Ciro Nappo, eds. ...*Mitis Sarni Opes. Nuova indagine archeologica in località Murecine*. Napoli: Denaro, 2000.
- de Visscher, Fernand. "Le régime juridique des plus anciens cimetières chrétiens a Rome." *Analecta Bollandiana* 69 (1951): 39-54.
- De Vos, Mariette. "La bottega di pittori di Via di Castricio." In *Pompei 1748-1980: I tempi della documentazione*, edited by Ida Baldassarre, 119-30. Roma: Multigrafica, 1981.
- Derda, Tomasz. "Necropolis workers in Graeco-Roman Egypt in light of the Greek papyri." *Journal of Juristic Papyri* 21 (1991): 13-36.
- Di Stefano Manzella, Ivan. *Mestiere di epigrafista. Guida alla schedatura del materiale epigrafico lapideo*. Roma: Quasar, 1987.
- Di Stefano Manzella, Ivan. *Le iscrizioni dei cristiani in Vaticano: Materiali e contributi scientifici per una mostra epigrafica*. Città del Vaticano, Roma: Monumenti, musei e gallerie pontificie; Edizioni Quasar, 1997.
- Dobres, Marcia-Anne and Christopher R. Hoffman. "Social agency and the dynamics of prehistoric technology." *Journal of Archaeological Method and Theory* 1, no. 3 (1994): 211-58.
- Dobres, Marcia-Anne and John E. Robb, eds. *Agency in archaeology*. New York: Routledge, 2000.
- Dobres, Marcia-Anne and John E. Robb. "'Doing' agency: Introductory remarks on methodology." *Journal of Archaeological Method and Theory* 12, no. 3 (Sep. 2005): 159-66.
- Dorigo, Wladimiro. *Late Roman painting*. New York: Praeger, 1971.
- Dresken-Weiland, Jutta. "Bilder im Grab und ihre Bedeutung im Kontext der Christianisierung der Frühchristlichen Welt." *Antiquité Tardive* 19 (2011): 63-78.
- Duncan-Jones, Richard. *Structure and scale in the Roman economy*. Cambridge; New York: Cambridge University Press, 1990.
- Duncan-Jones, Richard. "Economic change and the transition to late antiquity." In *Approaching late antiquity: The transformation from early to late Empire*, edited by Simon Swain and Mark Edwards, 20-52. New York: Oxford University Press, 2004.
- Ebanista, Carlo. "Il piccone del fossore: Un secolo di scavi nella catacomba di S. Gennaro a Napoli (1830 - 1930)." *Rivista di Archeologia Cristiana* 86 (2011): 127-74.



- Ebanista, Carlo. "Rilievo grafico e topografia cimiteriale: Il caso della catacomba di S. Gennaro a Napoli." In *Medioevo letto, scavato, rivalutato: Studi in onore di Paolo Peduto*, edited by Rosa Fiorillo and Chiara Lambert, 281-314. Firenze: All'Insegna del Giglio, 2012.
- Ebanista, Carlo. "Lastre con decorazione incisa dalla catacomba di S. Gennaro a Napoli." In *Incisioni figurate della tarda antichità*, edited by Fabrizio Bisconti and Matteo Braconi, 527-45. Città del Vaticano: Pontificio Istituto di Archaeologia Cristiana, 2014.
- Ebanista, Carlo and Alessio Cuccaro. "I mosaici pavimentali paleocristiani del 'grande edificio' nell'insula episcopalis di Napoli." In *Atti del XV Colloquio dell'Associazione italiana per lo studio e la conservazione del mosaico (Aquila, 4-7 febbraio, 2009)*, edited by Claudia Angelelli and Carla Salvetti, 511-30. Tivoli (Roma): Scripta Manent, 2010.
- Ebanista, Carlo and Emanuele Procaccianti. "Elementi di recinzione marmorea di età tardoantica dalla catacomba di S. Gennaro a Napoli." *Rivista di Archeologia Cristiana* 89 (2014): 85-116.
- Edmondson, Jonathan. "Inscribing Roman texts: *Officinae*, layout, and carving techniques." In *The Oxford handbook of Roman epigraphy*, edited by Christer Bruun and Jonathan Edmondson, 111-30. New York: Oxford University Press, 2015.
- Elsner, Jaś. *Art and the Roman viewer: The transformation of art from the pagan world to Christianity*. New York: Cambridge University Press, 1995.
- Elsner, Jaś. *Imperial Rome and Christian triumph: The art of the Roman Empire AD 100-450*. New York: Oxford University Press, 1998.
- Elsner, Jaś. "Archaeologies and agendas: Reflections on late ancient Jewish art and early Christian art." *Journal of Roman Studies* 93 (2003): 114-28.
- Elsner, Jaś. *Roman eyes: Visuality & subjectivity in art & text*. Princeton, NJ: Princeton University Press, 2007.
- Elsner, Jaś and Janet Huskinson. *Life, death and representation: Some new work on Roman sarcophagi*. New York: De Gruyter, 2011.
- Empereur, Jean-Yves and Marie-Dominique Nenna. *Nécropolis 1*. Cairo: Institut Français d'Archéologie Orientale, 2001.
- Empereur, Jean-Yves and Marie-Dominique Nenna. *Nécropolis 2*. Cairo: Institut Français d'Archéologie Orientale, 2003.
- Erasmus, Mario. *Reading death in ancient Rome*. Columbus, OH: Ohio State University Press, 2008.

