Utilitarian Ceramics in the Byzantine Peloponnese (8th – 13th century):
the economics of the ceramics and
ceramic production in the context of economic cycles

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2017
AUTHOR’S DECLARATION

I declare that this thesis has been composed solely by myself and that it has not been submitted, in whole or in part, in any previous application for a degree. Except where states otherwise by reference or acknowledgment, the work presented is entirely my own.

Rossana Valente
Utilitarian unglazed ceramics constitute an important range of evidence for investigating cultural and economic identities. The present research project analyses commonly used, unglazed Byzantine vessels from stratified contexts, excavated in Ancient Corinth (ASCSA), in close comparison with vessels from Sparta and Argos (Peloponnese – Greece). The first goal of this thesis is to provide an updated overview of the specific types of unglazed, utilitarian vessels used in these sites. Through a quantitative analysis, applied to ceramics, this study presents a seriation of specific types of unglazed utilitarian vessels from the Byzantine Period (8th – 13th centuries), which suggests a revised chronology of use for these vessels. Furthermore, this study also provides an analysis of how vessels changed shape and fabric over time and how Byzantine history and related domestic environments influenced the quantity and quality of utilitarian objects. Quantitative studies of unglazed pottery, based upon type and fabric, can produce relevant information for delineating technological, economic and social patterns on a local and a regional scale. Quantifying the presence and the percentage of unglazed pottery types in relation to their contexts makes it possible to identify technological, economic and cultural networks in which those pots were produced, used, reused and discarded. The production of coarse and cooking wares in the 8th century inherited a Late Roman artisanal tradition. Additionally, these wares are also characterized by a changed scale of production and by transformed manufacturing practices, which are further developed in the Byzantine period and cease only some decades after the Frankish conquest of the Peloponnese.

Diverse utilitarian vessels were part of a typological koine in the Byzantine period; the same types have been found in stratified deposits excavated in different sites across the Peloponnese and beyond. The appearance of these vessels may be used, primarily, to suggest date ranges and to denote regional and interregional trade. Furthermore, such typological consistency is evidence for connectivity and for exchange, which encompasses not only the exchange of goods, but also of technical know-how. The same types of wares were possibly produced simultaneously in distant sites. For instance, there are striking similarities between the Early and Middle Byzantine coarse and cooking wares produced in Corinth and those produced in Salento (Southern Apulia, Italy). Due to these similarities, utilitarian unglazed wares
may be studied as a proxy for patterns of social, cultural and economic networks of exchange in the Byzantine period between these two regions.

Finally, this study would like to investigate how the presence or absence, the frequency and the relative proportions of pottery types are determined by socio-economic factors. An analysis of the manufactory tradition, including variations in technology of production and of vessel morphologies, within the appropriate historical context, can be indicative of social and economic patterns. Pottery can demonstrate the components of effective demand and can, therefore, be an important tool for measuring patterns of production and consumption in relation to economic trends. This project tests diverse research methodologies in order to analyse how ceramics, set within a wide and multifocal range of historical and archaeological sources, can be informative of economic patterns and changes.
ACKNOWLEDGMENTS

This PhD thesis has only been possible thanks to the support of multiple researchers, professors, colleagues, friends and institutions. Firstly, I would like to thank the University of Edinburgh, the Department of Archaeology and, most of all, my supervisors, J. Crow and J. Bintliff. I would like to deeply thank them for their support and for providing constructive feedback, criticism and comments. Their guidance has given me the invaluable opportunity to embrace this research project in a manner that considers multiple research perspectives.

I am also thankful to the American School of Classical Studies at Athens (ASCSA), Corinth Excavations staff. This research would have not been possible without their knowledgeable guidance, kindness, generosity and the support of the director of Corinth Excavations, Guy D. R. Sanders, and the assistant director Ioulia Tzounou-Herbst. They not only facilitated my research by guiding me through the relevant material evidence, but they also have paradigmatically enriched my research with stimulating and inspiring conversations and their enthusiastic support. I would like to thank Guy for giving me permission to study the material from Corinth Excavations. I am deeply indebted to him for giving me the opportunity to work and practice in the pot shed and the field as a field director over the last five years. I must thank Ioulia for her cheerful assistance, which made my work in the Corinth museum joyful and stimulating. I would also like to thank Katie Petrole for her patience and for her willing assistance in the museum facilitating this research, as well as the architect James Herbst for his help and guidance with the architecture and plans of Corinth Excavations, which are included in this thesis. My thanks also go the conservator and friend Nicol Anastasatou and to Takis Notis for the logistic support and for the restoration of the pots needed for this research. I would like to thank Petros Dellatolas for his excellent photographs and the illustrator Christina Kolb, who has carefully rendered the drawings presented in this thesis.

In the time spent in Corinth I had the honour of meeting many scholars and friends; I have enormously benefitted from the interesting conversations we exchanged, many of which have also contributed to this dissertation. I am grateful to Mark D. Hammond and Kathleen Slane for sharing their research expertise on Roman
and Late Roman ceramics and to Mike Ierardi and Orestes Zervos for their expertise on numismatics.

I would also like to thank (in alphabetical order): Tassos Antonaras, Nancy Bookidis, Jody Cundy, Steven Ellis, Karen Garnett, Heather Graybehl, Allison Emmerson, James Herbst, Sarah James, Larkin Kennedy, Leigh Lieberman, Katherine Larson, Ian McPhee, Emilia Oddo, Elizabeth Pemberton, Katie Petrole, Katerina Ragkou, Emilio Rodríguez-Álvarez, Dylan K. Rogers, Kathleen Slane, Danielle Smotherman Bennett, and Charles K. Williams II.

This PhD research project has also been possible thanks to fruitful cooperation with numerous scholars and institutions. I would like to thank Demetris Athanasoulis, Director of the Ephorate of Antiquities of Cyclades, for allowing me to study the material included in this thesis, discovered during the excavations carried out in Argos under his directorship. I would also like to thank the Ephorate of Antiquities of the Argolid for providing access and a permit for publication. I am especially grateful to the archaeologist Anastasia Vassiliou, for sharing with me her research expertise on the material culture of Byzantine Argolid and for her enthusiastic and generous collaboration.

My studies in Sparta have been possible thanks to the support of the British School at Athens, which was also kind enough to assist with my permit application. I am grateful to Catherine Morgan for her generosity and support, as well as for the opportunity to study ceramics from the 2008 excavation season. I am also grateful to John Wilkes and Geoffrey Waywell for permitting me to access material from the excavations carried out under their directorship in the theatre and in the Roman Stoa. Moreover, I also would like to thank the staff of the Ephorate of Sparta, and especially the archaeologist Hara Giannakaki, for their welcoming and friendly support, as well as for facilitating access to study their material. In this respect, I also would like to thank the staff of the Archaeological Museum of Sparta.

The study of the Corinthian ceramics presented in this thesis has also benefitted from the collaboration of Paul Arthur, who I thank for allowing me access to material for a comparative study from diverse excavations carried out under his directorship in the Salento region. My deep gratitude goes to Marco Leo Imperiale for his generous guidance on the ceramics of Byzantine Salento, for sharing his research material and for the interesting conservations.
This research would have not been possible without the financial support of the University of Edinburgh, The School of History, Classics and Archaeology, HCA Doctoral Scholarship (2013-2016). I also would like to thank the American School of Classical Studies at Athens, which has funded my research through the Henry S. Robinson Corinth Research Fellowship (2014). My thanks also go to the Dumbarton Oaks, Byzantine Studies program, whose award has allowed me to attend the Byzantine Coins and Seals Summer Program (July 2015). On this occasion, I had the pleasure for studying and working on Byzantine coinage under the knowledgeable guidance of Vasiliki Penna, whom I deeply thank for her teaching and whose expertise has proven to be an invaluable resource.

I also owe thanks to my professors at the University of Siena, and particularly to Silvia Ronchey and Enrico Zanini who guided me as undergraduate and graduate student. Their guidance has encouraged my studies in the field of Byzantine studies and their training in the Department of Archaeology has formed me as an archaeologist.

I would also like to thank my examiners, Mark Whittow and Ulf-Dietrich Schoop, whose comments and feedback on this work are very appreciated and have been of much support.

Finally, I thank my friends and most of all my parents, Anna Maria and Angelo, and my partner Pasquale for enduring my long absences and warmly welcoming me back home. They have constantly supported me in all the stages of my academic career.

All the mistakes in this research are my own responsibility. Chiedo venia. Future work will try to fix them.
# CONTENTS

**AUTHOR’S DECLARATION** ........................................................................................................ I

**ABSTRACT** .......................................................................................................................... II

**ACKNOWLEDGMENTS** ........................................................................................................ IV

**CONTENTS** ......................................................................................................................... VII

**LIST OF FIGURES** ................................................................................................................ X

**LIST OF PLANS** .................................................................................................................... XI

**LIST OF TABLES** ................................................................................................................... XI

**LIST OF POTTERY FIGURES** ................................................................................................ XI

**LIST OF PLATES** .................................................................................................................... XIII

1 **INTRODUCTION** ................................................................................................................. 1

   1.1 INTRODUCTION: WHY A STUDY ON UNGLAZED VESSELS? ......................................... 1
   1.2 STRUCTURE AND SCOPE ............................................................................................. 5
   1.3 BYZANTINE ECONOMIC HISTORY AMONG TEXTS, ARCHAEOLOGY AND THEORETICAL MODELS ...................................................... 10
   1.4 A BYZANTINE ‘MIXED’ ECONOMY .............................................................................. 20

2 **RESEARCH METHODOLOGIES** ....................................................................................... 23

   2.1 INTRODUCTION .............................................................................................................. 23
   2.2 RESEARCH PRACTICALITIES ......................................................................................... 24
   2.3 TYPOLOGY AND CLASSIFICATION: EFFICACY OF THIS APPROACH .................... 30
   2.4 QUANTIFICATION AND RELEVANCE OF RESIDUALITY ........................................ 34
   2.5 DATING AND POTTERY CHRONOLOGY: A MATTER OF SERIATION ......................... 38
   2.6 THE APPLICABILITY OF AN ECONOMIC PERSPECTIVE ........................................... 40

3 **HISTORICAL AND ARCHAEOLOGICAL FRAMEWORK** .................................................. 43

   3.1 INTRODUCTION: THE CONTEXT OF EXISTING ARCHAEOLOGICAL EVIDENCE ........ 43
   3.2 CORINTH ...................................................................................................................... 49
   3.3 ARGOS ........................................................................................................................ 63
   3.4 SPARTA ......................................................................................................................... 65

4 **TYPOLOGY AND CHRONOLOGY OF UNGLAZED BYZANTINE CERAMICS** .............. 71

   4.1 INTRODUCTION .............................................................................................................. 71
   4.2 THE ‘DARK AGES’ CERAMIC EVIDENCE .................................................................. 72
   4.3 CONCLUDING REMARKS ON EARLY BYZANTINE POTTERY IN CORINTH ............ 85
   4.4 EARLY BYZANTINE CERAMICS IN SPARTA ............................................................... 86
   4.5 MIDDLE AND LATE BYZANTINE UNGLAZED CERAMICS IN CORINTH ................. 90
   4.6 COOKING WARE ........................................................................................................... 91
   4.6.1 Collar rim stewpot .................................................................................................. 91
   4.6.2 Cauldron .............................................................................................................. 99
   4.6.3 Thickened rim stewpot ...................................................................................... 103
   4.6.4 Triangular rim stewpot ...................................................................................... 104
4.6.5 Outwardly thickened rim stewpot ............................................................. 116
4.6.6 Folded rim stewpot .................................................................................... 121
4.6.7 Small cooking pot ............................................................................... 123
4.6.8 Lid ......................................................................................................... 129
4.6.9 Funnel ..................................................................................................... 130
4.6.10 Handmade cooking ware ...................................................................... 130
4.7 Unglazed White Ware ............................................................................... 133
4.8 Coarse Ware ............................................................................................ 135
4.8.1 Stamnos .................................................................................................. 135
4.8.2 Otranto type amphora .......................................................................... 135
4.8.3 Transport amphora ............................................................................... 138
4.8.4 Plain rim large amphora ...................................................................... 140
4.8.5 Lagena .................................................................................................... 144
4.8.6 Lagenes, body shape ............................................................................ 150
4.8.7 Triangular rim lagenes .......................................................................... 152
4.8.8 Lagenes with outwardly thickened rim .................................................. 154
4.8.9 Matt painted lagena ............................................................................. 155
4.8.10 Jug ......................................................................................................... 158
4.8.11 Imported incised jug ............................................................................ 167
4.8.12 Juglet .................................................................................................... 168
4.8.13 Lekane .................................................................................................. 170
4.8.14 Large bowl ......................................................................................... 173
4.8.15 Small bowl .......................................................................................... 176
4.8.16 Pedestal bowl .................................................................................... 176
4.8.17 Cup ....................................................................................................... 180
4.8.18 Tankard ............................................................................................... 184
4.8.19 Storage vessels ................................................................................... 185
4.8.20 Pithos .................................................................................................. 185
4.8.21 Storage jar ............................................................................................ 187
4.9 Middle and Late Cooking Ware from Argos Excavation .......................... 191

5 The Life Cycle of a Byzantine Pot ............................................................... 193
5.1 Introduction ............................................................................................... 193
5.2 Corinthian Kilns and the Pottery Production Evidence .............................. 193
5.3 Modes of Pottery Production: Technology and Production Organization ... 199
5.4 Specialization, Standardization and Intensification of Pottery Production ... 203
5.4.1 Interregional context of pottery standardization .................................... 211
5.5 Pottery Consumption ............................................................................... 218

6 The Economics of Ceramics and Ceramics in the Context of Economic Variables: On the Changing Economic Patterns of the Byzantine Empire... 225
6.1 Introduction ................................................................................................ 225
6.2 Contextualizing the Pottery Evidence: Economics During the ‘Dark Ages’ and the Perspective of the Late Antique Legacy ............................................. 229
6.3 Population Dynamic Demography and Its Financial Impact: The Case of the Pandemic Plague and of Climate Change ...................................................... 244
6.4 ECONOMIC AND SOCIAL CHANGES IN THE EARLY BYZANTINE PERIOD ........................................ 248
6.5 THE ECONOMIC IMPACT OF IMMIGRATION ........................................................................... 253
6.6 CONTINUITY AND CHANGE OF THE MIDDLE BYZANTINE ECONOMIC GROWTH: THE CERAMIC EVIDENCE IN CONTEXT .................................................................................. 259
6.7 THE MIDDLE BYZANTINE ECONOMIC RECOVERY: THE CONTEXT OF ITS MULTIPLE CAUSES .... 267

7 CONCLUSIONS AMONG MATERIAL EVIDENCE, ARCHAEOLOGY AND ECONOMIC HISTORY ................................................................. 276

7.1 SUMMARY ......................................................................................................................... 276
7.2 CERAMICS AND SOCIO-ECONOMIC QUESTIONS .............................................................. 278
7.3 CONCLUDING REMARKS AND FUTURE WORK .................................................................. 285

APPENDIX A: CERAMIC ASSEMBLAGES .................................................................................. 290

APPENDIX B: FABRICS .......................................................................................................... 354

1. COARSE WARE FABRICS ................................................................................................... 354
2. COOKING WARE FABRICS ............................................................................................... 358

POTTERY FIGURES .............................................................................................................. 361

COLOUR PLATES .................................................................................................................. 423

BIBLIOGRAPHY .................................................................................................................... 437

1. PRIMARY SOURCES ........................................................................................................... 437
2. SECONDARY SOURCES ..................................................................................................... 437
LIST OF FIGURES

Figure 2.1. Appearance of Break (Sanders et al. 2008: 65) ........................................... 28
Figure 2.2. Frequency Chart (Sanders et al. 2008: 66) .................................................. 29
Figure 2.3. Shape and Roundness of Inclusions (Sanders et al. 2008: 23) ......................... 30
Figure 3.1. Ancient Corinth. In black the Late Antique city walls, in yellow what became the Byzantine suburb, including the Forum area (After Sanders 2013) ............... 52
Figure 3.2. Map of Sparta showing sites mentioned in the text. ..................................... 70
Figure 4.1. Hand-made beaker from Lot-2012-46 (Photo by the author) ......................... 85
Figure 5.1. Unfinished examples of table ware (glaze missing). A: Light on Dark Slip Painted Ware B: Dark on Light Slip-Painted (Imitation Lustre), C: Sgraffito (developed style), D: Measles Ware. ................................................................................................ 194
Figure 5.2. Triangular rim stewpots from late 11th century to mid 13th century. .............. 206
Figure 5.3. Flat base cooking pots. A: 1 and 2 from Hierapolis, 3 from Cherson (Arthur 2004: 324). B: imported cooking found in Corinth. ...................................................... 212
Figure 5.4. Cooking pots A: from Athens (Frantz 1938: 458, fig. 20), B: from Sparta (Sanders 1993: 278, fig. 13), C: Otranto (Leo Imperiale 2004: 335, fig. 4). ......................... 213
Figure 5.5 Otranto type amphorae. A and B are photo and drawing of a Corinthian example, catalogue entry no. 188. C is a misfired Corinthian amphora, catalogue entry no. 190. D is an example from Otranto (Arthur 1992: 205) ............................................. 215
Figure 5.6. Jugs with gouged decoration. A: from Apigliano in Salento, Italy (Arthur & Leo Imperiale 2015: 42). B: from Corinth (catalogue entry no. 280). ......................... 217
Figure 5.7 Interior of cooking pots with carbonization marks (Photos by the author). ........ 220
Figure 5.8. Sooting marks on cooking pots (1st photo by P. Dellatolas, 2nd by the author) ............................................................................................................................................... 221
Figure 5.9 Stands. A: example of stand from Corinth (ASCSA excavations). B: stand from Sparta (photo by the author) .......................................................... 221
Figure 5.10 Standing mudbrick house and fireplace in the north-east Peloponnese (photos by the author) .............................................................. 222
Figure 5.11. Hearths in Units 1 and 3 of the Frankish complex (After Williams et al. 1997: 10). ........................................................................................................ 223
Figure 6.1 Coin stray finds from Constantinople (St. Polyeuctos) ................................... 233
Figure 6.2 Coin stray finds from Athens (Morrison 2002: 919, fig. 6.5) ......................... 233
Figure 6.3 Coin stray finds from Corinth (Morrison 2002: 921, fig. 6.9). ......................... 234
Figure 6.4 Coin stray finds from Aphrodisias (Morrison 2002: 917, fig. 6.1) ................... 234
Figure 6.5 Coin stray finds from Ephesos (Morrison 2002: 920, fig. 6.8) ...................... 235
Figure 6.6. Coin stray finds from Sicily (Morrison 2002: 920, fig. 6.8) ......................... 235
Figure 6.7 The time path of a money supply and the corresponding price level: gradual increase in the money supply (Jones 2014: 340, fig. 9.5) .................................. 237
Figure 6.8. The time path of a money supply and the related price level: instantaneous increase in money supply (Jones 2014: 340, fig. 9.4) .................................. 237
Figure 6.9 Shift of aggregate demand curve (http://www.slideshare.net/opaprb/ch13-9301579). .................................................................................................................. 238
LIST OF PLANS

Plan 3.1. Site of Corinth (After Athanasoulis 2013. Courtesy of the ........................................ 50
Plan 3.2. Plan of the Forum area showing 7th and 8th century graves (Sanders 2004: 181) (Courtesy of the American School of Classical Studies at Athens, Corinth Excavations). ........................................................................................................... 52
Plan 3.3. Late Antique phase of Panaghia Field ......................................................................... 53
Plan 3.4. Plan of Middle Byzantine Corinth showing a large and a small house complex (After Sanders 2013. Courtesy of the American School of Classical Studies at Athens, Corinth Excavations). .............................................................................................. 61
Plan 3.5. Argos with location of ancient and Byzantine monuments and plots where rescue excavations have been conducted by the Greek Archaeological Service (Vassiliou 2013: 218). ......................................................................................................................... 64
Plan 5.1. Plan showing the location of medieval kiln sites mentioned in the text (after Sanders 2003a: 36). .......................................................................................................................... 195
Plan 5.2. Plan of the Forum area showing the location of the kiln sites published by Morgan. ......................................................................................................................................... 198

Appendix:

Plan A. 1. Location of Lots in Panaghia South and Panaghia Villa ........................................ 290
Plan A. 2. Panaghia field with location of the lots in Panaghia West ....................................... 304
Plan A. 3. House complex in Nezi field (After Sanders 2013). .................................................. 308
Plan A. 4. Location of Lots in the Temenos of Temple E excavation area and in Decumanus excavation area (After Palinkas & Herbst 2011: 288). .................................................. 313
Plan A. 5. Plan of the Forum area .............................................................................................. 336

LIST OF TABLES

Table A. 1. Contexts presented in the text with date range and coins useful for absolute dating. ........................................................................................................................................... 350
Table A. 2. Byzantine cooking ware types expressed as a percentage of all Byzantine diagnostic cooking ware pottery within the context, first part of chart. ........................................... 351
Table A. 3 Byzantine lagenes types expressed as a percentage of all Byzantine diagnostic coarse ware pottery within the context. .................................................................................. 353

LIST OF POTTERY FIGURES

Figure A. 1. Imported bowl: no. 1.: imported globular amphorae: nos. 2-7. ......................... 361
Figure A. 2. Local coarse ware (late 7th – 9th century). ......................................................... 362
Figure A. 3. Imported cooking pot (gold sparkling inclusions). ............................................ 363
Figure A. 4. Imported cooking pot (silver sparkling inclusions): nos. 2-7; local cooking pot: nos. 29-31. .............................................................................................................................. 364
Figure A. 5. Collar rim stewpot, type 1. .................................................................................. 365
Figure A. 6. Collar rim stewpot, type 2. ................................................................................ 366
Figure A. 7. Collar rim stewpot, type 3-A: nos. 54-57; type 3-B: nos. 58-60............... 367
Figure A. 8. Collar rim stewpot, type 3-C................................................................. 368
Figure A. 9. Collar rim stewpot, type 4................................................................. 369
Figure A. 10. Cauldron, type 1........................................................................... 370
Figure A. 11. Cauldron, type 2........................................................................... 371
Figure A. 12. Thickened rim stewpot: nos. 81-82 Triangular rim stewpot, type 1-A: nos. 83-85.......................................................... 372
Figure A. 13. Triangular rim stewpot, type 1-A...................................................... 373
Figure A. 14. Triangular rim stewpot, type 1-B...................................................... 374
Figure A. 15. Triangular rim stewpot, type 1-C...................................................... 375
Figure A. 16. Triangular rim stewpot, type 2-A...................................................... 376
Figure A. 17. Triangular rim stewpot, type 2-B: no. 111. Triangular rim stewpot, type 2-C: nos. 112-114.......................................................... 377
Figure A. 18. Triangular rim stewpot, type 3-A...................................................... 378
Figure A. 19. Triangular rim stewpot, type 3-B...................................................... 379
Figure A. 20: Outwardly thickened rim stewpot, type 1-A: nos. 125-126; type 1-B: nos. 127-128; type 1-C: nos. 129—132.............................................................. 380
Figure A. 21. Outwardly thickened rim stewpot, type 2........................................... 381
Figure A. 22. Outwardly thickened rim stewpot, type 3.......................................... 382
Figure A. 23. Folded rim stewpot, type 1-A: nos. 142-145; type 1-B: nos. 146-147........ 383
Figure A. 24. Small cooking pot, type 1: nos. 148-152; type 2: nos. 153-156............. 384
Figure A. 25. Small cooking pot, type 3.................................................................. 385
Figure A. 26. Small cooking pot, type 4: nos. 162-168; type 5: no. 169.................... 386
Figure A. 27. Lid: nos. 170-173. Funnel: nos. 174-175................................................. 387
Figure A. 28. Handmade beaker......................................................................... 388
Figure A. 29. Unglazed white ware, beaker: no. 179; kettle: nos. 180-183............... 389
Figure A. 30.: Stamn: no. 184. Amphora, Otranto type, type 1, 1-A.: nos. 185-186; type 1-B: no. 187................................. 390
Figure A. 31. Amphora, Otranto type, type 1, 1-B..................................................... 391
Figure A. 32. Transport amphora, type 1: nos. 191-192; type 2: nos. 193-194............. 392
Figure A. 33. Transport amphora, type 2: nos. 195-196; type 3: nos. 197-198............. 393
Figure A. 34. Plain rim amphora, type 1: nos. 199-200; type 2: nos. 201-202............. 394
Figure A. 35. Plain rim amphora, type 3-A: nos. 203-204; type 3-B: no. 205; type 3-C no. 206; type 3-D: nos. 207-208............................................................... 395
Figure A. 36. Lagena, type 1-A: nos. 209-212; type 1-B: nos. 213-215.................................................. 396
Figure A. 37. Lagena, type 1-B: nos. 216-218; lagena type 2-A: nos. 219-222.............. 397
Figure A. 38. Lagena, type 2-B............................................................................. 398
Figure A. 39. Lagena, type 3: nos. 227-229; type 4: no. 230...................................... 399
Figure A. 40. Lagena, body shape, type 1-A: nos. 231-233; type 1-B: nos. 234-235; type 2: nos. 236-237.............................................................. 400
Figure A. 41. Lagena with outwardly thickened rim: no. 245. Matt painted lagena: type 1-A: nos. 246-250............................................................. 401
Figure A. 42. Matt painted lagena, type 1-B: no. 251; type 2: nos. 252-253................. 402
Figure A. 43. Burnished jug, type 1: nos. 254-256; type 2: nos. 257-260; type 3: nos. 261-262; type 4: no. 263............................................................. 403
Figure A. 44. Smoothed surface and grooved decoration jug, type 1-a: nos. 264-265; type 1-B: no. 266; type 2-A: nos. 267-268; type 2-B: nos. 269-270........................................ 404
Figure A. 45. Incised jug, type 1: no. 271; type 2: nos. 272-276................................. 405
Figure A. 46. Incised jug, type 2-A: nos. 277-278; type 2-B: no. 279. Gouged jug: nos. 280-281. 406
Figure A. 47. Trefoil rim jug: nos. 282-284. Imported, incised jug: nos. 285-286. 409
Figure A. 48. Juglet, type 1: nos. 287-289; type 2: nos. 290-291; type 3: no. 292. 410
Figure A. 49. Lekane: type 1. 411
Figure A. 50. Lekane: type 2. 412
Figure A. 51. Large bowl: nos. 306-315; small bowl: nos. 316-317. 413
Figure A. 52. Pedestal bowl, type 1: nos. 318-319; type 2: nos. 320-321; type 3: nos. 322-324. 414
Figure A. 53. Pedestal bowl, type 4: nos. 325-326; type 5: nos. 327-329. 415
Figure A. 54. Cup. 416
Figure A. 55. Cup. 417
Figure A. 56. Tankard, type 1-A: nos. 344-346; type 1-B: no. 347. 418
Figure A. 57. Pithos: nos. 348-351; pithos lid: no. 352. 419
Figure A. 58. Storage jar. 420
Figure A. 59. Storage jar. 421
Figure A. 60. Collared jar. 422

LIST OF PLATES

Plate. 1. Corinth, imported globular amphora: no. 5, imported cooking ware: nos. 15-26. 423
Plate. 2. Sparta, imported globular amphora: no. 32; handmade beaker: nos. 33, 35; wheel-made beaker: no. 36; wheel-made stewpot: no. 37; imported stewpot (silver inclusion): nos. 37-38. 424
Plate. 3. Corinth, local stewpots. 425
Plate. 4. Corinth, local stewpots. 426
Plate. 5. Corinth, local small cooking pot. 427
Plate. 6. Corinth, lid: nos. 170-173; funnel: no. 174. 428
Plate. 7. Corinth, handmade beaker: nos. 176-177; white ware beaker: no. 179; white ware kettle: nos. 181-182. 429
Plate. 8. Corinth, local amphora. 430
Plate. 9. Corinth, local lagena. 431
Plate. 10. Corinth, local jug: nos. 260-282; imported jug: no. 286. 432
Plate. 11. Corinth, local basin: nos. 292-304; local bowl: nos. 308-317. 433
Plate. 12. Corinth, local pedestal plate: nos. 321-327; local cup: nos. 334-342. 434
Plate. 13. Corinth, local tankard: nos. 345, 347; storage jar: nos. 354, 363. 435
1 INTRODUCTION

1.1 Introduction: why a study on unglazed vessels?

The present research approaches the study of Byzantine socio-economic trends with a major focus on unglazed utilitarian ceramics.

Although utilitarian vessels found in Byzantine ceramic assemblages are abundant and include a variety of shapes, attributes that make them particularly useful for archaeological investigation, they have tended to be less analytically and systematically investigated and published compared to the glazed wares. The majority of publications concerning Byzantine utilitarian vessels are based on the fundamental study on Corinthian ceramics by T. S. MacKay (1967) and on the first major synthesis on ‘fireproof cooking pots, transport vessels and storage containers’ by C. Bakirtzis (1989a, 2003). T.S. MacKay’s article has significantly improved our knowledge of Byzantine coarse wares. Her study, in fact, has been one of the first attempt to investigate unglazed ceramics in the relation to the entire ceramic assemblage of provenance and to suggest a chronological frame of production and usage of utilitarian vessels. It is worth considering that MacKay’s study originated in the context of a renewed interest in Byzantine archaeology, promoted by H. Robinson, Director of Corinth excavations (American School of Classical Studies). In the 1960s Robinson directed major campaigns to bring to light the Byzantine and later settlement phases at Corinth, particularly in the south and in the south-west side of the Forum area, and this directorship encouraged MacKay’s study (Robinson & Weinberg 1960; Robinson 1962, 1976).

publications, together with MacKay’s article, have made Corinth one of the leading excavation sites in the study of Byzantine utilitarian ceramics.

It is worth noting that the majority of the recent publications on Byzantine utilitarian vessels are based on MacKay’s publication (Bakirtzis 1989a; François 2010; Vroom 2003, 2015, 2016). Although much of MacKay’s work retains its value, the author herself underlines, ‘the catalogue does not give a full picture of the development and changes in particular forms, and is inadequate for some periods, both in quantity and variety of shapes presented’ (1967: 273). Additionally, it should be pointed out that the ceramics were dated according to the associated glazed ware chronology established by C. H. Morgan II in the miliarium of Byzantine pottery studies, Corinth XI, published in 1942. However, his chronological framework has been significantly revised in recent years (Sanders 1995b, 2000, 2003). Thus, the classification and the dating of unglazed pottery needs to be reassessed in order to overcome deficiencies further caused by the lack of suitable dated material.

Finally, it is worth noting that, despite MacKay’s observation that her catalogue did not provide a full picture of Byzantine unglazed ceramics, the same problem was evident in 1992, when Hayes observed that ‘the study of Byzantine pottery has until very recently been concentrated almost entirely on the glazed ware, and particularly the later, more ornamental ones’ (1992: 4). G. Sanders (1993), as well as J. Vroom (2003: 58) and E. F. Athanassopoulos (2016: 40), have since moved towards a similar observation on the state of unglazed, utilitarian vessels.

In the last decades, a renewed research interest on utilitarian pottery has brought to diverse paths of research, outlining how unglazed ceramics may be used as evidence for investigating cultural and economic identities in the context of Byzantine studies. More specifically, these recent research trends have been focused on pottery function, shedding light on food consumption and culinary habits on the basis of the morphological parameters of the vessels. These culinary habits are then further analysed in relation to relevant information in written sources and in artistic representations (Papanikola-Bakirtzis 2005; Vionis 2001, 2013; Vroom 2012, 2015). Furthermore, these studies have proposed historical interpretations regarding cross-regional similarities and trends, which are used to define different economic and cultural areas throughout the millenary history of the Byzantine Empire (Arthur 1989,
Despite this renewed attention to utilitarian vessels, the modes of production and the economic significance of these vessels (beyond their use for moving goods) have not often been studied, leaving unresolved issues concerning their chronology.¹ The exceptions to this is the major study on Byzantine amphora by N. Günsegin (1990), and the two major excavations at Saraçhane (Hayes 1992) and Otranto (D’Andria & Whitehouse 1993). The publications of these archaeological excavations have produced relevant information on the local and imported unglazed utilitarian vessel types, analysed in reference to contextual information and site of provenance.

In this respect, Corinth, as one of the major Byzantine cities continuously excavated for more than a century, appears to be a relevant archaeological site and research centre, providing a huge collection of material from stratified contexts. The ceramic assemblages from these stratified contexts are excellent for the creation of a chronotypology and seriation, which then can be assessed on the basis of quantification statistics. On the relevance of quantification analysis, I would like to quote the discourse of Veronique François regarding the elaboration of distributional maps to evaluate the entity of Byzantine ceramic diffusion. V. François has recently stressed that ‘maps should include quantitative data, but considering the level of research on Byzantine ceramics, that it is impossible. The lack of quantitative data in most publications does not allow for comparing the amounts of ceramics by category’ (2016: 145). At the current state of research, not enough material has been published to focus the analysis in this direction, specifically in the context of utilitarian vessels, and the future goal for the study of Byzantine pottery should be to continue the publication of stratified contexts that also include unglazed ceramics. Corinth, therefore, provides an excellent case study, since it allows to focus the analysis on ceramic assemblages from stratified contexts with a complete documentation of the archaeological units. In this respect, it is, in fact, necessary to be able to reconstruct a stratigraphic sequence of the pottery assemblages and to be able to quantify those assemblages in a statistical reliable way. Based upon of these reasons, unpublished

¹ Articles on Byzantine ceramics assemblages from diverse excavations in Greece have included examples of unglazed utilitarian vessels. Reference to this publication is made for comparanda in Chapters 4 and 5.
Byzantine utilitarian ceramics from the excavations at Corinth (ASCSA) are the core of this research project. However, before proceeding with the presentation of this PhD research project, it should be taken into account that the exceptional state of the archaeological research on Byzantine ceramics may lead to the creation of a ‘Corinthian bias’, with the risk that trends and phenomena of Corinthian pottery may be extended to the wide interregional contexts of the Byzantine Empire. On this topic, I would like to mention a significant example. The relevance of Corinth as a pottery production centre of glazed wares during the 12th century should be mainly connected to the work of C. Morgan, who drew attention to the so-called glazed ‘red wares’, thought to be locally produced. Recent petrographic analyses have proven that several glazed wares, such as Green and Brown Painted III and Spiral styles and Light on Dark Slip Painted II, were actually imported and not locally manufactured as once was thought (White et al. 2009). Moreover, an important Byzantine glazed ware, the so-called Measles Ware, was not exclusively produced during the 12th century in Corinth; instead, clear evidence suggests almost contemporaneous production in Argos (Vassiliou forthcoming) and in Sparta (Sanders 1993). The provenance of this ware, found in several sites all over the Mediterranean, becomes questionable if it is not further supported by a fabric inspection. For instance, Measles Ware, found in the Italian peninsula, has generally been considered to be of Corinthian import, whereas fabrics suggest a more complete variety of imports, such as in the case of Otranto, where Measles Ware appears to have been imported from Sparta and not from Corinth as was originally published (Armstrong 2009b: 318, specifically note no. 50). This new information drastically changes our idea of Corinth as a manufacturing centre in this period and stresses the importance of fabric analysis prior to the definition of any sort of connectivity or trade patterns based on ceramic evidence. Petrography on Byzantine ceramics is expected by the author to significantly change our current understanding of imports, exports, and the nature of the economic growth in the Late Byzantine period.

Finally, it is important to consider the possibility that ceramic trends visible in Corinth might be part of a wider network of phenomena that influenced the Corinthian pottery tradition, while Corinthian trends likely influenced others in return. Furthermore, other patterns could exclusively be local and may not have interregional implications. Hence, both multiple levels of research and plurality of evidence are
needed to carry out a truthful investigation, without privileging a single viewpoint or source. The only research possible is based on a multifocal investigation, which produces knowledge that is always provisional. Our knowledge of the historical events will, in fact, continue to be reformulated, following a ‘way to go further’ as the Ancient Greek word μέθοδος suggests, from which we get the English word ‘method’. Therefore, presented here is an historical interpretation established according to methodologies of investigation and based on material evidence. New and additional sources will change or improve our knowledge of this storia (Mannoni 1994; Ronchey 2006).

1.2 Structure and Scope

The first goal of this research project is to reassess unglazed pottery in order to provide a chrono-typology of the main types of plain, coarse, and cooking wares used in Byzantine Corinth. The analysis of ceramics in the present study is carried out through the adoption of quantitative methods. Among multiple research questions that can be studied through the adoption of this method, quantification is a valuable method to observe trends and changes in the variety of ceramic shapes produced and used within a specific chronological range for diverse scopes in everyday activities. Moreover, quantification can highlight changes in the ceramic manufactory process, such as the introduction of new shapes, with variability or increased level of standardization observed in a diachronic perspective. Finally, such quantification of ceramics in a diachronic approach allows to observe the number and variation of fabric recipes adopted by the local potters, the introduction of new fabric recipes, and the increase or decrease of imported vessels².

In this respect, the second major question that this research aims to investigate is why these changes are taking place in the ceramic assemblages in a specific chronological period. This PhD thesis endeavors to understand the socio-economic contexts in which these vessels were produced, a question that is related to the degree of complexity of the pottery typology and morphology, its degree of standardization,

² Please refer to Chapter 2 paragraphs 3 and 4 on the quantification and seriation methodology.
and the decrease or increase of fabric recipies. Once, in fact, the chronology has been clarified and trend in production highlighted, this study of unglazed ceramics aims to provide a meaningful tool for investigating socio-economic patterns in the context of the economic trends of the Early and Middle Byzantine empire.

Ceramics, as is the case with all archaeological artefacts, can be analysed through lenses applied by diverse, but integrated, research paradigms. A chrono-typological approach attributes a chronological value to distinctive types for dating archaeological contexts. This can be considered a preliminary level of study for ceramics, with their main application for elaborating archaeological periodization of stratigraphic sequences of layers and of historical landscapes, which can also be considered one of the major application for ceramics in archaeological research. A further level of research methodology sets the study of artefacts within a technological approach. Questions related to production aim to understand how objects were made and produced in all stages of their manufacture.

A further development of these enquiries can lead towards archaeometric investigation, which would shed light on matters related to technology. The manufacturing process, from the sourcing of raw material to the production of the final object, can be, for instance, investigated through petrographic analysis. This research tends also to move towards an anthropological evaluation of technology, related to questions of transmission, diffusion and transformations of know-how. Moreover, the techno-anthropological inquiry can investigate, through scientific methods (i.e. residual analysis in clay vessels) the function and usage of objects, such as why they were made in a specific material and shape. These questions not only refer to the use in stricto sensu of objects, but also to the relationship between people and artefacts and the social meaning that objects had for a community (ornaments, buildings, vessels used in domestic or religious contexts, just to mention some examples). A further research lens is applied through a cognitive approach to artefacts, which investigates them as the results of social norms. According to this approach, ceramics can be studied as material evidence for modes of communication, which are expressed through diverse artistic forms that are indicative of fashions and tastes. These different parameters and styles of communication can reveal information about the user and producer social norms.
Finally, economic focused enquiry, specifically into how things circulated within a society, researches the interaction and interrelation between objects and socio-economic identities. From barter to trade or gift, the exchange of objects is, in fact, strictly connected to the social, cognitive meaning and to the functional and utilitarian characterization that people gave to objects.

Enrico Giannichedda in his methodological discourse on *Global Archaeology* (Mannoni & Giannichedda 1996, Giannichedda 2002, 2006, 2014, 2016) analyses in detail how all these approaches are essential to move from the study of the artefacts to the study of ideas, desires and needs, as well as how they were managed and tackled in the diverse historical contexts. This viewpoint makes it possible to investigate material culture in relation to socio-economic identities, moving from technology to economy.

This point raises a question: in which ways have these approaches been adopted for the study of ceramics with specific reference to unglazed vessels with limited surface treatment, beyond smoothing and other decorative patterns. Multiple research projects on utilitarian vessels, from diverse regions and periods, have shown the informative potential of utilitarian vessels in different historical contexts. Studies based on diverse research questions have, for instance, investigated utilitarian vessels for dating purposes in Roman (Dyson 1976) and late Roman archaeology (Slane & Sanders 2005), showing how these wares can often be the only artefact available to elaborate any chronological proposition in the absence of other archaeological evidence.

Other projects have highlighted how plain wares can be assessed to answer questions related to pottery technology and production process, aided by the application of petrographic analysis. Such an approach indicates how utilitarian wares can be an additional data used for investigating socio-economic patterns, such as the scale of the production system, evidence of pottery consumption and the relation between pottery production and social organization (case studies on Bronze Age archaeology cf. Glatz 2015; Jacobs 2009, 2010; Jacobs & Borgers 2015). Moreover, additional perspectives of enquiry have investigated aspects of cultural identity and social practices with major focus on utilitarian vessels (on Roman and Late Roman pottery i.e. Poblome et al. 2014). This very brief list of case studies is suggestive of the informative potential of unglazed wares.
The objective of this study is to adopt a selection of approaches to the study of Byzantine ceramics. The present research could not cover and adopt all of the aforementioned methods and methodologies through which it is possible to examine utilitarian vessels. Whether their relevance is unquestionable, the reasoning for adopting some of these approaches might be summarised using Arnold's definition of paradigms essential in pottery studies: ‘the goal of science is to break up phenomena into units, isolate them and then determine the forces that are acting upon this’ (1985: 5). Some of these phenomena are investigated in this project, which does not pretend to be exhaustive, complete, definitive, or without mistakes. Limits, possible errors and unanswered questions are listed in the concluding paragraphs.

Chapter two presents and explains the research methods adopted in this project, placing them in the large framework of methodological paradigms. Substantially it discusses the utility of a typological and chronological analysis, in combination with a technological approach of pottery study, to elucidate socio-economic inquiries of research.

The goal of chapter three is to provide the historical frame of the analysed archaeological contexts. In setting the scene by an overview of the Byzantine history of these cities, it is also necessary to highlight the history of the archaeological investigation and excavations, since they determine the quantity and quality of archaeological evidence available for the present, historical interpretation. Argos and Sparta have been selected as comparative case studies due to their relevance in the history of the Byzantine Peloponnese and for the current knowledge of Byzantine ceramics in these urban centres. In the case of Argos, published Byzantine material presents striking similarities with the Corinthian pottery (Piérart & Thalmann 1980). A close examination of the Argive examples was essential because of the close typological resemblances to the Corinthian ceramics. The question was to understand if the Argive material was of possible Corinthian origin or if the similarities should have been researched in the diffusion of a manufacturing know-how. Significant types of ceramics from the Argos excavations carried out by the Greek Archaeological Service have been included in the present study (Chapter 4).

In the case of Sparta, comparative material has been brought to light from the Theatre, the Roman stoa area (Sanders 1993, 1995a), and from 1 km away from the Acropolis in the modern village of Magoula (Vassi 1993). More recent excavations from
the Theatre were carried out in 2008 under the direction of Catherine Morgan (BSA), Adamantia Vasilogamvrou and Kalliopi Diamanti from the Greek Archaeological Service. In this case the question was how far the pottery evidence from Sparta showed a similar production history and tradition compared to that of the Northern Peloponnesian during in the Byzantine period.

The ceramics in this study mainly consist of diverse types of cooking pots, transport vessels like amphorae and *lagenes*, large storage vessels and *pithoi*, *lekanes*, jugs, bowls, and miscellaneous shapes in coarse and cooking ware, all presented in Chapter four.

In turn, Chapter five presents a techno-anthropological interpretation of the ceramic assemblages, by analysing the variability of ceramics through a synchronic and diachronic perspective. Starting from a technological analysis, the organisation of production, the usage and consumption of ceramics is presented as far as the current limits of knowledge allow. Analysed in a diachronic perspective, this set of data is able to consider distinctive local features and their evolution through time, as well as in relation to the endogenous and/or exogenous related phenomena.

Finally, on the basis of the presented data, utilitarian vessels are contextualized through a diverse range of sources in order to discuss patterns of the Byzantine economic life. By focusing on ceramics, their production and circulation, and on numismatic evidence, this study aims to formulate an interpretation of some of the economic processes in relation to the wider context of the Byzantine Empire. The recurrent theme of enquiry that this research would like to analyse is how far the socio-economic approach in archaeological studies should be seen as separate from, or even constrained by, the application of modern economic theories to past societies. Is there a dichotomy between the social and cognitive approach of quantitative studies of manufacturing, levels of productivity, and surplus production with the ‘aseptic’ and ‘rational’ economic theories excluding any co-applicability? Should it not be possible to apply economic theories in research aiming to investigate different forms of exchange in premodern society, from gift to barter, from non-monetary exchange to trade because these theories appear to be exclusively dominated by the logic of profit? To start dealing with these questions it is necessary to frame and summarise what has been the debate on Byzantine economy and its different trends within historical and archaeological studies.
1.3 Byzantine economic history among texts, archaeology and theoretical models

The assessment of socio-economic identities in relation to Byzantine archaeology and historiography deserves special attention, because it is linked to the long-debated topic of the existence of a Byzantine market economy. A few related questions, on which historians have mainly focused, include: how strict and tight was the state control over traffic and economic transactions, how did the State impact on the economy by its fiscal role and, finally, did the Byzantine society operate within a market economy? Scholars, particularly those with a background in anthropological studies, have argued that this approach is partial, since it excludes other forms of exchange like gifts and diplomatic donations; they question the dichotomy of gift/commodity exchange, criticizing the superimposition of capitalistic market rules as a means to investigate every single aspect of pre-modern societies and, instead, highlight the importance of non-monetary exchanges.