- Fant, J. Clayton and Tony Kozelj, eds. *Ancient marble quarrying and trade: Papers from a colloquium held at the annual meeting of the Archaeological Institute of America, San Antonio, Texas, December 1986*. Oxford: BAR, 1988.
- Fant, J. Clayton, Ben Russell, and Simon J. Barker. "Marble use and reuse at Pompeii and Herculaneum: The evidence from the bars." *Papers of the British School at Rome* 81 (2013): 181-209.
- Fasola, Umberto M. *The catacomb of Domitilla and the basilica of Saints Nereus and Achilleus*. Translated by Mary F. Ingoldsby. Rome: Marietti, 1960.
- Fasola, Umberto Maria. *Le catacombe di S. Gennaro a Capodimonte*. Roma: Editalia, 1975.
- Felle, Antonio Enrico. "Recenti acquisizioni epigrafiche da catacombe romane." *Mélanges de l'École Française de Rome. Antiquité* 106, no. 1 (1994): 43-69.
- Felle, Antonio Enrico. "Epigrafia pagana e cristiana in Sicilia: Consonanze e peculiarità." *Vetere Christianorum* 42 (2005): 233-50.
- Felle, Antonio Enrico. "Prassi epigrafiche nella catacomba di Domitilla a Roma. Elementi di riflessione." In *Episcopus, civitas, territorium. Actas XV Congreso internacional de arqueología cristiana (Toledo, 8-12 septiembre 2008), Toledo*, 1637-46. Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 2013.
- Felle, Antonio Enrico. "L'apporto dell'Epigraphic Database Bari (EDB) all'analisi dell'apparato figurativo delle iscrizioni dei cristiani di Roma." In *Incisioni figurate della tarda antichità*, edited by Fabrizio Bisconti and Matteo Braconi, 99-112. Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 2013.
- Ferrua, Antonio. *Epigrammata damasiana*. Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 1942.
- Ferrua, Antonio. *Le pitture della nuova catacomba di Via Latina*. Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 1960.
- Ferrua, Antonio. *The unknown catacomb: A unique discovery of early Christian art*. New Lanark, Scotland: Geddes & Grosset, 1991.
- Finney, Paul Corby. *The invisible god: The earliest Christians on art*. New York: Oxford University Press, 1997.
- Fiocchi Nicolai, Vincenzo. *I cimiteri paleocristiani del Lazio e Etruria meridionale*. Vol. 1. Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 1988.
- Fiocchi Nicolai, Vincenzo. "La nuova basilica paleocristiana 'circiforme' della Via Ardeatina." In *Via Appia: Sulle ruine della magnificenza antica*, 78-92. Roma: Leonardo Arte, 1997.

- Fiocchi Nicolai, Vincenzo. "L'organizzazione dello spazio funerario." In *Christiana loca: Lo spazio cristiano nella Roma del primo millennio*, edited by Letizia Pani Ermini, 43-58. Roma: Fratelli Palombi Editori, 2000.
- Fiocchi Nicolai, Vincenzo. *Strutture funerarie ed edifici di culto paleocristiani di Roma dal IV al VI secolo*. Città del Vaticano: IGER, 2001.
- Fiocchi Nicolai, Vincenzo. "Le aree funerarie cristiane di età costantiniana e la nascita delle chiese con funzione sepolcrale." In *Atti del XVI Congresso internazionale di archeologia cristiana*. Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 2016.
- Fiocchi Nicolai, Vincenzo, Fabrizio Bisconti, and Danilo Mazzoleni. *Le catacombe cristiane di Roma: Origini, sviluppo, apparati decorativi, documentazione epigrafica*. Regensburg: Schnell & Steiner, 1998.
- Fiocchi Nicolai, Vincenzo, Fabrizio Bisconti, and Danilo Mazzoleni. *The Christian catacombs of Rome: History, decoration, inscriptions*. Translated by Cristina Carlo Stella and Lori-Ann Touchette. Regensburg: Schnell & Steiner, 1999.
- Fiocchi Nicolai, Vincenzo and Jean Guyon, eds. *Origine delle catacombe romane: Atti della giornata tematica dei seminari di archeologia cristiana (Roma, 21 marzo 2005)*. Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 2006.
- Foletti, Ivan and A. Filipová, eds. *The face of the dead and the early Christian world*. Rome: Viella, 2013.
- Frank, Tenney, ed. *An economic survey of ancient Rome*. Vol. V: Rome and Italy of the Empire. Baltimore: The Johns Hopkins Press, 1940.
- Fuchs, Stephan. "Beyond agency." *Sociological Theory* 19, no. 1 (Mar. 2001): 24-40.
- Fusco, Giuseppe Maria. *Dichiarazioni di alcune iscrizioni pertinenti alle catacombe di S. Gennaro dei poveri*. Napoli: Tipografia di Raffaele Miranda, 1839.
- Galante, Gennaro Aspreno. *I nuovi scavi nelle catacombe di San Gennaro in Napoli: Memoria letta all'Accademia nelle tornate del 15 maggio, 5 giugno e 2 luglio 1904*. Napoli: Cimmaruta, 1908.
- Galante, Gennaro Aspreno and Nicola Spinosa. *Guida sacra della città di Napoli*. Napoli: Società Editrice Napoletana, 1985.
- Gardner, Andrew, ed. *Agency uncovered: Archaeological perspectives on social agency, power, and being human*. London: University College London Press, 2004.

- Garnsey, Peter, ed. *Non-slave labour in the Greco-Roman world*. Cambridge: Cambridge Philological Society, 1980
- Garnsey, Peter. "Child rearing in ancient Italy." In *The family in Italy from antiquity to the present*, edited by David I. Kertzer and Richard P. Saller, 48-65. New Haven, CT: Yale University Press, 1991.
- Garraty, Christopher P. and Barbara L. Stark, eds. *Archaeological approaches to market exchange in ancient societies*. Boulder, CO: University Press of Colorado, 2010.
- Gaston, Robert W. "British travellers and scholars in the Roman catacombs 1450-1900." *Journal of the Warburg and Courtauld Institutes* 46 (1983): 144-65.
- Gell, Alfred. "The technology of enchantment and the enchantment of technology." In *Anthropology, art and aesthetics*, edited by Jeremy Coote, 40-63. Oxford: Clarendon Press, 1992.
- Gell, Alfred. *Art and agency: An anthropological theory*. Oxford: Clarendon Press, 1998.
- Gero, Joan M. and Margaret Wright Conkey, eds. *Engendering archaeology: Women and prehistory*. Cambridge, MA: Blackwell, 1991.
- Giddens, Anthony. *Central problems in social theory: Action, structure, and contradiction in social analysis*. Berkeley: University of California Press, 1979.
- Giovagnoli, Maurizio. "Indagine campione sul rapporto tra immagine e testo nelle iscrizioni pagane provenienti da Roma e dall'Italia." In *Incisioni figurate della tarda antichità*, edited by Fabrizio Bisconti and Matteo Braconi, 183-98, 2013.
- Goodson, Caroline J. *The Rome of Pope Paschal I: Papal power, urban renovation, church rebuilding and relic translation, 817-824*. New York: Cambridge University Press, 2010.
- Gori, Giancarlo, Mario Luni, Benedetta Montavecchi, and Anna Lia Ermeti. "Le collezioni Fabretti e Stoppani: 'Specchi' i-xxii." In *1756-1986, Il museo archeologico di Urbino. I, Storia e presentazione delle collezioni Fabretti e Stoppani*, edited by Mario Luni and Giancarlo Gori, 51-199. Urbino: Quattro Venti, 1986.
- Graham, Emma-Jayne. "Discarding the destitute: Ancient and modern attitudes towards burial practices and memory preservation amongst the lower classes of Rome." In *TRAC 2005: Proceedings of the fifteenth annual Theoretical Roman Archaeology Conference, University of Birmingham, 31st March-3rd April 2005*, edited by Ben Croxford, Helen Goodchild, Jason Lucas, and Nick Ray, 57-72. Oxford: Oxbow Books, 2006.
- Green, Bernard. *Christianity in ancient Rome: The first three centuries*. London: T & T Clark, 2010.

- Grig, Lucy. "Portraits, pontiffs and the Christianization of fourth-century Rome." *Papers of the British School at Rome* 72 (2004): 203-30.
- Guidobaldi, Alessandra Giuglia. "Gli arredi liturgici: Botteghe e produzioni." In *Christiana loca: Lo spazio cristiano nella Roma del primo millennio*, edited by Letizia Pani Ermini, 265-73. Roma: Fratelli Palombi Editori, 2000.
- Guyon, Jean. "La vente des tombes à travers l'épigraphie de la Rome chrétienne (IIIe - VIIIe siècles): Le rôle des *fossores*, *mansionarii*, *praepositi* et prêtres." *Mélanges de l'Ecole Française de Rome: Antiquité* 86 (1974): 549-96.
- Harpur, James. *Sacred tracks: 2000 years of Christian pilgrimage*. Berkeley, Los Angeles: University of California Press, 2002.
- Harris, William V., ed. *The inscribed economy: Production and distribution in the Roman Empire in the light of instrumentum domesticum. The proceedings of a conference held at the American Academy in Rome on 10-11 January, 1992*. Ann Arbor, MI: University of Michigan, 1993.
- Harris, William V. *Rome's imperial economy: Twelve essays*. Oxford: Oxford University Press, 2011.
- Hasegawa, Kinuko. *The familia urbana during the early Empire: A study of columbaria inscriptions*. Oxford: Archaeopress, 2005.
- Hassall, Mark. "Homes for heroes: Married quarters for soldiers and veterans." In *The Roman army as a community*, edited by Adrian Goldsworthy and Ian Haynes, *Journal of Roman Archaeology Supplementary Series* 34, 35-40. Portsmouth, RI: Journal of Roman Archaeology, 1999.
- Hawkins, Cameron. "Work in the city: Roman artisans and the urban economy." University of Chicago, 2006.
- Hawkins, Cameron. "Manufacturing." In *The Cambridge companion to the Roman economy*, edited by Walter Scheidel, 175-94. New York: Cambridge University Press, 2012.
- Heid, Stefan, ed. *Giuseppe Wilpert: Archeologo cristiano. Atti del convegno (Roma -- 16-19 maggio 2007)*. Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 2009.
- Hendon, Julia A. "Production as social process." *Archeological Papers of the American Anthropological Association* 17, no. 1 (2007): 163-68.
- Hinard, François and Jean-Christian Dumont. *Libitina: Pompes funèbres et supplices en Campanie à l'époque d'Auguste*. Paris: De Boccard, 2003.

- Hodder, Ian. "Human-thing entanglement: Towards an integrated archaeological perspective." *Journal of the Royal Anthropological Institute* 17, no. 1 (2011): 154-77.
- Hodder, Ian. *Entangled: An archaeology of the relationships between humans and things*. Malden, MA: Wiley-Blackwell, 2012.
- Hodges, Richard and William Bowden, eds. *The sixth century: Production, distribution, and demand*. Leiden; Boston: Brill, 1998.
- Holleran, Claire. *Shopping in ancient Rome: The retail trade in the late Republic and the Principate*. Oxford: Oxford University Press, 2012.
- Hope, Valerie M. *Death in ancient Rome: A sourcebook*. New York: Routledge, 2007.
- Hope, Valerie M. and Eireann Marshall, eds. *Death and disease in the ancient city*. New York: Routledge, 2000.
- Hopkins, Keith. "On the probable age structure of the Roman population." *Population Studies* 20, no. 2 (1996): 245-64.
- Hoven, Birgit van den. *Work in ancient and medieval thought: Ancient philosophers, medieval monks and theologians and their concept of work, occupations and technology*. Amsterdam: J.C. Gieben, 1996.
- Huskinson, Janet. "'Unfinished portrait heads' on later Roman sarcophagi: Some new perspectives." *Papers of the British School at Rome* 66 (1998): 129-58.
- Jerome. *Commentariorum in Ezechielem*. Vol. 25, col. 375. *Patrologiae cursus completus*. Edited by Jacques-Paul Migne. Paris, 1845.
- Johnson, Mark J. "Pagan-Christian burial practices of the fourth century: Shared tombs?" *Journal of Early Christian Studies* 5, no. 1 (1997): 37-60.
- Joshel, Sandra R. *Work, identity, and legal status at Rome: A study of the occupational inscriptions*. Norman: University of Oklahoma Press, 1992.
- Joyce, Rosemary A. and Jeanne Lopiparo. "Postscript: Doing agency in archaeology." *Journal of Archaeological Method and Theory* 12, no. 4 (Dec. 2005): 365-74.
- Justinian. *Novellae*. Vol. 3. *Corpus iuris civilis*. Edited by Paul Kreuger, Wilhelm Kroll, Theodor Mommsen, and Rudolf Shöll. Berolini: Weidmann, 1889-1895.
- Kenyon, Frederic G. *The paleography of Greek papyri*. Chicago: Argonaut, 1970.
- Kinney, Dale. "Roman architectural spolia." *Proceedings of the American Philosophical Society* 145, no. 2 (2001): 138-61.