On the one hand, concepts of redistribution and reciprocity, according to a Polanyian perspective of the pre-modern economy, have been labelled as ‘primitivist’ approaches to the ancient economy; these approaches largely reject the applicability of economic concepts, such as profit. Moses Finley in his *Ancient Economy* (1973), which followed the work on ancient economy elaborated by Max Weber (1922) and Johannes Hasebroek (1931), based his work, as the previously mentioned scholars did, exclusively on literary sources. Through the lens of ancient literature and, in the case of Finley, by applying the anthropological economic perspective of Marcel Mauss (1923-1924) and Karl Polanyi (Polanyi et al. 1957; Polanyi 1968), these scholars pictured ancient economic ideologies based on the viewpoint held by members of the elite class (Sherratt 2011: 10). According to this School, which emphasised primitive forms of exchange and self-sufficiency, the application of modern economic theories to past economies is inconceivable, as they would suggest that social or political needs were the main causes of goods redistribution and that the production sector never underwent significant regional specialization and technical improvements (Morrison 2012: 3, Finley 1973, also on this topic Austin Vidal-Naquet 1977). Moreover, Mauss’ anthropological study of gift-exchange stressed the interpretation that the movement of goods was intended, in ancient economies, as a moral affair and was not
related to rational economic market exchange roles. In medieval studies, this discussion on the movement of goods as ‘gift and counter-gift’ (Grierson 1959: 140) influenced medieval historiography³ and, later, medieval archaeology through the School of ‘Annales’.⁴

Grierson’s 1959 article constituted a warning to historians and archaeologists not to be misled by ‘commercial histories’ of the early Middle Ages. Grierson, in fact, explicitly rejected the concept of medieval commerce, instead favouring other mechanisms and forces as causes for the movement of goods. According to Grierson, a level of self-sufficiency and localised exchange for subsistence purposes was the basic level of the early medieval economy. Moreover, Grierson minimised the role of money and market in the structure of exchange, supporting the idea that essential components of the early medieval economy were autarky and gift exchange (1959). It is relevant, however, to point out that there is almost no discussion on the goods themselves as objects of exchange in this publication, nor does Grierson provide any discussion on the sphere of production. Nevertheless, his paper is necessary to examine in this discussion, since Grierson’s viewpoint played an important role in informing later publications (Moreland 2000: 8). For instance, the concept of a state-dominated economy has been supported by M. Hendy, following Philip Grierson’s interpretation, which stated that the Byzantine empire had supreme control over the economy, specifically through its monetary economy. Moreover, he concluded that trade had almost no impact on imperial economic affairs, was never a source of revenue, and had little impact on coin circulation (Hendy 1985, 1989). In essence, this approach led towards a primitivist analysis of Byzantine and of the early medieval economy, causing this period not to be identified as a forerunner of the Late Medieval economy, which, on the contrary, has been described as dominated by market forces.⁵

³ For a detailed analysis of historiography on the topic, see Moreland 2000: 11-12.
On the opposite front, the so-called ‘modernist’ counterpart analyses ancient economies as functioning self-sufficient systems, which largely operate as modern economies, but are smaller and vary in degree of organizational complexity. Firstly, as defined by M. Rostovtzeff and H. Pirenne (Rostovtzeff 1926; Pirenne 1937), this opposing perspective has been addressed within medieval studies by Michael Metcalf, who advanced the study of coinage and the monetary economy according to a modernist perspective and adopted economic theoretical principles (1984). It is worth pointing out that, according to Metcalf, study of the medieval economy through the lens of economic theories does not imply the absence of non-monetarised exchange, which ‘of course existed’ and could coexist with money-based trade (Metcalf 1998:197). This approach has been followed in Byzantine studies by Angeliki Laiou, who adopted and applied some modern theoretical categories to the Byzantine economy (2002b, c). Laiou’s perspective of the Byzantine economy was quite balanced, considering forms of non-economic and/or non-monetary exchanges as unrelated to modern economic theories fundamentally adopting the theorization of Polanyi and the anthropological approach of Mauss (Laiou 2002b: 697-700, Morrisson 2012: 3).

However, more recent anthropological studies in the last decades have further developed research paradigms on the meaning of the exchange of goods and of gift exchange, compared to Mauss’s model. According to Moreland, one of the main advocates for this approach, the value of an object derives from its intrinsic value, from its material qualities, and from the attributed values, which determine the way an object is exchanged. Therefore, if an object circulated as a commodity or as a gift, it might be considered within the socio-cultural context in which it was exchanged. Moreland reiterates how the exchange mainly relies on social values surrounding the object, since the same object can have the value of gift or of commodity according to the social context in which it was exchanged. Produced as a commodity, an object might be donated as a gift (Moreland 2000). This point holds crucial insight for the archaeological interpretation of material culture, which suggests, according to post-

processual archaeology and related anthropological studies, that the value and significance of an object is interdependent with the context of provenance. Post-processual archaeology, in fact, criticised the New-Archaeology approach as deterministic, particularly defining anachronistic economic factors as the main cause for social-economic changes.

Specifically, when analysing Late Antique and Early Medieval economies, scholars have tended to relate diverse types of exchange, like gifts, bulk exchange or barter to the diverse social identity and organization in which this exchange was taking place. For instance, R. Hodges, following a long tradition of economic and anthropological studies, has stressed the differences between commercial and non-commercial exchanges, particularly emphasising the main role of gift and redistribution in the economic system. ‘Primitivist’ archaeologists and historians depict the Late Antique and Early Byzantine economy as ‘redistributive’ and managed through ‘administred trade’ with reference to the annonae civica and militaris (Peacock and Williams 1986, Whittaker 1988, Haldon 2000, McCormick 2001, Oikonomides 2002). Wickham, in his systematic analysis of archaeological and written sources, has largely agreed with this point of view, though emphasising that, at different scales of exchange, trade coexisted with gift-exchange and redistribution. Whether bulk exchange was exclusively managed as a form of redistribution by the imperial authority or intended as the main force of economic activities, trade was taking place at a regional level, whereas the rural world was mainly denoted or characterised by autarky sufficient to satisfy basic needs (Wickham 2005: 693-824). Byzantine scholars have tended to stress the prominent position of the state as a major force in production and distribution sectors. The Byzantine state ruled as the exclusive authority over taxation control and management, since the state collected its revenues through taxes. The government then redistributed its incomes, part in salary to the state administration, military forces and campaigns, and part to the public sector, such as in the form of building projects. In this way money circulated through all strata of society, providing individuals with money that could then be used to pay taxes and, therefore, could restart the cycle of money circulation. Consequently, the

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6 Analysis on the importance of the context in the archaeological investigation is discussed in Chapter 3.
7 Cumberpatch 1997; Giannichedda 2014 and Moreland 2000 provide a good synthesis on this topic.
State not only controlled the majority of the national wealth, but also induced money
circulation. From this definition of the central role of the Byzantine state over the
economic system, synthesised here, some scholars have defined the state’s
intervention into the economy as ‘absolutely dominant not only in the respect of
extraction, movement and distribution of wealth, but also in terms of shaping
demand’ (Haldon 2000: 164, see also Hendy 1985, 1989).

On the other side, several scholars have supported a definition of the Late
Antique and Byzantine economies as moved by market forces (Carandini 1983, 1986;
Panella 1989, 1993; Lo Cascio 2006; Carrié; 2003, 2012; Laiou & Morrisson 2007;
Morrison 2012; Jacoby 2010; Sarris 2011, 2012b, 2016). It is worth noting that studies
on the Byzantine economy, trade and exchange proliferated only in the last decade,
filling, for example, the three volume publication *The Economic History of Byzantium*
(2002a) edited by Laiou. This imposing publication had the merit of highlighting the
relevance of research into the economic field in the world of Byzantine studies, using
multiple and diverse literary sources and material evidence, which were analysed
through varied methods of research. Following these volumes, in 2007, an analytical
survey of the economy of the Byzantine Empire, from the 4th century to the fall of
Constantinople on 1453, came out, written by A. E. Laiou and C. Morrisson. This book
is notable for investigating key themes related to economic structures, such as
agriculture, manufacture, monetary systems and trade, as well as the role of the State
and of other actors in economic and non-economic transactions, through the
application of literary and archaeological sources that are considered via the lens of
different economic theories.

Research on this topic has been further expanded on the basis of detailed
archaeological studies, which were published in 2009 in the volume entitled *Byzantine
Trade, 4th -12th Centuries: the archaeology of Local, Regional and International
Exchange*, edited by Marlia Mundell Mango. This book provided relevant updates on
archaeological research investigating forms of exchange and trade during Byzantine
times. However, in reference to the debate concerning the role of the State, along
with the main features of the Byzantine economy, the editor clarifies that ‘These
models (referring to Rostovtzeff, Finley, Polanyi etc.) are of course relevant to the late
Roman/early Byzantine economy; however, since one may distinguish between
economy and trade as subjects of study and speculation, these economic models will
not be examined directly here. So often questions posed about the general economy set the agenda for discussions of trade. Instead, these symposium papers cover trade as distinct from the economy as a whole, and consider the concrete evidence of traded materials, locations of trade, and mechanisms of operation – to start from the bottom up, so to speak. Leaving aside the state and the economy, the papers concentrate mainly on local and international trade where state involvement was limited’ (2009: 3). Similar to Mango’s publication, the 2012 monograph edited by Cécile Morrisson on Trade and Markets in Byzantium provides further archaeological insight into the Byzantine economy of exchange, with a major focus on regional and interregional networks of exchange. The papers presented in this publication did not advance the historical debate on the role of the State on Byzantine economy (Morrisson 2012: 4). Nevertheless, Morrisson’s introduction, the first chapter by Carrié and Temin’s concluding remarks provide a brief insight, based on an historical approach, to this economic debate, ultimately supporting a modernist approach of the economy of the Late Roman and Byzantine empire, described as an interaction between interdependent “free” markets (Carrié 2012, Temin 2012).

The last major monograph, published in 2016, entitled Trade in Byzantium and edited by Paul Magdalino and Nevra Necipoğlu, presents a plurality of historical and archaeological data on trade in the Byzantine empire. In relation to the economy of exchanges, updated archaeological evidence is presented that highlights the extension and grade of complexity, while stressing the limits of the archaeological evidence currently available, and emphasizing the need for more quantitative studies on Byzantine ceramics (François 2016). In specific reference to the debate concerning the degree of intervention and regulation of trade by the Byzantine State, P. Sarris J. C. Chaynet and K. Smyrlis present relevant case studies on the basis of legal and administrative sources in the Early and Middle Byzantine periods. These authors provide new evidence to analyse the complexity of Byzantine bureaucracy and legislation, which provided the essential institutional framework for regulations that sustained and controlled the high levels of intricacy found in both economy and trade.

According to the point of view of the previously mentioned scholars, even when the public economy was such an important sector, meaning that the imperial government controlled a big portion of production and distribution, as it did in the Byzantine Empire, there was still neither complete control over resources nor a
complete redistribution of them. The central authority, which can be identified as the biggest owner in all the empire, influenced the market, operating in it, but not dismantling it. To prove this image of an economy, which was contrary to autarky and redistribution, the Roman and Byzantine public economic mechanism of fiscal system and tax revenues can be cited. In this system, tax revenues were expended in favour of people other than those who paid the taxes, which is a key element of redistributive economy (Davies 1998: 242). Byzantine taxation was mainly focused on land, but the main costs and expenses for the economy were the army, military campaigns, gifts to foreign authorities, and the administration, specifically through the salaries given to civilian, military and ecclesiastical officials and the investments made on infrastructures (Oikonomides 2002: 979; Laiou & Morrisson 2007). Morrisson has estimated that the taxation rate in the Byzantine economy was around 21.25% and the monetary levy was around 17.8%. The Byzantine economy monetization level was around 46.25% and it is worth pointing out that 57% of all coins circulating corresponded to taxes, which was equal to 38% of monetary supply (Morrisson 2002: 950). Based upon these factors, the economic role of the Byzantine state has been defined as ‘varied’ (Laiou & Morrisson 2007: 231). The Byzantine state played, in different degrees throughout the centuries, a pre-eminent position in a fluctuating economic structure through its complex and highly sophisticated bureaucratic machine. However, it did not manoeuvre every single exchange, nor did it operate exclusively as a market fixer in the macroeconomics of the Empire. The state operated, with the participation of the higher classes of society, in a complex dialogue as driving and dynamic forces in a market economy of international scale. Money exchanges, bartering and gift exchange were forces included within the economic structure, social security and political stability guaranteed by the State, even though the State did so in diverse degrees and in different periods and geographic latitudes (Laiou 2002a; Laiou & Morrisson 2007; Oikonomides 2002; Jacoby 2010, 2015; Sarris 2016; Smyrlis 2016).

Diverse sources support this definition of the Byzantine economy. Not all primary sources were owned and managed by the State. Numerous literary texts

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8 Lo Cascio 2006: 218 and following pages on market scenario. Further studies on a Late Antique and Byzantine market economy, see Carrié 2012: 12-26, specifically on the intervention of the state in the economy: 20-21.
document the relevance of merchants, who had important financial resources (εὐποροί), and whose supply of basic and primary resources, such as iron and copper, was of public interest and civic utility, particularly in order to avoid interruption and abandonment of the projects of public interest (Giardina 1993: 532-534, 542). For instance, the emperor Nikephoros imposed ship owners, especially from Asia Minor, had to buy landed properties, mainly for agricultural production, whose products they would have transported to Constantinople. This obligation addressed to ship owning landowners would have, as observed by Magdalino, on the one side, subsidized agricultural production since the landowners would have wanted to maximise their profit, and on the other side, it would have strengthened their social status, which in the Byzantine times was based on land ownerships (2016: 187-188).

Moreover, several moral treatises, rich in Christian precepts, provide an informed description of contemporary society and its economic actors. From Late Antiquity to the Middle Byzantine period, these sources morally condemned merchants, criticising them for profiting from materials and goods which were transformed or processed through the physical work of other groups of people, such as artisans. Consequently, if merchants were, on the one side, appreciated for the public utility of their work and for supplying basic goods, then, on the other side, their activity was also condemned because of the power and authority that their stockpiling could have on the community. Many cases of morally condemning merchants for overpricing grain in time of shortage have similarities to the 12th century critique by Tzetzes of merchants in Constantinople for overpricing goods over 17%. Significantly, this moral condemnation arose from a concern about the accumulation of wealth and resources in the hands of few individuals. This was a philosophical warning, embedded into the Byzantine culture through the writings of Plato, Aristotle and Thales, reiterating the negative effects of the merchants’ cunningness (μῆτις) in gaining profit from lucrative transactions, which were negatively impacting the population (Giardina 1993: 544-545). Similarly, the Imperial legislation aimed to avoid speculation over prices, though they attempted to do so without regulating price and without managing the distribution of basic goods, such as grain, which was regularly traded. A further proof

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9 The involvement of the Byzantine elite into profitable commerce is very poorly documented until the 12th century, whereas it becomes more visible in literary texts from the 13th century onwards, during the course of the Late Byzantine period (Jacoby 2015: 86).
of the existence of a free market may be found in the Book of Eparch, where it is reported that limits were imposed on the profit of some commodities, but prices of goods were not fixed (Laiou & Morrisson 2007: 56-58; Jacoby 2010: 93-94).

Why were both Christian morality and imperial authority aiming to avoid the concentration of resources and economic power in the hands of a few individuals? Giardina analyses that these moral precepts and, I would like to add, the imperial legislation too, were aiming to guarantee social equilibrium and political stability (1993: 572-574). In this respect, the reiteration of the prohibition against the involvement of aristocrats and officials in trade and lucrative businesses becomes understandable. These maxims were based on basic and ancient rules, widely accepted in the Greek and Roman world, and, consequently, an intrinsic part of the Byzantine paideia. According to Aristotle, a Theban law forbade giving any public role in the administration to anyone who had been involved in commerce and trade during the previous ten years (Politics, III, 5, 1278 a; Reeve 1998). Moreover, it is well known how, in 219 B.C., a tribunus plebis promoted the approval of the law which prohibited senators from owning ships unless they were used to transport agricultural products from their own properties. These are norms and ancient laws intended to prevent the higher rank of the public and imperial administration from being involved in lucrative businesses, since their involvement in those activities could incite cases of corruption and avidity and create what we could even define as conflicts of interest (Giardina 1993: 564-565).

During Late Antique and Byzantine history, several authors condemned cases of corruption and avidity committed by local and central public administrators. Wealth, according to moralists, might have made senators and aristocrats involved in the public administration offices susceptible to bribery and corruption, causing dissatisfaction among the population and ultimately generating political instability (Giardina 1993, Watson 2010). With this background in mind, certain actions become comprehensible; for instance, the furious reaction of the Emperor Theophilus and the decision to set the empress’ ships on fire. The emperor did not want to be described as δημοβόρος, ‘devourer of the people’ and of the people’s goods. As has been recently pointed out by Magdalino, the emperor aimed to limit members of the imperial entourage from gaining advantages and privileges due to their social position.

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10 Both these authors provide a collection of cases from diverse literary texts on this topic.
and from accumulating resources that should be managed by other strata of society, such as, for instance, the mercantile elite (Magdalino 2016: 189). The necessity to guarantee social and political stability, did not transform the Byzantine economy into a redistributive one. Literary sources testify, while also reiterating their moral condemnations, that those in the higher ranks of society were involved in trade and artisanal manufacturing anyway, even if they did so through the use of front man (Giardina 1993; Laiou & Morrisson 2007; Jacoby 2010, 2015a, 2015b). Besides, it might worth pointing out that this ancient moral viewpoint is still alive, even in modern European countries, where it is considered preferable, in order to avoid cases of conflict of interest, not to have entrepreneurs carrying out lucrative business involved in key positions of high responsibility within the government (Giardina 1993: 565-572).

The involvement and influence of the Byzantine elite in lucrative businesses even increased during the course of the Middle Byzantine period, with a central authority that, nevertheless, continued to be the major economic actor anyway. During the course of the 11th century, economic growth, and increases in production and exchanges enabled the middle class and the aristocrats involved in business to accumulate relevant resources. In this historical period, Constantine X, as the conclusion of a series of reforms promoted by Constantine IX and Michael VI, distributed high imperial offices among people with specific abilities – not only based on social rank and blood connections – and even opened the Senate to free citizens, rendering it no longer a position exclusive to aristocrats on the basis of blood lineage. New senators, even after being nominated, continued to be involved in business (Oikonomides 2005: 234-237). What the impact of their presence was, in terms of the political economy, is difficult to evaluate. However, this measure did not mark the end of the moral condemnations against the involvement of the aristocrats in lucrative activity. It is suggested, for instance, that the emperor Alexius I established that senators, being members of guilds, were not allowed to take oaths in their residences, but how, instead, it was permitted for the other senators, since their morality was not invalidated by commerce and business (Giardina 1993: 582-583).

In conclusion, it might be possible to speculate that, despite the fact that the economic power of some social groups was so strong as to be included into the imperial administration, the ultimate interest of the Byzantine authority was actually
intended to promote the interest of the res publica and was in favour of political and social stability, which was guaranteed by fiscal policies.

1.4 A Byzantine ‘mixed’ economy

‘The Byzantine economy was strong and successful for a very long time. Indeed, it is probably the most successful example of a mixed economy’ (Laiou & Morrisson 2007: 234). This evaluation of the Byzantine economy clearly recognises the State’s intervention and the contemporary presence of market forces, with both their positive and negative effects. The literary sources discussed above prove that exchanges and contracts within the Byzantine territory were voluntary and could be arranged without the decree of the government authority. Private ownerships of the means of production were allowed and prices were not set by the government officials, but, more reasonably, were set by supply and demand. Profits and losses generated by artisanal manufacturing and trade determined the allocation of profits, which should be taken into account as another force of profit generation, together with all types of imperial and military offices, employed by the State. Still the Byzantine state functioned in a key economic role to various degrees and in various modes during the centuries, but it did not operate any type of total control over all production and distribution within the Byzantine territories. It provided the institutional framework with some degree of control, coordinating the condition in which a market economy could function. In some sectors of the economy, there was some degree of State control. For instance, coinage had always been entirely managed by the imperial authority and they never allowed the local authority to take over coin minting, unlike in Western Europe. Furthermore, the emperor always had total control over the mint, supervising it and owning its profits (Morrisson 2002: 917). Moreover, in Constantinople there was an imperial monopoly on textile, weaving and dyeing. The state provided security and stability with which a market could freely operate (Laiou & Morrisson 2007: 74, 231-233).

Nevertheless, in a monetary economy, which the Byzantine economy was, non-monetary exchanges were still taking place. The expenditures on gifts and tributes connected to diplomacy and public spending were enormous; moreover, the existence of barter and non-monetary transaction among the population at a local
level should be taken into account. Money exchanges, barter, and gift exchange can all be observed as forces encompassed within the economic pattern of behaviours found in the Byzantine empire, which operated in diverse degrees in different periods and at different geographic latitudes.

All the aforementioned aspects of organization of economic activities are generally considered to be distinctive of mixed economies, as Laiou and Morrisson have defined it (2007: 231). In a mixed economic system, as it would be described by economic theory, governments can regulate restrictions on transaction in the private market and licenses or permits might be necessary to perform some categories of activities. In a mixed economy, part of the economy is dominated by market forces and part is controlled by the State, with diverse degrees of intervention. Generally, the State intervenes in certain areas of the economy, such as regulation, public services and infrastructures. In a mixed economy, the role of the State is to guarantee the circulation and offer on the market of basic goods at controlled prices and to limit the interests and the economic advantages of some private companies involved in economic transactions (Orsini 1998: 341-342). A command economy, which is the alternative model, is entirely organized by government officials, who would have owned and directed all aspects and factors of production. However, this model does not appear to reflect the case for the Byzantine economy.

These main features of a mixed economy appear to have been adopted by the Byzantine State. The State’s partial control over some features of the economic system has been widely discussed by economists. The present study would like to further develop this analysis of a mixed economy by adopting Keynesian economic theory. In a very schematic way, the Keynesian economic corpus can be summed up in the following two major fundamentals: 1) the economic market is incapable of auto-regulating itself and 2) it does not reach a balance through a price system able to guarantee economic equilibrium and full employment (as, on the contrary, supported by Neoclassical economic theory). According to Keynes, governments have the proper instruments to decrease unemployment and to sustain and increase the activity of an economic system. In this view, the real output is determined by the expectation of demand, which, in turn, influences the employment rate. Unemployment, states Keynes, is caused by a decrease in the aggregate demand, with demand itself as the core of an economic system, at least in the short term.
A key point, according to this theoretical model, is that the aggregate demand is influenced by private and public decisions. The economic authority can actively sustain the demand and, therefore, can sustain the economy. Hence, it has the ability to maintain employment rates of labourers in case of an economic crisis or to avoid a future one. A stimulus package can be, on the one hand, government spending boosting demand through active policies and, consequently, increasing the growth rate, with a big impact on the real GDP. On the other hand, monetary policy can also stimulate the economy, for instance, reducing interest rates, in order to stimulate investments (Chirco 1998: 514-517; Jahan et al. 2014).

This approach does not claim to be concrete, because, among the available evidence, between the archaeological and textual records there will always be, as stated by Sherratt, a ‘shadowland’ of things we are not able to discover, things we might suspect that we do not know and things with which we are familiar, but which we might have been tackling incorrectly. However, an awareness of the constraints of the data available might allow us to move ‘beyond the strait-jacket of an approved and conventional set of methodologies applied on automatic pilot in the trusting belief that there is a ‘right’ and wrong’ way to do things, and beyond the limits of theoretical prescription, subject as it frequently is to the tranny of fashionable bandwagons’ (Sherratt 2011: 3-4). Starting from the enormous amount of data and information available, the application of the Keynesian economic theory, intended as a theoretical model, may allow us to structure an historical reconstruction by the coherent association of data according to significant relationships, through a ‘structural-interactionist’ approach as defined by Sherratt (2011)¹. Therefore, it is now time to define on which basis I am establishing this present work.

2 RESEARCH METHODOLOGIES

2.1 Introduction

The present study aims to apply contextual and analytical approaches to Byzantine economic archaeology in Corinth within a regional and interregional socio-historical perspective.

The first step of this research, before proceeding with technological and socio-economic questions about ceramic studies, is to establish a revised chronology for unglazed Byzantine wares according to shape, fabric, and decoration, when present, thereby creating an updated classification of Byzantine unglazed wares. The typological ordering of the artefacts, according to a cultural approach, is essential for validating the chronological and historical context. Additionally, for interpretative purposes, technological and manufacturing evidence should be included in the classification process and should not be separated from the typological classification of the ceramics. The chrono-typological approach allows for the relation of the analysis of technological and environmental parameters, such as raw materials and manufacturing adoptions, to theoretical paradigms derived from social and economic sciences, which, together, create a useful, holistic paradigm for investigation.

It follows that once chronologies are established and theoretical paradigms from multiple disciplines are applied, archaeology can investigate the structure and the performance of past economies, on the basis of the material record, in combination with written sources. The multiple connections between humans and natural and socio-cultural resources and conditions, together with productivity and distribution, describe an economic network. This economic network is determined by the production, exchange and distribution, and consumption within the socio-economic stratification of a population (Feinman 2008; Kerig & Zimmermann 2013). Production, exchange and distribution, and consumption, which are analysed in the following chapters, can be contextualised in light of economic theory. There has been a debate among scholars within humanities disciplines as to whether modern economic theories might be applicable to past societies. This present study aims to analyse how the application of economic theory to past societies might suggest alternative paradigms and theoretical models, through a lens that T. Mannoni defined as ‘a
change at the crossroad of knowledge: new and different approaches are necessary to propose diverse historical reconstructions and hypothetical explanations of socio-economic phenomena, which, in the current state of research, cannot be satisfactorily answered (Mannoni 1994). Moving from the artefact to the context and based on a quantitative analysis of the artefacts, technical, environmental, cultural, and socio-economic approaches should all be adopted together to evaluate tendencies, social needs, and the real meaning of the material culture for different social situations that may be investigated through global archaeology (Giannichedda 2014). This work aims to provide some ideas and possible applications for these theoretical models; however, it does not pretend to be definitive or conclusive, since some relevant aspects of inquiry cannot be discussed in detail in the present work due to the constraints of a PhD research project.

2.2 Research practicalities

More than 300 contexts, grouped into 62 Lots and encompassing a total of 1812,546 kg of pottery, were analysed and recorded; pottery assemblages were examined in their entirety, although for the purposes of this examination tiles, waterpipes, and lamps have been excluded from the quantification and seriation process (on the quantification methodology please refer to next paragraph).

Due to the massive quantity of material uncovered since the beginning of the excavations in 1896 by the American School of Classical Studies in Corinth, context finds can be saved or discarded depending on their stratigraphic relevance, position and the nature of the context. Since the 1950s this method for studying and managing the ceramics from each excavation season has been developed (Slane 1987): ceramics from each stratigraphic unit are washed, sorted with counts, and weights of all sherds found per stratigraphic unit recorded. Moreover, a preliminary identification of pottery forms and types is registered, initially in a notebook but in a database in more recent years. At the end of each excavation season the director of the excavation and the trench supervisor decide whether each ceramic assemblage should be saved in its entirety, should be partially discarded, or should be fully discarded, based upon the nature of the assemblage, on the stratigraphic unit and on the contexts surrounding the stratigraphic unit of provenance. This process establishes a complete record of all
ceramics found during each excavation season, which are recorded in the Pottery Lots Notebook; this notebook is particularly useful as it includes a record of the title tag that indicates an identification of each stratigraphic unit, as well as its location, nature, and a further notation on the related excavation notebook where one may find the full excavation record. Moreover, the Pottery Lots Notebook also provides an overview of each ceramic assemblage and of all the other artefacts and ecofacts excavated with it, including coins. The notebook can provide a more or less detailed description, depending on the year of excavations and whether studies have been carried out by scholars since the time of excavation. The saved contexts are then grouped into a unique 'lot', made up of different contexts, but all related to the same human activity; for instance, several stratigraphic units in a rubbish pit or in a foundation trench may be grouped into the same lot. These are stored in warehouses managed by the American School of Classical Studies’ Corinth Excavations and are numbered according to the year of excavation, followed by the sequential number, as in the example: Lot-1998-18.

The first step of this research project was to study the collection of inventoried unglazed vessels available in the museum of the Corinth Excavations (material partially accessible online: ascsa.net). Nearly complete vessels and rare pieces are kept separate from the lots and are inventoried for inclusion in the museum collection. This first phase has allowed me to familiarise myself with the shapes, dimensions, fabrics and decoration of plain, coarse and cooking wares found in Ancient Corinth since 1896, when excavations started under the auspices of the American School of Classical studies. This first step in this study began by recording and drawing these unglazed vessels. This study was supported by MacKay’s publication (1967), enabling me to arrange a preliminary classification of shapes, which highlighted differentiation in decoration and fabric within the same or very similar shapes.

A second step of my research has been to examine the Pottery Lots Notebook in order to select the Lots that were relevant for the investigation of this research project. G. Sanders’s PhD thesis has also proven essential, as his extraordinary familiarity with all the ceramic assemblages of Corinth has provided important guidance in identifying suitable lots. Some of the ceramics assemblages investigated in this thesis are from part of the corpus of Sanders’s thesis on glazed Byzantine ceramics. The main criteria in selecting the lots were the nature of the ceramic
assemblage and of the stratigraphic units, if they were in primary or secondary deposition, and the degree to which the ceramic assemblage was fragmentarity. This research focused on one area at a time, each of which were excavated by the American School in separate excavation years. These areas, named according to the modern or ancient topography of Corinth, are: Panaghia Field, subdivided into smaller fields of excavation, Nezi Field, the excavation area within the Temenos of Temple E, and the excavation area Temple E, southeast, and south west, the Forum area, and finally from the the Greath Bath on the Lechaion Road. The decision to consider Lots from diverse excavation areas was made in an effort to try to overcome biases that could have emerged from only considering deposits from a single location within the urban topography of Corinth, like a single domestic complex. In Appendix A, Lots are fully described, reported with their archaeological and stratigraphic contexts. Lots are grouped per their location within the topography of Byzantine Corinth. Descriptions of each area also include associated references to excavation notebooks and numbers of the archaeological contexts, with an introductory description of the stratigraphy and a characterization of the archaeological layers. Following this, the archaeological evidence is contextualised and is interpreted in relation to any historically relevant topographical contexts. Focusing the study on a single area has allowed me to reconstruct the stratigraphic sequence and its relative Harris Matrix. The stratigraphy has been reconstructed by studying excavation notebooks. Here, stratigraphic units, named ‘baskets’, are documented and plans are recorded.

The resulting typology, presented in Chapter 4, has been developed based upon the study of the 62 Lots analysed in the storeroom of the ASCSA Corinth excavations. Among these Lots, 35 have been selected as the most significant and are discussed in detail within the present thesis. These 35 lots have been chosen according to their stratigraphic relevance, as well as on the basis of the characteristics of their depositional process. Moreover, they have been selected based upon the dating evidence available. Finally, lots were chosen to avoid redundancies between very similar lots, since, in some cases, there was an overlap of types between lots, and to promote the consideration of lots from different areas in ancient Corinth. Furthermore, this redundancy of types within the 62 lots is considered to be indicative
of the fact that the sample was sufficient for the quantification and seriation of the types presented in Table 2A.

The system of cataloguing the ceramics in this study follows the inventorying system developed by the staff of the Corinth Excavations. Artefacts are numbered according to the catalogue created in this work and are also reported by the number in the Corinth Excavations System: a prefix standing for the type for object, followed by the year of excavation, and a number. Dimensions are expressed in meters and all measurements given are considered to be the maximum preserved; thus, that notation is not made unless it is necessary to distinguish between sherds of different dimensions.

Fabric descriptions, when available, are based on petrographic analysis that was carried out during previous projects on Late Roman and Byzantine ceramics (Greyhbel 2010, 2015; Joyner 1997, 2007; White 2009). For every single sherd, a picture of its fabric has been taken with a 20-400x magnification USB Digital Microscope. Petrographically tested sherds have also been photographed using the same tool in order to create a reference collection of fabric images whose petrographic composition has already been analysed. The fabric of every single catalogued sherd was compared with the reference collection and the fabric was macroscopically identified. When a different type of fabric has been noticed that does not match known ones, a macroscopic description has been provided, intended as a preliminary identification, which still needs to be petrographically examined. Macroscopic descriptions, which are presented in Appendix B, are based on petrographic criteria: colour, hardness, feel, fracture, inclusions and voids. Colour has been described according to the Munsell Soil Color Chart.

Hardness, tested with a fingernail and penknife, is measured according to the Modified Moh’s Scale, and is tested on fresh breaks. It actually measures the cohesiveness of the fabric, which can vary according to the firing process and to post-depositional phenomena (Sanders 1995b: 56; Orton & Hughes 2013: 277).

<table>
<thead>
<tr>
<th>HARDNESS (Modified Moh’s Scale)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Very soft</td>
<td>Fingernail scratches easily</td>
</tr>
<tr>
<td>Soft</td>
<td>Fingernail scratches</td>
</tr>
<tr>
<td>Medium hard</td>
<td>Penknife scratches</td>
</tr>
</tbody>
</table>
A fresh fracture allows for the description of both the texture and the hardness of a fabric, and may also suggest the manufacturing technology. It is defined according to the following terminology (Figure 2.1), (Sanders 1995b: 56; Orton & Hughes 2013: 278):

- **Hard**: Penknife just scratches
- **Very hard**: Penknife will not scratch

<table>
<thead>
<tr>
<th>Texture</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laminar</td>
<td>Platy, stepped appearance</td>
</tr>
<tr>
<td>Hackly</td>
<td>Large angular irregularities</td>
</tr>
<tr>
<td>Granular</td>
<td>Fine, more rounded irregularities</td>
</tr>
<tr>
<td>Conchoidal</td>
<td>Large, smooth, angular breaks like chert or glass</td>
</tr>
<tr>
<td>Smooth</td>
<td>Even, without apparent irregularities</td>
</tr>
</tbody>
</table>

![Figure 2.1. Appearance of Break (Sanders et al. 2008: 65)](image)

The surface is also described according to ‘feel’, indicating its appearance and the cohesiveness of the fabric (Orton & Hughes 2013: 277; Sanders et al. 2008: 65):

<table>
<thead>
<tr>
<th>Texture</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harsh</td>
<td>Abrasive surface</td>
</tr>
<tr>
<td>Rough</td>
<td>Angular irregularities present</td>
</tr>
<tr>
<td>Smooth</td>
<td>No irregularities discernible</td>
</tr>
<tr>
<td>Greasy</td>
<td>Slick, almost slippery surface</td>
</tr>
<tr>
<td>Powdery</td>
<td>Grainy feel often leaving powder on finger</td>
</tr>
</tbody>
</table>

Inclusions are estimated per their percentage based on dimension and frequency, following the scale illustrated in the following chart. The estimated size of
inclusions follows the modified Udden-Wentworth scale (Figure 2.2) (Sanders 1995b: 57; Orton & Hughes 2013:281):

- **V. Large** >1 mm (very coarse sand)
- **Large** 0.5 - 1.0 mm (coarse sand)
- **Medium** 0.2 - 0.5 (medium sand)
- **Small** 0.1 - 0.2 (fine sand)
- **Fine** <0.1 (very fine sand)

![Figure 2.2. Frequency Chart (Sanders et al. 2008: 66)](image)

Shape description varies from rounded to angular and is described on a scale from spherical to platy (Figure 2.3). A basic description of the colour is also provided, refined by term, such as clear or colourless.
Voids are also described, along with a percentage and a verbal description of their shape and orientation, according to the following chart. Voids can appear when the clay has not been sufficiently worked during the preparation process and, therefore, they are not always indication of organic temper (Sanders 1995b: 61, Sanders et al. 2008: 68). They might be confused with vughs or vesicles, which are related to the crafting process.

- Thin elongate voids = Planar voids
- Smooth, spherical voids = Vesicles
- Rounded voids = Cross sections of channels
- Irregularly shaped voids = Vughs (divide into large [2-3 mm] and fine [less than 1 mm long] scale)

2.3 **Typology and classification: efficacy of this approach**

The organisation of ceramics into a chrono-typological order based on attributes is the basic step for creating a classification of the Byzantine unglazed ceramics, presented in this research. The descriptive method of classification, according to the type-series approach, is adopted here. The type, defined within a fabric or ware, is considered the basic unit for establishing a typology, intended as a series of statistically relevant attributes, organized in a hierarchical order. The

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12 Archaeologists have largely debated on the methodology of classification, on the typological analysis and on the concept of type, since its conceivemented by O. Montelius in 1885 (Sul la cronologie de l’Age du Bronze, *in Materiaus prou l’Historie de l’Homme*). Key studies have been carried out by V. G. Childe (*Piecing together the Past*. London: 1956), Spaulding (1953. Statistical
typology is an instrument used by a researcher, who mainly deals with fragmentary vessels, to tentatively organise ceramics. For this reason, the typology should always be thought of as elastic and as a work-in-progress (Anastasio 2007: 33).

The debate on the methodology behind the construction of a typology has tended to develop along two divergent approaches, one of which has stressed the necessity of describing and classifying ceramics according to the viewpoint of the potter, therefore according to an emic perspective. In this respect, a relevant tradition of pottery study is named ‘ceramic ecology’, as established by Frederick R. Matson in his publication Ceramics and Man (1965), and further developed by Arnold (1985, 1993, 2008), Schiffer (1996, 2000, 2010), and Kolb (1988, 2011). This field of study aims to assess pottery from the manufacturing process and from raw material through to the firing process, circulation, consumption and the eventual discard of the ceramic artefacts. All these aspects are considered as active and interconnected factors within economic systems (Pool 1992: 286) and, therefore, are all essential to reconstructing socio-economic cultures. This theoretical model can certainly be considered as an ensemble research method, developed through interdisciplinary approaches. Scientific methods of research are, in this respect, fundamental, such as petrographic analysis, since they are capable of shedding light on the selection of raw material, on the chaîne opératoire and on the degree of specialization. This present study would have not been possible without the petrographic investigation carried out by different scholars on Corinthian clays (Greyhbel 2010, 2015; Joyner 1997, 2007; White 2009).

On the other side, the formalization of a ceramic typology is based on a series of objective attributes selected by the archaeologist. This ethic approach classifies ceramics according to selected, though explicit, parameters, by which the researcher conventionally and arbitrarily chooses to study the ceramics (Klejn 1982: 256; Levi 1990; Giannichedda 2017).


13 Please refer to Kolb 2011 for an interesting review on the main scholars on this field of research.
Even if the ceramic ecology based theoretical model can conclusively be adopted to analyse ceramics from all periods and geographical regions, as has recently been analysed by diverse scholars, these ethic and emich approaches should are not opposing, they are overlapping. It is important to bear in mind that the core of this debate is related to the development of critical methods and methodological approaches, which the researcher establishes and then puts in place to answer an historical question (Levi 1990: 92; Giannichedda 2017: 43). A well-organized taxonomic reorganisation of the different forms and wares, which a typology can guarantee, provides a reliable tool for the creation of a relative chronology sequence. A normative typology can then be established, as a second step, in connection with scientific methods of analysis, such as petrography and scientific dating methods, which can then be used to carry out technological studies.

In the context of the present research, it would be inaccurate to focus upon ‘technological and socioeconomic aspects of ceramic materials regardless of chronology or geography’ (Kolb 2011: 9). Despite the importance of the ‘ceramic ecology’ paradigms of archaeological investigation, it seems impossible to carry out a socio-economic analysis without considering chronology, and pottery studies related to taxonomic classification can be a source of information. Granted that chronologies are not the goal of ceramic studies, they are, however, fundamental to structure any type of historical and socio-economic interpretations for investigating those peoples that produced, used and discarded the pottery under examination (Lamboglia 1972). Based upon all these reasons, even if classifying ceramic vessels according to their manufacturing stages would have better supported the investigation of the actual productive sequences, this method of classification would have been more difficult to use for quantification analysis and for creating a relative sequence. In fact, as will be discussed in the chapter on pottery technology, similar steps of manufacturing may be adopted for different vessels with different functions. Furthermore, the Byzantine pottery industry appears to be generally quite conservative, adopting few technological changes and innovations, with a few important exceptions, from the Late Roman times onwards. Finally, it should be pointed out that the entire manufacturing process cannot always be reconstructed in specific detail through a macroscopic analysis, and no petrographic research has been conducted by the author, making this method of pottery analysis difficult to apply (Anastasio 2007: 36).
The approach to the classification of shape adopted in this project is primarily a geometric one, a method widely adopted in pottery studies to organise the vessels in order to provide a chronological scheme (Orton & Hughes 2013: 196-197). The main attributes, or features, taken into account for the creation of the typology presented here are the rim, body profile, base or foot, handle, absolute dimension and relational proportions. Moreover, in order to establish an accurate morphometric representation and analysis of the vessels, the general vessel proportions are not only recorded by taking measurements, but also by drawings, which are a real representation of the vessel profile when preserved in its entirety. The rendering of the real section of a vessel allows the researcher to observe the variability of the vessel profile. The degree of variability of a vessel profile is an important datum when working on a typology, and in classifying types and subtypes. Finally, it should be noted that, in the case of vessel preserved in a fragmentary state, the preserved section of the profile is rendered in the drawings of vessel profiles.

In the present project, the base unit for establishing the typology is the form, which is used to consider similar vessels with different type variation. The forms are organised into functional and morphological classes (Orton & Hughes 2013: 83). The nomenclature of some forms is adopted here on the basis of the classificatory system developed by the staff of Corinth excavations (ASCSA), specifically terms such as ‘collar rim’, ‘triangular rim’ and ‘folded rim’ stewpots, and ‘triangular rim’ lagenas. The adoption of Greek terminology, such ‘lagena’ and ‘lekane’, are derived from Bakirtzis’s publication (2003). The rest of the terminology adopted here to designate the different shapes is mainly based on English and Greek nomenclature, both of which are widely used in publications of Byzantine ceramics (MacKay 1963; Sanders 1987, 1993, 1995b; Vroom 2005; Vionis 2009). The organization of types and subtypes is the result of the classification carried out by the author based on the following system. First, ceramics have been grouped according to main features of fabric characterization and by surface treatment. Following this, the ceramics are given an identification and division based upon shape. Shapes are relevant for identifying the different functions of the wares within the diverse ceramic assemblages. After being separated according to shape, the ceramics are then further divided by type, based on morphologic characteristics that are mainly defined by rim profile and dimension, and types are also defined on the basis of base and body profile and rim diameter, or
diameter – height proportion. Decoration is considered here as a further parameter for defining a type, since it is indicative of a specific step within the chaîne opératoire (Cortese 2005: 327).

Subtypes, are intended to identify subcategories within a type. Subtypes are generally related to morphologic parameters, such as the shape details of a vase, which are interpreted here as distinctive and peculiar steps in the manufacturing process. Specifically, subtypes are intended to group variables within a larger shape type. The degree of variability of a shape within a chronological range can be related to manufacture routines and to the level of the pottering standardization. The diachronical analysis of ceramic assemblages can highlight how ceramic types can have some variabilities depending on the level of standardization of the manufacturing process (please refer to Chapter 4 on pottery technology for the analysis of pottery standardization). Subtypes have, in fact, similar chronologies within reference types, which render subtypes not chronologically meaningful for seriation purposes. This is why subtypes are described in the catalogues, but only the reference type is indicated in the seriation chart.

2.4 Quantification and relevance of residuality

Quantifying the ceramics per stratigraphic unit aims to estimate the quantity of different types of pots per assemblage, including how many were locally produced versus imported and how many of them were used contemporaneously, since not all vessels had the same lifespan, which naturally influences the quantity of pots per assemblage found in the archaeological stratification. Finally, quantification enables the comparison of different assemblages, statistically merging them for chronological and socio-functional evaluations, which, through the application of this methodology, is scientifically reliable and significant (Orton 1989: 94, Orton & Hughes 2013: 203-204).

The partial nature and fragmentary preservation of the archaeological record may affect the validity of historical conclusions based upon it. However, this limitation may partially be overcome by some methods of research that have been widely used in pottery analysis in order to test their statistical reliance in accordance with the contexts under investigation. The choice to use the quantification method is based on the nature of the research question and on the repeatability and reproducibility of
phenomena observed. The indispensable precision of the quantification method makes it necessary to exclude some measurements, like surface area of the vessel and their volume, since they are difficult to replicate. Sherd count, too, is biased by the physical characteristics of the vessel, such as shape, size, fabric and firing temperature, which influence the preservation of the ceramic artefact in the archaeological deposits (Orton & Hughes 2013: 206).

A reliable analysis is the estimation of vessels equivalents (EVE, Orton 1989: 94) and weight (Solheim 1960; Evans 1973). The analysis between different types is carried out by quantifying the EVE, a process by which the rim, often used to define types in this project, together with other diagnostic parts, such as handles or spouts, stand as representative of the whole pot. Comparisons of the same types of vessels, found in different assemblages, are made on the basis of weight with a level of precision that ensures its reliability. However, this method is not precise in estimating the proportion of different types of vessels in a single assemblage, since the heavier types will be present to a greater degree and, therefore, the quantification would be biased (Symonds & Haynes 2007: 69).

For this research, the main goal of which is to assess the relative and absolute chronology of vessels types, I have recorded both weight and sherd counts of the rim, handle, base and body sherds, divided by type. Every type has been assigned to a ware and a form, according to their function. The way lots are described in Appendix A is meant to provide a record of counts and weights of diagnostic rims, bases, handles and sherd types; additionally, it also includes counts and weights of non-diagnostic sherds, grouped by ware, although non-diagnostic pottery fragments are not used in the quantification analysis. Vessels preserved in almost their entirety have generally been mended, and I have counted all these joining sherds as a single vessel. Moreover, when sherds did not physically join, but the were fragments ascrivable to the same single vessel, they have been counted and recorded as one vessel. In this way, counts reported in the Lots description in Appendix A represent, as close as possible, the number of vessels present in a Lot (Slane 2003: 323). Finally, it should be noted that when joining fragments have been recorded between different Lots, I have counted them as one vessel in the quantification process in relation to the lowest Lot in terms of stratigraphic position, which is therefore also earlier in terms of relative chronology. However, in the Lots description, presented in Appendix A, there is a note on the
relative joining fragments from the later or upper Lots with reference to the joining Lot.