- Kloppenborg, John S. and Richard S. Ascough. *Greco-Roman associations: Texts, translations, and commentary*. New York: De Gruyter, 2011.
- Kloppenborg, John S. and S. G. Wilson. *Voluntary associations in the Graeco-Roman world*. New York: Routledge, 1996.
- Knappett, Carl. *An archaeology of interaction: Network perspectives on material culture and society*. Oxford: Oxford University Press, 2011.
- Knappett, Carl, ed. *Network analysis in archaeology: New approaches to regional interaction*. Oxford: Oxford University Press, 2013.
- Kraemer, Ross S. "Jewish tuna and Christian fish: Identifying religious affiliation in epigraphic sources." *The Harvard Theological Review* 84, no. 2 (1991): 141-62.
- Krautheimer, Richard. *Corpus basilicarum christianarum Romae. The early Christian basilicas of Rome (IV-IX cent.)*. Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 1937.
- Krautheimer, Richard. *Early Christian and Byzantine architecture*. Baltimore: Penguin Books, 1965.
- Kreiger, Jenny R. "Remembering children in the Roman catacombs." In *The Oxford handbook of childhood and education in the classical world*, edited by Judith Evans Grubbs and Tim Parkin, 600-24. New York: Oxford University Press, 2013.
- Kristensen, Troels Myrup, Birte Poulsen, and Stine Birk. *Ateliers and artisans in Roman art and archaeology*. Journal of Roman Archaeology. Supplementary Series no. 92. Portsmouth, RI: Journal of Roman Archaeology, 2012
- Lambert, Chiara. *Studi di epigrafia tardoantica e medievale in Campania*. Firenze: All'Insegna del Giglio, 2008.
- Latour, Bruno. *Reassembling the social: An introduction to actor-network theory*. Oxford: Clarendon, 2005.
- Laurenzi, Elsa. *Jewish catacombs. The Jews of Rome: Funeral rites and customs*. Rome: Gangemi Editore, 2013.
- Lavagnino, Emilio. "I lavori di ripristino della basilica di San Gennaro *extra moenia* a Napoli." *Bollettino d'arte del Ministero della Pubblica Istruzione* 22 (1929): 145-66.
- Lega, Claudia. *Le iscrizioni cristiane di Roma conservate nei Musei Vaticani: Indice dei vocaboli*. Città del Vaticano: Monumenti, Musei e Gallerie Pontificie, 2000.

- Lega, Claudia. "Roma, cimitero di Domitilla: Una nuova testimonianza in tarsia vitrea." In *Atti dell'VIII Colloquio dell'Associazione italiana per lo studio e la conservazione del mosaico: Con il patrocinio del Ministero per i beni e le attività culturali, Firenze, 21-23 febbraio 2001*, 497-516. Ravenna: Edizioni del Girasole, 2001.
- Lega, Claudia. "Due iscrizioni sepolcrali cristiane dalla collezione del Museo Sacro." *Bollettino dei Monumenti, Musei e Gallerie Ponteficie* XXI (2001): 229-43.
- Leiwo, Martti. *Neapolitana: A study of population and language in Graeco-Roman Naples*. Helsinki: Finnish Society of Sciences and Letters, 1994.
- Lepone, Antonella. "La 'villa piccola' sotto San Sebastiano." In *Plafonds et voutes à l'époque antique. Actes du VIIIe Colloque international de l'Association internationale pour la peinture murale antique (AIPMA), 15-19 mai 2001, Budapest-Veszprém*, edited by László Borhy, 191-200. Budapest: Pytheas, 2004.
- Lesure, Richard G. "Linking theory and evidence in an archaeology of human agency: Iconography, style, and theories of embodiment." *Journal of Archaeological Method and Theory* 12, no. 3 (Sep. 2005): 237-55.
- Levine, Lee I. *Visual Judaism in late antiquity: Historical contexts of Jewish art*. New Haven: Yale University Press, 2012.
- Liccardo, Giovanni. *Redemptor meus vivit: Iscrizioni cristiane antiche dell'area napoletana*. Trapani: Il Pozzo di Giacobbe, 2008.
- Lindsay, Hugh M. "Eating with the dead: The Roman funerary banquet." In *Meals in a social context: Aspects of the communal meal in the Hellenistic and Roman world*, edited by Inge Nielsen and Hanne Sigismund Nielsen, 67-80. Aarhus: Aarhus University Press, 1998.
- Lindsay, Hugh M. "Death-pollution and funerals in the city of Rome." In *Death and disease in the ancient city*, edited by Valerie M. Hope and Eireann Marshall, 152-73. New York: Routledge, 2000.
- Lindsay, Hugh M. "The cost of dying at Rome." *Ancient History* 31, no. 1 (2001): 17-27.
- Ling, Roger. *Roman painting*. Cambridge: Cambridge University Press, 1991.
- Ling, Roger. *Stuccowork and painting in Roman Italy*. Brookfield, VT: Ashgate, 1999.
- Ling, Roger, ed. *Making classical art: Process & practice*. Charleston, SC: Arcadia., 2000.
- Ling, Roger. "Roman painting of the middle and late Empire." In *The Cambridge history of painting in the classical world*, edited by J. J. Pollitt, 370-427. New York: Cambridge University Press, 2014.



- Lowden, John. "The beginnings of Biblical illustration." In *Late antique and medieval art of the Mediterranean world*, edited by Eva Rose F. Hoffman, 117-34. Malden, MA: Blackwell, 2007.
- Luongo, Gennaro, ed. *San Gennaro nel XVII centenario del martirio (305-2005). Atti del convegno internazionale: Napoli, 21-23 settembre 2005*. Napoli: Editoriale Comunicazioni Sociali, 2007.
- MacMahon, Ardle and J. Price, eds. *Roman working lives and urban living*. Oxford: Oxbow Books, 2005.
- MacMullen, Ramsay. "The epigraphic habit in the Roman Empire." *The American Journal of Philology* 103, no. 3 (1982): 233-46.
- MacMullen, Ramsay. *Christianizing the Roman Empire (A.D. 100-400)*. New Haven: Yale University Press, 1984.
- MacMullen, Ramsay. *Christianity and paganism in the fourth to eighth centuries*. New Haven: Yale University Press, 1997.
- MacMullen, Ramsay. *The second church: Popular christianity A.D. 200-400*. Atlanta: Society of Biblical Literature, 2009.
- MacMullen, Ramsay. "Christian ancestor worship in Rome." *Journal of Biblical Literature* 129, no. 3 (2010): 597.
- Mallardo, Domenico. "Le origini della chiesa di Napoli." In *Miscellanea Pio Paschini. Studi di storia ecclesiastica*, vol 1. Roma: Facultas Theologica Pontificii Athenaei, 1948.
- Mango, Cyril A. *The art of the Byzantine Empire, 312-1453: Sources and documents*. Englewood Cliffs, NJ: Prentice-Hall, 1986.
- Marucchi, Orazio. *Christian epigraphy: An elementary treatise, with a collection of ancient Christian inscriptions, mainly of Roman origin*. Translated by J. Armine Willis. Chicago: Ares Publishers, 1974.
- Mazzoleni, Danilo. "Fossori e artigiani nella società cristiana." In *Christiana loca: Lo spazio cristiano nella Roma del primo millennio*, edited by Letizia Pani Ermini, 251-55. Roma: Fratelli Palombi Editori, 2000.
- Mazzoleni, Danilo. *Epigrafi del mondo cristiano antico*. Roma: Pontificia Università Lateranense, 2002.
- Mazzoleni, Danilo. "Il repertorio figurativo delle lapidi iscritte delle catacombe ebraiche romane." In *Incisioni figurate della tarda antichità*, edited by Fabrizio Bisconti and

- Matteo Braconi, 435-48. Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 2013.
- Mazzoleni, Danilo. "The rise of Christianity." In *The Oxford handbook of Roman epigraphy*, edited by Christer Bruun and Jonathan Edmondson, 445-70. New York: Oxford University Press, 2015.
- McLean, Bradley H. *An introduction to Greek epigraphy of the Hellenistic and Roman periods from Alexander the Great down to the reign of Constantine (323 B.C.-A.D. 337)*. Ann Arbor: University of Michigan Press, 2002.
- McWilliam, Janette. "Children among the dead: The influence of urban life on the commemoration of children on tombstone inscriptions." In *Childhood, class and kin in the Roman world*, edited by Suzanne Dixon, 74-98. New York: Routledge, 2001.
- Melucco Vaccaro, Alessandra. "Agere de arte, agere per artem: La trasmissione dei saperi tecnici fra tradizione colta e fonti materiche." *Settimane di studio del Centro Italiano di Studi sull'Alto Medioevo* 45, no. 1 (1998): 343-78.
- Meskill, Lynn. *Archaeologies of materiality*. Malden, MA: Blackwell, 2005.
- Miles, Richard, ed. *Constructing identities in late antiquity*. New York: Routledge, 1999.
- Mommsen, Theodor. *Inscriptiones regni neapolitani latinae*. Leipzig: G. Wigand, 1852.
- Mommsen, Theodor, ed. *Liber pontificalis*. München: Monumenta Germaniae Historica, 1982.
- Monteix, Nicolas. *Les lieux de métier: Boutiques et ateliers d'Herculanum*. Collection du Centre Jean Bérard 34. Rome: École Française de Rome, 2010.
- Monteix, Nicolas. "Contextualizing the operational sequence: Pompeian bakeries as a case study." In *Urban craftsmen and traders in the Roman world*, edited by Andrew Wilson and Miko Flohr, 153-79. Oxford: Oxford University Press, 2016.
- Moormann, Eric M., ed. *Mededelingen van het Nederlands Historisch Instituut te Rome. Antiquity*. Vol. 54. Assen, Netherlands: Van Gorcum, 1995.
- Morelli, Giovanni. *Italian masters in German galleries: A critical essay on the Italian pictures in the galleries of Munich, Dresden, Berlin*. Translated by Luise Marie Schwaab Richter. London: G. Bell and Sons, 1883.
- Morelli, Giovanni. *Italian painters: Critical studies of their works*. Translated by Constance Jocelyn Ffoulkes. London: John Murray, 1892-1893.
- Neer, Richard. "Connoisseurship and the stakes of style." *Critical Inquiry* 32, no. 1 (2005): 1-26.