In order to seriate vessel types to establish a relative chronology, types are quantified by weight and expressed as a percentage of the total weight of diagnostic sherds, measured in kilograms, of the ceramics in the context. The counts of sherd (EVE) is the preferable method of analysis for investigating the relative abundance or paucity of a given vessel type within a stratigraphic unit, or context. Moreover, quantification based on sherd counts of EVE has the advantage of estimating the intrasite spatial distribution of types, also in relation to possible differences in the use of multiple spaces in a single building or in a neighborhood. However, single-instance counts or rim equivalents appear to be less reliable if the goal of the quantification process is to estimate the quantity of a single type in a diachronoic perspective of analysis when dealing with mixed dumped fills contexts. Sherd weights generate a more standardized set of data for estimating the quantity of a single type for a direct comparison with other deposits, which may also be spatially distant (Rice 1987: 291).

Finally, considering the low degree of standardization of ceramic production from the Early Byzantine period up to the early 12th century, the counts in large deposits, for instance, of multiple non-joining fragments as belonging to a single vessel are not always a reliable method of analysis. It, therefore, becomes debatable how reliable quantification on the basis of the minimum vessel number can be for analysing and quantifying when vessel profiles are irregular and the research is carried out on mixed dumped fills. In order to overcome problems of bias in the estimation of the relative abundance of type by single-instance counts, seriation has been arranged on the basis of weights. This method allows the researcher to compare the same types of pottery in multiple deposits, so, even though counts and weights are both recorded, weight rather than counts have been used to process the final quantification and the seriation used to establish a relative chronology. Fabric, type and decoration, when present, were quantified, adopting methods based on the aforementioned methodology. This approach allows the researcher to identify types in a diachronic perspective and to identify the appearance of new types and the presence of residuals or contaminations within the ceramic assemblage. This method of quantification has been tested in past decades by Slane (1987, 2003), Sanders (1987, 1995b, 2003), Williams (Williams et al.
The pottery assemblage has been recorded in its entirety in order to quantify the different wares, classes and types of ceramics. First of all, every pottery assemblage per stratigraphic unit was sorted separating fine ware, plain, coarse and cooking wares, identifying the diagnostic features and separating them for class, form and types. Per type, I have counted and weighed rim, bases, handles and identifiable body sherds. The non-diagnostic pottery sherds were counted and weighed in order to be included in the final count and weight of the relative ware, however they were not used in the quantification analysis. It should be noted that partially saved lots could have been included in this study, because, on the basis of the lot notebook, it can be determined that only non-diagnostic pottery fragments were discarded. Therefore, partially saved lots do not invalidate the quantification and seriation of the ceramic types, which is based on diagnostic pottery fragments. Finally, in Appendix A, the condition of the pottery sherds, including breakage, leaching and erosion, as well as the contexts of provenance, has been documented. This information is important in order to understand the depositional and post-depositional processes; additionally, when considered in relation to the character of the ceramics in the same stratigraphic unit, it can suggest the presence of residual or intrusive material and, therefore, the reliability of pottery assemblages. The nature of the context of provenance, together with the relationships between artefacts from the same stratigraphic units, enables one to understand how the artefact entered into the archaeological stratigraphy and to determine if they belong to the same chronology as the associated finds. Finally, the function of the object in relation to the other artefacts may lead to the identification of residual finds in our stratigraphy (Giannichedda 2007: 54-56). Those artefacts that do not seem to fit with the other finds in terms of chronology, function or typology are defined here as residual. Residuals are not considered as a bias to quantification analysis, but they have proved to be informative concerning the different ways that the archaeological stratigraphy may be formed, specifically the association between the matrix and the finds, as evaluated by the quantity and the nature of the residual material (Evans & Millett 1992: 229; Giannichedda 2007). Therefore, residuals can be useful in choosing the appropriate contexts for the research question under investigation. They are not
simply informative of types, which may have not been found in phase contexts, and they can also demonstrate the validity of the chrono-typology established for a specific site. In fact, the analysis of residuals allows one to identify the formation process, which means one can understand the natural or human activities that caused the formation of the stratigraphic unit and, therefore, the reliability of the contexts chosen for the elaboration of a ceramic typology (Terrenato & Ricci 1998: 102-103).

For the purpose of this study, contexts in primary deposits have been mainly chosen, such as robbing trenches and foundation trenches, rubbish pits, and wells. In addition, contexts with a considerable number of fragmentary vessels were included in this study, even if they were not in their primary contexts, since they can suggest a time of usage and, therefore, are useful in the seriation process. Finally, some cases where contaminations or residual pottery were clearly identifiable have also been included in order to test the seriation analysis.

2.5 Dating and pottery chronology: a matter of seriation

Seriation is the principal technique for ordering ceramics in a relative chronology embraced in this research (Djinjian 1991: 176-200 and 2010 on the different methods applied in seriation analysis). The method is the manual technique, where every single context has its stratigraphic relationships clarified to organise the pottery assemblage based on the occurrences of the types. Every type is indicated as a percentage of the weight of the proportion based on the aforementioned quantification. The quantity per type is presented in percentage, indicating the weight per type in a single context, as these are the binary values of the seriation analysis. Specifically, this method of frequency seriation is established based on the abundance, or frequency, measured per type in a context.

This seriation has been arranged on the basis of stratigraphic relation, specifically lots from the Decumanus area located southeast of Temple E and from Panaghia field were first arranged according to the stratigraphic sequence and were seriated first. The other deposits were arranged to better refine the relative position according to the similarity of the coefficients per ceramic types. This method identifies similarities between quantities of ceramic types in deposits expressed as a coefficient, which is calculated by adding the lower percentage of every single type present in two
deposits. In this way the deposits with the highest coefficient of similarity are also the most similar and are closely arranged in the matrix. According to this method, the deposits are finally ordered on the basis of the proportional quantity of types and therefore in a relative chronological sequence, allowing the researcher to relate all the lots through a chain of type-associations.

The charts presented in Appendix 1 and Tables 2 and 3 illustrate the deposits arranged from earliest to the latest along the horizontal axis, and pottery types are similarly arranged on the vertical axis. This matrix reordering suggests the relative chronology from the initial introduction of a type to the so-called ‘type vessel fade-point’ (Carver 1983; Guidi 1994: 58), indicated within a lot by the relative percentage of that type of cooking or coarse ware. This ordering results in an axial sequence, which indicates when a specific type starts to be produced, becomes popular and then goes out of use and tends to appear as residual in the ceramic assemblages, creating a battleship curve (Ford 1962).

This methodology of seriation is substantially based on the theoretical discourse promoted by Brainerd (1951) and Robinson (1951); later it was further developed by Kendall, who contributed to the methodological approach for the elaboration of the matrix analysis (1969, 1971), established here with the use of Microsoft Excel. In the present study I have not been able to combine statistical methods applied to build the seriation into a computerized method, such as correspondence analysis (CA) and k-means cluster analysis (Duff 1996, Eckert 2008: 123-125). These computer statistical methods will be adopted to test the relative chronology built on the basis of the manual technique as a future project, which will also take into account an increased corpus of ceramic evidence.

In synthesis, this dataset of quantified lots has been recorded into a database that has been crossreferenced with stratigraphic positions to establish a relative chronology for the ceramic assemblages. To establish absolute chronologies for pottery dating in the present research, *terminus post quem*, and the less common *terminus ante quem*, is based on coins found in association with the ceramic assemblages and on imported ceramics. This imported Byzantine glazed ceramic evidence is, here, studied on the basis of the revised chrono-typology elaborated by Sanders (1995b, 1999, 2000, 2003) and supported by the data from the Saraçhane excavation (Hayes 1992), and by excavations carried out by the University of Lecce in Salento (Southern Apulia, Italy),
(i.e. Arthur 2004; Arthur et al. 2015; Leo Imperiale 2004, 2015), all of which provide a similar chronology. All Lots that have been seriated in this project are dated from the mid-10th century to the mid-13th century.

However, it worth noting that this absolute method of dating, based on associated coin finds, has been proved to be imprecise and is not without complication. Whether coins can be precisely dated, this date can only provide a terminus post quem, since coins were generally kept in circulation for a very long time, and the duration of that circulation can be rarely quantified. Moreover, as numismatists keep reminding archaeologists, coins found in the archaeological context were not necessarily in circulation when they entered into the archaeological stratigraphy; therefore, archaeologists should be extremely cautious in adopting coins for establishing absolute chronologies (Callataÿ 2005: 120). Besides, coins, like pottery sherds, are subject to residuality, which is more complicated to evaluate in association with a pottery assemblage, since they may be found in a ‘casual association’ (Orton & Hughes 2013: 226). A possible way of using coins for absolute chronologies might be in obtaining from a coin a terminus when considered in relation to an entire stratigraphic sequence, and not in relation to the single context and stratigraphic units (Reece 2012). At the current state of research, it has not been possible to test the chronology suggested in this work with scientific dating techniques, which would be the most reliable methods to establish absolute chronology for the ceramics themselves or for the finds associated with the ceramic assemblage.

2.6 The applicability of an economic perspective

The second aim of this research project is to contextualize the datum obtained from the quantification process. Technological changes and an increase in pottery production are linked to the transformations in the socio-economic structures and identities during which these pots were produced and used (Please refer to Chapter 5 for a methodological debate on this topic). The scope is to investigate the multiple causes in the socio-economic contexts of production and usage of ceramics, which have determined changes in the quality and quantity of the ceramic assemblages in the Byzantine Peloponnese.
The reference to economic theoretical concepts gives rise to the question of the applicability of economic models to pre-modern societies. To begin with, it is important to remember what we define as economy, *strictu sensu*: economy exists when there is an exchange between two parts, with opposite interests. This fundamental, as well as simple, theoretical concept is defined by needs that cause the allocation of resources. The basic principle by which this behaviour may be analysed for individuals is the law of supply and demand, which is included in the majority of economic theories (Scarnati 1998: 39; Jones 2014: 55-57). In practice, it can be explained as the interaction between a buyer (or customer, or receiver), who aims to care for his or her personal needs, for instance, by spending as little as possible, and a seller, who aims to make as much profit as possible. In short, they both try to fulfil their own interests through the exchange of goods. In terms of economic theory, analysing demand means to quantify how much of a product or a service is required by buyers at a certain price. Supply is the quantity of the product or service that the market can offer at a certain price. The relationship between supply and demand, in the economic market theory, is constantly changing in relation to the fluctuation in supply and demand themselves (D'Adda 1998: 330-332; Lanzi 1998: 624-628).

The reference to market and prices requires some clarification. Price should not be thought of exclusively as the monetary evaluation of a good, but it can be conceptualised, instead, as the relationship and proportion at which two objects or services are exchanged. This relationship can be expressed in any good or service desired. A value, therefore, does not solely rely on currency for its definition and it can be applied to any context in which an exchange of objects or services takes place, in any market. Markets consequently should not exclusively be thought of as places with stands and shops, but, even within a household, we can observe the allocation of resources through different forms of exchange which do not necessary involve outside actors.

Premodern economies, including the Byzantine economy, were predominantly agricultural economies. The quantity of crops harvested every year is subject to a variety of factors, such as weather, droughts, heavy rainfalls, parasites, etc. The quantity of agricultural goods available every season reasonably influenced the quantity and the quality of what people were demanding and exchanging, and its availability would have increased or decreased its price. This model can be made more
complete if, apart from basic needs, we also consider customs, traditions, social behaviours, religious practices and fashion, just to mention some examples. Exchange of proportions of goods, denoted by their price, can be influenced by all these factors. In addition, the scarcity of goods may also be considered to be an influencing factor on goods requests and, therefore, on their price as well (Jones 2014: 5-6). Hence, economic theories can enable one to evaluate the economization of the production process and consumption behaviours. The focus on small economic units, which are an expression of individual actors and their rational human choice, is the object of microeconomics investigation.

In the present study, supply, demand, consumption and industry structure are analysed, merging archaeological evidence and historical sources, and examining them through the lens of economic theories while trying to define what has been called the ‘economics of ceramics’ (Jones 2014). The focus on a specific commodity sector, such as ceramics, means, in microeconomics, to analyse a specific sector of production. In this case, that sector of production is, on the one hand, widely documented in the archaeological record and, on the other, was not under the direct management of the State authority. Therefore, it allows for the analysis of how supply and demand can be investigated in relation to how quality and quantity of production changes through time.

Finally, it is worth observing that individual factors of economic phenomena are also subject to the indirect effect of wide phenomena, such as national income, unemployment, price levels and inflation (Cellini 1998: 589-590). These approaches deal with macroeconomic theory, which is interdependent and overlaps with microeconomics. Bearing in mind that, in the Byzantine society, a vast proportion of its total income derives from agriculture, it is possible to investigate some human choices and resource distribution (microeconomics), questioning how the economic growth was stimulated (macroeconomics) between, in this specific research instance, the 8th and the 13th centuries.
3 HISTORICAL AND ARCHAEOLOGICAL FRAMEWORK

3.1 Introduction: the context of existing archaeological evidence

The archaeological excavations carried out from the beginning of the previous century in the cities of Ancient Corinth, Argos and Sparta were focused on the discovery of the ruins of the classical poleis. The medieval levels were generally not considered core to the excavators’ exploration interests. However, the Greek archaeological services, in cooperation with different foreign archaeological schools, have diversified their studies and have produced some pioneering works on the Byzantine material culture, with major emphasis on ceramics and architectural features. Nevertheless, the primary studies and the scholarly background of those pioneering researchers influenced the methodological approach of the investigation and the interpretation of the medieval levels brought to light, significantly informing our current knowledge of these Byzantine Peloponnesian cities. The variety of textual, archaeological and iconographic sources of information, and the way they have been integrated in the past, pose some problems and questions concerning their theoretical implications and therefore, in turn, on the proposed historical interpretation. These issues might be summarised under two major points: the partial nature of the archaeological evidence and the difficulties surrounding the interaction between different sources.

To begin with the first point, I should immediately clarify that I am not referring to the partial nature of the archaeological record due to its perishability (wood, textile and other organic material), or due to a variety of objects being deliberately preserved and kept in circulation (glass and metal recycling). Nevertheless, these facets should be well kept in mind in order not to overemphasise the relevance of other typologies within the archaeological record. Nor I am referring to the inevitable limits of available archaeological evidence due to the constraints of the practicalities of archaeological research (physical limits of the excavated area, accessibility for study purposes to archaeological artefacts). There are multiple reasons, related to the origin of the archaeological record, that may make it

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14 These publications will be presented in the following paragraphs dedicated on each of the cities object of investigation.
incomplete for investigating socio-economic identities, in relation to urban
topography and monumental buildings. Material culture found in the archaeological
record can be the result of an intentional expression of social meaning, in different
forms and according to different levels of the society; examples of include: grave
deposits, monumental construction and ritual deposition. Contrary to these
intentional expressions, other categories of material evidence may enter into the
archaeological record without any specific social meaning or reasoning, as is the case
with rubbish pits or destruction debris. In addition to this dichotomy of the material
culture, written sources and iconographic evidence have been created for a specific
audience and for a precise purpose, generally related to the higher ranks of society.
Based upon these attitudes towards material culture, for a long time archaeologists’
research interests in ancient cities were focused on known buildings and on places
found in written sources, which has meant that diverse categories of material culture
have generally been neglected, because they were considered useless for
investigating these monuments (Sherratt 2011: 6-7). For instance, since the beginning
of the archaeological investigation of the ancient city of Corinth, the main objective
has been to bring to light the social and political core of the classical and Roman city
described by Pausanias: the Forum area, together with other Roman and Classical
vestiges, such as the theatre and the Odeon (Langridge-Noti 1996; Scranton 1957,
Brown 2010). However, it is worth immediately pointing out that, contrary to several
excavations in the rest of the Mediterranean countries, the medieval material culture
was not universally dismissed, leading to the fundamental corpora on Byzantine
pottery and Medieval architecture: *Corinth Volume XI* (Morgan: 1942) and on *Medieval
Architecture in the Central Area of Corinth*, Volume XVI (Scranton: 1957). Nevertheless,
the historical reconstruction of the medieval events presented in these volumes was
underpinned by Finley's paradigm stated in the well-known article "Corinth in the
Middle Ages" (1932), in which he argued that the city of Corinth, the capital of the
province of Achaia, was depopulated by the spread of the plague in 542 and heavily
damaged by the earthquakes in 524/5 and 551/2. The Slavic invasions at the end of the
6th century were the final straw, causing Corinth to be abandoned until the
Peloponnese was finally reconquered in 783 by Stavrakios and annexed to the Eastern
Roman Empire. Corinth, designated as the capital of the Peloponnesian Theme at the
end of the 8th century, experienced an important revival, becoming a nodal
administrative and economic centre in the Middle Byzantine period. This flourishing phase was interrupted by the sack of Roger of Sicily in 1147, a nefarious event which substituted in its place a phase of long decadence, brought to an end by the Latin conquest in 1210, when Corinth underwent an irreversible collapse and ceased to exist as a city.

This traditional historical paradigm, based on textual sources, has outlined the interpretation of the urban archaeology of Corinth. It was, for instance, the chronological framework used to provide absolute dates for the Byzantine glazed ware typology elaborated by Morgan (1942) and, in turn, was also applied to date the late Roman and Byzantine architecture brought to light in the Forum area (Bronner 1954; Scranton 1957; Robinson & Weinberg 1960; Robinson 1962; Robinson 1976, Ivison 1996; Sanders 2002; Brown 2010). Finally, it trickled down to the chronology of Byzantine unglazed wares from Corinth, proposed by Theodora Stillwell MacKay in her fundamental article published in 1967. This use of textual sources to establish an historical reconstruction and absolute chronologies, which are then superimposed on to the archaeological record, highlights the problematic and long-debated interaction and interference between the analysis of diverse sources.

In the context of the present study, there are two main questions that can be raised concerning this methodological approach. One is about establishing absolute chronologies for ceramic evidence. Secondly, I would like to analyse how the focus of the archaeological investigation on the core of the ancient city - the area of the Forum, in the case of Corinth, driven by the supremacy of the literary texts in the historical reconstruction - may have led to an idea of disruption and abandonment of the city from the 6th century onwards, due to the partial nature of the archaeological evidence, which was often read in the light of the written sources. For a long time, no other parts of the city, where diverse forms of urbanization may have taken place, have been taken into account. Several studies over the last decades propose an alternative and more articulated historical reconstruction of the socio-economic structure of Corinth, based on systematic pottery analysis. This tendency has been shared by scholars from diverse academic backgrounds and with varied fields of interest. Specifically, they have questioned and contextualised the Late Roman, Byzantine and Frankish periods in light of an increasing corpus of archaeological evidence and by adopting different approaches to investigating the literary and archaeological sources (on historical and
archaeological studies: Gregory 1993, 2005, 2010; Sanders 1999, 2004; Slane 2003, 2008; Slane and Sanders 2005; Veikou 2013. Philological analysis: Anagnostakis and Kaldellis 2014; Pottery and petrographic studies: Graybehl, 2010; Graybehl et al. 2013; Hammond 2015, Kennedy 2016). To sum up one of the major conclusion of these scholars, through the investigation of different excavation areas within Ancient Corinth and outside the traditional zone of archaeological research, ceramics clearly show a city that was not abandoned or devastated during the 6th and 7th century, in direct contrast to the description of Corinth presented in the Chronicle of Monemvasia. The archaeological record, rather, suggests a community well-connected within an interregional system that was looking East, as well as West, across the Mediterranean world.

The question that spontaneously arises is: do therefore different sources tell different histories? (Brandes 1999). As archaeologists we should always be aware that written sources were composed with political, administrative or legal purposes in mind and were created mainly by those in high echelons of power. In this respect, it is worth bearing in mind that the main source for the barbarian invasion in the Peloponnese is the Chronicle of Monemvasia, a document which presents a description of the extensive and devastating immigration of Slavs in the Peloponnese, including crucial descriptions that have formed the basis for the historical narrative and analysis (Charonis 1950, 1953, 1970; Setton 1950, Bon 1951, Yannopoulos 1980). Various sites in the Peloponnese have produced distinctive material evidence, such as handmade pottery or pottery made on a slow wheel, which has often been related to Slavic craftsmanship; this pottery is also found in association with ‘barbarian’ weapons and jewellery (Aupert 1980a, 1980b; Vryonis 1992; Sanders 1995a; Anagnostakis and N. Poulou-Papadimitriou 1997; Curta 2001, 2010, 2016a, 2016b; Vionis 2013b). When observing this archaeological record through the lens of the Chronicle, for many historians there seemed to be little question as to the context in which this literary source was composed and the perspective of the historical events it was presenting.

However, scholars have started questioning the real entity of the ‘Slavic invasion’, doubting its dreadful impact on the local population, which supposedly drove them out of their hometowns and permitted Slavic invaders to settle through the Balkans into the Peloponnese (Avramea 2001, Curta 2010, 2011, 2016a). Already in 1951 Antoine Bon highlighted how scholars had divergent critiques on the historical
validity of the Chronicle as authentic testimony of the Slavic invasion in this region (Bon 1951: 31-38). More recently, I. Anagnostakis and A. Kaldellis have delved into a critical approach to this 10th century poem. These two philologists and historians have observed how scholars have treated the Chronicle as a factual document of historical events by reading this literary source without a prior stage of philological critique and without contextualising this composition in light of 10th century political and religious affairs. Anagnostakis and Kaldellis highlight how the Chronicle can be better interpreted as a political instrument used to strengthen the territorial claims of the metropolitan bishopric of Patras over the see of Lakedaimon, competing against the metropolitan bishopric of Corinth, during the time in the 10th century when the entire Peloponnesse was ecclesiastically divided between those two metropolitan cities.

According to the Chronicle, the territories occupied by the Avars, and later the Slavs, in the western region of the Peloponnesse appear to correspond to the see of Patras, while the territories under the ecclesiastical jurisdiction of Corinth, in the Eastern Peloponnesse, were so heavily affected by the Barbarian devastation that the city of Argos was depopulated and even the Corinthians moved to Aigina, which led to Corinth no longer being able to be the only metropolitan bishopric of the region (Kislinger 2001: 25-29; Curta 2011: 253-255). The division of the Peloponnesian territories between the two metropolitan bishoprics of Patras and Corinth, presented in the Chronicle, was very schematic, but it was clearly intended to reinforce the claims of ecclesiastical jurisdiction over Lakedaimon in the 10th century, according to Arethas, bishop of Kaisareia in Kappadokia and native of Patras (Anagnostakis & Kaldellis 2014: 110-111).

Furthermore, Anagnostakis and Kaldellis, through a careful philological analysis of the Chronicle, have pointed out that several facts in Arethas’ narration correspond to classical topoi and archetypes borrowed from Pausanias, who was also writing about ethnic history in the Peloponnesse during the preceding ‘Dark Age’ (Anagnostakis & Kaldellis 2014: 108). Significantly, the 10th century author has structured his work, particularly the second half of the Chronicle, by combining narrative elements from Pausanias’ composition. Even the exact same places mentioned by Pausanias in Book 5 are cited by Arethas. Both authors end up talking about the ‘Dark Ages’, caused by the Dorians and later by the Avars-Slavs. Arethas uses these allusions to ‘Dark Ages’ to bolster claims for a renovated ‘Golden Age’ or a
Byzantine ‘renaissance’, which is argued to have taken place after the reconquest of Nikephoros I and the re-foundation of the city of Patras, and its elevation to metropolitan status (on the concept of Byzantine cyclical renaissance: Ronchey 2002).

Even though the historical validity of the Chronicle of Monenvasia should not be completely dismissed, ‘On the other hand, we still have no guarantee of historicity, and the present argument here shifts the balance toward literary invention, or at least toward the literary elaboration of the structural logic shaping the presentation of events. Arethas was effectively creating new civic identities out of ancient associations along the lines of origin, continuity vs. rupture, and ethnicity (pure vs. impure, mixed vs. autochthonous). Ultimately, these served the interests of the elites in the areas in question. If only we knew exactly how’ (Anagnostakis & Kaldellis 2014: 115).

From the archaeological and textual evidence from Corinth, it is difficult to substantiate the argument that a violent invasion devastated the city, since no evidence for devastation and destruction has ever been identified in the archaeological record (Sanders 2003a, 2003b, 2004). Moreover, it raises the question that, perhaps, other cities in the Peloponnese were also not brought to an end by the barbarian invasion, the evidence for which have been object of debate (Avramea 1997:67-86; Curta 2001, 2016a; Gregory 1993c; Vida and Völling 2000, Caraher 2010: 245). However, the presence of a non-Byzantine manufacturing tradition, documented by the so-called ‘Slavic' ceramic and metal work found even in territories that were never lost by the Byzantine authority and which has also been found in association with ceramics of Byzantine artisanal tradition, such as in Sparta, Argos and even in Corinth still must be further contextualized. Moreover, there is a problem in dating this material, whose absolute chronology is still based on the written sources. A similar problem has been pointed out by Caraher in reference to the dramatic abandonment of Early Christian basilicas, emphasising how churches dated to this period have often not been stratigraphically excavated or the excavation of these building has been poorly documented producing only vague chronological frame for the dates of construction, refurbishment and abandonment or destruction. This fragmentary and imprecise knowledge of chronologies of abandonment or destruction, argues Caraher, highly restricts and limits the ability of relating the architectural evidence from the archaeological record and specifically the lifecycles of
In conclusion, as S. Sherratt stated regarding this issue in the context of Bronze Age archaeology: ‘This is a hangover from the days when the written word (of whatever sort) was privileged above archaeology, and when the main role of archaeology was to corroborate written texts (where available) in a more or less literal-minded manner’ (2011: 9). One way to overcome these methodological discrepancies might be to move a step backwards and to begin the research from the material already available, examined together with unpublished ceramic data presented in this thesis. Here I will begin with the analysis of known archaeological evidence from the city of Corinth, in comparison with the evidence from Argos and Sparta.

3.2 Corinth

The political status of Corinth as the capital of the province of Achaia is uncertain, since clear evidence of its legal status is only dated until the 5th century (Brown 2008: 58-60). However, Corinth was definitely the seat of a metropolitan bishopric, which was ruled by an ecclesiastical exarch, whose authority was similar to a civil vicar. A relevant aspect of the political administration is that, even though Corinth was under the political control of the Byzantine Empire, it was, with the entire prefecture of Illyricum, under the authority of the Bishop of Rome until the reign of Leo III (Limberis 2005: 444-445). In this context, it is possible to speculate that the bishop in Corinth probably operated as a civic authority, assuming the responsibilities of the old curiales and covering the functions once assumed by the local boule (Limberis 2005: 456-457; Brown 2008: 66). This political authority of the bishop is clearly documented; for instance, in Byzantine Italy they had central importance in the civic administration, since they could even elect the provincial governor, also known as the iudices provinciarum. Moreover, it is possible to hypothesize that bishops in the Greek lands were not exclusively gaining political power, but were also becoming relevant economic actors. In southern Italy, for instance, it is documented that, in this period, bishops became some of the biggest landowners within the Byzantine Empire; in fact, in order to avoid state taxation, civic landowners used to donate their properties to the Church, even though they continued managing them through emphyteusis contracts (Falkenhausen 1982: 34).
It is worth noting that the economic status of the Late Antique\textsuperscript{15} city, recorded in historical sources, is not visible in the stratigraphic sequence excavated in the Forum area, where, for long time, excavations have been focused. Here, apart from the South Stoa Baths which probably went out of use during the course of the 6\textsuperscript{th} century (Biers 2003: 309), the architectural changes made to the forum area included levelling the shops and replacing them with a staircase bordering the Bema, as well as refurbishing of the west shops (Sanders 2002: 647-648).

Civic and economic activities ceased to take place around the area of the Roman Forum as suggested by the presence of 6\textsuperscript{th} to 8\textsuperscript{th} century graves and by the paucity of ceramic and numismatic evidence recovered during the excavation of the Forum. The earliest graves in the Forum date from the late 6\textsuperscript{th} century and provide a possible \textit{terminus ante quem} for when this area was excluded from the Late Antique city. The Theodosian and Justinianic legislation reinforced the Roman prohibition of burying within the city wall, and it has been suggested that the new circuit wall excluded the Forum area, which became a suburb of the city (Gregory 1979: 268-70, Sander 2004: 180; plan 3.2 and fig. 3.1). While the date of construction of the Late Antique city wall is still subject to debate, (Gregory suggests the early decades of the 5\textsuperscript{th} century – Gregory 1979: 268-70, whereas Sanders speculates a later chronology also on the base of the pottery evidence from the Forum area graves – 2004: 179), it appears that the urban core of the Late Antique city was reduced from a total extension of circa 140 hectares, to an area of circa 40 hectares (Sanders 2004: 179).

However, there is no reason to presume that the area encompassed by the Late Antique city wall should be considered as the sole area occupied in the Late Antique and Early Byzantine times. If the Forum area, during the course of the 6\textsuperscript{th} and the 8\textsuperscript{th} centuries, lost its civic function, in all likelihood its socio-economic influence

\footnote{Late Antiquity here refers to the 5\textsuperscript{th} to 7\textsuperscript{th} centuries (until ca. A.D. 650), although some scholars refer to this period as the Early Christian, or Early Byzantine period. This multiplicity of nomenclature highlights how denominations are based on diverse sources, historical and archaeological perspectives and on different scholarships. On this debate Whittow 2009, Bintliff 2012c: 383. On this topic with specific reference to post-classical Greece on concepts of abandonment, authority and religiosity Caraher 2010, with reference to earlier bibliography. In the present study, Early Byzantine period refers to the late 7\textsuperscript{th} to 9\textsuperscript{th} century, up to 802. With specific reference to Corinth, scholars date the Middle Byzantine period from 802 to 1058 AD, and the Late Byzantine one from 1059 to 1210 to AD. However, in the present study, to avoid confusion with other sites in the territories of the Byzantine empire, Middle Byzantine period refers from 802 to 1210 AD.}
shifted to other areas, rather than coming to an end entirely, with one possibility being the area East of the Forum, within the Late Antique city wall circuit.

Plan 3.2. Plan of the Forum area showing 7th and 8th century graves (Sanders 2004: 181) (Courtesy of the American School of Classical Studies at Athens, Corinth Excavations).

Figure 3.1. Ancient Corinth. In black the Late Antique city walls, in yellow what became the Byzantine suburb, including the Forum area (After Sanders 2013).
New excavations carried out in the East of the Theatre, directed by C. Williams, and recent investigations undertaken by Sanders in Panaghia Field (Plan 3.1, no. 1) and in Nezi Field (Plan 3.1, no. 2), South and South east of the Forum, have shed new light on the Late Roman and Byzantine Corinth. A total amount of 12 tonnes of stratified Roman and Late Roman pottery have been statistically analysed (Sanders 1999; Slane 2003; Slane-Sanders 2005). The results have revealed a new seriation of the Late Antique ceramics, concluding that much of what was once considered to be late 4th century coarse ware should now be dated to the mid-5th century. Furthermore, these excavations clearly indicated that the city of Corinth was still economically active well into the 7th century (Sanders 1999, Sanders & Slane 2005).

Plan 3.3. Late Antique phase of Panaghia Field
(Courtesy of the American School of Classical Studies at Athens, Corinth Excavations).

Hammond’s detailed study of the Late Antique ceramics (2015), focused on the Late Roman pottery from Panaghia field, shows how the economic system in Corinth experienced an innovative restructuring during the course of the 5th and early 6th
century. From a market dominated by interregional imports, he highlights a reduction in the importation of cooking and plain wares. Conversely, he attests to an expansion of the local pottery manufacture, which produced highly standardised vessels. This industry witnessed an important growth during the 6th and 7th centuries, indicative of the healthy and robust economic status of the city. This picture is supported, for example, by construction during the mid-6th century; in Panaghia field the so-called ‘Long Building, an important public construction of unclear function, was erected, while the Bath complex was converted for residential purposes (Sanders 1999).

Moreover, the associated imported wares, mainly amphorae LR 2, ARS and LRC fine ware forms, indicate that Corinth was still well integrated into a regional and interregional distributive and trading system (Hammond 2015: 445-453). Corinth, with two harbours, one to the West, at Lechaion, and Kenchreia on the Saronic Gulf opening towards the East, continued to be one of the main intersections in the Mediterranean network from the Late Antique through Byzantine times.

The evidence from Panaghia field is no exception and can be observed in the context of a flourishing building activity, which populated the Corinthian landscape in this period. The Later Roman bath at Panaghia is not itself unique, since baths with similar chronologies were built west of the Odeon (Biers 2003: 310; Corinth Excavation Notebook: 125 and 130). Additionally, the so-called Great Baths on the Lechaion Road (Biers 2003: 316; in the present publication Plan 3.1, no. 3) and other small baths in Kraneion area (Meleti 2013: 161-168) were still in use in this period. Furthermore, new basilicas were constructed during the course of the 5th and 6th centuries, such as the Lechaion Basilica (fPlan 3.1, no. 14), which was erected on the sandy shore of the inner basin of the Lechaion harbour, one of the main ports of Corinth (Sanders 2004: 184). The Kenchreian Gate (Kraneion) Basilica (Plan 3.1, no. 4) with associated cemetery (Manolessou 2009: 315), the 6th century basilica of Saint Kodratos (plan 3.1, no. 5) and the Skoutelas basilica (plan 3.1, no. 6) with a baptistery (Pallas 1960; 1990) and, finally, a martyrium or part of a baptistery, identified east of the Forum on the road to the Kraneion Basilica close to the amphitheatre (Sanders 2004: 185). All these new Christian structures document the economic vitality of Late Antique Corinth. Archaeological evidence, in fact, indicates that the Lechaion and Kenchreian Gate Basilica were still in use and were still part of the every-day life of the Corinthian community at least until the late 7th century (Sanders 2003a: 35).
The previously listed basilicas provide a hint of a more widely populated area during the course of the 6th and 7th centuries. Burials were organised in necropolises, established between the late 5th to 7th century, and these further document continuing occupation, indicating the extension of the settlement in the Late Antique period. Cemeteries are attested at the Asklepieion and the Christian cemetery at the Lerna Fountain (plan 3.1, no. 7) outside the Late Antique city wall north of the Forum (Roebuck 1951), at the Kenchreian Gate basilica (Pallas 1981; Meleti 2013: 161-168), the cemetery at the Kodratus Basilica (Meleti 2013), and towards the site of the Sanctuary of Demeter and Kore and the fountain of Hadjimustafa site (plan 3.1, no. 8 and 9). Moreover, recent excavations conducted by the 25th Ephorate of Byzantine Antiquities document the extension of the urban settlement, having brought to light dwellings and evidence of occupation in the western site of Zekio (plan 3.1, no. 10), north towards the site of Murat Aga (plan 3.1, no. 11) and south where a triconch fountain building has been discovered (plan 3.1, no. 12). Furthermore, farmstead and rural houses were located in the plain towards the Lechaion waterfront, such as the one excavated at Koutoumatsa (plan 3.1, no. 13), and other settlements dated to this period were settled along Lechaion and Kenchreai harbours (Athanasoulis 2013: 197-198).

When discussing the Late Antique and Early Byzantine topography of Ancient Corinth, seismic events should be considered since traditional historical reconstructions of the city take them into account. Although a sequence of catastrophic earthquakes is supposed to have heavily affected Corinth, none of the ancient written sources state that the city was devastated by any of these disastrous events, which took place from the 4th to the 6th century. This silence in the written sources is worth mentioning, as Corinth was the provincial capital and, therefore, it is conceivable to speculate that ancient authors would have recorded such devastating earthquakes. Additionally, no archaeological evidence can be associated with any of these seismic events. Due to all these reasons, Sanders speculates that Corinth was not heavily affected by the earthquakes in 365 and in 551/552, though he argues that the city possibly experienced a severe earthquake a few decades before the plague in the mid-6th century, as reported by Procopius (Procopius Bell. Goth 2.22-23; Dewing 1914. Anec. 18.41-44; Dewing 1935. De Aed. 4.2.24; Dewing & Downey 1940. Sanders 2004: 171). Furthermore, evidence of an earthquake dated to 524/525 has been
identified in the archaeological record, excavated in 2013 in Nezi field, south of the South Stoa (Sanders & Larson 2017).

Analysed in the context of a changing socio-economic society, the chronology of the Late Antique circuit walls together with date of the the graves in the Forum area and these earthquake deposits from Nezi field suggest that, during the course of the 6th century, the core of the socio-political and economic life may have moved elsewhere, but did not come to an end. Like documented in other urban centres related to the Byzantine worlds, such as in Naples (Arthur 2002) and in cities along the Adriatic costs, the civic centre shifted away from the Forum area (Curta 2016a: 102). According to the archaeological and historical evidence currently available, it is reasonable to hypothesize that in the case of Corinth the public buildings of the Forum lost their political and economic significance. Consequently, after probable damage by the mid-6th century earthquake, there would have been no reason to invest capital in restoring and renovating them when elsewhere in Corinth different buildings were by then acquiring social and political meaning. The archaeological evidence currently available might suggest that Late Antique Corinth experienced changes in its topography, evidenced by a fragmentation of the urban settlement, the significance of Roman public building coming to an end and the appearance of graves in these buildings. On the other hand, an increase in Christian building activity is documented and, in turn, the configuration of a civitas christiana, which was paired with intense construction activity as the elevation of new city walls testifies. This archaeological evidence might be contextualized within the economic, administrative and ideological transformation that took place during the course of the Late Antique period, in relation to changing socio-political identities, with the ecclesiastical and military elite now dominating the public political scene (Liebeschuetz 2001; McCormick 2001; Wickham 2005; Brogiolo 2011, Bintliff 2013a: 195). This different elite class managed the res publica outside of the traditional Roman institutions.

All these factors, together with the above-mentioned archaeological evidence, might suggest a picture of a Late Antique polycentric Corinth, which can also be defined as ‘città ad isole’ as Italian researchers describe the urban configuration of many Late Antique and Early Medieval cities in the Italian peninsula. During the course of the 6th and 7th centuries, even though the Forum ceased to gain political and economic value, Corinth continued to be a key, central place in the Byzantine Empire.
Some areas of the city deteriorated and became depopulated, whereas other zones were part of an urban topography with places of worship and of political and economic power, as documented by the variety of ceramic finds and by the architectural evidence.

What then happens in the course of the late 7th and 8th century? In terms of political status, Corinth continued to be an urban centre during the course of the so-called ‘Dark Ages’. Between 687 and 695 Corinth became the capital of the newly founded Theme of Hellas, which, around 786 and 788, was changed into the Theme of Peloponnesos. Corinth passed under the jurisdiction of the Patriarch of Constantinople, no longer under the authority of the Church of Rome (Avramea 1997: 36-37). However, until new excavations are carried out in diverse zones of ancient Corinth, graves are the only evidence that has been considered for the so-called ‘Dark Ages’ in the city. Burials have been identified in the area of the Roman urban core, such as in the Forum, Temple Hill and Temple C, together with graves located in the northern area of the city, like in the Asklepieion and Gymnasium areas, and, finally, other burials have been identified in diverse zones outside the urban settlement of Corinth. Altogether a total of 389 graves can be dated between the mid-7th to the 8th century (Kennedy 2016: 140). Burials in this period seem to follow a more chaotic deposition, even within the city walls; examples of this might include the case of Panaghia Field during the late 7th century and in the Forum area, where 8th century graves have been identified occasionally with Corinth-type buckles (Avramea 1997: 86-96, Sanders 2004: 183) and other graves with ceramics vessels and sometimes weapons and jewellery (Williams et al. 1974: no. 8; Williams & Fisher 1975: no. 2, pl. 57a; Robinson 1976: 222). The number of graves and their varied location within the topography of Corinth, along with doubt concerning the real entity of a ‘Slavic’ invasion (Anagnostakis & Kaldellis 2014), have been further investigated by the brilliant and systematic research on Late Antique mortuary costumes by Larkin Kennedy. The relation of archaeological data and contexts with stable isotopic ratios from human teeth sampled from these graves has enabled the identification of allochthonous individuals in Corinth. Her studies prove that a foreign presence was common through the history of Late Antique and Early Byzantine (6th to 8th century) Corinthian society, though in a way this refutes the historical reconstruction of an invasion, moving from a single region and heavily impacting the local community.
Migrants, from multiple geographic regions, such as possibly the Levantine coast, or the southern coast of Turkey and other unidentified areas, with diverse social status moved to Corinth and were incorporated into the social structure, as suggested by burial locations and typologies (Kennedy 2016).

This diverse picture of Corinth is supported by new excavations carried out by the Greek archaeological service, which have started shedding light on this period. Kodratos Basilica was probably still in use in this period, whereas, at Lechaion, a church was constructed within the apse of the Late Antique structure. The settlement located near this waterfront, together with the one at Kenchreai, continued to be inhabited, although at a reduced scale. Similarly, the two harbours and their infrastructures probably continued to function in this period. Also dwellings, probably inhabited in this period, have been identified at Murat Aga (plan 3.1, no. 11), Zekio (plan 3.1, no. 10) and Koutsoukomahals (plan 3.1, no. 15). A chapel erected at Lerna might be dated to the 8th - 9th centuries, and a three-sided apse on the hill of the temple of Apollo might be roughly contemporaneous. It is worth noting that these places have generally been dated on the basis of a range of criteria including architectural parameters, coins, buckles and other small finds, together with grave practices (Athanasoulis 2013: 200). No new ceramic evidence dated from the 8th and 9th centuries have been provided, therefore the amount of ceramic evidence dated to these centuries appears to be of limited quantities. Scholars have debated whether this limit might be due to the incomplete knowledge of the ceramics dated to this period, which, consequently would also restrict our understanding of the 8th and 9th centuries. It might be the case that pottery that has been considered as not datable or that has not been recognised as associated with the 'Dark Ages' has only started in recent years to be identified with the period in question (Russell 1986, Athanasoulis 2013: 200. On recent studies with dating and re-dating Dark Ages’ pottery: Poulou-Papadimitriou 2001; Armstrong 2006, 2009a; Vionis et al. 2009a, Vroom 2007, 2011, 2012, 2016 to mention some of the main studies on the topic). Additionally, another critical limitation might be that the archaeological work often focused on churches, monasteries and kastra for the Byzantine time. These sites can rarely provide evidence for everyday production and supply or trade and industry (Lightfoot 2002: 231; 2007: 271).

New ceramic evidence, found in Panaghia Field and Nezi Field and excavated by the American School of Classical Studies at Athens under Director G. D. Sanders,
will be presented in detail in Chapter 4. Located outside the traditional area of excavation, it may suggest a more complete picture of the socio-economic condition of ‘Dark Ages’ Ancient Corinth. The economic structure of this period, discernible from pottery and coin evidence in combination with other archaeological and textual sources, is presented in Chapter 6, along with an evaluation of the nature of their paucity and absence that might suggest a working hypothesis.

By the late 8th to early 9th centuries, the Byzantine empire was entering a period of political development, mainly determined by the military campaigns promoted by Nikephoros I against the Slavs in central Greece and the Peloponnese. The reorganization of the Themes of Hellas and Macedonia and the creation of the Themes of Kephalania and the Peloponnese belongs to this period (Zivkovic 1999: 141-155). Following the reintegration of the Peloponnese into the empire, Corinth became the thematic capital of the Peloponnese until the middle 11th century, when the two Themes of Hellas and Peloponnese were unified and Thebes was proclaimed the new capital (Bon 1951:141-155). Corinth was the centre of secular and religious power; it hosted the local government and housed officials, but it was also the seat of an archbishop, suggesting that a still-relevant metropolitan church should have existed in the polis (Sanders 2002: 649).

No substantial structural remains dated to the 9th and 10th century have been identified so far in Corinth. However, the numismatic evidence from this area and the absence of architecture have led some to argue that the former Forum might have functioned as *emporopanegyreis*, or as an open market, at this time (Penna 2002, Sanders 2002: 650). Corinth was an important city with a *kastron* and an archbishop, it hosted a military headquarters and it may have had little more than about 10,000 inhabitants in the 12th century (Sanders 2003b: 396). The wall circuit in the Middle Byzantine period has not been identified and no clear evidence of it has been discovered, though it has been hypothesized that the Late Antique walls were in use with modification in the later period, and that the *kastron* of Acrocorinth was independent from the city (Rogkou 2014: 233).

The city of Corinth became a major centre of artisanal production, such as of ceramics, and of highly skilled manufacturing, including silk production and agricultural production, which included olive oil, wine and raisins (Korkosis 1981: 236-237). The excavators of the Forum area have interpreted the material culture brought to light
here to be evidence of an intense industrial activity taking place by the end of the 11th century and continuing on throughout the 12th century. A series of domestic buildings, commercial structures and industrial complexes, which populate the former Forum area, have been dated to this period. However, some questions on the chronological reliability of this topographical reconstruction should be raised, since they were substantially based on Morgan's chronology (1942), which has been proved to be out-of-date. A first attempt to re-evaluate these chronologies has been carried out by G. D. Sanders, who has proposed a revised chronology on the basis of the reconstructed stratigraphy of some excavated area, together with the associated artefacts. Specifically, ceramics and glass have proved to be illuminating in this respect, since independent chronologies were suggested for identical finds from Italian excavations. For instance, the so called ‘Glass factory’, generally dated to the 12th century, was associated with the production of goblets and mould brown glass. Whitehouse has pointed out the similarity of the Corinthian glass finds with some types of Italian prounted beakers from Palazzo Vittelleschi excavations at Tarquinia (Central Italy), where they have been found in contexts with significant numbers of late 14th and early 15th century coins (Whitehouse 1991: 76-78). Moreover, Italian glass finds from other cities, such as Otranto and Brindisi in Apulia, Genoa in Liguria and Farfa in Lazio are very similar to the glass types found in the glass factory in Corinth, suggesting a date between the 13th and 14th century, and possibly early 15th century for the South Centre glass workshop excavated in the Forum area in Corinth (Whitehouse 1991; Sanders 2016). Therefore, a major project of restudy of the Byzantine pottery from this area would be desirable in order to clarify the chronology of the occupation, as well as the development of the topography of this area in the Byzantine and later periods.

Nevertheless, excavations from other zones of the city, together with literary sources, document how Corinth was a crucial point of the interregional trade networks in the Middle Byzantine period. In fact, in 1154 Corinth was described as ‘large and flourishing’ by the geographer Al-Idrīsī, who worked at the court of Roger of Sicily (Jaubert 1840: 122-126). Furthermore, in the late 12th century, Nicetas Khoniates recorded that Corinth was a wealthy town, an ‘emporion’, prosperous from trade with the two harbours of Lechaion and Kenchreia, and a core place for commercial activities. Anchored boats from Asia in one port and from Italy and Western Europe in the other here, demonstrate the contacts with both east and west (Nicetas Khoniates,
74-5; Dieten 1975, in Harvey 1989: 215; Sanders 2002: 651). These two sources may also permit one to speculate that the economy of the city of Corinth was not radically impacted by the siege of the Normans under Roger II of Sicily in 1145 (Athanasoulis 2013: 200).

Byzantine dwelling complexes of significant dimension, two-story and featuring central court, date to the Middle Byzantine period are located south and west of the Forum area (fig. 3.4; Sanders 2013, Ragkou 2013). Four bath complexes dated to the 11th and 12th centuries have been identified so far in Corinth (Sanders 1999: 473), whereas the major public, administrative and religious buildings of the Middle and Late Byzantine period have not been identified so far (Sanders 2002: 647; Athanasoulis 2013: 204).

Finally, it is worth mentioning that an important Venetian presence in Corinth is recorded by the end of 11th century, when Alexius I, in 1088, granted trading privileges to Venice that included no longer having to pay import and export taxes; it was renewed in 1126 and 1147 and eventually extended to other Italian state cities. The free trade concession has generally been considered to have fuelled the local
economy by increasing demand for trade goods, such as silk and olive oil from the entire Peloponnese. Scholars have depicted Corinth as a Venetian commercial centre: here, as in other regional centres, goods bought for exportation were stored by the Venetian merchants in warehouses built though the concession of further privileges (Scranton 1957: 50; Harvey 1989: 216; Laiou 2002b: 747-748; Sanders 2003a: 41).

The urban extension of the city was significant with the populated area reaching the waterfront. The previously mentioned sites of Koutsoukomahalas, Zekio and Mura Aga, have provided evidence of Middle and Late Byzantine occupation. Within the urban landscape, four churches have been identified in the Forum area that were also in use during this period, such as the single nave churches located on the hill of Apollo, dated to the 12th century, and in the area of the Roman bema, whose chronology is hypothesized to be around 10th -11th century. Moreover, a single-nave church, dated to the same period, with a three-sided apse was built in the Peirene Fountain. Finally, a Byzantine church was located below the crusader church of St. Johns. Outside the Forum area, a Middle Byzantine church was located in Zekio; the Kodratos Basilica was still in use during this period and the Kreneion Basilica had been renewed into a domed church. Furthermore, in Kenchreai the basilica was refurbished into a single nave church, whereas in the area of the apse and bema of the basilica of Leonides in Lechaion three churches were consecutively built in the Byzantine period, with the second of these three dated to the 11th century (Athanasoulis 2013: 204-205).

Important political changes took place in the Byzantine Empire after the capture of Constantinople in 1204 by crusaders. After the Franks gained control of Thessalonika and central Greece east of the Pindos Mountains, they proceeded with the conquest of the Peloponnese. Acrocorinth, the kastron dominating the Corinthian region, was besieged beginning in 1205 and was finally conquered in 1210, when Frankish domination was established in the region. Corinth became an essential garrison for Geoffrey de Villehardouin following its capture and it held the mint for the principality of Achaea (Scranton 1957: 84). Excavations do not attest levels of destruction of the city and there is no clear discontinuity in material culture with the coming of the Franks. The political change at Corinth following 1210 may have had little impact on trade and the city continued to gain importance in international commercial networks, with the seat of the Latin archbishop established in Corinth (Bon 1969: 473).
In contrast, a major change to the social-economic Corinthian identities took place in the late 13th century, particularly after the Treaty of Viterbo (1267), when the Peloponnese went under the Angevin authority and new commercial roots were set. In this respect, this research presents preliminary results on the 13th century unglazed ceramic evidence discussed in Chapter 4, showing and analysing how the cultural changes taking place during the course of the 13th century, which are reflected in the conclusions of this paper, were neither abrupt nor immediate.

3.3 Argos

The modern city of Argos, located 8 km away from the seashore, expands its urban settlement West of the Argolid plain and it also substantially overlays the topography of ancient and medieval city. The excavations of these ancient remains, mainly carried out by the École Française d’Athènes, brought to light the agora, the theatre and the Roman Odeon, the sanctuary of Apollo and Athena, the bath complex and sections of the classical city walls. These excavations have also encountered Late Antique and Byzantine aspects of the city of Argos (Aupert 1980a, 1980b, 1989; Piérart & Thalmann 1980). More evidence of the medieval city has been uncovered as new buildings were constructed in modern Argos, precipitating rescue excavations, which were carried out by the Ephorate of Byzantine Antiquities (Oikonomou-Laniado 2003).

The history of Late Antique and Byzantine Argos is framed on the basis of major historical events, which have generally been used by archaeologists to pin absolute chronologies to the ceramic evidence. For example, the ca. 585 terminus ante quem for the pottery assemblage from the bath complex is based on the well-known Slavic invasion, which left both the cities of Corinth and Argos devastated. Recent studies on Late Antique ceramics suggest a later chronology for the Argive material, proposing that it should be extended to the 7th century (Slane and Sanders 2005: 294). Therefore, numerous scholars have advocated a re-examination of the Late Antique and Early Byzantine material found in Argos in order to establish a diverse chronology and picture of the city, including when it was in the so called ‘Dark Ages’. The city of Argos continued to be a relevant, central location in the Middle and Late Byzantine period. In De thematibus, a 10th century document composed by Constantine Porphyrogennetos, Argos is mentioned among the major centres of the Peloponnese;
it continued to be referenced as such during the 13th century, as recorded by the geographer Al-Idrisi (Bon 1951: 89, 156—-158 in Sanders 2003b: 396 and Vassiliou 2013: 217). Moreover, because of its location, Argos was the seat of the bishopric, under the metropolitan city of Corinth (Konti 2002); Corinth was also the capital of the Theme of the Peloponnese to which Argos belonged until the 11th century when Thebes became the capital city of the Theme of Greece.

Plan 3.5. Argos with location of ancient and Byzantine monuments and plots where rescue excavations have been conducted by the Greek Archaeological Service (Vassiliou 2013: 218).
The ancient and Roman street network of the Byzantine city was partially kept in use, together with the circuit wall. Byzantine basilicas and associated cemeteries have been identified by several excavations that were carried out by the Greek Archaeological service within the urban centre, as well as on the Hill of Prophetis Elias (Oikonomou-Laniado 2003; Vassiliou 2013: 219). Such lively construction activity is also evidenced by the imposing architecture of the Middle Byzantine face of the Castle of Larissa (Andrews 2006: 107-115) and proved by the large variety and quantity of artefacts and coins. Middle and Late Byzantine Argos was well-connected within the Mediterranean trading network and the community was involved in lively economic activity, as documented by the locally produced glazed ceramics and by the relevant amount of imported artefacts, which experienced an important boom during the course of the 13th century (Vassiliou 2014, Vassiliou in press).

From 1212, when Geoffrey I Villehardouin, who had conquered Argos and Nauplion in 1212, granted these territories to the Duke of Athens, Otto de la Roche, they remained under Frankish control until 1388 (Vassiliou 2013). The change of political authority does not seem to have severely affected the socio-economic status of the city. The Castle of Larissa underwent renovation and the material culture from excavations led by the Greek Archaeological Service have identified artisanal site productions and relevant imports of Italian glazed wares, such as Proto and Later Archaic Maiolica, Lead-Glazed Ware and Roulette Ware, which prove the presence of wealthy households in this period (Oikonomou-Laniado 1993).

3.4 Sparta

Sparta, the capital of the district of Laconia and located in the Evrotas valley, was under the authority of the Theme of Hellas. Excavations by the American School of Classical Studies at Athens commenced in 1893 with a major focus on the Heroon (Walastein & Meader 1893). However, in 1906 the excavation directorship was passed to The British School, which turned its research interests towards excavating the Roman Stoa, the theatre and the bath complex; these loci remained their focus until 1910 and then again from 1925 to 1928 (Bosanquet 1905/1906b; Wace 1905/1906a, b; a list of the publications of Woodward and Hobling excavation seasons in Lewis 1975).
Between 1906 and 1910 the sanctuary of Artemis Orthia at Sparta was also an object of excavations (Bosanquet 1905/1906a; Dawkins 1929; Wace 1905/1906c). However, this project was interrupted after a short while, only to be resumed in 1988 with a major focus on the Roman phases of occupation of the Acropolis. Additionally, rescue excavations have been carried out in various areas of Sparta and its neighbourhood under the supervision of the 5th Ephorate of Byzantine Antiquities.

Settlement continued on the ancient location of the polis of Sparta throughout the Early and Middle Byzantine periods. Historical sources already portray a deserted city of Sparta through the late 6th and 8th centuries, devastated by earthquake, epidemics and invasions (Armstrong 2002: 350-352). This traditional historiographic reconstruction of the city relies on the Chronicle of Monemvasia, which narrates the invasion of Sparta by the Slavic tribal and nomadic groups, causing the emigration of the inhabitants towards the eastern cost of Laconia, to Mount Parnon, or to Sicily (Bon 1951: 31-64). Excavations in the orchestra of the theatre, carried out by Professors Wilkes and Waywell, have uncovered a relevant stratigraphic sequence dated from the 8th to the 10th century, which reveals continuity of the Byzantine socio-cultural tradition coexisting with Slavic cultural presence, probably leading to a protracted process of Hellenisation of the Slavs. Therefore, this archaeological evidence suggests a more articulated socio-economic structure of Early Byzantine Sparta, since the city retained the title of bishopric of Lacedaimon during the course of the ecumenical council of 680/681 (Sanders 1995: 455-457). However, other scholars speculate that, whether or not this archaeological evidence documents some level of occupation and whether or not the Chronicle should not be taken literally ‘there was not enough population to support a basic level of civic structures’ (Armstrong 2002: 351). The presence of Slavic communities is reported well into the 10th century in the areas near Sparta and Helos in a passage of the De Administrando Imperio by Constantine Porphyrogenitus. In this passage he describes how the Slavic communities were confined to the slopes of the Taigetus mountain after the reconquest by Nikephoros I. This further supports, together with the archaeological evidence, the hypothesis that Greek and Slavic communities coexisted in the Spartan plain (De Administrando Imperio: 50.13-21; Moravcsik & Jenkins 1967; Sanders 1995a).

Information on the 9th to 11th century socio-political history of Sparta is scant, after the reestablishment of the Byzantine authority under the emperor Nikephoros I,
who promoted the migration of landowners’ families from Asia Minor, probably to constrain their political and economic power (Armstrong 2002: 353). The Vita of Nikon, Sparta’s patron saint, who lived in the second half of 10th century, is recognised as the main source on Sparta in this time. However, as pointed out by Armstrong, the Vita appears to portray the mid-12th century Sparta contemporary with the time in which it was composed (Armstrong: 2009: 317).

Economic expansion characterizes 12th century Sparta. Archaeological excavations have brought to light sections of diverse neighbourhoods, which, combined with literary sources, can frame some aspects of the urban landscape of Byzantine Sparta in this period. Recent research projects carried out by The British School at Athens and by the 5th Ephorate of Byzantine Antiquities at Sparta have been investigating the three-aisled basilica with a triconch sanctuary on the eastern hill of the acropolis, known as the Osios Nikon church. The researchers have identified a Middle Byzantine phase of this complex, and associated buildings, dated to the 11th century (Sweetman & Katsara 2002; Katsara 2009, Sweetman 2009).

Located circa 1 km southwest of the acropolis, in the modern village of Magoula, rescue excavations conducted by the 5th Ephoreia of Byzantine Antiquities of Sparta have uncovered a cemetery, which, according to coin evidence found in two graves, has been dated to be in use during the 11th and 12th centuries (Vassi 1993). However, ceramic evidence found in a pit stratigraphically associated with the graves might suggest an even later use of this area, perhaps until the second/third quarter of the 13th century.

A market area was located on the southern slopes of the acropolis, defined by a two-story colonnade. Moving south, where the Roman theatre is located, excavations in the cavea area have revealed Byzantine dwellings, with evidence for artisanal activity in the Middle Byzantine period. Further domestic buildings have been brought to light in the stadium area (Sanders 1995a; Armstrong 2009b: 318). South of the acropolis area, Middle Byzantine buildings have been recently identified, among which - it is worth mentioning – is a cross-in-square type church, dated to the 11th century, and an almost complete bath complex, dated between 1100-1260 AD. A few dozen meters away (in the same city block no. 127, fig. 3.2, no. 4) an almost intact olive press, with associated buildings, is located and was dated by the excavators to between the 10th to the 12th centuries (Bakourou 2009). It is worth mentioning that
another stone olive press has been found in the nearby area, but without any connected structures (Stavrakos 2010: 139). Moreover, the importance of olive oil production is testified in the *Vita of Nikos*, in which the olive press is described as located in the centre of the city of Sparta (Armstrong 2007: 325-6). Moving east, in the adjacent city plot (no. 126; fig. 3.2, no. 5), the Greek Archaeological Service has uncovered a triconchos church and cemetery complex constructed, according to the excavators, around the 10th century, and kept in use until the 13th century, when burials were also placed in the area around the building (Bakorou 2009: 303-306).

This archaeological evidence provides clear indications of a Byzantine Sparta, rich in public and private buildings, which hints at a florid economic situation. Ceramic data appears to reflect a similar trend. Even though kiln sites have not been identified so far, by examining the ceramic fabrics together with evidence of kilns wastes, it is reasonable to hypothesize relevant Laconian production in the Byzantine period. Moreover, this lively economic status of the city is documented, specifically during the course of the 12th and 13th century, by a significant quantity of imported ceramic goods (Sanders 1993).

Furthermore, historical sources provide further hints as to the wealthy status of Sparta. The geographer Al-Idrīsī, who visited the city in the second quarter of the 12th century, documents the prosperity of Sparta, which was of considerable size (Al-Idrīsī, Jaubert 1840: 125 in Armstrong 2009b: 318). An economic prosperity which is also noted a century later in a description of the circuit wall and its towers in the French version of the *Chronicle of the Morea* (Schmitt 1904: 1. 2055-6 in Armstrong 2009b: 318). Additionally, local manufacturing, like the silk production in Sparta, reached high standards, according to the *Vita of Nikos*, which had a substantial impact on Laconian trade exports (Stavrakos 2010: 141).

Moreover, olive oil production was of considerably high scale. Venetian merchants, who probably even established a Venetian quarter in Sparta, boosted the commercialisation of Laconian olive oil, particularly after the emperor Alexios Komnenos’ trading concession in 1082 to the Italian maritime republics (Kordodes 1983: 109-110; Armstrong 2009b; Stavrakos 2010: 141-142). This high quality manufacturing and intensive production, along with the presence of skilled labours as the written sources also document, attest to a wealthy and established economic situation in the Middle Byzantine period (Armstrong 2009b: 318).
This state of affairs did not come to a drastic end with the Frankish conquest of the Peloponnese and the passage of Sparta under the authority of the Principality of Achaia. However, the Frankish conquest lasted until 1262, when Laconia was reconquered with the creation of the Byzantine Despotate of Moreas. Sparta probably started a slow decline during the course of the 13th century, after the foundation of the castle of Mystras in 1238, which became the new seat of the administration for the entire Byzantine controlled Peloponnese. The establishment of a settlement outside the city walls caused the economic and political affairs, which once took place in the valley of Laconia, to, instead, take place on the slopes below the castle. The shift of the bishopric in 1278 from Sparta to Mystras is indicative of how, by the last quarter of the 13th century, the political and economic core of Laconia was in Mystras and how Sparta was no longer involved into major socio-economic affairs.
Figure 3.2. Map of Sparta showing sites mentioned in the text.
4 TYPOLOGY AND CHRONOLOGY OF UNGLAZED BYZANTINE CERAMICS

4.1 Introduction

The current chapter aims to present a first attempt at a chrono-typology of unglazed utilitarian vessels from the 8th to the 13th centuries. Several wares, differentiated by fabric, technological characteristic, surface treatment and function, are included within this broad category16.

Firstly, ceramics have been grouped by technological characteristic, such as by main features of fabric characterization and by manufacturing techniques. Following this, the ceramics are given an identification and division based upon form, relevant for identifying the different functions of the wares within the diverse ceramic assemblages, which are analysed in the following chapter. After being separated according to form, the ceramics are then further divided by type, for which they are given a corresponding number, based on morphologic characteristics that are generally defined as base, body and rim profile or shape, rim diameter, or diameter – height proportion. Decoration is considered here as a further parameter for defining a type, since it is indicative of a specific step within the chaîne opératoire (Cortese 2005: 327).

Subtypes, expressed by letters next to the type number, are intended to identify subcategories within a type. Subtypes are generally related to morphologic parameters, such as the shape details of a vase, which are interpreted here as distinctive and peculiar steps in the manufacturing process.

The material is not presented per pottery assemblage from single stratigraphic units, since one of the goals was to present the transformation through time of the utilitarian vessels in the Byzantine period within the local industry.

The terminology adopted here, as explained in detail in Chapter 2, Paragraph 3, for designating the different shapes is mainly based on English and Greek nomenclature, both of which are widely used in publications of Byzantine ceramics (MacKay 1967; Bakirtzis 1989a, 2003; Sanders 1987, 1993, 1995b; Vroom 2005; Vionis 2009).

16 All pots presented in this catalogue have been illustrated. The drawings of all vessels have been numbered according to the catalogue numbering system.
4.2 The ‘Dark Ages’ ceramic evidence

The material evidence presented here, dated to the 8th through the 9th centuries, was discovered during the course of recent excavations carried out in the area southeast of the Roman Forum, called Panaghia Field, and south of the South Stoa, in Nezi Field. It is still uncertain if these areas were located within the boundaries of the Late Antique city walls, since the limits of the wall’s western sections are still debated. Further ceramics presented here and dated to this period have been found in funerary contexts in the Forum area.

Excavations in Panaghia field revealed a small bath and the so-called Long Building, which was constructed around the mid-6th century. A series of deposits, located in an outer space between these two buildings and interpreted as a series of dump fills, include a deep stratum of broken mortar. Altogether, they appear to document the demolition of cement and spolia walls from these two buildings, which is clearly identifiable in the stratigraphy. Their chronology ranges between the 8th and 9th centuries, indicating when the two buildings completely went out of usage and were finally dismantled (Sanders 1999: 460-463; Slane & Sanders 2005: 246). The destruction activity is also dated by a copper octagonal clip coin of the Abbasid Mint, dated to the second half of the 8th century or the 1st quarter of the 9th century. This coin was found in the demolished debris, providing a terminus ante quem for the chronology of the contexts overlaid by this demolition context (Corinth Excavations: Coin 1995-377).

Further ceramic evidence with similar chronology comes from the area south of the South Stoa, named Nezi Field, where Byzantine and Frankish buildings have been identified south of the Byzantine house complex that was discovered by H. Robinson in the 1960s (1962, 1976). Here, further excavations have been carried out since 2007 by Sanders, exploring evidence of activities dated to the 8th and 9th centuries. Fragmentary preserved structures suggest the existence of a room that was occupied during this period, which was possibly constructed with mud bricks on a stone foundation and a roof made from tiles. Collapse debris and dump fill deposits are suggested by what appears to be an intentional dump of tile fragments discarded.
among those that were probably collected and reused (Context 886, Notebook 1106). These levels have revealed a high quantity of imported cooking ware, with distinctive micaceous fabrics, and imported globular amphorae. The later occupation of this area, with the Byzantine house complex, has heavily impacted on the stratification, rendering little of it visible in the archaeological record dated to this period.

It is worth pointing out that all these contexts present significant quantities of residual Late Antique pottery among the sherds, such as Late Roman red slip wares and amphorae. A similar pattern has been observed in diverse pottery assemblages with similar chronology, but excavated in different geographic zones, such as in the Crypta Balbi (Cipriano et al. 1991), Gortyn (with specific reference to table ware Zanini & Costa 2012). These patterns, for instance, have suggested that the high quantity of Late Roman red slip ware, found as a residual element in the pottery assemblage, dated to the 6th – 8th century, might be interpreted as a phenomenon of longer usage for this variety of table ware during the course of the Late Antiquity. Moreover, in the case of utilitarian vessels, diverse case studies have documented the common practice in Late Antiquity of reusing amphorae, as in the case of the reuse of spatheia for a pipeline and for storing diverse types of foods and liquids, as documented by residual analysis (Camporeale et al. 2009; Pecci et al. 2010; Zanini 2009, 2010; Vroom 2016). This interpretation might be one possible explanation for the high degree of residuality found in the Early Byzantine contexts under investigation in this research.

However, the matrix composition of these stratigraphic units may also suggest another hypothesis for this phenomenon, which could be combined with the one previously discussed. These deposits are rich in construction debris, such as roof tiles, fragmentary squared bricks, worked stones and few fragments of marble revetments. Furthermore, considering the stratigraphic sequence, excavators have interpreted these deposits as related to the dismantling operation of the bath complex (Sanders 1999: 463). Consequently, the origin of this material, as well as this specific human activity, could explain this high residuality.

None of the 8th and 9th century contexts analysed in the present study included coins and it was impossible to apply independent scientific methods of chronology due to practicalities of the research constraints. At the current state of research

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17 Please refer to Appendix A for a detailed description of these contexts, their relation to the stratigraphic sequence.
presented in this thesis, chronology has been developed on the basis of the stratigraphic sequence, which has been used to establish a relative chronology, with a quantification of the associated finds. Finally, the absolute chronology here presented is supported by comparative vessels identified in a number of published excavations, which have been referenced in the catalogue entries as comparative examples.

**Imported Fine Ware**

1. (Lot 1999-22-01) Red matt painted bowl

   H. p. 0.019, diam. foot 0.10. Unknown provenance. Very fine, medium-hard fabric, yellow in colour (10 YR 7/6) with a reddish yellow core (7.5 YR 6/6). Rare, fine, sparkling inclusions; rare, medium, sub-rounded white inclusions. Rare, elongate voids. Conchoidal break.

   Disc with torus, ring foot, straight outwardly flaring body. Burnished inner surface, decorated with reddish yellow (5 YR 6/6) matt painted geometric motives. Wheel made.

   This fragment of red matt painted bowl, which, so far, has no comparanda from the 8th century contexts from Corinth, shares similarities with another painted bowl from the same excavation area, although that one has a suggested date of the mid-6th century and a hypothetical Cretan provenance (Hammond 2015: no. 150). Furthermore, this bowl bears a similarity to other unpublished fragments from 7th century contexts (Sanders in Poulou-Papadimitriou 2001: 237, note 29). While it is possible that the piece under investigation could be residual in this deposit, the hypothesis that it may be a primary deposition should not be completely discarded. Moreover, whether similarities are evident in term of shape with the other Corinthian example, differences in manufacturing and decoration patterns might suggest a different chronology or provenance. One possible interpretation for this bowl is the so-called *ceramica sovradipinta* from Gortyn (Vitale 2008), and also from Pseira (Poulou-Papadimitriou 2011: 388), which has been dated to between the 6th century and the 8th century. It is worth noting that other centres, such as Egypt and Southern Palestine, were producing similar ware in an almost contemporary range of time (Hayes 1972: 413). Moreover, it might be possible to exclude any association with the
so-called Central Greek Painted Ware (Hayes 1972: 413), even though it has been documented in the Peloponnesian centre of Argos (Aupert 1980b: 420, 454-455, nos. 159-161, fig. 37). The fabric macroscopic examination of the Corinthian 6th century example by Hammond (2015: 147, 270) appears to exclude any fabric similarities between the Corinthian finds and the Central Greek matt painted production.

**Imported Coarse Ware**

2. (Lot 1998-10-3) Globular amphora
   Cf. Hayes 2003: 505-506, no. 341, fig. 32.
   H. p. 0.103, diam. rim 0.12. Reddish yellow (7.5 YR 6/6), medium-hard fabric, with rare (0.25-0.5 mm) gold sparkling (mica?) inclusions; rare (0.25-1.5 mm) rounded-spherical, white (lime?) inclusions; irregularly shaped voids; smooth break, smoothed finish.
   Amphora with conical neck, vertical rim, outwardly and inwardly thickened, outwardly sloping lip. Strap handle from mid-neck.

3. (Lot-1998-11-2) Globular Amphora, Late Roman 2 descendent
   Cf. Hayes 1992, fig. 57, no. 43.
   H. p. 0.057, diam. rim 0.08. Reddish yellow (7.5 YR 7/6), medium-hard fabric, with rare (0.25-0.5 mm) gold sparkling (mica?) inclusions; rare (0.25-0.50 mm) subrounded-spherical, dark-red inclusions; rare, rounded voids, smooth break.
   Amphora with slightly cylindrical neck, flaring rim, with concave inner profile and squared lip. Vertical, sloping, handle attached below lip.

4. (Lot-2012-45-2) Globular Amphora
   H. p. 0.061, diam. rim 0.06. Reddish yellow (5 YR 6/6), medium hard fabric, with few (0.25-0.50 mm) subrounded-spherical white (lime?) inclusions, rare (<0.25 mm), gold, sparkling (mica?) inclusions, few (0.25-1.50 mm) smooth, spherical voids, conchoidal break.
   Amphora with conical neck, flaring thickened rim with tapered lip. Strap handle from neck.
5. (Lot-2012-45-1) Globular Amphora, LR 2 derivative (photo: plate no. 1)

Cf. Sanders 1995a, amphora no. 6.

H. p. 0.184, diam. rim 0.07, w. 0.864. Reddish yellow (10 YR 6/6), medium-hard fabric, with few (0.25-1.5 mm) subrounded-spherical, white, inclusions, rare subrounded-tabular red inclusions; rare (0.25-0.50 mm) black, rounded-spherical inclusions; rare irregularly shaped voids; conchoidal break. Southern Argolid fabric?

Amphora with ovoid body, conical neck curving up to flaring rim with deep concave profile. Wheel-ridged body. Strap handle from shoulder to upper neck.

6. (Lot-1998-12-1) Globular Amphora

H. p. 0.116, diam. rim 0.12. Hard, reddish yellow (5 YR 6/6) fabric, with rare (0.25-0.50 mm) rounded, gold sparkling (mica?) inclusions; rare (0.25-1.5 mm) rounded-tabular red inclusions; rare (0.25-0.50) subrounded-platy black inclusions; rare (0.25-1.5 mm), white-opaque, subrounded-tabular inclusions; irregularly shaped voids, smooth break.

Amphora with cylindrical neck, outwardly thickened rim, rounded lip. Vertical handle, oval in section, from mid neck, wheel-ridged neck.

7. (Lot-1998-12-4) Globular Amphora


Amphora with conical neck, slightly outwardly thickened rim, rounded lip. Strap handle from neck.

The types of imported amphorae found in Corinth may be ascribed to the wide and extremely heterogeneous group of the so-called globular amphorae, which have been documented in Constantinople (Hayes 1992: 62, 172, 177), Paphos, Cyprus (Hayes 2003), Crete (Poulou-Papadimitriou 2011), Kos (Didioumi 2014: 177, 180), Melos and Sparta (Sanders 1995a), Beotia (Vroom 2003: 220), Butrint, Albania (Vroom 2012), Northern Adriatic region in Italy (Negrelli 2012), Rome (Sangui et al. 1997), and in Southern Italy, such as in Naples (Arthur 1993a: 231-244), Otranto (Arthur & Patterson 1998: 516-521, 526-528), Salento (Arthur & Leo Imperiale 2015: 39), and Sicily (Ardizzone Lo Bue 2012: 39-49). Produced in diverse centres in the
Mediterranean during the late 7th, 8th and 9th centuries (Vroom 2016: 172), the very scant Corinthian evidence dated to 8th and 9th century appears to be associated and connected with this interregional production.

Amphora nos. 6 and 7, distinguished by a vertical neck and a rounded, slightly flaring rim, might possibly be considered descendants of the Late Roman amphora 2, assigned to the globular amphora variety. The presence of a second handle in these instances is hypothetical. Nevertheless, shape similarities, and possibly also similarities in fabric, have been speculated here with the southern Apulian types (Leo Imperiale 2015: 428, plate no. 1.4).

Local Coarse Ware

   H. p. 0.301, diam. rim 0.084, max. diam. 0.287. Fabric 1, pale yellow (2.5 YR 8/3). Amphora with ovoid body, conical neck, flaring rim with slightly concave inner profile and flat lip. Two vertical handles, oval in section, from shoulder to upper neck. Wheel-ridged body.

9. (Lot-1999-59-1) Early Byzantine Amphora
   H. p. 0.047, diam. rim 0.11. Fabric 4, pale yellow (2.5 YR 8/3). Amphora with conical neck, outwardly and inwardly thickened rim, with rounded lip. Three grooves around mid-neck. Wheel-ridged non-joining body fragments.

10. (Lot 1998-10-4) Early Byzantine Amphora
   H. p. 0.088, diam. rim 0.13, w. 0.01. Fabric 1, light brown (7.5 YR 6/4). Amphora with conical neck, rounded lip. Strap handle below lip.

11. (Lot-1998-11-7) Early Byzantine Amphora
    Chert and quartz fabric, reddish yellow (5YR 6/6).

18 Please refer to Appendix B for a detailed fabric description of local fabrics.
Amphora with ovoid body, sloping shoulder to cylindrical neck, slightly flaring, thickened rim with rounded lip. Strap handle from lower shoulder to neck. Pared surface, wheel-made.

12. (Lot-1999-22-4) Early Byzantine Amphora

H. p. 0.117, diam. rim 0.12. Chert and quartz fabric, reddish yellow (5YR 6/6).

Amphora with ovoid body, cylindrical neck, straight outwardly flaring rim with slightly concave inner profile, rounded lip. Strap handle from neck to max. diam. Wheel-made.


H. 0.192, diam. base 0.12, diam. rim 0.083. Fabric 2, reddish yellow (5 YR 7/6).

Jug with flat base, almost globular body, slightly flaring neck, rounded lip. Vertical handle, oval in section, from max. diam. to lip. Wheel-ridged lower body. Hand-smoothed upper body.


H. 0.23, diam. base 0.125, max. diam. lip 0.106. Fabric 2, reddish yellow, between 7.5 YR 7/4 and 5 YR 7/6

Jug with flat base, almost spherical body, conical neck flaring to trefoil rim with rounded lip. Strap handle, with shallow central spine, from shoulder to neck. Wheel-ridged body.

Amphora no. 8 appears to be one of the very few cases of local production of the amphora Late Roman 2 derivative, which, in this instance, particularly resembles the late southern Argolid amphora type. This amphora is a case of enchytrismòs, an infant grave. The possible secondary reuse of this amphora suggests the hypothesis that this container may once have been filled with wine, as is generally the case with Gaza amphorae reused for infant burials excavated in Corinth (Kennedy 2016).

Amphora no. 9, in a similar fabric and with a handle attachment, was probably characterized by a wheel-ridged body, as suggested by the numerous non-joining
body fragments found in the same context. This is a feature characteristic of the later Corinthian Byzantine amphorae.

Finally, amphorae nos. 10, 11 and 12, possibly table amphorae designed to imitate the Late Roman amphora 2 derivation, are characterized by a cylindrical neck and a flaring, rounded rim and were made in the local cooking fabric. The use of gritty, local cooking fabric for the production of amphorae is a phenomenon widely documented in Corinth during the course of the 6th and particularly 7th century (Slane & Sanders 2005: 287).

**Imported Cooking Ware**

15. (C-1998-21) Flanged, flaring rim stewpot (photo: plate no. 1).

H. p. 0.14, diam. rim 0.157, max. diam. 0.173. Dark reddish gray (2.5 YR 4/1), to reddish brown (5 YR 5/4), hard, fabric with few (0.25-0.5 mm) subrounded-spherical, gold sparkling inclusions; few (0.25-1.5 mm) rounded-angular white inclusions; few (0.25-0.5 mm) angular-spherical, dark grey inclusions; think elongate voids, hackly break.

Stewpot with almost spherical body, flaring rim outwardly rolled, offsite by deep concave inner profile, probably to host lid. Two strap handles, with shallow central spine, from max. diam. to above the lip. Wheel-ridged body to max. diam.

16. (Lot-1998-11-5)

H. p. 0.179, diam. rim 0.20 (very uneven). Hard, light brown (7.5 YR 6/4) hard, few gold (0.5-1.5 mm) sparkling, spherical-angular inclusions; frequent (0.5-1.5 mm) sub-rounded-spherical, white inclusions; few (0.25-0.50) subrounded-spherical inclusions; abundant, irregularly shaped voids., granular break.

Stewpot with round bottom, ovoid body, max. diam. below median, inwardly sloping shoulder curving up to flaring rim, squared lip. Wide strap handle from max. diam. to below rim. Wheel-ridged body.

17. (Lot 1998-11-4) Straight, flaring rim stewpot

H. p. 0.043, diam. rim 0.13. Fabric as pot no. 16.
Stewpot with almost vertical shoulder to flaring rim, concave inner profile and squared lip. Strap handle attached below lip. This pot appears to resemble the so-called Late Roman micaceous Aegean Ware, dated to the 5th and 6th centuries, with caterinated, globular body, pronouncedly wheel ridged and everted rim (Slane & Sanders 2005: 255, Sanders 1999: 463, 469, no. 17).

18. (C-1999-57) Stewpot with straight, slightly flaring rim (photo: plate no. 1).
H. 0.168, diam. rim 0.145. Very dark gray (7.5 YR 3/1), medium hard fabric with few (0.5 – 1.5 mm) gold, subrounded spherical sparkling inclusions; frequent (0.50-1-50 mm) angular-spherical white inclusions, common irregularly shaped voids, granular break.
Stewpot with round bottom, almost spherical body, curving sharply up to vertical rim with rounded lip. Strap handle from max. diam. to upper shoulder. Grooved two-thirds of body. Wheel-made.

19. (Lot-1999-29-1) Straight, flaring rim stewpot
H. p. 0.104, diam. rim 0.21. Fabric as vessel no. 18.
Stewpot with globular curving up to straight, flaring rim with squared lip. Wheel-ridged upper body. Strap handle from max. diam. to upper shoulder and lower rim. Wheel-made.

20. (C-1998-22) Flaring, tapered rim stewpot (photo: plate no. 1).
H. p. 0.121, diam. rim 0.18, max. diam. 0.21. Reddish-yellow (7.5 YR 6/6), hard fabric with frequent (0.5-1.5 mm) rounded-spherical gold (mica?) inclusions; frequent (0.5-1.5) black subrounded-spherical inclusions; few (0.25-1.5) subrounded-spherical, white inclusions; common rounded voids, hackly break.
Stewpot with almost spherical body, straight, flaring rim with tapered lip. Handle from max. diam. to shoulder.

21. (Lot 1998-10-1) Flaring, tapered rim stewpot
H. p. 0.091, diam. rim 0.22, thickness just below rim 0.006. Fabric as pot no. 16.
Stewpot with convex lower body curving up to straight upper body; flaring rim with tapered lip. Slightly wheel-ridged body. Wheel-made.
22. (Lot-1999-59-2) Flaring, tapered rim stewpot
   H. p. 0.026, diam. rim 0.165. Fabric as vessel no. 16.
   Stewpot with straight, flaring rim, tapered lip. Hand-smoothed surface.

23. (Lot-1999-42-03) Flaring, tapered rim stewpot
   H. p. 0.031, diam. rim 0.13. Fabric as vessel no. 16.
   Handle missing. Stewpot with sloping shoulder, straight, slightly outwardly
   flaring rim with tapered lip. Wheel made.

24. (Lot-1999-22-02) Flaring, tapered rim stewpot (photo: plate no.1)
   H. p. 0.122, diam. rim 0.16. Fabric as vessel no. 16.
   Stewpot with ovoid body curving up to straight flaring rim, with inwardly
   bevelled lip. Vertical handle from lip to max. diam. Wheel-ridged body. Wheel-
   made.

25. (Lot 1998-11-8) Stewpot with almost vertical, tapered rim
   H. p. 0.054, diam. rim 0.15. Fabric as vessel no. 18.
   Stewpot with sloping shoulder curving sharply up to vertical rim, inwardly
   thickened, inwardly bevelled lip with slightly concave profile. Shallow, wide
   groove below rim on exterior. Unevenly hand-smoothed outer surface, to erase
   wheel-ridged surface, which is unevenly still visible.

26. (Lot-2012-45-6) Concave, flaring rim stewpot (photo plate 1)
   H. p. 0.95, diam. rim 0.14. Reddish brown (5 YR 4/4) hard fabric, with frequent
   (0.25-0.50) subrounded-spherical silver sparkling inclusions; few (0.50-1.50 mm)
   white, rounded-spherical white inclusions, few (0.25-1.50 mm) angular-spherical
   black inclusions; irregularly shaped voids conchoidal break.
   Stewpot with almost spherical body. Flaring rim with concave profile, founded
   lip. Strap handles, from max. diam. to rim.
27. (Lot-1999-42-1) Concave thickened rim stewpot

Single fragment preserves one-tenth of body, one-fifth or rim. Missing base and handle.

H. p. 0.045, diam. rim 0.15. Fabric as vessel no. 26, outer section: 7.5 YR 4/1 (dark gray), outer section 5 YR (5/6).

Stewpot with round shoulder curving up to vertical rim, inwardly thickened with deep concave inner profile. Wheel-made.

28. (Lot-1998-28-2) Concave thickened rim stewpot

Single fragment preserves one-twelfth of body, one-sixth of rim. Missing base and handles. Fired-blackened patches on body and rim.

H. p. 0.071, diam. rim 0.17, wt. 0.056. Fabric as vessel no. 26.

Stewpot with round shoulder curving sharply up to vertical collar rim, inwardly thickened, concave inner profile, inwardly sloping lip. Single groove around rim on exterior, just below lip. Wheel-made. Pared outer surface.

All these imported cooking vessels are similar in shape, with an almost spherical body and two handles. The vessels with flaring, tapered rims and characterized by a gold micaceous fabric (nos. 20 to 24) can be ascribed to the brown micaceous ware as defined by Hayes, specifically to the so-called ‘baggy two-handle cooking pot’ type. In deposits 30, 32-35 and 50 of Saraçhane excavations there are cooking pots similar to those presented here, supporting the suggested chronology (Hayes 1992). Cooking pots nos. 22 and 23 have further comparanda from the ‘Saranda Kolones’ Castle site at the Paphos excavations (Hayes 2003: 502, no. 327). Moreover, I could personally identify similar flaring, tapered cooking pots in Naxos (unpublished material, pottery from ‘Unlocking Historic Landscapes in the Eastern Mediterranean project’, directors Prof. S. Turner and Prof. J. Crow). However, in this last instance, the fabric, according to a macroscopic analysis, does not appear to be similar to the Corinthian examples, but rather may indicate possible local production.

Among the group of vessels with the gold, sparkling inclusion fabric, cooking pot no. 16 appears to be similar to the cooking vessels identified in the Byzantine emporio on Chios (Balance et al. 1989: 114, no. 284). Moreover, this shape has been documented in Constantinople (Hayes 1992: 55-57) as well as on the Bozburun shipwreck (Hocker et al. 1998a: 14-15, fig. 6), all of which suggest a date between the
8th and 9th centuries. This type of cooking pot appears have been widely exported, since it has also been attested in diverse sites around the Mediterranean, from Southern France to Northern Africa, Cyprus, and Western Turkey. Probably to the gold micaceous cooking pot type can be ascribed also some examples from the 8th century contexts excavated in the Crypta Balbi (Sagui et al. 1997: 46-47, no. 19). Probably also some examples from Vibo Valentia, in Calabria, might be ascribed to this type, as well (Cuteri et al. 2014: 74, fig. 4), However, the identification cannot be secure since a detailed description of the fabrics of these types in Vibo Valentia is not available, but the authors hypothesise a possible Aegean origin (Cuteri et al. 2014: 65). It has been hypothesized that this type of cooking pot was probably produced in the region between Çandarlı and Phokaia in Western Turkey (Vroom 2016: 161).

Finally, it is worth pointing out the presence of imported 'silver micaceous' cooking pots, which have a spherical body and a thinner (i.e. no. 26) or thickened (i.e. no 27) rim with concave profile. At the current state of research, no published comparanda have been documented, nor is their provenance known. The only exception which is worth noting is in 8th century contexts excavated in the Crypta Balbi, where imported cooking vessels, which the authors suggest being imported from the Eastern Mediterranean territories, present striking shape similarities with the silver micaceous type, such as to no. 26 (Sagui et al. 1997: 46-47, no. 16 and possibly 18). However, the identification cannot be secure since a detailed description of the fabrics of these types imported in Rome is not available. Nevertheless, recent excavations in the Theatre of Sparta have brought to light identical vessels, which are presented in the following section.

Silver micaceous cooking vessels type nos. 26 and 27 have been found in contexts dated to the late 8th and 9th centuries, whereas no. 28 has so far been documented only in late 9th – 10th century deposits. This type of silver sparkling vessel with a concave, thickened rim appears to be in use well into the 10th century, significantly replacing the importation of gold micaceous cooking pot vessels.

Local Cooking Ware

29. (Lot-1998-10-2) Flanged, flaring rim stewpot.
H. p. 0.114, diam. rim 0.15. Chert and quartz fabric, yellowish red outer margin (5 YR 5/6), gray inner margin (7/5 YR 6/1).
Stewpot with almost globular body, flaring rim, offset to possibly host lid, rounded lip. Wheel-ridged upper body.

30. (Lot-1998-11-3) flanged, flaring rim stewpot
H. p. 0.04, diam. rim 0.15. Quartz, mudstone and chert fabric, yellowish red (5 YR 5/6).
Stewpot with sloping shoulder, curving sharply up to flaring rim with slightly concave inner profile, probably offset to host lid, rounded lip. Grooved shoulder.

31. (Lot 1998-11-6) Flanged, flaring rim stewpot
H. p. 0.053, diam. rim 0.15. Quartz, mudstone and chert fabric, yellowish red (5 YR 5/6).
Stewpot with almost globular body, inwardly sloping shoulder curving sharply up to flaring rim, with deep concave inner profile. Wheel-ridged body. Handle stump at rim.

These stewpots with a globular body, a flanged, flaring rim, and possibly two handles (i.e. no. 29), were made in the local chert fabric, which was a fabric recipe widely used in the Late Antique period and kept in use by potters throughout the Byzantine period and later into the Frankish period. It is worth noting that there are not only fabric similarities, but also similarities between some Late Antique cooking vessels, such as some 7th century cooking pots (cf. no. 4.27 in Slane & Sanders 2005) and locally made Early Byzantine pots, which might be considered to be a later development. Dated between the 8th and the 9th century, together with this type, new types of stewpot were introduced into the market by Corinthian potters and will be presented in the following section.

Hand Made Vessels

The evidence for hand-made pottery in Corinth is very scant. In the contexts analysed, dated to the 8th and 9th centuries, a total of 6 body sherds, two of which had combed decoration, have been found. Worth pointing out is one beaker from a context dated to the late 8th to the early 9th century (Lot-2012-46), found in association with imported micaceous silver cooking vessels as type nos. 26 and 27 together with
gold micaceous cooking vessels with tapered, flaring rims. The hand-made beaker, found in this context, with a flat base and a flaring, rounded rim is decorated with incised combed decoration (fig. 4.1). This vessel appears to be very similar to the so-called ‘slavic’ jar identified in Argos (Aupert 1980a).

Figure 4.1. Hand-made beaker from Lot-2012-46 (Photo by the author).

4.3 Concluding remarks on Early Byzantine pottery in Corinth

The ceramic evidence presented here and contextualized within their pottery assemblages of provenance show that, during the course of the 8th and 9th centuries, ceramic production did not cease in Corinth, even though it was significantly reduced in quantity. Moreover, the fabric adopted for cooking vessels and some amphorae (chert fabric and local fabric 1) appears to be very similar to the fabric recipe used by the Late Antique potters. This data clearly indicates that not only was craft expertise never forgotten in Corinth, but it actually never ceased to be practised. The local society preserved the empirical knowledge of pottery manufacturing, despite the impoverishment of the local industry caused by economic and political changes experienced during the 8th century. It seems likely that some local artisans and their
families perpetuated their craft know-how, adapting the scale of their manufacture to a changed economic context.

Additionally, new types and shapes are introduced into the local manufactory production in this period (i.e. nos. 8 and 9). More than being simply a later development of Late Antique types, they appear to be prototypes of Middle Byzantine production (Sanders 2003a: 39). These types are produced by a local manufacture that shares features similar to the Byzantine pottery industry documented in other regions of the Empire, which, therefore, suggests that Corinthian artisans were potentially influenced by the outside craftsmanship environment. Furthermore, the ceramic evidence presented here proves that the community of Corinth was still taking part in interregional exchanges on a Mediterranean scale, as documented by the imported cooking vessels and amphorae. These interregional exchanges are further proved by fragments of an imported chafing dish similar to the Crypta Balbi finds (Romei 1992: 379; Sanders 2003a: 40). Moreover, between the late 8th and early 9th century, limited quantities of white ware imports from Constantinople were reaching Corinth, although they stop abruptly around the first quarter of the 9th century and only resume later during the course of the mid-10th century (Sanders 2003b: 390).