- Nestori, Aldo. *Repertorio topografico delle pitture delle catacombe romane*. Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 1975.
- Nielsen, Inge and Hanne Nielsen, eds. *Meals in a social context: Aspects of the communal meal in the Hellenistic and Roman world*. Aarhus: Aarhus University Press, 1998.
- Nordhagen, Per Jonas. "Working with Wilpert: The illustrations in *Die Römischen Mosaiken und Malereien* and their source value." *Acta ad archaeologiam et artium historiam pertinentia*, Series altera in 8.5 (1985): 247-257.
- Nuzzo, Donatella. *Tipologia sepolcrale delle catacombe romane: I cimiteri ipogei delle Vie Ostiense, Ardeatina e Appia*. Oxford, England: Arcaheopress, 2000.
- Orsi, Paolo. *Insigne epigrafe del cimitero di S. Giovanni in Siracusa: Nota*. Roma: Tipografia della Pace di Filippo Cuggiani, 1895.
- Oryshkevich, Irina. "Roma sotterranea and the biogenesis of new Jerusalem." *RES: Anthropology and Aesthetics* 55/56 (Spring-Autumn 2009): 174-81.
- Oryshkevich, Irina. "Through a Netherlandish looking-glass: Philips van Winghe and Jean l'Heureux in the catacombs." *Fragmenta* 5 (2014): 101-20.
- Oryshkevich, Irina T. "The history of the Roman catacombs from the age of Constantine to the Renaissance." Dissertation. Columbia University, 2003.
- Osborne, J. "The Roman catacombs in the Middle Ages." *Papers of the British School at Rome* 53 (1985): 278-328.
- Parkin, Tim. *Demography and Roman society*. Baltimore, MD: Johns Hopkins University Press, 1992.
- Parkin, Tim. "The demography of infancy and early childhood in the ancient world." In *The Oxford handbook of childhood and education in the classical world*, edited by Judith Evans Grubbs and Tim Parkin. New York: Oxford University Press, 2013.
- Pearce, Susan. "The Hinton St. Mary mosaic pavement: Christ or emperor?" *Britannia* 39 (2008): 193-218.
- Pergola, Philippe. "Die Domitilla-Katakombe." *Boreas* 13 (1990): 103-12.
- Pergola, Philippe. "Mensores frumentarii christiani et annone à la fin de l'antiquité (relecture d'un cycle de peintures)." *Rivista di Archeologia Cristiana* 66, no. 1-2 (1990): 168-84.
- Pergola, Philippe and Palmira Maria Barbini. *Le catacombe romane: Storia e topografia*. Roma: Carocci, 1999.

- Petersen, Joan M. "The identification of the *Titulus Fasciola* and its connection with Pope Gregory the Great." *Vigiliae Christianae* 30, no. 2 (June 1976): 151-58.
- Phang, Sara Elise. *The marriage of Roman soldiers (13 BC - AD 235): Law and family in the imperial army*. Boston: Brill, 2001.
- Philpott, R. A. "Late Roman cemetery organization in Britain." In *Römerzeitliche Gräber als Quellen zu Religion, Bevölkerungsstruktur und Sozialgeschichte*, edited by Manuela Struck, 413-20. Mainz: Universität Mainz, 1993.
- Piscopo, Geremia. *Notizie storiche di S. Agrippino e delle catacombe di S. Gennaro*. Napoli: Stipod, 1954.
- Prudentius. *Peristephanon liber*. In *Prudentius with an English translation*, translated by H. J. Thomson. Loeb Classical Library 398, vol. 2. Cambridge, MA: Harvard University Press, 1969-79.
- Rawson, Beryl. "Death, burial, and commemoration of children in Roman Italy." In *Early Christian families in context: An interdisciplinary dialogue*, edited by D. L. Balch and C. Osiek, 277-97. Grand Rapids, MI: William B. Eerdmans, 2003.
- Rebillard, Éric. *Religion et sépulture. L'église, les vivants et les morts dans l'antiquité tardive*. Paris: Ecole des Hautes Études en Sciences Sociales, 2003.
- Rebillard, Éric. *The care of the dead in late antiquity*. Translated by Elizabeth Trapnell Rawlings and Jeanine Routier-Pucci. Ithaca: Cornell University Press, 2009.
- Rebillard, Éric. "The Church, the living, and the dead." In *A companion to late antiquity*, edited by Philip Rousseau, 220-30. Malden, MA: Blackwell, 2009.
- Rebillard, Éric. "The burial of the poor in the Roman Empire and its evolution in late antiquity." In *Transformations of religious practices in late antiquity*, 313-39. Burlington, VT: Ashgate, 2013.
- Rebillard, Éric. "Church and burial in late antiquity (Latin Christianity, third to sixth centuries CE)." In *Transformations of religious practices in late antiquity*, 227-49. Burlington, VT: Ashgate, 2013.
- Rebillard, Éric. "The church of Rome and the development of the catacombs: On the origin of Christian cemeteries." In *Transformations of religious practices in late antiquity*, 293-311. Burlington, VT: Ashgate, 2013.
- Rebillard, Éric. "*Koimeterion* and *coemeterium*: Tomb, martyr tomb, necropolis." In *Transformations of religious practices in late antiquity*, 251-76. Burlington, VT: Ashgate, 2013.