4.4 Early Byzantine ceramics in Sparta

Not dissimilar from the picture suggested by the ceramic evidence found in Corinth are the pottery finds recently brought to light during the 2008 excavation season, the scope of which was to investigate the phases and types of occupation of the Roman Theatre in Sparta during the Late Antique and Byzantine times. The research was carried out under the direction of Catherine Morgan (BSA), Adamantia Vasilogamvrou and Kalliopi Diamanti from the Greek Archaeological Service (plan 4.1). The excavation data merges with the picture of the Early, Middle and Late Byzantine occupation of the Theatre and Roman Stoa as portrayed by the pottery evidence brought to light during the 1992-1994 excavation seasons (Sanders 1993, 1995a).
It is worth noting that one of the earliest Byzantine deposits is a pit, probably to be related to a tomb structure, which was used as a mass grave for which four different phases of deposition have been distinguished, with a 12th - 13th century terminus ante quem of construction. This pit was filled with deposits rich in ash, as well as large fragments of cooking ware and animal bones, suggesting that the origin of this material is from dump fills (Morgan & Loughlin 2008: 7-8). The chronology proposed here is between the last quarter of the 8th and first quarter of the 9th centuries on the basis of comparative published pottery from Sparta (Sanders 1995a) and Constantinople (Hayes 1992). A similar preliminary date was also proposed by the excavators (Morgan & Loughlin 2008: 10). No coins have been found in these deposits that would indicate a range of absolute chronologies.

Presented here is a selection of the examples dated to this period (photos: plate no. 2).

32. Globular amphora (P 137)
Single fragment preserving half neck and rim. Missing base, body and handles.
H. p. 0.078, diam. rim 0.07 ca. Very hard, fine fabric, with smooth surface, reddish brown (5YR 5/4) in colour with few (0.25-1.50 mm) rounded-spherical white-opaque inclusions, rare, rounded voids, smooth break.
Amphora with cylindrical neck, flaring rim, outwardly thickened, round in section, offset by ridge. Vertical handle, oval in section, attached to mid-neck.

33. Handmade beaker (P164)
   Cf. Sanders 1995a, no. 1.
   Two joining fragments, plus two non-joining, preserve complete profile. One-fifth of base, one-fourth of body and neck, one-tenth of rim.
   H. 0.16 ca, diam. rim 0.16. Hard, very coarse fabric, very dark gray (5YR 3/1) in colour, with frequent (0.5-1.5) angular-spherical white-opaque inclusions, frequent irregularly shaped voids. Hackly break, smooth surface.
   Cooking pot with flat base, ovoid body, everted rim with rounded lip. Undecorated.

34. Handmade beaker or stewpot (P 165 + P167)
   Four joining fragments, plus five non-joining fragments, preserve one-third of shoulder, neck and rim. Missing body and base.
   H. p. 0.085, diam rim 0.14 ca. Fabric as no. 33.
   Cooking pot with ovoid body to flaring rim with squared lip. Irregular combed decoration.

35. Handmade beaker (P139)
   Single fragment preserves one-sixth of base and body. Heavily fired-blackened.
   H. p. 0.049, diam base 0.08, fabric as no. 33.
   Flat base, straight flaring lower body with concave profile. Smoothed outer surface.

36. Wheel-made beaker (P125)
   Two non-joining fragments preserve one-eighth of base, one-ninth of rim, one-sixth of body. Fire-blackened surface in patches.
   H. p. 0.154, diam. rim 0.12 (uneven), diam. base 0.15 (uneven). Medium-hard coarse fabric, red (2.5 YR 4/8) in colour with few (0.50-1.50 mm) subrounded-spherical inclusions; few (0.50-1.50 mm) subrounded-tabular, black inclusions,
rare (0.50-1.50 mm) angular-spherical inclusions. Rounded shape voids, hackly break. Smooth surface.
Cooking pot with flat base, ovoid body, curving up to conical neck, flaring, thickened rim, with bevelled out lip. Double incised wavy line on max. diam.

37. Wheel-made stewpot (P159)
Three joining fragments preserve one-sixth of body and rim. Missing base and handle. Fire-blackened surface.
H. p. 0.118, diam. rim 0.11, fabric as no. 36.
Stewpot with ovoid body, sloping shoulder curving up to flaring rim with concave profile and rounded lip. Handle almost round in section at max. diam. Smoothed surface.

38. Concave, thickened rim stewpot (P126)
Single fragment preserves one-seventh upper body and rim. Missing base and handles.
H. p. 0.049, diam. rim 0.15. Fabric with silver inclusions as no. 26.
Stewpot with sloping shoulder to flaring rim with concave profile, with rounded lip. Wheel-made.

39. Silver micaceous stewpot handle (P158)
Two joining fragments preserve complete handle. Missing rest of the pot. Fabric as no. 26.

This new excavation data confirms that, as in Corinth, wheel-made pottery was locally produced in Sparta in the Early Byzantine period. However, contrary to the Corinthian examples, here handmade vessels represent circa 50% of the archaeological assemblage. Additionally, it is worth noting that, as in Corinth, these vessels are found in association with not only wheel-made pots, but also with imported cooking vessels, in silver micaceous fabric, and with very few fragments of imported white ware. If Corinth and Sparta appear to share similarities in terms of imported material in the Early Byzantine period, the local productions present differences in terms of the pottery technologies and the manufactory styles that define and characterize the
ceramic production in the Middle and Late Byzantine period, which show substantial differentiation between the Spartan and Corinthian pottery craftsmanship.

4.5 Middle and Late Byzantine unglazed ceramics in Corinth

During the course of the second half of the 9th and 10th centuries the ceramic assemblages continue to be comprised mainly of utilitarian vessels, most of which are locally made cooking and storage vessels. However, the number of contexts that can be dated to this period appear to be quite limited in quantity. Only from the mid-10th century does the number of ceramic assemblages start slowly increasing, both in terms of variety of types and in terms of quantity of ceramic types per stratigraphic unit.

Cooking pots, amphorae, lagenes, and pedestal bowls have been identified in statistically sufficient numbers for establishing a seriation. The chronology suggested for the other types of coarse wares are based on their repeated occurrences in well-dated contexts. However, they have not been included in the seriation chart, since they are generally fragmentary due to the fragile physical characteristic of these types of table wares, which does not allow current research to quantify them at a volume that would be considered statistically significant for seriation purposes.

In the case of the Argos material, the chronology is based on comparative ceramics from Corinthian material and from published Argive comparanda (Piérart & Thalmann 1980), since documentation of their associated finds and of the stratigraphic relationship of their contexts of provenance was not available.

In the case of Spartan ceramics, a relative sequence has been established on the basis of the stratigraphic sequence of their contexts. The absolute chronology, because no associated coins were found in the contexts excavated in the 2008 Theatre excavation season, is based on the published comparative material from the Theatre and Roman Stoa in Sparta (Sanders 1993, 1995a), Sarachane excavations (Hayes 1992) and on comparative Corinthian material.
4.6 Cooking Ware

4.6.1 Collar rim stewpot

Type 1: 9th century to first half 10th

Type 1-A with concave profile

40. (Lot-1998-18-1)
Five joining fragments preserve one-tenth of body, one-third of rim, one-third of handle.
H. p. 0.061, diam. rim 0.15. Chert and Quartz fabric, 5 YR 5/6 (yellowish red).
Stewpot with dimple base, globular body curving sharply up to vertical collar rim, with concave inner profile, rounded lip. Strap handle overhanging lip.

41. (C-1963-753) (Photo: plate no. 3)
Three joining fragments preserve one-eighth of body, one-fourth of rim, one complete handle.
H. p. 0.095, diam. rim 0.12, w. 0.097. Chert and quartz fabric?, red (2.5 YR 5/6).
Stewpot with round ovoid body, deep sloping shoulder curving sharply up to vertical rim, inwardly thickened with concave inner profile, rounded lip. Strap handle from max. diam. to above the lip. Grooved shoulder. Smoothed outer surface.

42. (Lot-2003-24-1)
Single fragment preserves one-twentieth of body, one-sixth of rim. Missing bottom and handles.
Stewpot with sloping shoulder curving sharply up to tall, straight outwardly flaring slightly flanged rim, with rounded lip. Groove around shoulder.

43. (Lot-2003-24-2)
Three joining fragments preserve one-tenth of body, one-fifth of rim. Missing bottom and handles.
H. p. 0.038, diam. rim, 0.15. Quartz-Mudstone-Chert fabric, 5 YR 5/8 (yellowish red).
Stewpot with straight inwardly sloping shoulder curving sharply up to straight, slightly flaring rim, inwardly thickened with deep concave inner profile, inwardly bevelled lip. Grooved shoulder.

44. (Lot-1999-42-2)
Single fragment preserves one-fourteenth of body, one-sixth of rim, one complete handle. Missing base. Crusted outer surface.
H. p. 0.088, diam. rim 0.15, wt. 0.107. Sandstone fabric, 5 YR 5/8 (yellowish red).
Stewpot with ovoid body, sloping shoulder to vertical, collar rim with concave inner profile and inwardly bevelled lip. Strap handle, with shallow double spine, overhanging lip to max. diam. Grooved body.

45. (Lot-1998-28-5)
Two non-joining fragments preserve one-fourth of rim, one-third of handle. Missing base, body and second handle.
H. p. 0.032, diam. rim 0.14. Fabric: mudstone poorly fired, outer section 2.5 YR 5/6 (red), inner section 7.5 YR 6/4 (light brown).
Stewpot with vertical collar rim, concave inner profile and rounded lip. Strap handle, with two shallow central ribs, overhanging lip.

**Type 1-B**

46. (Lot-1998-28-1)
Single fragment preserves one-eighth of body, one-seventh of rim. Missing base and handles. Fire-blackened close to maximum diameter. Crusted inner and outer surface.
H. p. 0.061, diam. rim 0.135, wt. 0.066. Chert and quartz fabric, red (2.5 YR 5/6).
Stewpot with round shoulder curving up to vertical thickened, collar rim, with concave inner profile and slightly inwardly sloping lip. Grooved shoulder.
Type 2: mid-10th to 11th century

Type 2-A

47. (Lot-1977-47-12)
Three joining fragments preserve one-third of body and rim, one complete handle. Missing second handle and base.
H. p. 0.088, diam. rim 0.16, w. 0.27. Chert and quartz fabric, slightly finer; red (2.5 YR 5/6).
Globular body, round shoulder, vertical rim, with concave inner profile, rounded lip, groove on exterior. Single groove just below lip, on outer rim, grooved shoulder. Strap, double spined, handle, from max. diam. to shoulder. Smoothed body.

48. (Lot-1996-36-8)
Six fragments preserve one-fourth of body, one-fifth of rim, one complete handle. Missing bottom. Crusted surface.
H. p. 0.125, diam. rim 0.16, w. 0.25. Mudstone chert fabric? yellowish red (5 YR 5/6).
Stewpot with almost globular, sloping shoulder, curving sharply up to vertical rim, with slightly concave inner profile and inwardly bevelled lip, inwardly sloping. Strap handle, with shallow central rib, from lower body to shoulder. Three grooves around upper body.

49. (Lot-1996-36-14)
Fourteen fragments preserve one-sixth of body, one-third of rim, one complete handle. Missing base. Crusted inner and outer surface. Fire-blackened patches on outer body and rim.
H. p. 0.147, diam. rim 0.145, wt. 0.36. Quartz, mudstone and chart fabric, reddish yellow (5 YR 5/6).
Stewpot with spherical body curving sharply up vertical rim, slightly thickened towards lip and with concave inner profile, rounded lip. Strap handle with shallow central rib, from shoulder to max. diam. Two grooves around shoulder, covered by handle attachment.
50. (Lot-1996-36-23)
Single fragment preserves one-sixth of rim. Missing lower body, base and handle.
H. p. 0.047, diam. rim 0.14, wt. 0.028. Well-fired chert and quartz fabric, light gray (10 YR 7/2).
Stewpot pot with vertical, collar rim with concave inner profile and rounded lip, slightly inwardly bevelled lip. Wide groove around rim on exterior, and just below rim. Grooved shoulder.

51. (Lot-1992-92-1)
Single fragment preserves one-sixth of shoulder and rim. Missing base, body and handles.
H. p. 0.042, diam. rim 0.14, w. 0.048. Quartz, mudstone and chert fabric, dark grayish brown (10 YR 4/2).
Stewpot with sloping shoulder to vertical, collar rim with rounded lip and, deep concave profile. Grooved shoulder.

52. (Lot-1992-92-20)
H. p. 0.065, diam. rim 0.14, w. 0.05. Sandstone? fabric, reddish yellow (5 YR 6/6).
Stewpot with sloping shoulder to vertical collar rim, with concave profile, rounded lip, groove just below lip on exterior.

Type 2-B

53. (Lot-2009-89-26) (photo: plate no. 3)
Numerous joining fragments preserve one-sixth of bottom and body, three-thirds of rim, one complete handle.
H. p. 0.157, diam. rim 0.155, w. 0.672. Mudstone well fired, margins yellowish (red 5 YR 5/6), gray core (5 YR 6/1).
Stewpot with round bottom, almost spherical body, collar rim with concave inner profile, round lip. Strap handle from max. diam. to above the lip. Grooved shoulder and upper body. Pared lower body.
Type 3: mid-11th century to early 12th century

Type 3-A (collar rim, bevelled in lip)

54. (C-1996-33) (photo: plate no. 3).
Complete profile. 31 joining fragments, 2/3 bottom and body, half rim, complete handles. Fire-blackened patches on lower body and bottom.
H. 0.18, max. diam. 0.226, diam. rim. 0.156, wt. 0.93. Quartz, mudstone and chert fabric, yellowish red (5 YR 5/6).
Stewpot with flat bottom with circular concavity and bulge on outer centre, almost globular body. Vertical collared rim, inward thickened to form slightly ledge, inwardly bevelled lip. Two vertical handles, oval in section, with central sharp spine, from max. diam. to shoulder.

55. (Lot-1996-36-6) (photo: plate no. 3).
Numerous fragments preserve complete profile, one-third bottom, almost complete body, two-thirds of rim, two complete handles. Restored with plaster.
Crusted surface. Body blackened in patches.
H. 0.174, diam. rim 0.14, w. 1.15. Chert and Quartz fabric? yellowish red (5 YR 5/6).
Stewpot with flat bottom, almost spherical body, vertical collar rim with inwardly bevelled lip. Grooved shoulder. Strap handles from max. diam. to shoulder. Pared body.

56. (Lot-1996-36-7)
Numerous fragments preserve complete profile, almost complete base, half of body, one-third of rim, one complete handle. Restored with plaster. Blackened surface on lower body.
H. 0.19, diam. rim 0.15. w. 0.7. Mudstone, chert fabric, light brown (7.5 YR 6/4).
Stewpot with flat bottom, almost globular body, vertical collar rim, with concave inner profile, inwardly bevelled lip. Grooved shoulder. Strap handle from median to shoulder.
57. (C-1937-2288)
Intact except few fragments from bottom. Inner surface heavily encrusted with a layer of calcium carbonate
H. 0.156, max. diam. 0.19, diam. rim 0.139, w. 1.148 Chert and Quartz fabric? yellowish red (5 YR 5/6).
Stewpot with round bottom, uneven globular body, vertical, collar rim with inwardly bevelled lip. Vertical, strap handles from mid-body to shoulder. Slightly wheel-ridged outer surface.

Type 3-B (thickened collar rim, bevelled in lip)

58. (C-1937-2294)
Numerous joining fragments preserve one-third of base, two-thirds of body and rim, two complete handles.
H. p. 0.205, diam. rim 0.148, w. 1.178. Well fired chert and quartz fabric?
Stewpot with round bottom, ovoid body, narrow sloping shoulder to vertical, collar rim, inwardly thickened with inwardly bevelled lip. Vertical, strap handle from max. diam. to shoulder. Pared body, double groove around max. diam. and upper shoulder, three grooves around mid-shoulder.

59. (Lot-2009-89-21) (photo: plate no. 3).
Numerous joining fragments preserve two-thirds of body, complete rim, two complete handles. Missing bottom. Fire-blackened body.
H. p. 0.18, diam. rim 0.16, w. 0.538. Quartz, mudstone, chert fabric, 5 YR 5/6.
Stewpot with ovoid body, short round shoulder to vertical collar thickened rim, with inwardly bevelled lip. Vertical, strap handle, mid-body to shoulder. Pared lower body, wheel-ridged mid-body, grooved upper body and shoulder.

60. (Lot-1991-77-2)
Single fragment preserves one-twentieth of body, one-fourth of rim. Missing handles and bottom.
H. p. 0.041, diam. rim 0.15, w. 0.047. Well fired chert and quartz fabric, yellowish red core (5 YR 5/8), light brown margins (7.5 YR 6/3).
Stewpot with sloping shoulder, vertical collar rim, concave inner profile, inwardly bevelled lip. Three deep grooves around shoulder. Shallow groove around rim on exterior.

**Type 3-C (Collar rim, inwardly bevelled lip and offset lip)**

61. (Lot-1996-36-13)
   Single fragment preserves half upper body, half rim, one complete handle. Missing base. Crusted inner and outer surface.
   H. p. 10.03, diam. rim 13.5, wt. 0.28. Quartz, mudstone and chert fabric, dark grayish brown (10 YR 4/2).
   Stewpot with ovoid body, curving sharply up to vertical rim, with inwardly bevelled lip, incised by uneven groove. Strap handle, with shallow central rib, from max. diam. to shoulder. Grooved shoulder. Pared body.

62. (Lot-1999-25-11)
   Single fragment preserves one-twelfth of shoulder, one-sixth of rim. Missing base, body and handles. Crusted inner and outer surface.
   H. p. 0.003, diam. rim 0.12, w. 0.06, wt. 0.023. Quartz, mudstone and chert fabric yellowish red (5 YR 5/8).
   Stewpot sloping shoulder to vertical rim, inwardly thickened, inwardly bevelled lip with groove on mid-width. Very shallow groove around rim on exterior. Grooved shoulder.

63. (Lot-1999-25-03)
   Single fragment preserves one-twelfth of shoulder, one-sixth of rim. Missing base, body and handles.
   H. p. 0.03, diam. rim 0.14, wt. 0.033. Quartz, mudstone and chert fabric yellowish red (5 YR 5/8).
   Stewpot with sloping shoulder to vertical thickened rim, with slightly concave inner profile inwardly bevelled lip offset by groove. Grooved shoulder.
64. (Lot-1999-25-08)
H. p. 0.029, diam. rim 0.14, wt. 0.035. Well fired chert and quartz fabric, dark gray (5 YR 4/1).
Stewpot with round shoulder curving sharply up to vertical, flanged rim, with offset lip for hosting lid. Grooved shoulder.

65. (Lot-1999-25-02)
Two joining fragments preserve one-sixth of shoulder, one-third of rim, one complete handle. Missing base, lower body, one handle. Fired-blackened in kiln. Crusted surface.
H. p. 0.068 diam. rim 0.13, wt. 0.15. Chert and quartz fabric, yellowish red (5 YR 5/6).
Stewpot with almost spherical body, vertical, offset rim by inwardly thickened ridge. Groove around mid-rim on exterior, Three grooves around shoulder. Strap handle, with central rim, from shoulder to max. diam.

66. (C-1996-34) (photo: plate no. 4).
Five joining fragments. preserve 1/3 upper half body, nearly 1/2 rim, 1 handle. Inner and outer surface heavily crusted.
H. p. 0.101, diam. rim 0.125, wt. 0.265. Quartz, mudstone and chert fabric, dark gray (10 YR 4/1).
Stewpot with almost spherical body, inwardly sloping rim offset by groove on lip, and slightly inwardly thickened to form flange possibly for lid. Vertical strap handle, with central spine, attached max. diam. to below rim. Two uneven grooves around max. diam., double just below rim on exterior.

67. (Lot-1999-25-4)
Single fragment preserves one-tenth of shoulder, one-fifth of rim. Missing base, body and handles.
H. p. 0.047, diam. rim 0.105, wt. 0.03. Chert and quartz fabric, dark brown (7.5 YR 3/2)
Stewpot with straight inwardly sloping shoulder, curving sharply up to vertical rim, with inwardly bevelled lip, offset by deep groove. Wide groove around almost all rim on exterior. Two grooves on upper body.

**Type 4 (Plain Collar rim)**

**Chronology: 12th century – first quarter 13th century**

68. (C-1992-92) 12th century
Numerous joining fragments, complete vase except for small parts of bottom, lower body. Burn surface on bottom and handle.
H 0.140, diam. rim 0.116. Well-fired Chert and Quartz fabric, slightly greyer and yellower than 10YR 7/3
Stewpot with flattened bottom with shallow bulge at centre. Ovoid body with max. diam. above median; rounded shoulder curving in to vertical collar rim with rounded lip. Two vertical strap handles set on shoulder. Four grooves on shoulder.

69. (1997-47-4) 13th century (photo: plate no. 4).
Numerous joining fragments preserve two-thirds of base, half body, rim, one complete handle.
H. 0.18, diam. rim 0.116, w. 0.65. Sandstone fabric, inner section reddish brown (5 YR 5/4), red outer section (10 R 5/8).
Stewpot with round bottom, spherical body curving sharply up to vertical rim, slightly thickened and with inner concave profile, rounded lip. Strap handle from max. diam. to shoulder. Grooved upper body to shoulder, groove around rim on exterior.

4.6.2 **Cauldron**

Cauldrons are cooking vessels bigger than the collar rim stewpots. Cauldrons are characterized by a diameter large from 18 cm to 20 cm and by a capacity of five litres in average. This form tends to be similar in terms of body and rim shape with the contemporary collar rim stewpots.
Type 1: mid 10th – early 12th centuries

Type 1-A

70. (C-1977-224)
Numerous joining fragments preserve complete profile, two complete handles. One-third of vase missing. Fire-blackened surface on patches on exterior. Restored with plaster.
Round bottom curving up to globular body; vertical rim, with concave inner profile and inwardly sloping lip. Grooved shoulder, wheel-ridged upper body. Smoothed lower body and bottom. Strap handle from max. diam. to shoulder. Wheel-made.

71. (C-1977-226) (photo: plate no. 3).
Eight fragments preserve one-fifth of body, one-third of rim. Missing base and handles. Restored with plaster.
H. p. 0.156, diam rim 0.19, w. 0.397. Chert and quartz fabric, yellowish red margins (5YR 5/6), brown core (7.5YR5/4),
Stewpot with globular body curving sharply up to vertical rim with concave inner profile and inwardly bevelled lip. Groove around rim on exterior and around shoulder. Wheel-ridged upper body, smoothed surface on lower body. Wheel-made.

72. (Lot-1977-47-13)
Eight joining fragments preserve one-fourth of body, one-third of rim, one complete handle. Missing base.
H. p. 0.092, diam. rim 0.19, w. 0.45. Chert and quartz fabric, yellowish red margins (5YR 5/6), gray core (7.5YR5/1),
Stewpot with globular body, sloping shoulder to vertical rim, with concave inner profile, inwardly bevelled lip. Wide groove just below lip on exterior, single groove on shoulder. Wheel ridged upper body. Strap handle from max. diam. to shoulder. Smoothed lower body outer surface. Wheel-made.
73. (Lot-2009-89-27)
Two joining fragments preserve one-sixth of body, one-third of rim, one complete handle. Missing base and second handle.
H. p. 0.11, diam. rim 0.20, w. 0.367. Quartz mudstone chert? dark reddish gray. (5YR 4/2).
Stewpot with ovoid body, narrow, sloping shoulder to vertical collar rim, with concave profile and inwardly bevelled lip. Vertical, strap handle, with double spine, from mid-body to shoulder. Pared body, grooved shoulder and double groove below rim.

Type 1-B

Numerous joining fragments preserve complete profile, entire base, one-third of body, half rim, one handle. Missing second handle.
H. 0.169, diam. rim 0.204, w. 0.6. Quartz mudstone chert? dark reddish gray (5 YR 4/2).
Stewpot with round bottom, oval body, sloping shoulder to vertical rim, with inwardly bevelled lip. Vertical, strap handles, with shallow central spine, attached to max. diam. and shoulder. Wheel-ridged bottom. Pared surface body, decorated three grooves around max. diam.

75. (C-1937-2295) published in Mackay 1967: 289, no. 94.
Numerous joining fragments preserve almost complete vase. Missing one-fourth of body, one-third of rim.
H. 0.21, diam. rim 0.192, w. 1.816. Chert and quartz fabric, outer section red (2.5 YR 5/8), reddish brown inner section (5 YR 5/3).
Stewpot with concave bottom, ovoid body, sloping shoulder, curving up to vertical collar rim with inwardly bevelled lip. Vertical, strap handle with shallow central spine from max. diam. to shoulder. Grooved central body and lower shoulder, pared the rest of body surface.
76. (Lot-1991-77-4)
Two joining fragments preserve one-sixth of body and rim, one complete handle. Missing second handle and bottom.
H. p. 0.141, diam. rim 0.20, w. 0.347. Chert and quartz fabric, outer section red (2.5 YR 5/8), reddish brown inner section (5 YR 5/3).
Cauldron with almost ovoid body, vertical thickened rim inwardly bevelled lip. Wheel-ridge body. Strap handle from shoulder to max. diam.

Type 2-A

77. (C-1977-225)
Fourteen fragments preserve almost complete profile, except centre of bottom; preserved one-fifth of base and body and rim, one complete handle. Fire-blackened inner and outer surface. H. p. 0.172, diam. rim 0.18, w. 0.487.
Stewpot with concave bottom, ovoid body, sloping shoulder to vertical, thickened rim, slightly inwardly sloping, rounded lip. Strap handle from max. diam. to above the lip.

78. (Lot-1977-47-11)
Single fragment preserves one-tenth of shoulder, one-fifth of rim, one handle stump. Missing base.
H. p. 0.096, diam. rim 0.18, w. 0.07. Fabric: core yellowish red (5YR5/6), margins reddish gray (5YR5/2). Sandstone.
Stewpot with sloping shoulder to inwardly flaring, outwardly thickened rim with inwardly bevelled lip. Handle attaches at shoulder. Wide groove around rim on exterior. Smoothed surface.
Cauldron Type 2-B

79. (Lot-1996-36-15)
H. p. 0.231, diam. rim 0.185, wt. 0.955. Mudstone, chert and quartz fabric, red (2.5 YR 5/6).
Cauldron with ovoid body, round shoulder, vertical collared rim inward thickened to form ledge for lid, slightly concave inner profile. Vertical handles, oval in section, from shoulder to just below max. diam. Band of grooves on shoulder.

80. (Lot-1996-36-16)
Single fragment preserves one-eighth of body, one-fourth of rim, one handle stump. Crusted inner and outer surface.
H. p. 0.083, diam. rim 0.19, wt. 0.19. Mudstone, chert and quartz fabric, red (2.5 YR 4/8)
Cauldron with ovoid body, round shoulder curving sharply up to vertical rim inwardly thickened, with inwardly bevelled lip, with incised groove along mid-width. Four grooves on shoulder. Strap handle from shoulder.

4.6.3 Thickened rim stewpot

Chronology: 11th century

81. (Lot-1992-92-3)
Single fragment preserves seventh of shoulder and rim. Missing base, body and handles.
H. p. 0.043, diam. rim 0.14, w. 0.023. Mudstone well fired fabric, red outer margin (2.5 YR 5/8), reddish gray inner margin (5 YR 5/2).
Stewpot with sloping shoulder to vertical, thickened rim, with slightly concave inner profile. Wheel-ridged shoulder, groove around rim on exterior.
82. (C-1937-2285) Published in Mackay 1967: 289, no. 93.
Numerous joining fragments preserve complete profile, complete bottom, half body and rim, one-third of handle. Missing second handle.
H. 0.18, diam. rim 0.136, 0.76. Sandstone fabric?, yellowish red (5 YR 5/8).
Stewpot with round bottom, spherical body, vertical thickened rim, with slightly concave inner profile, flat lip, slightly inwardly sloping. Pared body surface. Grooved shoulder.

4.6.4 Triangular rim stewpot

Type 1: late 11th century – 2nd quarter 12th century

Type 1-A

83. (Lot-1992-90-2)
Three non-joining fragments preserve one-tenth of body, one-fourth of rim, one-third of handle. Missing base and second handle.
H. p. 0.051, diam. rim 0.15, wt. 0.104. Sandstone fabric, red (2.5 YR 5/6).
Stewpot with sloping shoulder to vertical rim, triangular in section, with inwardly sloping lip. Groove around rim on exterior. Undecorated shoulder. Strap handle from shoulder.

84. (Lot-1991-77-5)
Four joining fragments preserve half body and two-thirds of rim, one complete handle, one-third of second handle.
H. p. 0.116, diam. rim 0.15, w. 0.513. Sandstone fabric, yellowish red (5 YR 5/8).
Stewpot with almost spherical body, vertical rim, triangular in section with slightly inwardly sloping lip. Pared lower body, wheel ridged body from max. diam. to below rim. Single groove around rim on exterior. Strap handle, with shallow central rib, from shoulder to max. diam.

85. (Lot-5117-8)
Two joining fragments plus two non-joining fragments preserve half rim, one-sixth of body. Missing base. One complete handle preserved.
H. p. 0.082, diam. rim 0.155, w. a 0.099, b 0.150, c. 0.042. Sandstone fabric, red (2.5 YR 5/6).
Round shoulder curving up to vertical rim, triangular in section, inwardly thickened with flat lip slightly inwardly sloping. Groove around rim on exterior, grooved shoulder. One strap handle from median to upper shoulder.

86. (Lot-1999-25-1)
Single fragment preserves one-sixth of rim and shoulder. Missing base, body and handles.
H. p. 0.042, diam. rim 0.15, wt. 0.038 Quartz, mudstone and chart fabric, red (2.5 YR 5/6), gray inner margin (10 YR 6/1), reddish yellow outer margin (7.5 YR 6/6).
Stewpot with sloping shoulder curving up to vertical rim, triangular in section, squared lip, inwardly sloping. Groove around mid-rim on exterior, grooved shoulder.

87. (Lot-1999-25-10)
Single fragment preserves one-tenth of rim. Missing base, body and handles.
H. p. 0.022, w. 0.039, diam. rim 0.16, wt. 0.014. Quartz, mudstone and chart fabric, red (2.5 YR 5/6).
Stewpot with vertical rim, triangular in section, slightly concave inner profile, flat lip, inwardly sloping. Groove around rim on exterior.

88. (Lot-1992-89-1)
Single fragment preserves one-twelfth of shoulder, one-sixth of rim. Missing base, body and handles.
H. p. 0.046, diam. rim 0.13, w. 0.026. Quartz, mudstone and chart fabric, inner section gray (5YR 5/1), red outer section (2.5 YR 5/6).
Stewpot with sloping shoulder to vertical rim, inwardly thickened, triangular in section, flat lip. Grooved shoulder.

89. (Lot-5117-7)
Two joining fragments preserve one-third of rim, one-eleventh of upper body. Missing base and handles. Fire-blackened surface on outer rim.
H. p. 0.041, diam. rim 0.14, w. 0.056. Chert and quartz fabric, red (2.5 YR 5/6).
Shoulder sloping to vertical rim, triangular in section, inwardly thickened with concave inner profile, flat lip slightly inwardly sloping. Groove around rim on exterior, wheel-ridged shoulder.

90. (Lot-5117-9)
Two joining fragments preserve one-fifth of rim. Missing body, base and handles.
H. p. 0.018, diam. rim 0.15, w. 0.03. Chert and quartz fabric, yellowish red (5YR 5/6).
Vertical rim, triangular in section, inwardly thickened with inner concave profile, flat lip inwardly sloping. Wide groove around rim on exterior.

91. (Lot-5117-10)
Single fragment preserves one-eighth of rim. Missing body, base and handles.
H. p. 0.028, diam. rim 0.17, w. 0.03. Sandstone fabric, red (2.5 YR 5/6).
Vertical rim, triangular in section, inwardly thickened, flat lip with rounded edges, slightly inwardly sloping. Wide groove around rim on exterior. Plain shoulder.

92. (Lot-5117-11)
Two joining fragments preserve one-fifth of rim. Missing body, base and handles.
H. p. 0.038, diam. rim 0.16, w. 0.03. Packed quartz fabric, yellowish red (5 YR 5/8).
Shoulder sloping to vertical rim, triangular in section, inwardly thickened, flat lip slightly inwardly sloping. Wide groove around rim on exterior, deeply grooved shoulder.

**Type 1-B**

This subtype of triangular rim cooking pot is characterized by a greater diameter compared to subtype 1-A. The diameter of subtype 1-B ranges from 17 cm to 21 cm. This subtype has not been denominated as a cauldron form, since no complete profiles have been identified in the contexts analysed for this research project, making this shape not directly comparable with the previous cauldron types.
93. (Lot-5117-5)
Two joining fragments plus two non-joining fragments preserve almost one-tenth of body, half rim. Missing base and handles.
H. p. 0.056, diam. 0.18, w. a 0.116, b 0.034, c 0.030. Sandstone? fabric, yellowish red (5 YR 5/6).
Shoulder sloping to vertical rim, inwardly thickened, triangular in section, with slightly concave inner profile, flat lip, slightly inwardly sloping. Wide groove around rim and at shoulder attachment on exterior, grooved upper body.

94. (Lot-5117-6)
Two joining fragments preserve one-seventh of shoulder and rim. Missing base and handles.
H. p. 0.063, diam. rim 0.18, w. 0.052. Sandstone fabric, yellowish red (5YR 5/8).
Shoulder sloping to vertical rim, triangular in section, inwardly thickened with flat lip inwardly sloping. Groove around rim on exterior, grooved shoulder.

95. (Lot-5117-14)
Single fragment preserves one-eighth of rim. Missing body, base and handles.
H. p. 0.032, diam. rim 0.19, w. 0.03. Sandstone fabric, reddish brown (5 YR 5/4).
Shoulder sloping to vertical rim, triangular in section, inwardly thickened, squared lip inwardly sloping. Groove around rim on exterior, grooved shoulder.

96. (Lot-5117-15)
Single fragment preserves one-eighth of rim. Missing body, base and handles.
H. p. 0.025, diam. rim 0.18, w. 0.02. Chert and quartz fabric, outer edge yellowish red (5 YR 5/6), inner edge reddish gray (2.5 YR 5/1).
Shoulder sloping to vertical rim, triangular in section, inwardly thickened, flat lip inwardly sloping. Groove around rim on exterior, grooved shoulder.

97. (Lot-1989-08-07)
Single fragment preserves one-seventh of rim. Missing base, body and handle.
H. p. 0.041, diam. rim 0.205, w. 0.06. Chert and quartz fabric, red (between 2.5 YR 5/6 and 4/6).
Stewpot with vertical rim, triangular in section, inwardly thickened, with flat lip, slightly inwardly sloping. Deep groove incised around upper shoulder, below rim and around rim on exterior. Wheel-ridged shoulder.

**Type 1-C**

98. (Lot-1990-54-16)

Five joining fragments preserve one-twentieth of body, one-tenth of shoulder and one-third of rim. One complete handle preserved.

H. p. 0.113, diam. rim 0.13 w. 0.142. Chert and quartz fabric, dark gray (5 YR 4/1).

Stewpot with spherical body, vertical rim, inwardly thickened, triangular in section, with deep concave inner profile, rounded lip. Vertical, strap handle attached from body at max. diam. to shoulder. Slightly grooved upper body, band of incised wavy lines around lower rim, single groove around middle of rim on exterior.

99. (Lot-1990-54-17)

Single fragment preserves almost half body and one-third of rim. Missing base. One handle preserved.

H. p. 0.114, diam. rim 0.15, w. 0.184. Quartz, mudstone chert fabric? Reddish brown margins (5 YR 5/4), reddish gray core (5 YR 5/2).

Stewpot with spherical body, curving up to vertical, triangular rim, inwardly thickened, with concave inner profile, inwardly sloping lip. Vertical strap handle attaches to upper body, with shallow from max. diam. to shoulder. Grooved upper body and shoulder, groove around rim.

100. (Lot-1990-54-18)

Single fragment preserves one-third of upper body and rim. Missing base and lower body.

H. p. 0.094, diam. rim 0.13, w. 0.131. Quartz, mudstone and chert fabric. Yellowish red outer margin (5 YR 5/6), brown core (7.5 YR 5/2).

Stewpot with spherical body sloping to vertical rim, triangular in section, inwardly thickened, with concave profile, inwardly sloping lip. Vertical, strap
handle attached from just above max. diam. to shoulder. Grooved upper body and shoulder. Very shallow groove incised just below lip on exterior.

101. (Lot-1989-15-1)
Numerous fragments preserve almost complete profile, except base, half body, three-fourths of rim. One handle preserved. Fired-blackened in patches, (likely during firing in the kiln).
H. p. 0.16, diam. rim 0.134, w. 0.42. Sandstone? fabric, yellowish red (5 YR 5/6).
Stewpot with round bottom, spherical body curving up to vertical rim, inwardly thickened, triangular in section, with pronounced concave inner profile. Wide groove around rim on exterior. Double groove around shoulder. Deeply wheel-ridged on body. Pared bottom. Strap handle from max. diam. to shoulder.

102. (Lot-2002-36-2)
Numerous joining fragments, plus one non-joining rim fragment preserve complete profile, almost complete base, two-thirds of body, one-fourth of rim, one complete handle. Crusted inner and outer surface. Fire blackened bottom, inside and outside, and patches on outer body.
H. 0.202, diam. rim 0.17, wt. 0.817. Fabric: Mudstone well fired fabric, red (2.5 YR 5/8).
Stewpot with round bottom. Spherical body curving sharply up to vertical rim, inwardly thickened, triangular in section, with concave inner profile, flat lip, inwardly sloping. Deep groove around mid-rim on exterior, grooved body. Strap handle from median to shoulder.

103. (Lot-1989-08-04)
Five joining fragments preserve half shoulder and rim, one complete handle. Missing base.
H. p. 0.085, diam. rim 0.125, w. 0.15. Sandstone fabric, red (2.5 YR 5/8).
Stewpot with almost spherical body, vertical rim, inwardly thickened, triangular in section with concave inner profile. Flat lip inwardly sloping. Wide groove around rim on exterior. Three lightly incised grooves on upper shoulder. Strap handle from max. diam. to shoulder.
104. (Lot-1989-08-06)
Single fragment preserves one-fifth of shoulder and rim. Missing base and handle.
H. p. 0.042, diam. rim 0.16, w. 0.04. Sandstone fabric? reddish yellow (5 YR 6/8).
Stewpot with round shoulder curving sharply up to vertical rim, triangular in section, with concave inner profile, inwardly sloping lip. Groove around mid-rim on exterior. Grooved shoulder.

Type 2: second half 12th century

Type 2-A

105. (Lot-2002-05-6)
Numerous fragments preserve one-third of body, half rim, one complete handle, two-thirds of second handle. Missing base. Crusted inner and outer surface. Fire-blackened lower body, handles.
H. p. 0.157, diam. rim 0.16, wt. 0.54. Quartz, mudstone and chert fabric, yellowish red margins (5 YR 5/8), brown core (7.5 YR 5/4).
Stewpot with almost spherical body curving up to vertical rim, inwardly thickened, triangular in section, with slightly concave inner profile and flat lip, inwardly sloping. Strap handle from upper shoulder to max. diam. Single groove around rim on exterior. Grooved body.

106. (Lot-1989-08-05)
Three joining fragments preserve one-sixth of body, one-fifth of rim, one complete handle.
H. p. 0.118, diam. rim 0.14, w. 0.14. Sandstone fabric, core gray (7.5 YR 5/1), edges reddish yellow (7.5 YR 6/6).
Stewpot with spherical body curving up to vertical rim, triangular in section, inwardly thickened, with flat lip sharply inwardly sloping. Grooved upper body. Strap handle from max. diam. to shoulder.
Numerous joining fragments preserve nearly complete vessel except for a few fragments in bottom, body; chips in rim. Blackened surface on bottom and lower body.
H 0.21, diam. rim 0.178. Quartz Mudstone-Chert, red-brown (2.5 YR 5/7).
Stewpot with round bottom with small bulge at centre. The body curves into ovoid body, with max. diam, above median, round shoulder. Vertical rim, triangular rim in section, flat lip inwardly sloping; broad groove on exterior rim on exterior. Two vertical strap handles from median to shoulder.

108.  (Lot-1992-100-41)
Numerous fragments preserve almost complete vase except for a few fragments from body, bottom and a chip from rim. Fire-blackened on bottom and shoulder.
H. 0.195, max. diam. 0.23, diam. rim 0.165, wt. 1.25. Sandstone fabric, red 2.5 YR 5/6.
Stewpot with round bottom curving up to almost spherical body. Vertical rim, triangular in section, inwardly thickened, flat lip, slightly inwardly sloping. Slightly wheel-ridged lower body, grooved upper body, single groove around rim on exterior. Two strap handles from max. diam. to upper shoulder.

109.  (Lot-1992-100-68)
Numerous fragments preserve almost complete vase except for a few fragments from body.
H. 0.185, max. diam. 0.22, diam. rim 0.14, wt. 1.1. Quartz, mudstone chert fabric, red (between 2.5 YR 5/8 and 4/8).
Round bottom with shallow cavity at centre (diam. 0.009), curving up to spherical body with vertical rim, triangular in section, inwardly thickened, with squared lip. Groove around rim on exterior. Grooved body, more sharply on upper part. Two strap handles from max. diam. to upper shoulder.

Numerous fragments preserve almost complete vase except for a few fragments from bottom and body. Fire-blackened on bottom, body and handles.
H. 0.167, max. diam. 0.21, diam. rim 0.148, wt. 1.2. Sandstone fabric, yellowish red (5 YR 5/6).

Stewpot with flat bottom curving up almost spherical body. Vertical rim, triangular in section, inwardly thickened, with concave inner profile, inwardly sloping lip. Two strap handles from max. diam. to upper shoulder. Wheel-ridged on body except central band. Groove around rim in exterior. Sprinkled colourless glaze on lower body.

**Type 2-B (vertical rib)**

111. (Lot-2002-05-3)

Three joining fragments preserve one-twentieth of body, one-fourth of rim. Missing base and handles. Crusted inner and outer surface.

H. p. 0.038, diam. rim 0.155, wt. 0.047. Sandstone fabric, outer section yellowish red (5 YR 5/8), reddish gray inner section (5 YR 5/2).

Stewpot with round shoulder curving sharply up to vertical rim, triangular in section, with squared lip, inwardly sloping. Groove around rim on exterior. Grooved shoulder. Vertical rib attached on outer rim and shoulder.

**Type 2-C**

This subtype of triangular rim stewpot, type 2, is characterized by a rim diameter ranging from 10 cm to 13 cm, by an ovoid body shape and by a decreased diameter – height proportion compared the subtype 1 of triangular rim stewpot, type 2.

112. (Lot-1991-77-3)

Five joining fragments preserve complete one-third of body, half rim, one complete handle. Missing bottom and second handle.

H. p. 0.0112, diam. rim 0.11, w. 0.232. Sandstone, yellowish red (5 YR 5/8).

Stewpot with flaring lower body to carination, almost straight inwardly sloping upper body to vertical rim, triangular in section with inwardly bevelled lip. Wheel-ridge body. Strap handle from shoulder to carination.
113. (Lot-1991-77-6)

Single fragment preserves one-tenth of body, one-fifth of rim. Missing base and handles.

H. p. 0.048, diam. rim 0.10, w. 0.020. Sandstone fabric, yellowish red (5 YR 4/6). Small cooking pot with sloping shoulder to vertical rim, triangular in section with squared, flat lip, inwardly sloping. Lightly grooved shoulder, single groove around rim on exterior.


Numerous fragments preserve almost complete vase, except for a few fragments from body and rim. Fire-blackened on almost the entire outer surface of body and at centre on inner bottom surface.

H. 0.145, max. diam. 0.195, diam. rim 0.13, wt. 1. Sandstone, yellowish red (5 YR 5/8).

Stewpot with flat bottom, curving up to globular body. Vertical thickened rim, triangular in section, inwardly sloping lip. Two strap handles from max. diam. to shoulder. Grooved body from max. diam. to just below rim. Pared lower body.

**Type 3: first three quarters 13th century**

**Type 3-A**

115. (Lot-1992-100-37)

Numerous fragments preserve two-thirds of body, entire rim; no bottom. Fire-blackened surface on body and handles.

Max. pres. H. 0.176, max. diam. 0.268, diam. rim 0.19. Wt. 1.291. Sandstone, red, slightly lighter than 2.5 YR 4/8.

Stewpot with spherical body curving up to vertical rim, triangular in section, inwardly thickened, with flat lip with round edges, inwardly sloping. Wide groove around rim on exterior. Strap handle, with central rib, from max. diam. to shoulder. Slightly wheel-ridged lower body, grooved upper body.
116. (Lot-1997-44-17)

Eight joining fragments preserve one-sixth of body, one-third of rim, one complete handle.

H. p. 0.165, diam. rim 0.15, w. 0.28. Sandstone fabric, brown (7.5 YR 4/4).
Stewpot with spherical body, vertical, thickened rim, triangular in section, with flat lip inwardly sloping, with rounded edges. Pared lower body, grooved upper body and shoulder. Single groove around rim on exterior. Strap handle from max. diam. to shoulder.

117. (Lot-1997-47-03)

Numerous joining fragments preserve two-thirds of body, four-fifths of rim, two complete handles, missing base.

H. p. 0.159, diam. rim 0.155, w. 0.7. Sandstone? light brown 7.5 YR 6/4
Stewpot pot with round bottom curving up to ovoid body with max. diam. above median of body. Sloping shoulder curving up to thickened rim, triangular in section, with inwardly sloping lip. Strap handles from max. diam. to shoulder. Grooved shoulder, single groove around rim on exterior.

118. (C-1992-53) (photo: plate no. 4).

Numerous joining fragments preserve complete profile, both handles; missing parts of bottom, body, shoulder, ca. 1/10 rim. Restored with plaster.

H. 0.232, diam rim 0.177, w. 1.776. Chert fabric, reddish brown (10R 5/5)
Cooking pot with rounded bottom, spherical body, vertical rim triangular in section, inwardly sloping lip. Two strap handles from max. diam. to shoulder. Pared bottom and lower body, broad wheel marks on mid-body, grooved shoulder, single groove around rim on exterior.

119. (Lot-1992-84-50)

Eighteen joining fragments preserve two-thirds of body, one-fifth of rim, one complete handle.

H. p. 0.175, diam. rim 0.175, w. 0.715. Mudstone poorly fired fabric.
Stewpot with spherical body, vertical rim, triangular in section. Vertical strap handle from max. diam. to shoulder, with shallow central rib. Grooved shoulder to max diam. Wheel-ridged lower body. Groove around rim on exterior.

120. (Lot-1992-84-53)
Numerous joining fragments preserve one-tenth of body, three-quarters of rim, two almost complete handles. Missing bottom.
H. p. .0.15, diam. rim 0.15, w. 0.492. Chert fabric.
Stewpot with almost spherical body, curving up to vertical rim, triangular in section, flat lip inwardly sloping. Groove around rim on exterior. Strap handle with central rib, from shoulder to max. diam. Pared outer surface.

Type 3-B (vertical rib)
121. (Lot-1997-44-24)
Numerous joining fragments preserve almost complete pot. Missing base. White crust on inner surface.
H. p. 0.194, diam. rim 0.185, w. 1.25. Chert fabric, red (10R 4/6).
Stewpot with spherical body, thickened rim triangular in section, with flat lip, inwardly sloping. Two strap handles from max. diam. to shoulder. Grooved shoulder. Two vertical ribs, diametrically opposite, from max. diam. to mid-rim.

122. (Lot-1997-47-09) (photo: plate no. 4).
Numerous joining fragments preserve complete profile; missing a few fragments from base and body. Fire–blackened surface on exterior base and body.
H. 0.203, diam. rim 0.165, w. 1.55. Quartz, mudstone chert?, yellowish red (5 YR 5/6).
Stewpot with round bottom, spherical body. Thickened rim, triangular in section, inwardly sloping lip. Two vertical, strap handles from max. diam. to shoulder. Grooved shoulder, single groove around rim on exterior. Two vertical ribs, diametrically opposite, from max. diam. to mid-rim.

123. (Lot-1992-84-69)
Numerous fragments preserve almost complete pot.
H. p. 0.21, diam. rim 0.17, w. 1.55, quartz chert mudstone fabric.
Stewpot with round bottom, almost spherical body, vertical rim, triangular in section. Pared bottom and lower body, grooved shoulder to max. diam. Groove around rim on exterior. Vertical strap handle from shoulder to max. diam. Vertical rib over shoulder to rim.

124. (Lot-1992-84-63)
Numerous joining fragments preserve almost complete pot. Fired blackened outer surface, bottom to over handle (kiln firing?)
H. 0.21, diam. rim 0.18, w. 1.725. Chert fabric.
Stewpot with almost spherical body, vertical rim, almost triangular in section, inwardly sloping lip. Strap handle, with shallow central rib, from max diam. to shoulder. Grooved shoulder, single groove around rim. Wheel-ridged lower body. One vertical rib from rim to shoulder.

4.6.5 Outwardly thickened rim stewpot

Type 1: first half 12th century

Type 1-A

125. (Lot-1990-54-19)
Five joining fragments preserve one-fifth of body, one-third of shoulder and half rim. Missing base. Fire-blackened inside and outside.
H. p. 0.085, diam. rim 0.10, w. 0.135. Chert and quartz fabric, brown, (7.5 YR 5/3).
Stewpot with almost spherical body, outwardly thickened rim with rounded lip. Vertical handle, oval in section, attached to mid-body to shoulder. Grooved mid-body, except shoulder.

126. (Lot-5117-13)
Single fragment preserves one-tenth of shoulder, one-sixth of rim. Missing body, base and handle.
H. p. 0.039, diam. rim 0.13, w. 0.01.
Fabric: Mudstone poorly fired fabric, yellowish red (5 YR 5/6).
Shoulder sloping to vertical rim, triangular in section, inwardly thickened, flat lip with slightly inwardly sloping, rounded edges. Plain rim, slightly grooved shoulder.

**Type 1-B**

127. (Lot-1990-54-20)
Nine joining fragments and three non-joining fragments preserve one-sixth of body, one-third of shoulder and nearly complete rim. Two complete handles preserved.
H. p. 0.102, diam. rim 0.12, w. 0.325. Chert and quartz fabric. Weak red inner section, (2.5 YR 4/2), red outer margin (2.5 YR 4/6).
Stewpot with spherical body, vertical, outwardly thickened rim, outwardly defined by ridge on mid-rim. Vertical, strap handle attached from max. diam. to shoulder. Pared outer surface.

128. (Lot-1989-08-01)
Two joining fragments preserve one-fourth of shoulder and rim. Missing base and handles.
H. p. 0.081, diam. rim 0.16, w. 0.09. Quartz, mudstone, chert?, red (2.5 YR 5/6).
Shoulder sloping to vertical rim, inwardly thickened, flat lip inwardly sloping, with squared outer edge; wide groove around rim on exterior. Undecorated shoulder.

**Type 1-C**

129. (Lot-1991-77-1)
Single fragments one-eighth of body, one-fourth of rim. Missing handle and bottom. Fire-blackened on body.
H. p. 0.066, diam. rim 0.13, w. 0.067. Well fired chert and quartz fabric, pale brown (10 YR 6/3).
Stewpot with sloping shoulder, vertical rim, inwardly bevelled lip. Double deep groove below rim.
130. (Lot-1989-15-2)
Two joining fragments preserve one-seventh of body and rim, one complete handle. Missing base.
H. p. 0.088, diam. rim 0.125, w. 0.12. Mudstone chert and quartz fabric, red inner margin (2.5 YR 5/6), pinkish gray outer margin (7.5 YR 6/2).
Stewpot with almost spherical body, vertical rim, slightly inwardly thickened, inwardly bevelled lip. Three grooves just above max. diam., wide groove around shoulder. Vertical handle, round in section, with shallow spine, from max. diam. to shoulder.

131. (Lot-2002-05-7)
Single fragment preserves one-seventh of body, one-fifth of rim. Missing bottom and handles.
H. p. 0.048, diam. rim 0.11, wt. 0.038. Well fired chert and quartz? light brown (7.5 YR 6/4).
Small stewpot with sloping shoulder to vertical rim, inwardly thickened with inwardly bevelled lip. Single groove around max. diam.

132. (Lot-2002-05-5)
Single fragment preserves one-tenth of body, one-fifth of rim. Missing base and handle.
H. p. 0.047, w. 0.064, diam. rim 0.135, wt. 0.025. Quartz, mudstone chert fabric dark reddish (gray 2.5 YR 4/1).
Stewpot with straight inwardly flaring wall, outwardly thickened, squared rim. Single groove on above max. diam. and around mid-shoulder.

Type 2: second to third quarter 12th century

Type 2-A
133. (Lot-1989-15-09)
Eight joining fragments preserve one-fifth of body, half rim. Missing base and handle.
H. p. 0.084, diam. rim 0.125, w. 0.15. Mudstone poorly fired fabric, yellowish red (5 YR 5/6).
Stewpot with spherical body curving up to vertical rim, outwardly thickened, with flat lip, inwardly sloping. Grooved shoulder to max. diam. Vertical handle from shoulder.

134. (Lot-1989-15-08)
Six joining fragments, plus two non-joining fragments, preserve one-tenth of body, one-third of rim, one-third of one handle. Missing base.
H. p. 0.067, diam. rim 0.17, w. 0.23. Mudstone poorly fired fabric: red (2.5 YR5/6).
Stewpot with almost spherical body, sloping shoulder to outwardly thickened rim, with inwardly bevelled lip. Grooved body. Strap handle from shoulder.

135. (Lot-1989-15-10)
Two joining fragments preserve one-twelfth of body, one-fifth of rim, one complete handle. Missing base.
H. p. 0.077, diam. rim 0.145, w. 0.1. Mudstone poorly fired fabric, yellowish red (5 YR 5/8).
Stewpot with almost spherical body, vertical rim, outwardly thickened with concave inner profile, inwardly and outwardly bevelled lip. Strap handle from max. diam. to shoulder. Wheel-ridged body.

136. (Lot-1989-08-08)
Two joining fragments preserve one-fifth of shoulder and rim, one-third of handle. Missing base. Fire-blackened surface.
H. p. 0.063, diam. rim 0.15, w. 0.1. Mudstone poorly fired fabric, red (2.5 YR 5/6).
Stewpot with round shoulder curving up to vertical, thickening towards outwardly thickened rim, with flat lip inwardly sloping. Strap handle, with two shallow ribs, from upper shoulder. Grooved upper body.

137. (Lot-1989-08-09) Stewpot joining Lot-1989-15-07
Single fragment preserves one-twentieth of shoulder, one-seventh rim. Missing base and handle.
H. p. 0.047, diam. rim 0.16, w. 0.02. Mudstone poorly fired fabric, light red core (2.5 YR 6/8), weak red margins (2.5 YR 5/2).
Stewpot with sloping shoulder, outwardly thickened rim, with deep concave inner profile, inwardly sloping lip. Grooved shoulder.

**Type 3: last quarter 12th century**

138. (Lot-1992-100-64)
Numerous fragments preserve almost complete vase except for a few fragments from body. Fire-blackened outer body.
H. 0.165, max. diam. 0.185, diam. rim 0.14, wt. 1. Packed quartz fabric, red (2.5 YR 5/8).
Flat bottom, with bulge at centre. Ovoid body with round shoulder, curving up to vertical rim, outwardly thickened, with flat lip. Shallow incised line around rim on exterior, just below lip. Two strap handles, with central rib, from max. diam. to upper shoulder. Five grooves around shoulder. Wheel-ridged lower body and bottom.

**Type 4: first 3 quarters 13th century**

**Type 4-A**

139. (C-1992-55)
Six joining fragments preserve three-fourths body profile to rim, upper half of handle, both attachments.
H. p. 0.16, diam rim 0.162. w. 0.75. Fabric 7. core: 5 YR 6/2 to 5 YR 1/6.5.
Stewpot with almost spherical body, outwardly thickened rim, inwardly sloping lip. Two vertical strap handles from just above max. diam. to upper shoulder. Grooved shoulder, smoothed body.

**Type 4-B**

140. (Lot-1997-44-25)
Numerous joining fragments preserve almost complete pot. Missing base.
Blackened surface. Restored with plaster.
H. p. 0.166, diam. rim 0.145, w. 0.9, chert fabric, red (2.5 YR 5/6).
Stewpot with spherical body curving up to vertical, outwardly thickened rim with deep concave profile, inwardly sloping lip. Grooved body, except lower section.

141. (Lot-1997-44-18)
Single fragment preserves one-sixth of shoulder and rim. Missing base and handle.
H. p. 0.063, diam. rim 0.16, w. 0.05. Chert fabric, dark greyish brown (2.5 Y 5/2).
Stewpot with sloping shoulder, outwardly thickened rim, with squared, inwardly bevelled lip, ridge at lower edge of rim, on exterior. Four grooves on upper shoulder.

Folded rim stewpot
Chronology: 13th century
Type 1-A

142. (Lot-1997-44-16)
Two joining fragments preserve one-fourth of shoulder and rim, and one complete handle. Missing base.
H. p. 0.089, diam. rim 0.175, w. 0.18. Chert fabric, red margins (2.5 YR 5/6), yellowish red core (5 YR 5/6).
Stewpot with sloping shoulder curving up to folded rim, inwardly sloping lip. Strap handle from max. diam. to above the lip. Grooved shoulder, deep groove below rim.

143. (C-1992-56) (photo: plate no. 4).
Numerous joining fragments, complete profile from median to rim, nearly half circumference, one handle.
H. p. 0.153, diam. rim 0.225 rim, w. 1.047. Quart-mudstone chert fabric.
Stewpot with globular body curving up to folded rim. Two vertical handles attached above max. diam. to above the lip. Single groove around max. diam, framing a wide band decorated with single incised wavy line, on top framed by grooved shoulder. Incised wavy line on outer rim.
144. (Lot-1992-84-68)
Numerous joining fragments preserve half body, two-thirds of rim, two complete handles. Missing bottom.
H. p. 0.22, diam. rim 0.185 (uneven) w. 1.033. Quart-mudstone chert fabric.
Stewpot with almost spherical body, vertical folded rim with squared lip. Vertical strap handle from max. diam. to above the lip. Pared lower body, wheel-ridged upper body, grooved shoulder.

145. (Lot-1992-84-26)
Numerous joining fragments preserve almost complete bottom, half body, one-fifth of rim, one handle stump.
H. 0.17, diam. rim 0.16, w. 0.677. Quart-mudstone chert fabric.
Stewpot with round bottom, spherical body, vertical folded rim. Strap handle from max. diam. to lip. Smoothed outer surface. Incised band around max. diam. defined by lower double groove and single upper groove, decorated with incised wavy line.

Type 1-B
146. (Lot-1997-47-01)
Fifteen joining fragments preserve one-sixth of body and one-fourth rim. Missing base and handle.
H. p. 0.153, diam. rim 0.16, w. 0.55. Mudstone poorly fired, yellowish red (5 YR 5/6).
Stewpot with almost spherical body, curving up to folded rim. Vertical, strap handle from max. diam. to lip. Slightly grooved shoulder. Vertical rib on shoulder.

147. (Lot-1997-47-11)
Eighteen joining fragments preserve one-sixth of body, one-third of rim; eight non-joining fragments preserve almost half base. Fire-blackened surface on exterior.
H. p. 0.19, diam. rim 0.15, w. 0.4. Mudstone well fired fabric, brown (7.5 YR 5/4).
Stewpot with round bottom curving up to spherical body. Folded, thickened rim. Grooved upper body. Vertical rib on shoulder.

4.6.7 Small cooking pot

Type 1: mid 10th to 11th century

148. (Lot-1977-47-10) mid-10th century
Seven joining fragments preserve one-fourth of body, two-thirds of rim. Missing base and handle.
H. p. 0.096, diam. rim 0.12, w. 0.2. Fabric: core red (2.5 YR 5/6), margins dark reddish grey (5 YR 4/2), chert and quartz.

149. (Lot-1977-47-17) mid-10th century
Single fragment preserves one-sixth of shoulder and rim. Missing base.
H. p. 0.049, diam. rim 0.1, w. 0.01. Fabric: red (2.5 YR 5/6), Sandstone.
Rounded shoulder curving up to straight, slightly flaring rim, with slightly concave inner profile, inwardly bevelled lip. Groove around rim, just below lip. Grooved shoulder.

150. (Lot-1977-47-18) mid-10th century
Single fragment preserves one-fifth of base and lower body.
H. p. 0.053, diam. base 0.07, w. 0.04. Fabric: core reddish brown (2.5 YR 5/4), edges red (2.5 YR 5/6), chert and quartz?
Flat base with globular body. Shallow, wide groove around mid-body. Smoothed outer surface.

151. (Lot-1996-36-9) mid 11th century
Numerous fragments preserve complete profile, two-thirds of base and body, half rim, complete handle. Restored with plaster. Crusted inner surface. Fired-blackened lower body.
H. 0.14, diam. base 0.08, diam. rim 0.0105, w. 0.3. Well fired chert and quartz fabric.
Small cooking pot with flat base, ovoid body curving sharply up to vertical rim, with concave inner profile and rounded, slightly inwardly bevelled lip. Groove around rim on exterior, grooved shoulder. Strap handle from below shoulder to max. diam.

152. (Lot-1992-90-7) second half 11th century
Single fragment preserves one-tenth of body, one-fourth of rim. Missing base.
H. p. 0.068, diam. rim 0.115, w. 0.031. Well fired chert and quartz fabric, light reddish brown (local 10 YR 6/4).
Small cooking pot with almost globular body curving sharply up to flaring rim, with concave inner profile, rounded lip. Single groove around rim on exterior. Grooved shoulder.

Type 2: 1st half 12th century

153. (Lot-1990-54-12)
Twenty-three joining fragments preserve nearly complete vase. Missing one-third of upper body and one-quarter of rim.
H. 0.123, diam. rim, 0.102, diam. base 0.102, w. 0.441. Quartz-mudstone-chert fabric, red (2.5 YR 5/6).
Small cooking pot with flat base, hemispherical body curving up to vertical rim with rounded lip. Strap, vertical handle attaches on body at max. diam. to rim. Double groove around rim on exterior. Pared surface.

154. (Lot-1989-15-17)
Single fragment preserves one-eighth of body, one-fourth of rim. Missing base.
H. p. 0.052, diam. rim 0.10, w. 0.03. Fabric 9, pale yellow (2.5 Y 8/3).
Mug with sloping shoulder to vertical rim, with concave inner profile, inwardly bevelled lip. Wide groove around rim on exterior, grooved shoulder. Wheel-made.
155. (Lot-1989-15-11)
Eight joining fragments preserve almost complete base, one-sixth of body, two-thirds of handle. Missing rim. Fire-blackened surface.
H. p. 0.148, diam. base 0.09, w. 0.22. Mudstone well fired fabric, yellowish red margins (5 YR 5/6), pinkish gray core (7.5 YR 6/2).
Flat base curving up to ovoid body, strap handle, with very shallow central rib, handle attached to max. diam.

156. (Lot-1989-08-02)
Three joining fragments preserve one-sixth of body, half rim. Missing base and possibly handle.
H. p. 0.078, diam. rim 0.085, w. 0.05. Chert fabric, reddish brown (5 YR 5/4).
Almost spherical body, vertical with rounded lip. Grooved upper body, double groove around rim.

Type 3: second half 12th century
Numerous fragments preserve one-fourth of base, two-thirds of body and rim, one complete handle. Fire-blackened on lower body and handle.
H. 0.135, diam. base 0.094, diam. rim 0.102, wt. 0.3. Sandstone, yellowish red (5 YR 5/8).
Flat base curving up to spherical body. Vertical rim, with concave inner profile, squared lip inwardly sloping. One strap handle from max. diam. to shoulder. Pared lower body and shoulder, grooved upper body.

158. (C-1992-62) (photo: plate no. 5).
Twenty-one joining fragments, complete except for ca. 1/4 body, 1/10 rim. All from B. 108 except for one. Whitish traces from salts, post depositional.
H 0.122, diam. base 0.067, diam. rim 0.087, w. 0.3. Quartz, Mudstone-Chert, dark reddish brown (5 YR 3/2)
Small cooking pot with flat base, ovoid body with max. diam. above median. Vertical, thickened rim, triangular in section, flat lip. Vertical strap handle
attached to just below body median and shoulder. Grooved upper body between handle attachments.

159. (Lot-1976-245-15)
Two non-joining fragments preserve half of base and lower body, one-third of rim and one-fifth of shoulder. Traces of blackened surface on base and lower body.
H. 0.105, diam. base 0.07, diam. rim 0.09, w. 0.154. Chert and quartz fabric, red (2.5 YR 5/6).
Mug with flat base, spherical body, straight, flaring, thickened rim, triangular in section, flat lip. One vertical handle frim just below max. diam. to above the lip. Grooved body from 0.031 from base. Incised wavy line on rim.

160. (C-1992-61) (photo: plate no. 5).
Numerous joining fragments preserve complete profile with handle except for small parts of body and ca. 1/12 of rim. Blackened surface on bottom and outer surface.
H 0.13, diam. base 0.091, diam. rim 0.108, w. 0.471. Chert and quartz fabric, yellowish red – red (between 5 YR 4/6 and 2.5 YR 4/6).
Flat bottom, spherical body, vertical, thickened rim, triangular in section, rounded lip, slightly inwardly sloping. Vertical strap handle from max. diam. to rim. Grooved body from ca. H 0.050 to ca. 0.014 m. below base of rim. Incised wavy line on shoulder.

161. (Lot-1992-100-43)
Numerous fragments preserve almost complete vase except for a few fragments from body. Fire-blackened on 70% of vase.
H. 0.144, diam. base 0.091, diam. rim 0.116, w. 0.850. Chert and quartz fabric, yellowish red (5 YR 5/6).
Flat bottom curving up to spherical body. Vertical rim, almost triangular in section with slightly concave inner profile, rounded lip. One strap handle from max. diam. to lip. Pared lower body, grooved upper body.
Type 4 (small cooking pot with folded rim) 13th century

162. (C-1997-39) (photo: plate no. 5).
Numerous joining fragments preserve complete profile, almost complete base, two-thirds body, one-quarter of rim, one handle. Fire blackened surface.
H. 0.12, diam. base 0.06, diam. rim 0.10. w. 0.26.). Mudstone well fired?, (4 YR 5/5).
Small cooking pot with flat base, spherical body, folded rim, with rounded lip. Single vertical handle, oval in section, from lower body to shoulder. Grooved shoulder. Wheel-made.

163. (Lot-1997-44-1)
Nine joining fragments preserve one-quarter of body, half rim. Missing base and handle.
H. p. 0.095, diam. rim 0.095, w. 0.2. Chert fabric, yellowish red (5 YR 5/6).
Small cooking pot with almost spherical body curving up to vertical, folded rim, inwardly bevelled lip. Vertical handle attached to shoulder. Slightly wheel-ridged lower body, grooved upper body and shoulder.

164. (Lot-1992-84-64)
Nine joining fragments preserve almost half body and rim. Missing base. Almost entire outer surface fire-blackened.
H. p. 0.154, diam. rim 0.13 (irregular), w. (0.208). Mudstone well fired?
Small cooking pot with almost spherical body, vertical folded rim with squared lip. Grooved shoulder and lip. Handle possibly attached above the lip.

165. (Lot-1992-84-56)
Four joining fragments preserve one-eighth of body, one-fourth of rim, two-thirds of handle. Missing base.
H. p. 0.088, diam. rim 0.095, w. 0.066. Quartz, mudstone and chert fabric.
Small cooking pot with globular body, vertical folded rim. Vertical handle, oval in section, from max. diam. to above the lip. Band of five grooves around max. diam. partially covered by handle attachment.
166. (Lot-1992-84-55)
Seven joining fragments preserve one-fifth of body, one-third of rim. Missing base.
H. p. 0.124, diam. rim 0.115, w. 0.126. Quartz mudstone chert fabric.
Small cooking pot with spherical body, vertical folded rim, with rounded lip.
Smoothed outer surface.

167. (Lot-1992-84-59)
H. p. 0.135, max. diam. 0.145, diam. base 0.05, w. 0.421. Quartz, mudstone chert fabric?
Small cooking pot with concave bottom, almost spherical body, outer surface slightly smoothed, some wheel-ridged still visible, especially on lower body.

168. (Lot-1992-84-61)
Seven joining fragments preserve half base, one-third of body. Missing neck and rim.
H. p. 0.107, diam. base 0.07, w. 0.303. thicker walls: 0.018. Fabric: mudstone poorly fired.
Small cooking pot with almost flat base, concave undersurface, almost spherical body. Body much thicker (1.8 cm) than base (0.4 cm).

**Type 5: second half 13th century**

169. (Lot-1992-84-57)
Six joining fragments preserve one-fifth of body, one-sixth of rim. Missing base.
H. p. 0.135, diam. rim 0.11, w. 0.08. Chert fabric.
Small cooking pot with almost spherical body, vertical rim, inwardly thickened with concave inner profile, flat, rounded lip. Three-quarters of body grooved, with grooves becoming wider from max diam. towards lower body. Smoothed lower body. Traces of white slip on all pot (inner and outer surface).
4.6.8 Lid

Rare examples of lids, in the cooking bell shape, and funnels in cooking ware fabric have been identified from only one assemblage from Corinthian contexts, dated to the mid-10th century, with further fragments found in 11th century contexts.

A variation on the type of clay lid is characterized by a disc shape and single handle, often with punched decoration, which has been found in few contexts dated to the second half of the late 11th – 12th centuries (cf. no. 173). It might be hypothesized that the paucity of these types of utilitarian objects may be due to a preference for lids and funnels made in other materials, probably metal.

170. (C-1977-228) (photo: plate no. 6).
Eight joining fragments preserve almost half body, complete top and one-third of handle. Missing rim.
H. p. 0.136, with handle 0.188, diam rim top 0.136, w. 0.789. Strong brown (7.5YR5/6), mudstone well fired fabric.
Bell with conical body, flat top. Central bulge on inner top surface. Strap handle on central top. Wheel-made.

171. (C-1977-229) (photo: plate no. 6).
Five joining fragments preserve one-fourth of lower rim.
H. p. 0.081, diam. rim 0.26, w. 0.140. Strong brown (7.5YR 5/6), mudstone well fired fabric.
Conical shape body with rounded lip. Double groove on exterior just above lip.

172. (C-1977-230) (photo: plate no. 6).
Seven joining fragments preserve one-fourth of body and rim.
H. p. 0.121, diam. rim 0.24, w. 0.249. Yellowish red (5YR 5/6), mudstone well fired fabric.
Conical body, with straight inwardly sloping walls, rounded lip. Double groove above lip on exterior, wheel-ridged outer body.

173. (C-1963-573) (photo: plate no. 6).
Thee joining fragments preserve complete profile and almost intact pot. Missing only one-seventh of vase. Restored with plaster.

H. 0.08, diam. 0.195. Well fired chert and quartz fabric.

Lid with disk shape (thickness: 0.02), horizontal handle, oval in section, with central spine. Double line of punched decoration around outer upper surface. Incised wavy line below one side of handle. Two holes made before firing on handle sides.

4.6.9 Funnel

174. (C-1977-221) (photo: plate no. 6).

Seven joining fragments preserve one-half of vase. Missing lower cone part.

H. p. 0.133, diam. rim 0.207, w. 0.93. Fabric 3: very pale brown (10YR 7/4).

Funnel with almost hemispherical body, squared resting surface. Groove around median and shoulder, incised wavy line on upper shoulder. Wheel-ridged body.

Wheel-made.

175. (Lot-1977-47-29)

Two joining fragments preserve one-sixth of rim and body.

H. p. 0.11, dima. rim 0.22, w. 0.23. Fabric 2, brownish yellow (10YR 6/6).

Top of conical pouring spout slopes continuously to hemispherical body with tapering lip. Three bands of grooves from spout to lip spaced out by two incised wavy lines. Wheel-made.

4.6.10 Handmade cooking ware

It is rare, in Corinth, to find handmade pots, beaker in shape, which have a dark brown to a fired-blackened surface and are characterized by a very coarse fabric with frequent large, crystalline quartz and lime inclusions. The outer surface of the beaker is smoothed and, in few instances, also includes a combed, incised decoration. Around a total of four base and four rims have been found so far in the contexts analysed for
this project, which have been dated to between the 10th to the 12th centuries. The shape of these beakers appears to be consistent throughout the course of these centuries, with a flat base, ca. 0.10 m in diameter, globular body and a flaring rim with a rounded lip that has an average of 0.10 m in diameter. The shape and the fabric are very close to the earlier, handmade vessels generally ascribed to a ‘Slavic’ manufacturing tradition and, therefore, it could even be possible to hypothesise that these beakers are residual sherds in Middle Byzantine pottery assemblages. However, a later date is supported by multiple other sources, such as the handmade beaker found in the agora of Argos, which is almost identical to the Corinthian examples and is dated to the late 12th century (Piérart & Thalmann 1980: 470, no B 42). Additionally, excavations in the Roman Stoa and Theatre of Sparta clearly show that, from the 10th to the 14th centuries, handmade cooking vessels were predominant in the ceramic assemblages (Sanders 1993, 1995a). Nevertheless, wheel-made cooking vessels were produced in Sparta in the same period, even though handmade wares continued to be preferred, probably for its long-resisting quality (Sanders 1993: 279). The 2008 excavation in the Theatre area confirms this trend. Handmade cooking vessels were the most dominant type of cooking ware from the ceramic assemblages dated from the 9th to the 13th centuries. These pots were possibly made with the use of a platform, turned by hand, and the outer surface was polished, leaving the inner surface rough. Their shape is characterized by a flat base, a globular body and a flaring rim with rounded or squared lip. Very few vessels preserve traces of incised liner decoration. Finally, it is worth pointing out that a similar handmade cooking ware manufacturing tradition, although with different regional characteristics, has been documented in the Danube valley, in Serbia, Rumania and Bulgaria (Bikic 1994). Through the analysis of stratified and chronologically well-defined contexts, this ware has been dated from the 10th to the 14th century, during which it underwent changes of shape and decoration, probably with a major transformation identified between the 11th and 12th centuries (Bikic 2015).

The handmade cooking ware identified in Corinth and in Sparta, as well as in Central European contexts, was found associated with wheel-made pottery, imported Byzantine amphorae, and with Byzantine glazed table ware. This data facilitates the hypothesis that handmade manufacturing, which might be related to household production, should not be systematically equated to a subsistence-level economy;
furthermore, most likely the socio-economic status cannot be detected from the adoption and use of these handmade vessels. It is likely that these handmade vessels should be associated with non-Byzantine manufacturing know-how, which was kept alive by the descendants of those immigrants of Slavic culture (Sanders 1993: 279). Moreover, in the case of Sparta where these vessels are more numerous, the dominant production of these vessels might also be explained by its production process, which would have required fewer infrastructures, a shorter and simplified manufacturing process, and would still have produced functional cooking vessels that performed well, but were likely cheaper than the other ones that could be found on the market.

176. (Lot-1998-28-3) Beaker, 1st half 10th century (photo: plate no. 7).
Single fragment preserves one-seventh of rim. Missing base and body.
H. p. 0.031, w. 0.042, diam. rim 0.1, w. 0.01. Fabric: medium hard, outer margin 5 YR 3/2 (dark reddish brown) 2.5 YR 4/6 (red). Frequent (0.25-1.5) sub-rounded spherical, white inclusions; rare (0.25 – 1.5 mm) angular-spherical, silver sparkling inclusions; rare (0.50-1.5), rounded-spherical black inclusions. Irregularly shaped voids. Hackly break.
Beaker with flaring rim and rounded lip. Parallel, oblique bands of combed decoration on outer pared surface.

177. (C-1977-284) Beaker, 11th century (photo: plate no. 7).
Single fragment preserves one-fifth of base and one-sixth of body. Missing rim.
H. p. 0.042, diam. base 0.11. Medium-hard fabric, gray core (10YR 5/1), dark grayish brown margins (10YR 4/2), Frequent (0.25-1.5) sub-rounded spherical, white inclusions; rare (0.5 – 1.5 mm) silver sparkling inclusions; rare (0.25-0.5), rounded-spherical black inclusions. Abundant irregularly shaped voids. Hackly break.
Beaker with flat bottom, roughly finished with narrow edges projecting from base. Straight, slightly flaring lower body, with rough outer surface.

178. (Lot-1989-15-18) Beaker, 12th century
Single fragment (a) and two non-joining fragments (b) preserve one-twentieth of body, one-seventh of rim, missing base.
H. p. 0.034, diam. rim 0.10, w. 0.11. Medium-hard fabric, core gray (10YR 5/1), brownish yellow inner margin (10YR 6/6), dark grayish brown outer edge (10YR 4/2). Frequent (0.25-1.5) sub-rounded spherical, white opaque, inclusions; rare (0.5 – 1.5 mm) silver sparkling inclusions; rare (0.25-0.5), rounded-spherical black inclusions. Abundant irregularly shaped voids. Hackly break. Inwardly sloping irregularly shaped voids. Hackly break.

Inwardly sloping shoulder curving up to flaring rim with round lip.

4.7 Unglazed White Ware

Imported jugs, produced in the same fabric as the glazed white table ware, appears in the Middle Byzantine contexts in Corinth, most likely during the course of the second half of the 10th century, but definitely during the 11th and very early 12th century. These jugs are characterized by a deep concave bottom, a globular body, a cylindrical neck and a trefoil rim, some examples of which also have spouts on the shoulder. The body is wheel-ridged and is occasionally spritzed with yellow glaze. The function of this jar might be hypothesized by analysing the evidence for fired-blackening on the body and the inner surface, which is often covered by a layer of calcium carbonate, thereby suggesting that these jugs were used as kettles for boiling water. There are very few examples of unglazed beakers produced in the same white Constantinopolitan fabric, made with very thin walls as the kettles are. These utilitarian vessels were reasonably produced in the same manufacturing centre where the white glazed table ware was produced; however, according to the quantified evidence from Corinth, they were imported in lower quantities.

179. (Lot-1996-36-22) White Ware beaker (photo: plate no. 7).

Three joining fragments preserve two-thirds of base, one-sixth of body. Missing handle and rim.

H. p.: 0.059, diam. base 0.06, wt. 0.086. Fabric: white (2.5 Y 8/1).

Beaker with flat base curving up to ovoid body. Lightly wheel-ridged body. Sparse drops of yellow glaze.

180. (Lot-2009-07-1) White Ware kettle, trefoil rim.
Numerous joining fragments preserve complete profile. Missing one-fifth of bottom and body, half neck and rim.

H 0.24, max. diam. 0.14, rim length: 0.07, width: 0.065, w. 0.461. Fabric: outer margin 10 YR 8/2 (very pale brown), inner margin 7.5 YR 8/4 (pink).

Kettle with concave bottom, central conical bulge at centre (diam 0.015, h. 0.007). Almost globular body. Cylindrical neck, flaring trefoil rim with inwardly bevelled lip. Strap handle from max. diam. to below lip. Wheel-ridge outer body.

181. (Lot-2009-07-2) White Ware kettle (photo: plate no. 7).

Numerous joining fragments preserve almost complete vessel. Missing one-tenth of body and neck, one-third of rim.

H. 0.25, max. diam. 0.15, rim length: 0.07, width:0.062, w. 0.831. Fabric: 5 YR 8/4 (pink).

Kettle with concave bottom, shallow bulge at centre, globular body, cylindrical neck. Flaring trefoil rim with rounded lip. Strap handle from max. diam. to below lip. Wheel-ridge body. Few drops of green glaze on lower body.

182. (Lot-2009-07-3) White Ware kettle (photo: plate no. 7).

Numerous joining fragments preserve complete profile. Missing one-sixth of bottom, few chips of body, one-fourth of rim.

H. 0.265, max. diam. 0.165, rim length: 0.075, width: 0.07, w. 0.907. Fabric: edges: 2.5 Y 8/2 pale yellow, core: 5 YR 8/3 (pink)

Kettle with concave bottom, bulge at centre (diam. 0.02 m, h. 1.1 cm) globular body, cylindrical neck, trefoil rim, thickening towards squared, flat lip. Rib around mid-neck. strap handle from max. diam. to below lip. Wheel-ridge body.

183. (Lot-2009-07-4) White Ware kettle, trefoil rim.

Numerous joining fragments preserve complete profile. Almost complete bottom, missing one-sixth of body, neck and rim.

H. 0.245, max. diam. 0.015, rim length: 0.07, width: 0.065, w. 0.677. Fabric: 10 YR 8/1 (white)

Kettle with concave bottom, central bulge (diam. 1.8 cm, h. 0.7 cm). Globular body. Cylindrical neck, trefoil rim with tapered, flaring lip. Strap handle from
max. diam. to below lip. Wheel-ridge body. Few sparse drops of yellow glaze on bottom.

4.8 Coarse Ware

4.8.1 Stamnos

This rare example of stamnos, produced in cooking ware fabric, has been found in contexts dated between the 9th to the first half of the 10th century.

184. (Lot-1998-18-2)
Numerous joining fragments preserve complete base, almost half body, one-sixth of rim.
H. p., 0.305, diam base 0.10., diam. rim 0.08. Quartz-Mudstone-Chert fabric, reddish gray core (5 YR 5/2), yellowish red margins (5 YR 5/6).
Stamnos with flat base, straight, flaring lower body curving up to rounded shoulder. Cylindrical neck to rounded lip. Trefoil rim? Wheel-ridged body. Graffito on shoulder (potter’s mark?). Vertical handle attached from shoulder to mid-neck.

4.8.2 Otranto type amphora

The earliest examples of transport amphora are characterized by an ovoid body with a round bottom, and conical neck with flaring rim, offset by a ridge. The body is always wheel-ridged with incised wavy lines around the mid-body and shoulder. They appear identical to the so-called Otranto type amphora, type 1 (Arthur 1992: 206-207), although, based upon a macroscopic analysis of the fabric, the Apulian examples appears to be very similar, but not identical to the Corinthian ones (cf. Chapter 5, paragraph 4 for a discussion on the production of this amphora). Characterized by a very fine fabric, very pale brown in colour (10YR 8/4), the Otranto types have an exterior that is smooth and almost soapy to the touch, whereas the Corinthian examples have a powdery surface. Future petrographic analysis will need
to be used to characterize the mineralogy of this fabric. In the meantime, Corinthian production for this amphora is proven through the identification of several wasters in the kiln sites located along the slopes of Acrocorinth. With the current state of research, it is not possible to evaluate where the Corinthian amphorae were exported, since when they are found in the diverse sites around the Mediterranean, they have a tendency to be identified as Otranto types. The fabric used for the production of these vessels was extremely fine compared to the fabrics used for coarse wares and even for the local table ware. Furthermore, it does not appear to be adopted for the production of any other utilitarian vessels. Probably the potters intentionally established a fabric that would have appeared almost identical to the Otranto, since the shapes were identical. Therefore, it would be a plausible hypothesis that these amphorae were also transporting the same contents, which have been hypothesized to be wine (Arthur & Auriemma 1996).

Very fragmentary evidence for this amphora has been found in 9th century contexts, although it appears to increase in quantity during the course of the 10th and 11th centuries only to almost disappear in the first decades of the 12th century.

**Type 1-A**

185. (C-1977-233) (photo: plate no. 8).

Four joining fragments preserve one-third of body, one-third of rim, two complete handles. Missing base.

H. p. 0.312, diam. rim 0.08, w. 2.57. Fabric 4, very pale brown (10YR 8/4).

Amphora with ovoid body with max. diam. below shoulder. Conical neck, inwardly flaring. Flaring, thickened rim, inwardly offset with a low tapering ridge. Two strap handles, with high central spine, from shoulder to mid neck. Incised, wide wavy line around max. diam. and on shoulder. Wheel-ridged shoulder and body.

186. (Lot-1977-47-21)

Single frgt preserves one-tenth of shoulder, almost half neck, one-third of rim, one stump of handle.

H. p. 0.118, diam. rim 0.08, w. 0.15. Fabric 4, very pale brown (10YR 7/4).
Amphora with sloping shoulder to conical neck, flaring rim, outwardly thickened, concave inner profile by inner ridge, flat lip. Broad incised wavy line on lower neck. Strap handle with central spine, attached to upper neck. Wheel-ridged neck.

**Type 1-B**

187. (C-1977-235)

Numerous joining fragments preserve almost complete upper body, half rim and two complete handles. Missing base.

H. p. 0.225, diam. rim 0.075, w. 1.88. Fabric 4, very pale brown (10YR 7/4)

Amphora with ovoid body, sloping shoulder, conical neck narrowing towards flaring rim, inwardly offset by a low, tapering ridge. Wide groove on mid-neck, above handle attachment and around rim on exterior. Wheel-ridged body. Strap handle, with two shallow ribs, from shoulder to mid-neck. Graffito incised after firing on lower neck: <gr>ΠΡ<gr> on shoulder monogram.

188. (C-1937-2297) photo in fig. 5.6.

Complete profile. Numerous joining fragments preserve almost complete amphora. Missing a few body sherds, restored with plaster.

H. 0.545, diam. rim 0.082, max. diam. 0.325, w. 9. Fabric 4.

Amphora with round bottom, ovoid body, round shoulder, cylindrical neck, flaring rim, outwardly thickened, concave inner profile by inner ridge, flat lip. Strap handle with central spine, from shoulder to neck. Wheel-ridged body. Incised wavy line around mid-body and shoulder.

189. (Lot-1992-92-4)

Single fragment preserves one-fourth of shoulder and neck, one handle stump. Missing base, body and rim.

H. p. 0.102, diam. neck 0.115, w. 0.34. Fabric 4, pale yellow (2.5 Y 8/2).

Amphora with incised swirls and wavy lines around shoulder and upper body. Wheel-ridged surface.

190. (C-2009-11) photo in fig. 5.6.
Complete profile. More than thirty joining fragments preserve all of base, nine-tenths of body and one-tenth of rim. Some non-joining fragments in the lot. Surface and fabric darkened due to overfiring at top of shoulder, neck and handle. Missing rim.
H. 0.67, max. diam. 0.34, w. 9.04, Fabric 4, pale yellow (2.5YR 8/3).
Amphora with a round bottom with a bulge at centre of base. Ovoid body with max. diam. at shoulder. Shoulder tapers sharply to cylindrical neck. Two strap handles attached at shoulder to neck. Neck warped during firing so that it is off-centre. Upper neck and handle vitrified in the kiln. Incised wavy line on body around max diam. and around shoulder. Wheel-ridged body, grooved upper body.

4.8.3 Transport amphora

Beginning in the last quarter of the 11th century, a new amphora appeared with a flaring rim and high handles with a central spine made in the very common Corinthian pale yellow fabric, predominantly well fired chert and quartz fabric (Joyner 2007: 198) that was widely used for the production of utilitarian vessels. However, this amphora type appears to last only for few decades before it is replaced by an amphora characterized by a high flaring handle with a spine that overhangs a flaring rim, here catalogued as type 2, dated to the 12th century.

Type 1, flaring rim

191. (Lot-1992-90-10)

Single fragment preserves one-sixth of neck and rim, one-fourth of handle.
H. p. 0.077, diam. rim 0.065, w. 0.172. Well fired chert and quartz fabric, pale yellow edges margins (2.5 Y 8/3), pink core (7.5YR 8/3).
Amphora with conical neck, curving up to flaring rim with slightly concave profile and rounded lip. Swung handle with central spine.

192. (Lot-2009-51-1) (photo: plate no. 8).

Two joining fragments preserve one-third of neck, rim, and handle; missing body and base.
H. 0.057, Diam. rim. 0.09, w. 0.27. Well fired chert and quartz pale yellow (2.5 Y 8/2).
Amphora, convex neck, outwardly thickened, flaring rim, with squared lip. Strap handles, attached on mid-neck, with central spine.

**Type 2. Transport amphora with high swung handle**

193. (Lot-1990-54-13)
Two joining fragments preserve one-fifth of shoulder, nearly half-neck and rim. One complete handle preserved.
H. 0.105, diam. rim 0.065, w. 0.108. Fabric 3?, 2.5 YR 6/8 (light red).
Amphora with sloping shoulder curving up to conical neck, flaring rim offset by thickened, raised ridge. Vertical, high-swung, spined handle attaches to shoulder and to above the lip. Grooved shoulder.

194. (Lot-1989-08-39)
Twelve fragments preserve one-sixth of body, complete neck, rim and handles. Missing base.
H. p. 0.269, diam. rim 0.069, w. 1.31. Fabric 5, reddish yellow (close to 7.5 YR 7/6).
Amphora with ovoid body with max. diam. above median, round shoulder turning sharply up to short, conical neck, inwardly sloping. Outturned rim, offset by thin ridge. Swung handles, with high central rib, from shoulder to above the lip. Wheel-ridged upper body.

195. (Lot-1992-87-22)
Single fragment preserves one-fifth of shoulder and rim, one complete handle. Missing body and base.
H. p. 0.11, diam. rim 0.04, wt. 0.25. Fabric 8, reddish yellow (5 YR 6/6).
Amphora with round shoulder, inwardly flaring neck, with outwardly flaring rim offset by ridge. High swung strap handle, with central rim, from shoulder to above the lip. Slightly wheel-ridged shoulder and neck.

196. (Lot-1992-87-26)
Numerous fragments preserve one-fourth body, three-quarters of neck and rim, one-fourth of handle, one complete handle. Missing base.

H. pres. 0.318, diam. rim 0.067, w. 1.15. Fabric 5, reddish yellow (between 7.5 YR 7 and 6/6).

Amphora with ovoid body, round shoulder to short neck inwardly sloping, flaring offset rim with flat lip. Swung handles, with central spine, from shoulder to above the lip. Wheel-ridged body.

**Type 3: 13th century**

197. (C-1997-58)

Several joining fragments preserve half shoulder, complete neck and rim, one handle and one-fourth of a second handle.

H. 0.17, diam. rim 0.06, w. 0.48. Fabric 5, light brown (7.5 YR 6/4).

Amphora with rounded shoulder, short cylindrical neck curving up to vertical, inwardly thickened rim, inwardly bevelled lip. Two vertical, high swung handles, with central spine, from shoulder to above the lip. Wheel-ridged body. Wheel-made.

198. (Lot-1997-47-15) (photo: plate no. 8).

Sixteen joining fragments preserve one-sixth of body, two-thirds of neck and rim, one complete handle.

H. p. 0.203, diam. rim 0.06, w. 0.78. Fabric 5, reddish yellow (7.5 YR 6/6).

Amphora with ovoid body, rounded shoulder, short cylindrical neck outwardly thickened to rounded lip. Vertical, high swung handles, with central spine, from shoulder to above the lip. Wheel-ridged body.

**4.8.4 Plain rim large amphora**

These amphorae with large dimensions are still made with the coarse local fabric adopted for the contemporary utilitarian vessels. According to the evidence available thus far, they have been dated to the 11th century, making them contemporary with the so-called Otranto type, from which they are
distinguished not only by fabric and shape, but also by the thinner thickness of
the amphora body, suggesting that these amphorae were probably not intended
for interregional transportation.

Type 1: 11th century

199. (Lot-1996-36-12)
Numerous fragments preserve one-fourth body, almost complete neck, half rim,
one complete handle, one-third of a second handle. Restored with plaster.
H. p. 0.349, diam. rim 0.09, max. diam. 0.345, wt. 1.6. Fabric 9, pale brown (2.5 Y
7/3).
Amphora with ovoid body, round shoulder, cylindrical neck, thickening towards
rounded lip, slightly bevelled inwards. Strap handles, with two central ribs, from
shoulder to mid-neck. Band of eight grooves around shoulder, two shallow
grooves around mid-neck, both partly covered by handle attachments. Pared
body.