- Rebillard, Éric. “Were the Carthaginian *areae* Christian cemeteries or burial enclosures for Christians?” In *Transformations of religious practices in late antiquity*, 277-91. Burlington, VT: Ashgate, 2013.
- Rebillard, Éric and Jörg Rüpke, eds. *Group identity and religious individuality in late antiquity*. Washington, DC: Catholic University of America Press, 2015.
- Remus, Harold. “Voluntary associations and networks: Aelius Aristides at the Asclepieion in Pergamum.” In *Voluntary associations in the Graeco-Roman world*, edited by John S. Kloppenborg and Stephen G. Wilson, 146-75. New York: Routledge, 1996.
- Robb, John. “Beyond agency.” *World archaeology* 42, no. 4 (2010): 493-520.
- Ruffini, Giovanni. *Social networks in Byzantine Egypt*. New York: Cambridge University Press, 2008.
- Russell, Ben. “The Roman sarcophagus ‘industry’: A reconsideration.” In *Life, death, and representation: Some new work on Roman sarcophagi*, edited by Jas Elsner and Janet Huskinson, 119-47. Berlin: De Gruyter, 2010.
- Russell, Ben. *The economics of the Roman stone trade*. New York: Oxford University Press, 2013.
- Rutgers, Leonard V. *Subterranean Rome: In search of the roots of Christianity in the catacombs of the eternal city*. Leuven: Peeters, 2000.
- Saller, Richard P. and Brent D. Shaw. “Tombstones and Roman family relations in the Principate: Civilians, soldiers and slaves.” *Journal of Roman Studies* 74 (1984): 124-56.
- Salzman, Michele Renée. *On Roman time: The codex-calendar of 354 and the rhythms of urban life in late antiquity*. Berkeley, CA: University of California Press, 1990.
- Sapirstein, Philip. “Painters, potters, and the scale of the Attic vase-painting industry.” *American Journal of Archaeology* 117, no. 4 (2013): 493-510.
- Scandurra, Carmela. “Epigrafia e società.” In *La Rotonda di Adelfia: Testimonianze archeologiche dalla catacomba di S. Giovanni*, edited by Gioconda Lamagna and Rosalba Amato, 21-24. Palermo: Regione Siciliana, Museo Archeologico Regionale Paolo Orsi, 2014.
- Scheiblaue, C., M. Wimmer, and N. Zimmermann. “Interactive Domitilla catacomb exploration.” In *VAST 2009: The 10<sup>th</sup> International symposium on virtual reality, archaeology, and cultural heritage; the 7<sup>th</sup> Eurographics workshop on graphics and cultural heritage: St. Julians, Malta, September 22-25, 2009*, edited by Kurt Debattista, 65-72. Aire-la-Ville, Switzerland: Eurographics Association, 2009.

- Scheidel, Walter. "Approaching the Roman economy." In *The Cambridge companion to the Roman economy*, edited by Walter Scheidel, 1-24. New York: Cambridge University Press, 2012.
- Scheidel, Walter, ed. *The Cambridge companion to the Roman economy*. Cambridge: Cambridge University Press, 2012.
- Scheidel, Walter, Ian Morris, and Richard P. Saller, eds. *The Cambridge economic history of the Greco-Roman world*. Cambridge: Cambridge University Press, 2007.
- Scheidel, Walter and Sitta von Reden, eds. *The ancient economy*. New York: Routledge, 2002.
- Sellet, Frédéric. "Chaîne opératoire: The concept and its applications." *Lithic Technology* 18, no. 1/2 (Spring/Fall 1993): 106-12.
- Sennett, Richard. *The craftsman*. New Haven: Yale University Press, 2008.
- Sgarlata, Mariarita. *Ricerche di demografia storica: Le iscrizioni tardo-imperiali di Siracusa*. Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 1991.
- Sgarlata, Mariarita. *L'epigrafia greca e latina cristiana della Sicilia*. Vol. 2. Pisa: Scuola Normale Superiore di Pisa, 2000.
- Sgarlata, Mariarita. *S. Giovanni a Siracusa*. Città del Vaticano: Pontificia Commissione di Archeologia Sacra, 2003.
- Sgarlata, Mariarita. "L'epigrafia cristiana nell'età di Cesare Baronio." In *Arte e committenza nel Lazio nell'età di Cesare Baronio*, edited by Patrizia Tosini, 49-68. Rome: Gangemi Editore, 2009.
- Sgarlata, Mariarita. "Un secolo di ricerche sui cimiteri cristiani del suburbio e del territorio di Siracusa." In *Ricerche e attività del Corso internazionalizzato di archeologia. Catania, Varsavia, Konia 2009-2012*, edited by P. Militello and M. Camera, *Syndesmoi* 3, 177-91. Palermo, 2012.
- Sgarlata, Mariarita. "Parole e immagini nelle catacombe di Siracusa." In *Incisioni figurate della tarda antichità*, edited by Fabrizio Bisconti and Matteo Braconi, 511-23. Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 2013.
- Sgarlata, Mariarita. "La catacomba di S. Giovanni." In *La Rotonda di Adelfia: Testimonianze archeologiche dalla catacomba di S. Giovanni*, edited by Gioconda Lamagna and Rosalba Amato, 9-13. Palermo: Regione Siciliana, Museo Archeologico Regionale Paolo Orsi, 2014.
- Shaw, Brent D. "Latin funerary epigraphy and family life in the later Roman Empire." *Historia* 33, no. 4 (1984): 457-97.