200. (Lot-1996-36-17)
Two joining fragments preserve one-tenth of body, one-sixth of neck, one-fifth
of rim, one complete handle. Missing base. Crusted surface.
H. p. 0.20, diam. rim 0.09, wt. 0.4. Well fired chert and quartz fabric?, light red
(2.5 YR 6/8).
Amphora with ovoid body, sloping shoulder to cylindrical neck, rim slightly
outwardly thickened with rounded lip. Groove around shoulder and around neck,
below lip, on exterior. Strap handle, with two ribs, from shoulder to mid-neck.

Type 2: late 11th to mid-12th century

201. (Lot-2009-51-2) (photo: plate no. 8).
Twelve fragments preserve one-sixth of shoulder, one-third of neck, two-thirds
of rim, one complete handle, one-third of a second handle.
H. 0.173, diam. rim 0.10, w. a (0.87), b 0.16. Well fired chert and quartz pink outer
section (7.5 YR 7/4), reddish yellow inner section (5YR 7/6).
Round shoulder curving up to vertical neck, with inwardly bevelled lip. Strap
handle from median to shoulder, with shallow central spine.
202. (Lot-2009-07-6)

Six joining fragments preserve one-twentieth of shoulder, one-fourth of neck and rim, almost one complete handle. Fabric 9.

H. p. 0.0115, diam. rim 0.09, w. 0.171.

Amphora with sloping shoulder, cylindrical neck, outwardly thickened rim with inwardly bevelled lip. Strap handle from mid-neck, with shallow central rib. Ridge on upper neck.

**Type 3-A: second half 12th – 13th century**

203. (Lot-1992-87-18)

Twelve fragments preserve one-third of shoulder, half of neck and rim. One complete handle preserved. Missing base and body.

H. p. 0.14, diam. rim 0.075, w. 0.448. Fabric 9, pink (7.5 YR 7/4).

Amphora with round shoulder curving up to cylindrical neck, inwardly thickened rim, flat lip. Single groove on lower neck, three shallow grooves on upper neck. Wheel-ridged body. Vertical strap handle with two spines from upper body to neck.

204. (Lot-1992-100-97)

Three fragments preserve one-third of neck and rim.

H. pres. 0.10, diam. rim 0.09, wt. 0.300. Fabric 9, pale yellow (2.5 YR 8/3).

Amphora with sloping shoulder, cylindrical neck inwardly thickening, almost triangular in section, slightly outwardly thickened, inwardly sloping lip. Strap handle with shallow ribs from neck.

**Type 3-B**

205. (Lot-2002-03-01)

Numerous fragments preserve half of the upper body, one-third of rim, one complete handle.

H. p. 0.193, diam. rim 0.10, w. 0.9. Fabric 9, very pale brown (10 YR 7/4).

Amphora with ovoid body, round shoulder, cylindrical neck, outwardly thickened rim, triangular in shape, slightly inwardly sloping lip. Wide groove around max.
diam., four grooves on upper shoulder, three on lower neck, one on upper neck.
Strap handle, with double ribs, from max. diam. to mid-neck.

Type 3-C

206.  (Lot-1992-87-21)
Three fragments preserve one-fifth of shoulder, one-tenth of rim, one complete handle. Missing body and base.
H. p. 0.125, diam. rim 0.08 ca. wt. 0.35. Fabric 9, very pale brown (10 YR 7/4).
Amphora with round shoulder curving up to short cylindrical neck with flaring rim offset by groove. Strap handle, with two shallow ribs, from shoulder to neck.
Three wide grooves around shoulder, two incised lines just below neck.

Type 3-D

207.  (Lot-1997-47-13) (photo: plate no. 8).
Six joining fragments preserve one-tenth of shoulder, complete neck and rim, one-third of two handles.
H. p. 0.128, diam. rim 0.85, w. 0.4. Fabric 7, outer section reddish yellow (7.5 YR 6/6), inner section light yellowish brown (10 YR 6/4).
Amphora with convex, sloping shoulder sharply curving up to cylindrical neck; triangular rim, inwardly thickened, squared lip, inwardly sloping. Wide strap handles, with three shallow ribs, attached to neck. Single groove around neck, just below rim.

208.  (Lot-1997-47-16) (photo: plate no. 8).
Fourteen joining fragments preserve half shoulder, one-fourth of neck and rim, one complete handle.
H. p. 0.146, diam. rim 0.08, w. 0.4. Fabric 9 fabric, pale yellow (5Y 8/3).
Amphora with round shoulder curving sharply up to cylindrical neck, with inwardly thickened rim, triangular in section, inwardly bevelled lip. Strap handle with two shallow central ribs, from maximum diameter to neck, just below lip.
Pared surface.
4.8.5  Lagena

Lagenes are medium size amphora, smaller and with thinner walls than are the transport amphora. A lagena is generally characterized by a round bottom, a globular body and a cylindrical neck. The thinner and smaller dimensions support the hypothesis that, rather than being used for long distance transportation, they were used as a container for domestic purposes or for more local or short distant commerce. They could contain water, wine or even olive oil (Bakirtzis 2003: 89-94).

Type 1: 11th century

Type 1-A, Flaring rim

209. (Lot-1996-36-18)
Numerous fragments preserve one-tenth of base, half body, one handle stump, one-third of neck, one-fifth of rim, and one-fourth of a second handle.
H. p. 0.36, diam. rim 0.095, max. diam. 0.275, wt. 1.55. Fabric 9, pale yellow (2.5 YR 8/2).
Lagena with round bottom, almost ovoid body, round shoulder curving sharply up to cylindrical neck. Neck inwardly slopes towards rim, which is outwardly thickened with rounded lip, inwardly sloping. Strap handle from shoulder to mid-neck. Double groove around max. diam., shoulder mid-neck. Wheel-ridged bottom.

210. (Lot-1991-82-1)
Sixteen fragments preserve one-sixth of body, almost complete neck and rim, one complete handle, plus a second handle stump. Missing base.
H. p. 0.214, diam. rim 0.075, w. 0.648. Fabric 3? Inner margin light red (2.5 YR 6/6), outer margin very pale brown (10 YR 7/4).
211. (Lot-1992-92-6)
Two joining fragments preserve one-third of neck, half rim, one-fourth of handle. Missing base, body and second handle.
H. p. 0.064, diam. rim 0.07, w. 0.065. Fabric 2, reddish brown (5 YR 5/3) Lagena with cylindrical neck, thickening towards flaring rim. Strap handle from mid-neck. Groove below lip on exterior.

212. (Lot-2009-07-5)
Ten joining fragments preserve one-sixth of shoulder, one-fourth of neck, one-tenth of rim, one complete handle.
H. p. 0.145, diam. rim 0.10, w. 0.384. Fabric 9. Lagena with sloping shoulder, cylindrical neck, straight, flaring rim with rounded lip. Vertical handle, with two shallow ribs, oval in section, from max. diam. to mid-neck.

Type 1-B. Flaring, offset rim

213. (Lot-1991-82-2)
Five fragments preserve half neck and rim, one-third of handle. Missing base, body and second handle.
H. p. 0.068, diam. rim 0.075, w. 0.11. Fabric 9. Lagena with conical neck, flaring rim offset by ridge. Strap handle, with shallow central spine from mid-neck.

214. (Lot-1991-82-5)
Six joining fragments preserve complete neck and rim. One-third of handles preserved. Missing base and body.
H. p. 0.075, diam. rim 0.085, w. 0.228. Fabric 9, light gray (2.5Y 7/2). Lagena with cylindrical neck, flaring rim offset by groove on inwardly bevelled lip. Strap handles, with two shallow central ribs, from mid-neck. Single groove below rim on exterior.
Three joining fragments preserve one-fourth of neck and rim. One handle stump.
H. p. 0.069, diam. rim 0.09, w. 0.062. Fabric 9, very pale brown (10 YR 8/3).

216.  (Lot-1992-92-10)
Two joining fragments preserve one-third of neck and rim, one handle. Missing base, body and second handle.
H. p. 0.117, diam. rim 0.09, w. 0.146. Fabric 9, pinkish core (7.5 YR 8/4), pale yellow margins (2.5 Y 8/2).
Lagena with cylindrical neck, outwardly thickened rim, inwardly bevelled lip with groove on the middle. Strap handle, with shallow groove, from mid-neck. Single groove below rim on exterior.

Numerous joining fragments preserve one-third of body and neck, one-sixth of rim, one handle. Missing base.
H. p. 0.245, diam. rim 0.09, max. diam. 0.22, w. 0.56. Well fired mudstone fabric.
Lagena with ovoid body, sloping shoulder to conical neck. Flaring rim, with inwardly bevelled lip, offset by groove. Strap handle, with shallow groove at centre from shoulder to mid-neck. Three grooves below handle attachment around shoulder.

218.  (Lot-1992-92-16)
Three joining fragments preserve one-third of neck and rim. One handle stump. Missing base, body and handles.
H. p. 0.071, diam. rim 0.08, w. 0.046. Well fired chert and quartz fabric.
Lagena with cylindrical neck, flaring rim, inwardly bevelled lip offset by groove. Strap handle from mid-neck. Wide groove below lip on exterior.
Type 2: 11th to third quarter 12th century

Type 2-A (plain rim with bevelled in lip)

219. (Lot-1996-36-11)

Seven fragments preserve one-sixth of body, one-third of neck and rim, one complete handle. Crusted surface.

H. p. 0.135, diam. rim 0.08, wt. 0.031. Chert and quartz fabric, outer margin 10 YR 7/4 (very pale brown), inner margin 5 YR 6/8 (reddish yellow).

Lagena with round shoulder, curving up to cylindrical neck, with inwardly bevelled lip. Strap handle, with shallow central spine, from max. diam. to mid-neck. Wheel-ridged neck.

220. (Lot-1992-92-5)

Four joining fragments preserve one-fifth of neck and rim, two-thirds of handle. Missing base, body and one handle.

H. p. 0.092, diam. rim 0.09, w. 0.174. Fabric 8?, pale yellow (2.5 Y 8/3).

Lagena with sloping shoulder to cylindrical neck, slightly thickening towards inwardly bevelled lip. Strap handle from mid-neck. Single groove below lip on exterior. Wheel-ridged body.

221. (Lot-1992-92-7)

Three joining fragments preserve one-third of neck and rim, one handle stump. Missing base, body and one handle.

H. p. 7, diam. rim 0.07, w. 0.039. Fabric 9, pale yellow (2.5 Y 8/3).

Lagena with cylindrical neck, inwardly bevelled lip, groove on lip. Strap handle from mid-neck. Groove on lower neck towards shoulder attachment.

222. (Lot-2009-89-2)

Seven joining fragments preserve one-tenth of body, half neck, one-third of rim, one complete handle.

H. p. 0.156, diam. rim 0.07, w. 0.211. Fabric 9.

Lagena with ovoid body (max. diam. above median), sloping shoulder to cylindrical neck, inwardly bevelled lip. Strap handle with two shallow ribs from
mid-neck to max. diam. Three grooves around lower shoulder, double groove around mid-neck.

**Type 2-B**

This type of lagena is characterized by a reddish, coarse fabric, very similar to the mudstone well fired fabric used for the production of stewpots.

223. (Lot-1992-92-15)

Two joining fragments preserve one-fifth of neck and rim. Missing base, body and handles.

H. p. 0.068, diam. rim 0.09, w. 0.032. Mudstone well fired?, red (2.5 YR 5/8) inner margin, reddish brown (5 YR 5/3) outer margin. Lagena with conical neck to slightly outwardly thickened rim with rounded lip. Double groove on mid-neck corresponding to handle attachment section.

224. (Lot-1992-92-17)

Five joining fragments preserve one-fourth of neck, one-fifth of rim, one complete handle.

H. p. 0.12, diam. rim 0.09, w. 0.192. Mudstone well fired?, red (2.5 YR 5/8). Lagena with conical neck, slightly inwardly and outwardly thickened rim, rounded lip. Strap handle from mid-neck, with shallow rib. Double groove around mid-neck.

225. (Lot-1992-90-9)

Single fragment preserves one-fourth of rim, one-third of handle. Missing base and body.

H. p. 0.054, diam. rim 0.08, w. 0.110. Mudstone well fired?, weak red (2.5 YR 5/2.) Lagena with conical neck, flat lip. Strap handle from mid-neck.

226. (Lot-1992-89-3)

Two joining fragments preserve almost complete neck and two-thirds of rim; one-third of two handles preserved. Missing base and body.
H. p. 0.148, diam. rim 0.07, max. diam. 0.19, w. 0.133. Quartz mudstone and chert fabric?, red (2.5 YR 5/6).
Lagena with possible ovoid body, conical neck, outwardly thickened rim with flat lip. Strap handles from mid-neck. Neck trimmed at mid-length to create a squared ridge. Grooved shoulder.

**Type 3**

This type of lagenes diverges from the previous type due to the different details of the body shape, which probably indicate that they were produced in different workshops, which also would explain the adoption of different fabrics. Type 3 is characterized by a red, coarse fabric, generally adopted for the production of cooking pots, whereas types 1 and 2 are made of the pale-yellow Corinthian fabric widely used in the production of coarse ware. Dimensions of this type of lagena are very similar to the previous tow types. This type is dated between the late 11th to the 1st half of 12th century.

227. (Lot-2009-89-11)
Ten joining fragments preserve one-fifth of body, one-third of neck and handle, one complete second handle. Missing base.
H. p. 0.182, diam. rim 0.08, w. 0.175. Fabric 9, pale yellow (2.5 Y 8/3).
Lagena with ovoid body, cylindrical neck, with rounded lip, trimmed on outer section. Strap handle from mid-neck to max. diam. Wheel-ridge body, except lower part towards bottom (9 cm from bottom).

228. (Lot-2009-89-18)
Ten joining fragments preserve one-fourth of body; four joining fragments preserve one-third of neck, rim, and handle. Neck and body do not attach.
diam. rim 0.085, w. 0.591 Fabric 2, reddish brown (5 YR 5/3).
Lagena with concave bottom, ovoid body, cylindrical neck, slightly inwardly flaring towards rounded lip. Strap handle from shoulder to mid-neck. Wheel-ridged body.
229. (Lot-1992-89-16)
Numerous fragments preserve complete profile, one-sixth of bottom, one-third of body, half neck, one-third of rim, one handle stump.
H. 0.35, diam. rim 0.08, w. 1.748. Fabric 9, pale yellow (2.5 Y 8/3). Lagena with concave bottom, ovoid body with max diam. above median. Cylindrical neck, with rounded lip. Strap handle from mid-neck. Wheel-ridge body and neck.

Type 4: 13th century
230. (Lot-1997-47-12) (Photo: plate no. 9)
Numerous joining fragments preserve complete profile except only one-tenth of body, rim and handle are preserved.
H. 0.25, diam. base 06, diam. rim 0.056, w. 0.95. Well fired chert and quartz fabric, pale yellow (2.5 Y 8/3). Lagena with concave bottom. Globular body, sloping shoulder curving up to cylindrical neck, with inwardly bevelled lip. Two strap handles attached from max. diam. to upper neck. Single groove around upper shoulder and around upper neck. Slightly wheel-ridged bottom, smoothed surface.

4.8.6 Lagenes, body shape

Type 1-A: 11th century
231. (Lot-1991-82-4)
Two joining fragments and one non-joining fragment preserve half body. Missing base, neck, rim. One handle stump preserved.
H. p. 0.244, thickness: 0.014, width: 0.205, max. diam. 0.235, w. 1.127. Fabric 9. Lagena with ovoid body, max. diam. above median, strap handle from max. diam. Incised wavy line on lower body. Single groove around max. diam, three grooves around shoulder, single groove below neck.

232. (Lot-1992-92-14)
Fifteen joining fragments preserve one-fourth of base, one-third of body. Missing neck, rim and handles.
H. p. 0.212, max. diam. 0.248, w. 0.614. Well fired chert and quartz fabric.
Lagena with concave bottom, bulge at centre (diam. 0.0013, thickness 3 mm).
Ovoid body with max. diam. above median. Wheel-ridged lower body.

233. (Lot-2009-89-19)
Twenty-three joining fragments preserve one-tenth of bottom, half body of small amphora. Missing neck, rim and handles.
H. p. 0.214, max. diam. 0.19, w. 0.553. Fabric 9, pale yellow (2.5 Y 8/3).
Lagena with possible concave bottom, almost ovoid body, round shoulder.
Vertical handle attached at max. diam. Wheel-ridge upper body.

Type 1-B: 12th century

234. (Lot-1992-89-4)
Twelve joining fragments preserve one-sixth of body. One handle stump preserved. Missing bottom, lower body and neck.
L. 0.198, w. 0.587 max. diam. 0.25. Fabric 9, pale yellow (2.5 Y 8/3).
Lagena with ovoid body (max. diam. above median), round shoulder. Strap handles from max. diam. Three deep grooves above max. diam. Four grooves around upper shoulder, below neck attachment.

235. (Lot-1992-89-15)
Eighteen joining fragments preserve one-third of body. Missing bottom, neck, rim and handles.
H. p. 0.214, max. diam. 0.259, w. 1.849. Fabric 9, pale yellow (2.5 Y 8/3).
Lagena with ovoid body, pared surface with combed tool.

Type 2: late 11th – early 12th century

236. (Lot-2009-89-16)
Fourteen joining fragments preserve one-third of body, two handle stumps. Missing bottom, neck and rim.
H. p. 0.192, max. diam. 0.18, w. 0.410. Fabric 8? light red (2.5 YR 6/8).
Lagena with ovoid body (max. diam. above median). Vertical handles from max diam. Wheel-ridged lower body, double groove around mid-body and shoulder. Single groove on upper shoulder at neck attachment.

237. (Lot-2009-89-4)
Three joining fragments preserve one-third of body. Missing base, neck, rim and handle.
H. p. 0.146, max. diam. 0.16, w. 0.218. Fabric 8? light red (2.5 YR 6/8).
Amphora with ovoid body. Handle from max. diam. Single groove around mid-body, double groove around max. diam. and shoulder. Wide groove below neck at shoulder attachment.

4.8.7 Triangular rim lagenes
Type 1
Type 1 of triangular rim lagenes are characterized by a very coarse fabric, reddish in colour, similar to the fabric used for the production of cooking pot. This type appears to be produced around the late 10th to early 12th century.

238. (Lot-1991-82-3)
Numerous joining fragments preserve one-seventh of body, almost complete neck and rim, one complete handle, one-sixth of second handle. Missing base.
H. p. 0.141, diam. rim 0.075, w. 0.523. Fabric 2, yellowish red outer margin (5 YR 5/6), reddish gray inner margin (5 YR 5/2).
Lagena with ovoid body, sloping shoulder, cylindrical neck with slightly concave profile towards thickened rim with inwardly bevelled lip. Strap handles, with shallow central spine, from max diam. to mid-neck. Band of five grooves from max. diam. to mid-shoulder, single groove below neck, six grooves on upper neck.

239. (Lot-1990-54-14) (Photo: plate no. 9)
Single fragment preserves half neck, rim and handle. Missing base and body.
H. p. 0.054, diam. rim 0.07, w. 0.084. Fabric 9, pale yellow (2.5 YR 7/3).
Lagena with cylindrical neck and thickening towards vertical rim, defined by ridge on outer surface, triangular in section, with flattened lip that is slightly inwardly sloping. Vertical, strap handles from mid-neck.

**Type 2**

Type 2 of triangular rim lagenes are by a coarse, whitish fabric, petrographically characterized as well fired chert and quartz fabric. This type is produced in the 12th century up to first half of the 13th century circa.

240. (Lot-1989-15-20)

Single fragment preserves one-fifth of neck and rim, one complete handle. Missing body.

H. p. 0.103, diam. rim 0.06, w. 0.1. well fired chert and quartz fabric, light gray (5Y 7/2).

Lagena with conical neck, inwardly thickened rim with squared lip. Handle, with two central ribs, from neck.

241. (Lot-1989-08-27)

Two joining fragments preserve two-thirds of neck and rim, one-fifth of one handle, three-fourths of the other. Missing base and body.

H. p. 0.103, diam. rim 0.083, w. 0.2. Well fired chert and quartz fabric, pale yellow (2.5 Y8/2).

Shoulder sharply curving up to cylindrical neck, vertical rim, inwardly thickened, with concave profile and flat lip, inwardly sloping. Two broad, incised grooves, one just below lip on exterior, and the other on lower neck, just above shoulder. Two strap handles, with shallow rib, attached to mid-neck.

242. (Lot-1989-08-48)

Single fragment preserves one-fourth of neck and handle, one-tenth of rim. Missing base and body.

H. p. 0.062, diam. rim ca. 0.065, w. 0.08. Well fired chert and quartz fabric, light gray (2.5 Y 7/2).
Vertical cylindrical neck to inwardly thickened rim with squared lip. Double incised line below lip on exterior, wide groove on lower neck, all partly covered by handle attachment. Strap handle with central spine attached to neck.

243. (Lot-1992-100-95)

Five fragments preserve one-quarter of shoulder, one third of neck, half rim, one handle.

H. p. 0.119, diam. rim 0.08, wt. 0.280. Fabric 9, very pale brown (10 YR 8/4).
Lagena with sloping shoulder curving up to cylindrical neck, thickened rim, triangular in section. Flat lip. Single groove on shoulder, on lower neck and below lip. Strap handle, with shallow central rib, from shoulder to upper neck.

244. (Lot-1997-47-14) (Photo: plate no. 9)

Thirteen joining fragments preserve one-fifth of fourth of body, half neck and rim, one complete handle.

H. p. 0.216, diam. rim 0.086, w. 0.65. Well fired chert and quartz and mudstone fabric 7, very pale brown (10 YR 7/4).
Lagena with almost spherical body with rounded shoulder curving sharply up to cylindrical neck; triangular rim, inwardly thickened and flat lip inwardly sloping. Strap handle, with shallow central rib, from lower shoulder to neck. Single groove just below rim. Wheel-ridged upper body (height ca. 0.04) from max. diam. to below shoulder. Pared lower body and shoulder.

4.8.8 Lagenes with outwardly thickened rim

This uncommon type of lagena has been so far identified in contexts dated between the second half of the 12th century to the first quarter of the 13th century.

245. (C-1992-86) (Photo: plate no. 9)

Many joining fragments preserve complete profile, circa one-third of bottom, seven-eighths of body and neck, complete rim, one handle, with attachments for a second.

H. 0.303, diam. rim 0.121, wt. 2.016. Fabric 9, white 2.5Y 8/2
Lagena with concave bottom, ovoid body with max. diam. just above median, sloping shoulder curving up to cylindrical neck. Flaring, outward thickened rim,
triangular in section, bevelled out lip. Two vertical strap handles from max. diam. to shoulder, with central rib. Wheel-ridged on upper body, single groove below neck, three grooves around lower neck, two grooves on lip.

4.8.9 Matt painted lagena

Type 1-A: 12th century to first quarter 13th century

246. (Lot-2002-36-1)

Eighteen joining fragments and two non-joining fragments preserve one-fifth of body, half neck and rim, one complete handle.
H. p. 0.281, diam. rim 0.08, wt. 0.614. Fabric 9, very pale brown (10 YR 7/4).
Lagena with almost spherical body, cylindrical neck, vertical rim inwardly thickened, with squared lip. Strap handle from max. diam. to upper neck. Wide groove below rim on exterior and double groove on lower neck. Grooved shoulder to max. diam., finer grooves on lower body. Black matt painted swirls on shoulder.

247. (Lot-1989-08-17) (photo: plate no. 9).

Twenty-six joining fragments preserve half body, one-third of neck and rim, two complete handles. Missing base. Matt painted decoration very poorly preserved on handle.
H. p. 0.269, diam. rim 0.07, w. 1.12. Quartz and chert fabric, red (5 YR 5/8).
Lagena with ovoid body with max. diam. above median, curving sharply up to cylindrical neck. Inwardly thickened rim, with slightly concave inner profile. Incised groove around upper neck, two wide grooves around lower neck, another two grooves on upper shoulder, one wide groove around median. Slightly wheel-ridged body. Strap handle from median to mid-neck. Red (between 2.5 YR 5/4 and 5/6) matt painted decoration: horizontal band just below median, four spirals on shoulder, irregular wavy line on upper handle.
248. (Lot-1989-08-18) (photo: plate no. 9).

Eight joining fragments preserve one-eighth of body, one-sixth of neck, one-third of rim, one complete handle. Missing base and one handle.

H. p. 0.183, diam. rim 0.95, w. 0.58. Quartz and chert fabric, yellowish red margins (5 YR 5/6), brown core (7.5 YR 5/3).

Lagena with ovoid body curving sharply up to conical neck. Inwardly thickened rim, triangular in section, with concave inner profile, flat lip. Strap handle from max. diam. to neck. Single groove around upper neck, double wide grooves around max. diam., all covered by handle attachments. Matt dark reddish gray (2.5 YR 4/1) painted decoration: two spirals on upper body, two curvilinear lines on lower handle attachment, two horizontal hatches on upper handle, vertical hatches on lip.

249. (Lot-1992-87-23)

Single fragment preserves complete handle and one-fourth of rim. Missing body.

H. p. 0.131, diam. rim 0.07, wt. 0.3. Quartz and chert fabric?, yellowish red (5 YR 5/8).

Lagena with cylindrical neck, vertical rim, inwardly thickened, triangular in section with concave inner profile, squared lip. Strap handle, with two shallow ribs, from max. diam. to neck. Groove below lip on exterior. Red (2.5 YR 5/6) hatches on lip and handle.

250. (C-1992-90)

Twenty joining fragments preserving small part of upper body, over half shoulder to rim, one handle, top of a second handle.

H. p. 0.171, diam. rim 0.073, wt. 0.660. Fabric 3, paler than 7.5 YR 7/4

Lagena with sloping shoulder, cylindrical neck, inwardly thickening towards flat lip. Two broad vertical strap handles with two ribs from max. diam. to neck. Wheel-ridging body, ending midway on shoulder with single groove between grooved section and neck. Two grooves around neck. Two large spirals in matt red-brown paint on shoulder framed by lower band.
Type 1-B (matt painted fish decoration): second half 12th century to 1st quarter 13th century

251. (Lot-2002-03-02)
Numerous joining fragments preserve one-fourth of upper body, almost complete neck and rim, one complete handle, second handle stump. Restored with plaster.
H. p. 0.224, diam. rim 0.088, w. 0.7. Fabric 2?
Lagena with ovoid body, conical neck, outwardly flaring to inwardly thickened rim, with squared lip. Grooved body, double groove on lower neck, single groove below rim. Strap handles from median to mid-neck. Red matt painted fish decoration on upper body, parallel strokes on upper handle, dots on lower handle. White matt painted hatches on completely red matt painted lip.

Type 2: 1st three quarters 13th century

252. (Lot-1997-44-30)
Twenty-three joining fragments preserve one-sixth of body, almost complete neck, rim and handle, one-fourth of second handle. Worn matt painted decoration.
H. p. 0.296, diam. rim 0.073, w. 1.2. Mudstone well fired fabric? Yellowish red outer section (5 YR 5/8), light brown inner section (7.5 YR 6/4).
Lagena with almost spherical body, round shoulder curving sharply up to cylindrical lower neck up to carination, where it inwardly slopes up to flaring, outwardly thickened and squared rim. Two strap handles, with three ribs, from lower shoulder to neck. Wheel-ridged body. Reddish-brown (between 2.5 YR 5 and 4/3) matt painted loops on upper body, almost horizontal lines below handle. Three horizontal hatches on handles.

253. (Lot-1997-44-31)
Numerous joining fragments preserve almost complete profile, twenty-three non-joining body sherd fragments and four base fragments. Missing rim and handles.
H. p. 0.295, diam. base 0.088; max diam. at median 0.266, w. 1.28. Mudstone well fired fabric, very pale brown (10 YR 7/4).
Lagena with concave bottom, spherical body curving up to cylindrical neck. Body completely wheel-ridged. Black painted spiral intersecting horizontal band on upper body.

4.8.10  Jug

The thin walls characteristic of Middle Byzantine jugs makes it very difficult to find complete preserved profiles. Furthermore, the jug finds have not been numerous. Moreover, rims have rarely been found with a sufficient preserved length of body to be used to define the body shape. Based upon these reasons, the typology presented here has mainly been established on the basis of surface treatment and decoration. Nevertheless, the author is aware of the limits of this typology, considering that the samples are limited in number, and that an increase in evidence in the future could change the arrangement of these jug types.

Burnished jug

Type 1: second half 10th century to 11th century

254. (Lot-1977-47-7)
Single fragment preserves one-fifth of base, one-sixth of body. Missing rim and handle.
H. p. 0.038, diam. base 0.07, w. 0.003. Fabric 5? Reddish yellow (between 7.5YR 7 and 6/6).
Flat base, flaring, convex walls. Exterior body surface lightly burnished with vertical strokes.

255. (Lot-1977-47-8)
Single fragment preserves one-fifth of body and rim. Missing base.
H. p. 0.048, diam. rim 0.1, w. 0.0014. Fabric 5, very pale brown (10YR 7/4).
Jug with outwardly flaring, rim with rounded lip.

256. (Lot-1977-47-28)
Eight joining fragments preserve one-tenth of shoulder, three-fourths of neck one-eighth of rim, one stump of handle.
H. p. 0.084, diam. rim 0.055, w. 0.05. Fabric 5, reddish yellow (7.5 YR 7/6).
Sloping shoulder to cylindrical neck, curving to flaring rim with squared lip. Handle, oval in section, attached to mid-neck. Three shallow grooves below lip on exterior, one groove on upper shoulder.

**Type 2: 12th century**

257. (Lot-1992-89-5)
Ten joining fragments preserve complete base one-third of body. Missing handle and rim.
H. p. 0.098, diam. base 0.084, max. diam. 0.12. w. 0.28. Fabric 9 fabric, pale yellow (2.5 Y 8/3).
Jug with disc foot, slightly concave on undersurface, ovoid body with max. diam. above median. Double groove on mid-body (h. 0.084 to 0.095 from bottom). Burnished surface. Wheel-made.

258. (Lot-1992-89-6)
Six joining fragments preserve complete base, one-sixth of body. Missing rim and handle.
H. p. 0.118, diam. base 9, w. 0.254. Fabric 9 fabric, pale yellow (2.5 Y 8/3).

259. (Lot-1992-87-19)
Seventeen fragments preserve two-thirds of vase. Missing rim.
H. p. 0.215, diam. base 0.081, w. 0.33. Fabric 5, brownish yellow (10 YR 6/6).
Jug with disc foot, almost spherical body, conical neck, vertical handle, round in section, with shallow spine, from shoulder to upper neck. Single groove on upper shoulder, grooved lower neck, burnished surface.

260. (Lot-1992-100-86) (Photo: plate no. 10)
Numerous fragments preserve complete vase except a few fragments of body. Rim missing.
H. pres. 0.24, diam. base 0.107, wt. 0.8. Fabric 7, reddish yellow (5 YR 7/6).
Jug with disc foot, almost spherical body, cylindrical lower neck flaring towards rim. Round handle from shoulder to neck. Burnished body. Two grooves around max. diam., one below neck, grooved neck.

**Type 3 (burnished surface with white matt slip painted decoration): 11th century**

Seven joining fragments preserve one-sixth of body, one-third of neck. Missing base, handle and rim.  
H. p. 0.138, max. diam. w. 0.14. Fabric 5, pale yellow outer margin (2.5 Y 8/3), pink inner margin (5 YR 7/4).  

262. (C-1937-2293) (Photo: plate no. 10)  
Seven joining fragments preserve two-thirds of shoulder, one-third of neck, two handle stumps. Restored with plaster. White decoration better visible only on one side of vase.  
H. p. 0.159, w. 0.244. Fabric 8.  
Jug with ovoid body (max. diam. above median) curving up to conical neck. Two vertical handles, oval in section, shoulder to upper neck. Burnished body. Shoulder and lower neck decorated with white painted pairs of concentric loops with dots on upper side.

**Type 4 (burnished): 13th century**

263. (C-1997-59) (Photo: plate no. 10)  
Numerous fragments preserve complete profile, five-sixth of bottom, half body, all neck, three-quarters of rim, complete handle.  
H. 0.16, diam. base 0.06, diam. rim 0.04, w. 0.22. Fabric 7, very pale brown margins (10 YR 8/4), yellowish brown core (10 YR 5/4).  
Jug with flat bottom, spherical body curving up to narrow cylindrical lower, widening upper neck, flaring rim with tapered lip. Vertical handle, round in section, with central spine from max. diam. to mid-neck. Single shallow groove
around max. diam., vertical burnishing strokes over lower body, burnishing over upper body. Wheel made. As MacKay 1967, no. 44.

Jug with smoothed surface and grooved decoration:

Type 1: second half 11th century

Type 1-A

264. (C-1937-2271)
Single fragment preserves upper body, complete neck, rim and both handles.
Missing base and lower body.
H. p. 0.158, diam. rim 0.075, w. 0.419. Well fired chert and quartz fabric.
Jug with ovoid body, steep shoulder to cylindrical neck, rounded lip. Two vertical, strap handles from shoulder to mid-neck. Pared surface. Grooved around lower shoulder and mid-neck.

265. (C-1937-2270)
Intact vase except for missing bottom, upper part of neck and rim.
H. p. 0.217, diam. base 0.127, w. 0.962. Well fired chert and quartz fabric.
Jug with flat base, almost cylindrical body, slightly convex profile on lower section, sloping shoulder, cylindrical neck. Vertical, strap handle from lower shoulder to neck. Double groove around lower body, lower and upper shoulder.

Type 1-B

266. (C-1937-2275)
Numerous joining fragments preserve complete base, two-thirds of body, neck and handle. Missing rim.
H. p. 0.172, diam. base 0.096, w. 0.558. Fabric 9.
Jug with flat base, straight flaring body to carination, cylindrical upper body, sloping shoulder, cylindrical neck. Vertical handle, oval in section with spine, from lower shoulder to neck. Pared surface. Single groove around lower shoulder, double at lower neck.

Type 2: 12th century

Type 2-A
267. (Lot-1990-55-11)
Two joining fragments preserve one-third of shoulder, one-fifth of neck and rim. One complete handle preserved. Missing base and body.
H. 0.14, diam. rim 0.07, w. 0.10. Fabric 9 reddish yellow (between 5 YR 7/6 and 6/6).
Jug with round shoulder curving up to cylindrical neck, slightly thickened, rounded lip. Vertical handle, round in section, with shallow spine, from shoulder to upper neck. Two shallow grooves around shoulder, just below neck. Smoothed surface.

268. (Lot-1992-87-20)
Five fragments preserve one-sixth of body and half neck. Missing rim.
H. pres. 0.112, diam. neck 0.047, w. 0.088, wt. 0.15. Fabric 9 fabric, very pale brown (10YR 7/4).
Jug with round shoulder curving up to conical, slightly outwardly flaring neck. Vertical handle, round in section, from shoulder to neck. Three grooves around upper shoulder, one rib around neck. Smoothed surface.

Type 2-B

269. (Lot-1992-89-11)
Two joining fragments preserve one-eighth of base, one-seventh of body. Missing rim and handle.
H. p. 0.010, diam. base 0.12, w. 0.191. well-fired chert and quartz fabric?, reddish yellow (7.5 YR 7/6)
Jug disc foot, ovoid body. Smoothed outer surface.

270. (Lot-1992-100-90)
Complete body preserved. Missing neck, rim, handles and chips from foot.
H. p. 0.182, diam. foot 0.086, max. diam. 0.137, 0.75. wt. Fabric 9 fabric, very pale brown (10 YR 7/3).
Jug with disc foot, ovoid body with max. diam. above median. Two vertical handles, round in section, from shoulder. Double groove around max. diam.
Incised jug

Type 1: second half 11th century

271. (C-1937-2274) (Photo: plate no. 10)
Two joining fragments preserve half of base, body, one-fourth of shoulder, one-eighth of neck. Missing rim and handle.

H. p. 0.087, diam. base 0.094, w. 0.176. Fabric 9 very pale brown (10 YR 7/4). Jug with flat base, cylindrical body curving, with slightly concave profile, sloping shoulder, cylindrical neck. Smoothed outer surface on entire body. Two grooves near base, incised vertical lines on lower body, diagonal on upper body, double grooves define shoulder on lower and upper edges framing bands of diagonal lines at centre.

Type 2: late 11th to 12th century

272. (C-1937-2276)
Numerous joining fragments preserve one-fifth of base, two-thirds of body, four-fifth of neck, one-third of handle. Missing rim.

H. p. 0.198, diam. base ca. 0.12, w. 0.503. Well fired chert and quartz fabric. Jug with flat base ovoid body, round shoulder, cylindrical neck. Vertical handle, oval in section with central spine, from shoulder to upper neck. Pared surface. Double groove around mid-body and shoulder, which are decorated with vertical, incised hatches. Band of vertical and oblique grouped, incised lines on upper shoulder.

273. (Lot-1990-55-10)
Six joining fragments preserve one-third of shoulder and an almost complete neck. One complete handle preserved. Missing body and base.

H 0.115, diam. lip 0.048, w. 0.117. Fabric 9, very pale brown (10 YR 7/3). Jug with round shoulder curving up to narrow, cylindrical lower neck, with widening towards rounded lip. Vertical, spined oval, attached to shoulder and neck below lip. Smoothed surface. Two narrow bands filled with wheeled decoration around max. diam. and shoulder. Grooved lower neck. Three parallel bands of incised wavy lines on upper neck.
274. (Lot-1992-100-79)
Numerous fragments preserve almost complete vase except chips of body, three-quarters of rim and handles.
H. 0.235, diam. base 0.103, diam. rim 0.06, max. diam. 0.169, wt. 0.95. Fabric 9, pale yellow (2.5 Y 8/2).
Jug with flat base, slightly concave, spherical body, conical neck, slightly flaring towards squared lip. Smoothed outer surface decorated with three shallow grooves above max diam., four incised wavy lines on shoulder and mid-neck, two incised lined on neck-shoulder attachment. Strap handle from shoulder to upper neck.

275. (Lot-1992-100-84) (Photo: plate no. 10)
Numerous fragments preserve three-quarters of vase. Missing neck and one handle. Worn surface.
H. pres. 0.155, diam. base 0.075, wt. 0.3. Fabric 9, outer edge reddish yellow (5 YR 6/6), inner edge very pale brown (10YR 7/4).
Jug with disc foot, with spherical body, curving up to cylindrical neck. Smoothed surface decorated with band of four incised wavy lines around max. diam., framed on top by two grooves, and just below grooved neck. Vertical handles, round in section, from upper body.

276. (C-1992-87) (Photo: plate no. 10)
Numerous joining fragments., upper half amphora with both handles, ca. half of upper body, three-quarters of neck, rim.
H 0.204, diam. rim 0.065, wt. 0.769. Well fired chert and quartz fabric (10YR 8/2).
Jug with ovoid body curving into high round shoulder. Cylindrical neck, flaring towards rounded lip. Two vertical strap handles with two shallow ribs, attached to shoulder and upper neck. Smoothed surface decorated with an incised band of grouped oblique hatches framed by double grooves. Pair of nipples projecting from shoulder on either side. Squared ridge at shoulder and neck conjunction, framed by lower groove and decorated with groups of incised hatches.
Type 2-A (strainer)

277. (Lot-1989-08-35)
Five joining fragments preserve one-sixth of shoulder, one-third of neck, half strainer; one handle stump. Worn surface. Possible faint matt painted decoration on shoulder.
H. p. 0.113, width 0.157, max. diameter at neck 0.04; w. 0.12. Well fired chert and quartz fabric, pale yellow (5Y 8/3).
Round shoulder curving up to cylindrical neck; conical strainer attached into lower neck. Decoration: band of multiple incised wavy lines on upper neck, followed by double groove around mid-neck and by three ridges on lower neck, decorated with multiple incised hatches; double groove around upper shoulder at neck attachment. Vertical handle, round in section, on mid-shoulder. Possible white matt painted swirls on shoulder.

278. (Lot-1989-08-26)
Single fragment preserves almost complete neck and lip (only one-seventh missing); only handle attachments preserved. Missing base and body.
H. p. 0.088, diam. rim 0.062, w. 0.095. Well fired chert and quartz fabric, pale yellow (5Y 8/2).
Slightly flaring convex neck to inwardly bevelled lip. Strainer at lower neck. Strap handles attached on mid-neck. Ridge on upper shoulder and around lower neck at strainer height, both decorated with incised vertical hatches.

Type 2-B

279. (1989-08-40)
Single fragment preserves one-tenth of neck and rim, one-fifth of handle. Missing base and body.
H. p. 0.048, width 0.028, diam. 0.05 (?), w. 0.02. Fabric 9, pale yellow (2.5Y 8/3).
Jug with cylindrical neck with rounded lip. Vertical handle, round in section, attached to mid-neck, decorated with bulge on upper part of handle.
Gouged Jug: second half 11th century to 1st half 12th century

280. (C-1937-2280)

Eight joining fragments preserve one-third of base, body and neck, two stumps of handle.
H. p. 0.187, diam. base 0.101, w. 0.281. Well fired chert and quartz fabric pale yellow (5Y8/3).
Jug with flat base, almost spherical body curving up to cylindrical lower neck, flaring upper neck. Vertical handle, oval in section, from max. diam. to upper neck. Smoothed outer surface. Vertical, irregularly gouged lines, ca. 0.008 wide, with uneven length from base to below shoulder. Single groove at bottom of body, around lower and mid-neck.

281. (Lot-1991-77-7)

Two joining fragments and two non-joining preserve one third of body, missing base, neck, rim and handles.
H. p. 0.154, max. diam. 0.15, wall thickness 6 mm, w 0.143. Fabric 9, pale yellow (5Y 8/3).
Jug with globular body. Two band of incised oblique grooves on body, divided by three horizontal grooved around maximum diameter where vertical handle, oval in section is attached.

Trefoil rim jug

282. (C-1977-253) 10th century (Photo: plate no. 10)

Ten joining fragments preserve half upper body, complete neck, two-thirds of rim and handle. Missing spout of trefoil mouth.
H. p. 0.159, max width 0.136, w. 0.172. Fabric 5, inner margin reddish yellow (7.5YR 7/6), outer margin yellow (10YR 7/6).
Jug with ovoid body, round shoulder, curving up to cylindrical neck outwardly flaring towards squared lip. Strap handle, with double ribs, from shoulder to mid-neck. Double groove around shoulder, single groove on upper shoulder and just below lip on exterior. Smoother surface. Wheel-made.
283. (Lot-1992-92-8) 11th century

Ten joining fragments preserve one-third of body and rim. Missing base and handle.

H. p. 0.173, diam. at neck 0.105, w. 0.204. ‘Few inclusions’ fabric, light brown (7.5 YR 6/4).

Jug with globular body, trefoil, offset rim. Single ridge below rim on exterior. Band of four grooves around max diam.

284. (Lot-1992-100-87) 12th century

Thirteen fragments preserve one-quarter of body, complete neck and handle. Missing base and part of rim. Worn surface.

H. pres. 0.217, max. diam. 0.175, w. 0.35. Well fired chert and quartz fabric, very pale brown (10 YR 7/3).

Jug with round shoulder, cylindrical neck flaring to trefoil rim. Round handle from shoulder to below rim. Two wide grooves around max. diam., grooved neck. Smoothed surface.

4.8.11 Imported incised jug

The few occurrences of this type of imported, incised jug are all found in contexts dated to the 12th century. It is worth noting that, according to a macroscopic analysis, these vessels appear to be made of the same fabric used for the production of 12th and 13th century glazed wares, like the Spatter Painted, Green and Brown Painted I, II, and III with Spiral decoration; Slip Painted Light on Dark I and II; Painted Sgraffito, Sgraffito Freestyle and Aegean Ware. Some of these wares have previously been considered to be of Corinthian production, such as the Green and Brown Painted I, II and III, and Slip Painted I and II. Petrographic analyses have identified that this fabric is mainly characterized by phyllites and schists inclusions, which are inconsistent with the Corinthian geology (White 2009: 110-112).

285. (Lot-2002-05-9)

Single fragment preserves one-fourth of shoulder.

H. p. 0.065, l. 0.072, w. 0.066, wt. 0.068. Fabric: Phyllite A 1 fabric, yellowish red (5YR 5/6).

286. (C-1992-89) (Photo: plate no. 10)

Eight joining fragments preserve profile from shoulder to upper neck, half upper body, almost complete neck, one handle, one second handle stump. Missing base and rim.
H. p. 0.143, wt. 0.350. Hard light red clay with very few small white inclusions, fewer black, gold sparkling inclusions. Slightly yellower than 2.5YR 6/8.
Jug with ovoid body with max. diam. above median, round shoulder. Cylindrical lower neck, conical upper neck. Vertical handles, oval in section, with high central spine, rising vertically from shoulder and turning down to upper neck. Band of deeply incised scallops on upper body; incised linked loops on shoulder between two bands of grooves, ridged lower neck.

4.8.12 Juglet

All types of juglet presented in this catalogue are dated between the second half of the 11th century and the 1st quarter of the 12th century.

Type 1

287. (C-1937-2272)

Four joining fragments preserve two-thirds of base and body, lower handle stump. Missing neck and rim.
H. p. 0.084, diam. base 0.069, max. diam. 0.09, w. 0.164. Well fired chert and quartz fabric.

288. (Lot-2009-89-6)

Numerous joining fragments preserve almost complete base, two-thirds of body. Missing neck, rim and handles.
H. p. 0.088, diam. base 0.085, max. diam. 0.11, w. 0.222. Fabric 4, reddish yellow (5 YR 6/8).
Jug with flat base, ovoid body (h. max. diam. 0.065), sloping shoulder. Double groove around max. diam., single groove below neck at shoulder attachment.

289. (Lot-2009-89-13)
Ten joining fragments preserve half base and body, complete handle. Missing neck and rim.
H. p. 0.096, diam. base 0.08 (uneven), max. diam. 0.086 w. 0.168. Fabric 4, very pale brown (10 YR 8/3).
Jug with flat base, globular body. Vertical handle, oval in section from mid-body to upper shoulder. Single groove around mid-body and on upper shoulder.