- Shaw, Brent D. "The age of Roman girls at marriage: Some reconsiderations." *Journal of Roman Studies* 77 (1987): 30-46.
- Shaw, Brent D. "The cultural meaning of death: Age and gender in the Roman family." In *The family in Italy from antiquity to the present*, edited by David I. Kertzer and Richard P. Saller, 66-90. New Haven: Yale University Press, 1991.
- Shepherd of Hermas*. In *Excluded books of the New Testament*, translated by J. B. Lightfoot *et al.* 249-403. London: Eveleigh Nash and Grayson, 1927.
- Sigismund Nielsen, Hanne. "The value of epithets in pagan and Christian epitaphs from Rome." In *Childhood, class and kin in the Roman world*, edited by Suzanne Dixon, 165-77. New York: Routledge, 2001.
- Sigismund Nielsen, Hanne "Interpreting epithets in Roman epitaphs." In *The Roman family in Italy: Status, sentiment, space*, edited by Beryl Rawson and Paul R. C. Weaver, 169-204. New York: Oxford University Press, 1997.
- Snyder, Graydon F. *Ante pacem: Archaeological evidence of Church life before Constantine*. Macon, GA: Mercer, 1985.
- Society of the Divine Word. "The catacombs of Domitilla." Last modified Accessed Dec. 14, 2016. <<http://www.domitilla.info/docs/brochures/brochen.pdf>>.
- Sovrintendente dell'Ospedale di San Gennaro de' Poveri. *Letter to Gennaro Aspreno Galante*. Busta ASD/112, fasc. 5. Rome: Archivio della Pontificia Commissione di Archeologia Sacra, 1912.
- Spier, Jeffrey. "The earliest Christian art: From personal salvation to imperial power." In *Picturing the Bible: The earliest Christian art*, edited by Jeffrey Spier, 1-23. New Haven; Fort Worth, TX: Yale University Press, in association with the Kimbell Art Museum, 2007.
- Spier, Jeffrey. *Picturing the Bible: The earliest Christian art*. New Haven; Fort Worth, TX: Yale University Press, in association with the Kimbell Art Museum, 2007.
- Strazzulla, Vincenzo. *Studio critico sulle iscrizioni cristiane di Siracusa*. Siracusa: Tipografia di Andrea Norcia, 1895.
- Susini, G. C. *The Roman stonecutter: An introduction to Latin epigraphy*. Oxford: Blackwell, 1973.
- Temin, Peter. *The Roman market economy*. Princeton; Oxford: Princeton University Press, 2012.

- Terpstra, Taco T. *Trading communities in the Roman world: A micro-economic and institutional perspective*. Boston: Brill, 2013.
- Tronzo, William. *The Via Latina catacomb: Imitation and discontinuity in fourth-century Roman painting*. University Park, PA: Published for the College Art Association of America by the Pennsylvania State University Press, 1986.
- Trout, Dennis. *Damasus of Rome: The epigraphic poetry*. New York: Oxford University Press, 2015.
- Venit, Marjorie S. *The monumental tombs of Alexandria: The theater of the dead*. New York: Cambridge University Press, 2002.
- Venit, Marjorie S. *Visualizing the afterlife in the tombs of Graeco-Roman Egypt*. New York: Cambridge University Press, 2016.
- Venticinque, Philip Frank. "Common causes: Guilds, craftsmen and merchants in the economy and society of Roman and late Roman Egypt." Dissertation, University of Chicago, 2009.
- Vleeming, S. P. "The office of a choachyte in the Theban area." In *Hundred-gated Thebes: Acts of a colloquium on Thebes and the Theban area in the Graeco-Roman period*, edited by S. P. Vleeming, 241-55. Leiden: Brill, 1995.
- Ward-Perkins, J. B. "The role of craftsmanship in the formation of early Christian art." In *Atti del IX Congresso internazionale di archeologia cristiana, Roma, 21-27 settembre 1975*, vol I, 637-52. Città del Vaticano: Pontificio Istituto di Archeologia Cristiana, 1978.
- Webb, Matilda. *The churches and catacombs of early Christian Rome: A comprehensive guide*. Portland, OR: Sussex Academic Press, 2001.
- Weitzmann, Kurt. *Age of spirituality: Late antique and early Christian art, third to seventh century. Catalogue of the exhibition at the Metropolitan Museum of Art, November 19, 1977, through February 12, 1978*. New York: The Metropolitan Museum of Art, 1979.
- Weitzmann, Kurt and Herbert L. Kessler. *The frescoes of the Dura synagogue and Christian art*. Washington, DC: Dumbarton Oaks Research Library and Collection, 1990.
- White, L. Michael. *Social networks in the early Christian environment: Issues and methods for social history*. Atlanta: Society of Biblical Literature, 1992.
- Williams, John. *Imaging the early medieval Bible*. University Park, PA: Pennsylvania State University Press, 1999.
- Williams, Mark F. *The making of Christian communities in late antiquity and the Middle Ages*. London: Wimbledon, 2005.



- Wilpert, Josef. *Sulla tecnica delle pitture cimiteriali e sullo stato di loro conservazione*. Dissertazione della pontificia accademia romana di archeologia. Roma: Pontificia Accademia Romana di Archeologia, 1894.
- Wilpert, Josef. *Die Malereien der Katakomben Roms*. Freiburg im Breisgau: Herder, 1903.
- Wolff, Janet. *The social production of art*. New York: St. Martin's Press, 1981.
- Wood, Diana, ed. *The Church and the arts: Papers read at the 1990 summer meeting and the 1991 winter meeting of the Ecclesiastical History Society*. Oxford, UK; Cambridge, MA: published for the Ecclesiastical History Society by Blackwell Publishers, 1992.
- Yasin, Ann Marie. "Displaying the sacred past: Ancient Christian inscriptions in early modern Rome." *International Journal of the Classical Tradition* 7, no. 1 (Summer 2000): 39-57.
- Yasin, Ann Marie. "Funerary monuments and collective identity: From Roman family to Christian community." *The Art Bulletin* (2005): 433-57.
- Yasin, Ann Marie. *Saints and church spaces in the late antique mediterranean: Architecture, cult, and community*. Cambridge: Cambridge University Press, 2009.
- Yasin, Ann Marie. "Prayers on site: The materiality of devotional graffiti and the production of early Christian sacred space." In *Viewing inscriptions in the late antique and medieval world*, edited by Antony Eastmond, 36-60. New York: Cambridge University Press, 2015.
- Zimmermann, Norbert. *Werkstattgruppen Römischer Katakombenmalerei*. Münster, Westfalen: Aschendorff, 2002.