Type 2

290. (Lot-2009-89-5)
Four joining fragments preserve complete profile. Missing almost entire base, one-third of body, half rim. Complete handle preserved.
H. p. 0.102, max. diam. 0.075, diam. rim 0.035, w. 0.111. Fabric 8?
Small jug with flat base, ovoid body, sloping shoulder to cylindrical neck, slightly flaring towards rounded lip. Vertical handle, round in section, from max. diam. to mid-neck. Double groove around shoulder.

291. (Lot-2009-89-10)
Almost complete profile preserved. Rim and handle missing; foot edges missing.
H. p. 0.088, max. diam. 0.07, w. 0.137. Fabric 9.
Small jug with disc foot, ovoid body with max diam. above median (h. 0.048), sloping shoulder, cylindrical neck. Handle attached below shoulder.

Type 3

292. (Lot-2009-89-9)
Almost intact vase preserves complete base and body. Missing neck, rim and handles.
H. p. 0.052, diam. base 0.07, max. diam. 0.088, w. 0.207. Fabric 5, light brown (7.5 YR 6/4).
Small jug with flat base, straight flaring body to carination, sloping shoulder. Handles from carination. Burnished surface. White slip painted double arches on body and shoulder.

4.8.13 Lekane

The shape of lekanes does not appear to change through time. It is generally documented that utilitarian objects are far less subject to fashion and socio-cultural trends; in these instances, the shape and functional use of the object are the only parameters considered by their users, probably, here, in the contexts of food processing. With the current state of the research it is not possible to determine if lekanes always have handles, since not all examples were found complete. The main differentiation taken into account here is based upon dimension, which divides the lekane between type 1, which bigger in dimension and type 2, which is smaller in dimension, with a diameter 25 cm on average and seems to be produced only during the course of the 12th century. It is worth noting that lekanes with matt painted decoration are dated only from the late 12th to the 13th century.

Type 1

293. (C-1977-223) 10th century (Photo: plate no. 11)
Five joining fragments preserve complete profile, circa one-third of vase.
H. 0.148, diam. base 0.18, diam. rim 0.41, w. 1.235. Fabric yellowish red (5YR5/8). Quartz, mudstone, chert?
Basin with flat base curving sharply up to straight, flaring body; straight almost horizontal rim Double groove on rim, wide groove below rim on exterior, band of four shallow grooves on upper body on exterior, wheel-ridged inner surface. Drops of white slip on outer base, splotches of brown glaze on rim and upper body on exterior surface on one side. Wheel-made.

294. (Lot-1992-90-3) 11th century
Single fragment preserves one-seventh of rim, one-fourth of handle. Missing base and body.
H. p. 0.032, diam. rim, 0.40, w. 0.092. Well fired chert and quartz fabric, reddish yellow (between 7.5 YR 6/6 and 7/6).
Basin with straight flaring body, horizontal rim with concave inner profile. Incised wavy line on lip. Single groove below rim on exterior. Strap handle over lip with single spine.

295. (Lot-1991-77-9) 12th century
Single fragment preserves one-twentieth of body, one-twelfth of rim. Missing base.
H. p. 0.083, diam. rim 0.40, w. 0.149. Almost Fabric 9, reddish yellow core (7.5 YR 6/6), light red margins (2.5 YR 6/8).
Basin with straight flaring body, outwardly thickened rim, flat lip, with slightly concave inner profile. Pared inner and outer body surface.

296. (Lot-2002-36-5) 12th century
Single fragment preserves one-nineteenth of rim. Missing base and body.
H. p. 0.102, w. 0.076, diam. rim 0.60, wt. 0.188. Well fired Chert and Quartz fabric, light brown (7.5 YR 6/3).
Straight, slightly flaring upper body, thickening towards horizontal rim, flat lip. Incised wavy line on lip, below rim and on upper body on exterior.

297. (Lot-1992-89-8) 12th century
Six joining fragments preserve one-tenth of body, one-fifth of rim. Missing base.
H. p. 0.146, diam. rim 0.50, w. 0.505. Almost Fabric 9, reddish yellow core (7.5 YR 6/6), light red margins (2.5 YR 6/8).
Basin with straight flaring basin, outwardly thickened rim, flat lip with concave profile.

298. (Lot-1992-87-17) 12th century
Two joining fragments preserve complete profile, one-quarter of vase, one complete handle.
H. 0.14, diam. base 0.31, diam. rim 0.40, w. 0.158. Fabric 9, pale yellow (2.5 Y 8/3).
Basin with flat base, straight flaring body, outwardly thickened rim, flat lip inwardly sloping. Vertical strap handle from mid-body to lip. Wheel-ridged inner
surface, pared outer surface. Three matt dark gray (10 YR 3/1) painted hatches with blurred edges on lip, dribbling on upper wall inside and on top of handle.

299. (Lot-1997-44-28) (Photo: plate no. 11) 13th century
Single fragment preserves complete profile, one-sixth of body, one-eleventh of rim and base. Worn surface.
H. p. 0.133, diam. rim 0.405, w. 0.4. Fabric 9, very pale brown (10 YR 7/4).
Flat base, straight, flaring walls, horizontal rim, slightly downwardly sloping. Two grooves below rim on exterior. Shallow incised lines on entire body left by tool used for paring the outer surface.

Type 2: 12th century

300. (Lot-1992-90-5)
Single fragment preserves one-tenth of rim. Missing base and body.
H. p. 0.041, diam. rim 0.24, w. 0.036. Fabric as 92-90-3. Well fired chert and quartz fabric, reddish yellow (between 7.5 YR 6/6 and 7/6).
Basin with straight, flaring upper body, straight, flaring rim, inwardly sloping lip with concave inner profile. Groove below rim on exterior.

301. (Lot-2009-89-8)
Two joining fragments preserve one-fifth of body and rim, missing base.
H. p. 0.069, diam. rim 0.24, w. 0.071. Fabric 5, 7.5 YR 6/6 (reddish yellow)
Bowl with straight flaring body, T rim, inwardly sloping. Grooved body. Pellet appliqué decoration on lip (diam. 4 mm).

302. (Lot-2009-51-3)
Two non-joining fragments preserve one-fifth of body and rim, missing base.
H. p. 0.104, diam. rim 0.28. Well fired Chert and Quartz fabric, pink outer section (7.5 YR 7/4), reddish yellow inner section (5YR 7/6).
Basin with straight flaring body, inwardly and outwardly thickened rim, with concave, inwardly sloping lip.
303. (Lot-1991-77-08)  
Single fragment preserves one-twentieth of body, one-tenth of rim. Missing base.  
H. p. 0.094, diam. 0.25 from lower concave profile, below rim (from inner section), w. 0.209. Almost Fabric 9, reddish yellow core (7.5 YR 6/6), light red margins (2.5 YR 6/8).  
Basin with straight flaring body, inwardly and outwardly thickened rim, flat lip. Strap handle over lip to possibly mid-height.

304. (Lot-1992-100-82) (Photo: plate no. 11)  
Numerous fragments preserve complete base, three-quarters of body, half rim and one handle.  
H.0.135, diam. base 0.18, diam. rim 0.30, wt. 2. Well fired chert and quartz fabric, very pale brown (10 YR 7/4).  
Basin with flat body with straight, flaring walls, curving up to T rim with slightly concave lip. Strap handle with shallow central rib, from mid-body to lip. Slightly wheel-ridged inner and outer body surface.

305. (Lot-1992-87-28)  
Three joining fragments and one non-joining fragment preserve one-tenth of base and lower body, one-eighth of rim.  
H. 0.145, diam. rim 0.26, diam. base 0.18, w. 0.15. Fabric 9, pale yellow (2.5 Y 7/3).  
Basin with flat base, flaring body, T rim, inwardly sloping. Two wide grooves around lower body. Band of clay pellets on mid-body, three grooves below rim on exterior. Pared surface.

4.8.14  Large bowl

306. (Lot-1977-47-26) 10th century  
Four joining fragments preserve one-twelfth of body and rim.  
H. p. 0.061, diam. rim 0.32, w. 0.06. Fabric 5, reddish yellow (7.5 YR 6/6).  
Large bowl with straight, flaring wall to squared lip. External surface lightly burnished with vertical strokes.
307. (Lot-1992-90-4) 11th century
Single fragment preserves one-eighth of rim. Missing base and body.
H. p. 0.039, diam. rim 0.33, w. 0.036. Well fired chert and quartz fabric, reddish yellow (between 7.5 YR 6/6 and 7/6).
Bowl with straight flaring upper body to vertical rim, outwardly thickened, squared lip.

308. (Lot-1989-08-25) 12th century (Photo: plate no. 11)
Three joining fragments preserve one-fifth of body and rim. Missing base.
H. p. 0.07, diam. rim 0.24, w. 0.095. Fabric 9 fabric, very pale brown core (10 YR 7/4), reddish yellow margins (5 YR 6/6).
Bowl with straight and flaring body with rounded lip. Wheel-ridged inner and outer wall surface.

309. (Lot-2002-36-4) 1st half 12th century
Single fragment preserves one-eighth of rim. Missing base and lower body.
H. p. 0.037, w. 0.068, diam. rim 0.25, wt. 0.024. Well fired chert and quartz fabric, very pale brown outer section (10 YR 7/4), reddish yellow outer section (7.5 YR 6/6).
Hemispherical bowl curving up to vertical rim with rounded lip. Two wide grooves around rim on exterior. Pared surface. Wheel-made.

310. (Lot-1976-245-16) 1st half 12th century
Single fragment preserves one-fifth of upper body and rim. Missing base and lower body.
H. p. 0.053, diam. rim 0.26, w. 0.77. Fabric 9, pale yellow (2.5 Y 8/4).
Bowl with widely flaring, convex body curving up to slightly flaring rim, with flattened lip. Incised groove below lip outside.

311. (Lot-1989-08-45) Second-third quarter 12th century
Two joining fragments preserve complete profile, two-thirds of base, body, half rim.
H. 0.106, diam. base 0.098, diam. rim 0.25, w. 0.65. Fabric 7, very pale brown (10 YR7/4).
Bowl with flat base curving up to convex, flaring lower body to carination, where it develops in straight, slightly flaring rim with rounded lip. Groove below lip on exterior. Smoothed outer surface.

Single fragment preserves one-twentieth of body, one-ninth of rim. Missing base.
H. p. 0.068, diam. rim 0.31, w. 0.1 Fabric 7?, very pale brown (10 YR 7/4) outer margin, reddish yellow inner margin (5 YR 6/6).
Basin with convex upper body curving up to squared rim, outwardly thickened. Three wide grooves below rim on exterior.

313. (Lot-1992-87-27) Second half 12th century
Single fragment preserves one-ninth of upper body and rim. Crusted surface.
H. p. 0.066, max.w. 0.07, diam. rim 0.23, wt. 0.06. Well fired chert and quartz fabric, pale yellow (2.5Y 7/3).
Bowl with convex body to carination, vertical upper body with horizontal rim, slightly inwardly sloping. Wheel-ridged inner body, smoothed outer body.

314. (Lot-1997-44-26) First half 13th century
Three joining fragments preserve one-sixth of body, one-third of rim. Missing base.
H. p. 0.058, diam. rim 0.195, w. 0.1. Fabric 7? close to 10 YR 7/4 very pale brown Bowl with convex, flaring walls to carination, where it sharply curves up to vertical rim with squared lip. Smoothed surface. Wheel-made.

315. (Lot-1997-44-27) First half 13th century (Photo: plate no. 11)
Single fragment preserves one-fifth of body and rim. Missing base.
H. p. 0.66, diam. rim 0.28, w. 0.1. Fabric 7, very pale brown core (10 YR 7/4), reddish yellow margins (5 YR 6/6).
Bowl with flaring, convex wall curving sharply up to vertical rim, with inwardly bevelled lip. Incised wavy line around rim on exterior. Pared outer and inner surface. Wheel-made.

4.8.15 Small bowl

The small bowls included in this catalogue are dated between the 2nd to the 3rd quarter of the 12th century.

316. (Lot-1989-15-14)
Single fragment preserves complete profile, one-fifth of pot.
H. 0.035, diam. rim 0.15, w. 0.05. Fabric 7, reddish yellow (5 YR 6/6).
Bowl with flat base, body with straight flaring walls to inwardly bevelled lip.
Slightly wheel-ridged inner surface.

317. (Lot-1989-08-44) (Photo: plate no. 11)
Single fragment preserves complete profile, half base, two-thirds of body, one-tenth of rim.
H. 0.047, diam. rim 0.096, diam. base 0.045, w. 0.05. Fabric 7, light yellowish brown (lighter than 10 YR 6/4).
Small bowl with flat base curving up to hemispherical body with rounded lip.
Shallow bulge at centre of inner base. Double groove on outer surface below lip.
Smoothed surface.

4.8.16 Pedestal bowl

The pedestal bowl, considered to be an element of table ware, appears to recall the shape of contemporaneous white ware glazed pedestal bowls, imported from Constantinople and, therefore, might be interpreted as a local, unglazed imitation. Observing the diverse examples of unglazed pedestal bowls through time, one type of shape is identifiable between the 10th – 11th centuries, characterized by a tall, flaring ring foot; in contrast, during the course of the 12th century, this shape tends to be characterized by a false ring foot. This transition, which coincided with the end of the importation of white ware vessels, included both the pedestal bowl and, once
it appeared in the 12th century, the glazed bowl, which was both imported and locally produced and had a low or false ring foot. The identification of different types of pedestal bowl has confirmed that differentiation in characteristics of the shape is also associated with different fabric and even with diverse surface treatments, such is found in the example of type 2.

Type 1: 10th century

318. (C-1977-218)

Four joining fragments preserve complete profile, one-third of foot, body and rim. Restored with plaster. 
H. 0.072, diam. foot 0.09, diam rim 0.185, w. 0.111. Fabric 2, yellowish red (5YR 6/6).

Pedestal plate with high, flaring ring foot. Shallow convex body, with central bulge at inner centre, rounded lip. Wide groove around foot, shallower around mid-foot, wide groove just below lip on interior and exterior. Burnished inner surface. Wheel-made.


Single fragment preserves one-eleventh of body and rim. Missing foot. 
H. p. 0.026, diam. rim 0.18, w. 0.008. Fabric 2, very pale brown (10YR 7/4).

Pedestal plate with high, flaring ring foot. Convex body to slightly outwardly curving up to rounded lip. Groove below lip on exterior. Smoothed surface. Wheel-made.

Type 2: mid - 10th and 11th century

320. (1977-47-22)

Three joining fragments preserve one-third of vase. Missing foot. 
H. p. 0.029, diam. rim 0.165, w. 0.08. Fabric 5, reddish yellow (7.5 YR 6/6).

Widely flaring, convex body, with rounded lip. Shallow groove just below lip on interior, double incised line below lip on exterior. Lightly burnished inner surface with diagonal strokes. Lightly wheel-ridged outer surface. Wheel-made.

321. (C-1937-733) (Photo: plate no. 12)

Whole vase preserved.
Pedestal bowl with conical foot, squared resting surface. Shallow body with almost straight, flaring body to rounded lip. Burnished inner and outer body surface, smoothed foot. Incised circle at centre on inner surface. Wheel-made.

**Type 3: second half 11th century**

322. (C-1996-32) (Photo: plate no. 12)

Nine joining fragments preserve complete profile. Almost complete foot, three-fourths of body and lip.

H. 0.09, diam. foot 0.105, diam. rim 0.280, wt. 1.008. Fabric 9, margins pale yellow (2.5 YR 8/3), core: pink (7.5 YR 8/3).

High flaring, ring foot, squared resting surface, shallow rib at mid-height. Flat undersurface of almost straight flaring body, squared lip. Two incised circumferences around exterior of lower body; on interior, three incised lines near centre, incised circle at centre. Smoothed inner and outer surface.

323. (Lot-1996-36-1)

Numerous fragments preserve complete profile, two-thirds of foot, half body, one-third of rim. Crusted surface.

H. 0.09, diam. rim 0.285, diam. foot 0.085, w. 0.6. Fabric 9 fabric, light yellowish brown (10YR 6/4).

Plain, vertical ring foot, with squared edges; body with flat undersurface, straight and flaring walls, flat lip. Three grooves on inner and outer lower body. Smoothed surface.

324. (Lot-1996-36-2)

Numerous fragments preserve complete profile. One-third of foot and of body; half rim.

H. 0.089, diam. foot 0.09, diam. rim 0.285, wt. 0.42. Fabric 9, pale yellow (5 Y 8/3).

Pedestal plate with tall, straight flaring ring foot, with bevelled in edges and flat central undersurface. Straight flaring walls, squared, flattened lip. Double
grooves on lower inner body, uneven three incised lines on outer lower body. Smoothed surface.

**Type 4: second half 11th century- first quart 12th**

325. (C-1992-28) (Photo: plate no. 12)

Seven joining fragments preserving full profile. Missing only one-fourth of rim. Upper surface slightly corroded.

H. 0.054, diam foot 0.084, diam rim 0.079, wt. 0.469. Fabric 8, core between 5YR 7/6 to 2.5 YR 6/6.

Pedestal bowl with tall flaring ring foot with ridged resting surface, plain convex underside. Almost straight flaring body with outwardly bevelled lip Smoothed inner and outer surface. Three concentric incised lines on mid-inner body surface. Incised medallion at centre.

326. (Lot-1999-25-13)

Single fragment preserves one-seventh of fourteenth of body and one-seventh of rim. Missing base

H. p. 0.035, diam. rim 0.155, wt. 0.045. Fabric 8, brown core (7.5 YR 5/2), yellowish red margins (5 YR 5/6).

Bowl with straight flaring wall, outwardly bevelled lip. Smoothed inner and outer surface.

**Type 5: 2nd quarter to late 12th century**

327. (C-1992-79) (Photo: plate no. 12)

Seven joining fragments preserve almost complete vase except for one-fifth of upper body to lip.

H 0.051, diam. foot 0.10, diam. lip 0.13, wt. 0.616. Well fired chert and quartz (near 5 YR 6/6).

328. (C-1992-88)
Fourteen joining fragments preserve entire foot, three-quarters of body and lip. 
H 0.071-0.081, diam. foot 0.116, diam. lip 0.246, wt. 0.798. Well fired chert and 
quartz (fired), 5YR 8/2.
Bowl with a disc foot with biconical profile; straight flaring walls ending in a 
bevelled lip by groove. Medallion at centre (diam. 0.065). Slightly smoothed inner 
and outer surface.

329. (Lot-1992-100-89)
Seven fragments preserve three-quarters of vase.
H. 0.067, diam. rim 0.223, diam. foot 0.081, wt. 0.55. Fabric 9 pale yellow (2.5 Y 
8/2).
Unevenly trimmed disc foot; body with straight, flaring walls to uneven, flaring 

4.8.17  Cup
The very limited number of cups and tankards samples found in the analysed 
contexts do not make it possible to establish any form of typology. However, it is 
worth showing that these types of utilitarian artefacts were also part of the Middle 
Byzantine table ware.

330. (Lot-1977-47-5) mid-10th century
Single fragment preserves one-fourth of body, one-third of rim. Missing base. 
H. p. 0.048, diam. rim 0.08, w. 0.025. Fabric 5, very pale brown (10YR 7/4). 
Globular body to slightly flaring rim with tapered lip. Grooved body. Wheel-
made.

331. (Lot-1977-47-6) mid-10th century
Single fragment preserves one-third of body and rim. Missing base. 
H. p. 0.047, diam. rim 0.08, w. 0.003. Fabric 3, reddish yellow (5YR 6/6). 
Globular rim curving sharply up to vertical rim with rounded lip. Grooved 
shoulder. Wheel-made.
332. (Lot-1977-47-20) mid-10th century

Single fragment preserves one-fourth of upper body, one-fifth of rim, one complete handle. Missing base.

H. p. 0.05, diam. rim 0.085, w. 0.05. Fabric 5, reddish yellow (7.5 YR 6/6).

Ovoid body curving up to straight, flaring rim, with flat lip. Vertical handle, rounded in section, from lower body to lip. Grooved shoulder.

333. (Lot-1977-47-24) mid-10th century

Two joining fragments preserve one-fourth of shoulder and rim, one complete handle.

H. p. 0.06, diam. rim 0.05, w. 0.04. Fabric 8, yellowish red (5YR 5/6).

Ovoid body with carination curving up to straight, inwardly thickened rim, with rounded lip. Vertical handle, rounded in section, attached at max. diam. of body to just below lip. Grooved shoulder.

334. (C-1977-220) mid-10th century (Photo: plate no. 12)

Two joining fragments preserve complete profile, nearly half cup, one handle.

H. 0.066, diam. base 0.12, diam. rim. 0.104, w. 0.126. Fabric 3, pink (7.5YR 7/4).

Cup with flat base curving up to shallow echinoid body with rounded lip. Single strap handle from lower body to lip. Irregularly grooved upper body. Smoothed surface. Wheel-made.

335. (Lot-1996-36-3) 11th century (Photo: plate no. 12)

Numerous fragments preserve complete profile, one-third of base and body, one-fourth of rim.

H. 0.073, diam. base 0.065, diam. rim 0.08. Fabric 9, pale yellow (2.5 Y 8/2).

Cup with disc foot, globular body with rounded lip. Smoothed outer surface. Wheel-made.

336. (C-1937-732) 11th century (Photo: plate no. 12)

Whole vase preserved.

H. 0.06, diam. rim 0.075 – 0.08, diam. base 0.07, w. 0.167. Well fired chert and quartz fabric, pale yellow (2.5Y 8/3).
Cup with flat base curving up to uneven globular body with inwardly bevelled lip. Smoothed surface. Incised shallow groove around max. diam. on exterior.

337. (C-1937-1325) 11th century
Whole vase preserved.
H. 0.082, diam. foot 0.062, diam. rim 0.086, (uneven), w. 0.3. Well fired chert and quartz fabric, pale yellow (2.5Y 8/3).
Mug with flat base, convex body to straight, flaring rim with tapered lip. Smoothed surface. Single groove around rim and shoulder attachment.

338. (C-1937-2278) 11th century
Numerous joining fragments preserve almost complete vase. Missing one-fifth of body and rim.
H. 0.1, diam. base 0.075, diam. rim 0.1, w. 0.313. Well fired chert and quartz fabric, light reddish brown (local 10 YR 6/4).
Small cooking pot with flat base, ovoid body, straight flaring rim with concave inner profile, rounded lip. Vertical handle oval in section, from lower body to shoulder. Pared body, grooved shoulder.

339. (C-1937-2277) 11th century
Numerous joining fragments preserve complete vase except one-tenth of base and body. Fire-blackened on body and inner rim surface.
H. 0.097, diam base 0.065, diam. rim 0.10, w. 0.294 Well fired chert and quartz fabric, red (2.5 YR 5/6).
Small cooking pot with flat base, ovoid body curving up to vertical rim, with inwardly and outwardly bevelled lip. Vertical handle, oval in section from mid-body to shoulder. Pared surface. Double groove around shoulder and rim.

340. (Lot-1990-54-11) 1st half 12th century
Two joining fragments, complete profile from base to rim, preserved nearly half body and one handle.
H. 0.075, diam. base 0.07, diam. rim 0.06, w. 0.085. Fabric 3 reddish yellow, (5 YR 6/6).
Mug with flat base and ovoid body curving up to flaring rim with rounded lip. One vertical ring handle, round in section, attached from max. diam. to rim.

341. (Lot-1989-15-16) 1st half 12th century
Two joining fragments preserve complete profile, one-third of base, one-sixth of body, one-tenth of rim.
H. p. 0.087, diam. rim 0.11, diam. foot 0.06, w. 0.05. Fabric 9, pale yellow (2.5 Y 7/4).
Cup with disc foot, almost hemispherical body, round lip. Vertical handle, round in section, with central spine, attached on lower body to just below lip. Smoothed surface.

342. (C-1992-85) 2nd half 12th century (Photo: plate no. 12)
Numerous fragments preserve complete bottom, over half body, three-fourths of rim, handle.
H 0.123, diam. rim 0.083, wt. 0.243. Fabric 9 (7.5 YR 7/4 Near 5 YR 6/7).
Mug with flat base, ovoid body, with max. diam. just above median, sloping shoulder, straight, slightly flaring rim with inwardly bevelled lip. One vertical handle, round in section, from mid-body to rim. Slightly wheel-ridged body, grooved shoulder.

343. (Lot-1992-100-92) 2nd half 12th century
Numerous fragments preserve one-fifth of base, almost complete body and rim. Missing handle. Pink patches 5 YR 7/4 on body, and blackened surface. Worn surface.
H. 0.101, 0.068, diam. rim 0.094, diam. base 0.07, wt. 0.25. Fabric 7, reddish yellow (5 YR7/6).
Mug with flat base, globular body curving up to straight, thickened, flaring rim with rounded lip. Vertical handle, round in section, from max. diam. to rim. One incised wavy line below three parallel grooves on shoulder. Two grooves on rim.
4.8.18 Tankard

Tankards have been found only in 11th century contexts, with an increase in number during the second half of the century.

Type 1-A

344. (C-1996-31)
Fourteen fragments preserve complete profile, one-seventh of base, one-third of body, one-seventh of rim, two-thirds of handle, one stump of second handle.
H. 0.119, diam. rim 0.10, diam. base 0.07, wt. 0.114. Fabric 9, lighter than 10 YR 7/4 (very pale brown).
Tankard with flat base, conical body to narrow round shoulder curving up to straight, tall flaring rim with rounded lip. Two vertical round handles, attached from shoulder to below lip. Slightly burnished outer surface. Wheel-made.

345. (C-1937-2290) (Photo: plate no. 13)
Single fragment preserves one-fourth of shoulder and rim, one complete handle. Worn surface.
H. p. 0.078, diam. rim 0.10, w. 0.044. Fabric 5, reddish yellow (7.5YR 6/6).
Tankard with straight flaring body to round short shoulder, to almost vertical, straight rim, with tapered lip. Vertical handle, round in section, from just below body to upper rim. Burnished surface with vertical strokes.

346. (Lot-2009-89-7)
Two joining fragments preserve one-tenth of body, one-fifth of rim, one complete handle.
H. p. 0.112, diam. rim 0.14, w. 0.061. Fabric 8.
Tankard with straight, flaring body to tapered lip. Vertical handle, round in section, with central rib. Double groove on upper body, at height of handle attachment. Burnished outer surface to lip.
Type 1-B

347. (C-1937-2292) (Photo: plate no. 13)

Single fragment preserves half neck and rim, one-sixth of shoulder, handle stubs on one side of body.

H. p. 0.114, diam. rim 0.11, w. 0.146. Fabric 9 fabric, very pale brown (10 YR 7/4).

Tankard with straight, flaring body to rounded shoulder curving sharply up to vertical, tall rim with tapered lip. Vertical, round handle from shoulder, to upper rim. Burnished outer surface. White slip painted concentric loops with dots around upper edges on shoulder, bigger and irregularly painted on rim.

4.8.19 Storage vessels

Clay storage vessels were quite limited in number in the investigated pottery assemblages. Pithoi are the biggest storage vessels identified, with no substantial changes in shape through the centuries. They are characterized by a vertical, thickened rim, triangular in section. One example of a clay pithos lid has also been identified.

Worth noting is an open shape storage vessel, here defined as a pithos, characterized by its straight flaring lower body, almost vertical upper body, folded rim and vertical plaster decoration. This pithos has been found in a context dated to the first quarter of the 13th century, but its feature characteristics, such as the folded rim and the vertical rib decoration, appear also on contemporary cooking vessels dated to the first three quarters of the 13th century.

4.8.20 Pithos

348. (Lot-1996-36-20) second half 11th century

Two joining fragments preserve one-sixth of body and rim.

H. p. 0.126, outer diam. rim 0.30, w. 0.3. Well fired chert and quartz fabric, light yellowish brown (10 YR 6/4).

Conical body, horizontal rim, with squatted lip. Uneven groove below rim on exterior.
349. (Lot-1992-90-12) last quarter 11th to 1st half 12th century
   Single fragment preserves one-twentieth of upper body, one-eighth of rim.
   Missing base and lower body.
   H. p. 0.081, diam. rim 0.35, w. 0.303. Well fired chert and quartz fabric, light gray
   (10 YR 7/2).
   Pithos with inwardly sloping shoulder to vertical rim, outwardly thickened, flat
   lip, with punched decoration on lip.

350. (Lot-1999-25-7) 12th century
   Single fragment preserves one-tenth of rim. Missing base and body.
   H. p. 0.071, diam. rim 0.45 (outer edge), wt. 0.43., Well fired chert and quartz
   fabric, light gray (10 YR 7/2).
   Pithos with vertical, outwardly thickened rim, triangular in section, with flat lip.
   Groove below rim.

351. (Lot-1997-44-29) 13th century
   Twenty-four fragments, some of which join, preserve one-sixth of body, almost
   complete shoulder and rim. Three complete handles.
   H. p. 0.22, diam. 0.52, rim w. 8. Fabric, light brown margins (7.5 YR 6/4), very pale
   brown core (10 YR 7/4).
   Pithos with straight, flaring lower body to almost carination, curving up to
   almost vertical upper body, folded rim with squared lip. Vertical strap handles,
   with three shallow ribs, from shoulder to just below lip. Plastic ridge on
   carination, around upper body and below rim, vertical ribs from over shoulder to
   lip. Cf. Mackay 1963: 301, no. 141 for shape, although this example has a matt
   painted decoration.

352. (Lot-1992-89-9) Pithos lid, 12th century
   Single fragment preserves one-fourteenth of lid.
   Actual H. 0.022, diam. rim 0.69, w. 1.362. Almost Fabric 9, reddish yellow core (7.5
   YR 6/6), light red margins (2.5 YR 6/8).
Flat disk, inwardly bevelled edge. Smoothed outer surface. Rough undersurface. Double groove at 0.085 un upper surface from outer edge. Graffito <A> on upper surface.

4.8.21 Storage jar

Storage jars, smaller than pithoi, with a distinctive vertical rim have rarely been found with complete profiles; therefore it is not possible to suggest a typology according to their shape and dimension. Written sources report diverse names for storage jars, such as bytina, kourelos and kouroupi, names that were probably associated with their size and specific function (Bakirtzis 2003: 122-123).

353. (C-1977-232) 10th century
Numerous joining fragments preserve two-thirds of body, almost half rim, one complete handle, missing base.

H. p. 0.36, diam. rim 0.20, w. 2.620. Fabric 2: yellowish red (5YR 5/8).
Jar with ovoid body with max. diam. above shoulder. Vertical rim, inwardly thickened, with inner concave profile; squared lip. Deep groove just below lip on exterior, wide, shallow groove below rim; grooved body. Strap handle from max. diam. to shoulder.

354. (C-1937-2296) 11th century (Photo: plate no. 13)
Numerous fragments preserve complete profile, one-sixth of base, half body, complete rim and handles. Restored with plaster.

H. 0.355, diam. base 0.26 (very uneven), diam. rim 0.235, w. 5.55. Fabric 5, reddish yellow (7.5 YR 6/6).
Jar with flat base curving up to ovoid body (max. diam. 0.33), vertical, triangular rim, with squared lip. Horizontal handles, attached on max. diam., oval in section, only one handle with high central rib. Pared lower body. Wheel-ridged shoulder to max. diam. Three grooves on around lower rim.

355. (Lot-1996-36-19) 11th century
Four joining fragments preserve one-six of shoulder, one-third of rim. Missing base and body.
H. p. 0.039, Diam. rim 0.23, w 1. Chert and quartz fabric, very pale brown core (10YR 7/4), margins 5YR 6/6 (reddish yellow).
Jar with outturned, thickened rim, with rounded lip, offset by ridge. Incised zig-zag line around neck, just below lip on exterior.

356. (Lot-2009-51-4) Late 11th – 12th century
Single fragment preserves one-tenth of rim. Missing base and body.
H. p. 0.053, diam. rim 0.21. Well fired chert and quartz pale yellow (2.5 Y 8/2).
Jar with vertical rim, inwardly thickened, with concave inner profile, rounded lip.

357. (Lot-2009-51-5) Late 11th – 12th century
Single fragment preserves one-tenth of rim. Missing base and body.
H. p. 0.061. diam. rim 0.16. Well fired Chert and Quartz fabric, pink outer section (7.5 YR 7/4), reddish yellow inner section (5YR 7/6).
Jar with sloping shoulder to vertical rim with rounded lip and concave inner profile. Ridge on mid-neck.

358. (Lot-1989-08-20) 12th century
Single fragment preserves one-eleventh of rim. Missing body and base.
H. p. 0.068, diam. rim 0.25, w. 0.1. Fabric 7, very pale brown core (10 YR 7/3), reddish yellow margins (5 YR 6/6).
Shoulder sloping sharply up to vertical rim, inwardly thickened with concave profile by ridge. Smoothed surface.

359. (Lot-1989-08-19) 12th century
Single fragment preserves one-eighth of rim. Missing base and body.
H. p. 0.088, diam. rim 0.315, w. 0.2. Well fired Chert and Quartz fabric, light gray (5Y 7/2).
Shoulder sloping to vertical rim, outwardly and inwardly thickened, with flat lip.
Two parallel ridges on outer rim, with upper one less pronounced.
360. (Lot-1989-08-46) 12th century

Three joining fragments plus one non-joining fragment preserve one-tenth of body, one-third of rim. Missing base.

H. p. 0.082, diam. rim 0.225, w. 0.34. Well fired Chert and Quartz fabric, core very pale brown (10 YR8/4), pale yellow outer margin (2.5Y 7/4), very pale yellow (10 YR8/2) inner margin.

Jar with sloping shoulder curving sharply up to cylindrical neck, horizontal rim. Double groove on lower neck.

361. (Lot-2002-05-2) second half 12th century

Four joining fragments preserve one-tenth of shoulder, one-fourth of rim and handle. Missing base, body and one handle. Heavily crusted.

H. p. 0.126, diam. 0.22, wt. 0.395. Fabric 3, reddish yellow (between 5YR 6/6 and 6/8).

Jar with sloping shoulder to almost conical neck, flaring rim, inwardly thickened deep concave inner profile and inner flange probably for hosting lid. Vertical strap handle, attached below rim, with three ribs. Shallow groove below rim on exterior.

Collared smaller jar

362. (Lot-1977-47-9) 10th century

Single fragment preserves one-seventh of shoulder and rim. Missing base and body.

H. p. 0.069, diam. rim 0.17, w. 0.05. Fabric 5, inner margin reddish yellow (5YR 6/6), outer margin very pale brown (10YR 7/4).

Sloping shoulder to vertical rim, with slightly concave inner profile, rounded lip. Wide groove on shoulder at articulation of rim and just below lip; lightly grooved shoulder. Wheel-made.

363. (C-1937-2284) 11th century (Photo: plate no. 13)

Two non-joining and six joining fragments preserve complete profile, all base, half body, one-fourth of rim, one handle. Missing second handle.
H. 0.18, diam. base 0.088, diam, rim 0.12-0.125, w. 0.524. Well fired chert and quartz fabric.
Jar with flat base almost globular body, flaring rim, with mid-ridge. Vertical, strap handle with central spine from mid-body to shoulder. Wheel-ridged from 0.045 m above base to shoulder.

364. (Lot-1996-36-10) 11th century
Eighteen fragments preserve one-fourth of shoulder, two-thirds of rim. Missing base. Restored with plaster.
H. p. 0.07, diam. rim 0.15, wt. 0.2. Well fired chert and quartz fabric, close to 10 YR 7/4 (very pale brown).
Sloping shoulder to vertical collar rim, with rounded, inwardly bevelled lip. Uneven line incised around rim on exterior, band of four grooves around shoulder.

365. (Lot-1999-25-6) late 11th – 12th century
Single fragment preserves one-tenth of shoulder, one-fourth of rim. Missing base and body.
H. p. 0.045, diam. rim 0.125, wt. 0.4. Well fired chert and quartz fabric, pale yellow (5Y 7/3).
Jar with round shoulder curving sharply up to vertical rim, with concave inner profile, inwardly bevelled lip. Groove around rim on exterior, just below lip. Grooved shoulder.

366. (Lot-1991-77-10) late 11th – 12th century
Four joining fragments and one non-joining fragment preserve one-fourth of rim.
H. p. 0.048, diam. rim 0.15, w. 0.109. Almost Fabric 9, reddish yellow core (7.5 YR 6/6), light red margins (2.5 YR 6/8).
Jar with vertical rim and rounded lip. Double groove around rim.
4.9 Middle and Late cooking ware from Argos excavation

The examples of cooking pots included in this catalogue were those that would facilitate a direct examination with the Argive material. They clearly testify, together with the published ceramics from the Argos Agora, that Middle and Late Byzantine cooking wares have close similarities in terms of shape to the Corinthian examples. However, a macroscopic analysis suggests that Argive pots were not made in the same fabrics adopted by the Corinthian potters. Worth noting is that the fabric and appearance of Argive material resembles that of the Corinthian vessels in colours, which was probably done intentionally by the potter. The discovery of wasters in the excavations carried out by the Greek Archaeological Service in the city of Argos is evidence for local Middle Byzantine pottery production. However, at the current state of research, kilns and pottery workshops, with associated wasters that have been excavated, are dated from the 13th century to later periods of production (Vassiliou 2014: 294-302).

367. Triangular rim stewpot, from 2nd quarter to late 12th century. (ΑΡΓ.1980/Κ1) Argos, Droulia plot Cf. Piérart & Thalmann 1980, no. D 5. (Photo: plate no. 14) Intact vase. Unevenly fired-blackened outer surface from bottom to rim. H. 0.19, diam. rim 0.16., max. diam. 0.23. Red (2.5 YR 5/6), medium-hard fabric with common to few (0.5 – 1.5 mm) white, opaque, angular/spherical inclusions (possibly quartz); few to rare (0.25 – 0.5 mm), rounded/spherical gold sparkling (possibly mica). Stewpot with flat bottom and spherical body curving up to vertical rim, triangular in section, with squared lip, slightly inwardly sloping. Wheel-ridged lower body up to max. diam., grooved shoulder. Single deep groove on upper shoulder and around rim on exterior. Strap handles, with shallow central rib, from max. diam. to upper shoulder

368. Small cooking pot, 12th century APΓ.1977/K1 Published in Oikonomou-Laniado 1997, 238, no. 4. (Photo: plate no. 14) Argos, Bavela plot Intact vase. Fire-blackened surface. H 0.148, diam base 0.086, diam. rim 0.103. Local fabric as no. 365.
Cooking pot with flat base, globular body curving up to straight, slightly flaring rim, with inwardly sloping lip. Vertical, strap handle from max. diam. to shoulder.

Intact vase with fired-blackened half body opposite to handle.
H 0.097, diam base 0.0063, diam. rim 0.089. Hard, coarse fabric, orange red (2.5 YR 6/6-5/6) in colour, with common to few (0.5 – 1.5 mm) white, opaque, angular/spherical inclusions (possibly quartz), possibly local fabric.
Small cooking pot with flat base, globular body curving up to slightly flaring rim with concave profile and inwardly bevelled lip. Vertical, strap handle from max. diam. to shoulder. Smoothed surface.
5 THE LIFE CYCLE OF A BYZANTINE POT

5.1 Introduction

This chapter would like to discuss, following an examination of utilitarian vessel assemblages, the relationship between technology, morphology and uses of unglazed utilitarian pots in the Byzantine period, with major focus on Corinth. Based upon both the similarities and the changes in pottery shapes and dimension, with a particular attention to clay fabrics, this analysis would like to assess aspects of the consistency and the variation in manufacturing technology. Technological and manufacturing choices in pottery manufactory, in fact, are not the sole factors taken into account by potters in the production process. Cultural, as well as economic concerns, can affect their decisions in the chaîne opératoire. This chapter also aims to evaluate, from a techno-anthropological perspective, some of the manufacturing choices in a diachronic perspective put in place by the potters in Byzantine Corinth. The focus on aspects of production and on the uses and functions of utilitarian pottery may provide further data for shedding light on some social and economic features, which may be used to better define aspects of economic features of Byzantine society. The first step of this enquiry examines the evidence of modes of pottery production in Byzantine Corinth.

5.2 Corinthian kilns and the pottery production evidence

Multiple pieces of evidence indicate that pottery was produced in Corinth during the Byzantine period. The quantities of ceramic production wasters, found over years of excavations, are particularly relevant; these include fragments of kiln lining, unglazed, slip-decorated, biscuit fired sherds, misfired vessels, as well as kiln furniture, which includes firing yokes used for hanging stemmed vessels in the kiln and firing tripods for the separation of stacked vessels (Fig. 5.1).
Figure 5.1 Unfinished examples of table ware (glaze missing). A: Light on Dark Slip Painted Ware B: Dark on Light Slip-Painted (Imitation Lustre), C: Sgraffito (developed style), D: Measles Ware. (Photos courtesy of the American School of Classical Studies at Athens, Corinth Excavations).

Pottery kilns identified in the Forum area of Corinth were excavated during the first half of the 20th century, when a preeminent interest went to uncovering architectural remains. Unfortunately, residues and other material evidence that would be important for an analysis of the function of various kilns and their complexes were often not considered relevant and were ultimately discarded. The main source of information currently available is the only notes recorded in the excavation notebooks that were partially published by Morgan in 1936, 1939 and 1942.

However, three unexcavated and unpublished potential pottery production sites have been identified outside the archaeological site of Ancient Corinth. Preliminary information and a first review of these pottery kiln sites have been provided by G. Sanders (1999, 2003), and by H. White in her unpublished PhD thesis (2009), which focused on the development of production technologies of Byzantine glazed pottery manufactured at Corinth, enabling one to grasp a more complete picture of the pottery production at Corinth in the Byzantine period.
Plan 5.1. Plan showing the location of medieval kiln sites mentioned in the text (after Sanders 2003a: 36).
The earliest of the unexcavated Byzantine kiln sites is located approximately 100 m. north of the Hadji Mustapha fountain on the edge of Acrocorinth and was brought to light during excavations carried out by the Greek archaeological service in the late 1980’s. The Hadji Mustapha Kiln Site is characterised by a substantial deposit of misfired pottery and distorted wasters over a meter in depth. Analysis of the material washed from the baulks and collected from the site was predominantly the so-called ‘Otranto type’ amphorae and smaller quantities of plain wares, cooking pots and tiles. No examples of coarse plain brown glazed wares were reported. While no kiln structure has been located, it is considered very likely that the production debris is from a pottery workshop located within the area, possibly dated between the 9th and 10th centuries (Sanders 1999: 162; White 2009: 46).

Another kiln site has been identified, along the Acrocorinth slope, southwest of the first gate of the kastron, but it has not been excavated. A dense distribution of wasters and fragments of vessels, as well as one firing tripod and a significant quantity of fragments of kiln lining at the top and western slopes of the mound, make it possible to identify this as a kiln site. The surface material indicates a greater variety of types than those identified at the Hadji Mustapha kiln, including amphorae and amphorae stands, stewpots, basins, pithos, lids, jars, and chafing dishes, though this last group is rarely represented. Pottery styles suggest that production occurred during the 10th and 11th centuries (Sanders 2003b: 397).

Before analysing the kiln identified by Morgan (1936, 1939, 1942), it is worth noting that there were surface finds of unglazed wasters of Green and Brown Painted and Slip Painted Dark on Light wares in the site at Roumelioteika by the Asklepeion, dated to the 12th century (Sanders 1999: 162). The quantities of wasters here lead one to hypothesise that there were kilns in the vicinity. However, since no detailed studies have been carried out on this evidence, it cannot be excluded that this concentration of wasters is only a dump of debris from a production centre located elsewhere (White 2009: 47).

Among the kiln sites published by Morgan, the St John’s 1937 kiln, the biggest of the identified pottery workshops, was situated under the north aisle of St John’s church (plan 5.2, no. 1). Its structure is not well preserved due to the construction of St John’s church and the related monastic complex on this area. The kiln evidence is related to a structure, circular in plan, domical in shape, with a floor, 1.60 m in
diameter, supported by a central pillar, and made of brick and tile fragments, set in mortar. The wasters found in the nearby area of the kiln site are mainly that of 12th century glazed wares, including Green and Brown Painted, Sgraffito, Measles, Slip Painted and Plain Glazed styles, bloated amphorae, wasters, firing yokes and two tripods. Building upon an 11th century chronology suggested by Morgan, the presence of glazed wasters, make it possible to hypothesise a 12th century chronological range for the period during which this production centre functioned (Morgan 1942: 14; Sanders 2003b: 397).

The other two kiln sites published by Morgan, the northernmost Agora S.C. 1936 and South Stoa 1936 (plan 5.2, nos. 2 and 3), are of uncertain identification as pottery production centres. No evidence related to pottery production has been recorded associated with the Agora S.C. 1936 kiln site, making its identification as a pottery manufacturing centre uncertain (Morgan 1942: 15-16). In the case of the South stoa complex, evidence of burning was recorded in the general surrounding area around the kiln site, but no wasters have been recorded in proximity of the structure (Morgan 1942: 19-21). However, White, while analysing the pottery fragments from a pit excavated eight meters distant from this complex that was filled with unfinished table ware, hypothesized that at least the South Stoa kiln complex might have functioned as a workshop possibly related to the glazing process of 12th century wares (White 2009: 50).

Furthermore, the Agora N.E. kiln also brings up questions about its role as a potential pottery manufactory centre. Located to the northeast of the Forum, it is the best preserved kiln of those excavated, similar in structure to the St John’s kiln (plan 5.2, no. 4). However, evidence for a pottery manufacturing centre has not been indicated by Morgan and, moreover, an attributed date as Byzantine/Turkish kiln makes it necessary to restudy the archaeological evidence for a chronological and functional identification of this area (Morgan 1942: 16-17, White 2009: 51).
Plan 5.2. Plan of the Forum area showing the location of the kiln sites published by Morgan.
Kiln sites dated to the Frankish period have not been identified so far in Corinth; however, petrographic analysis proves that not only 13th and 14th centuries glazed table ware, such as Green and Brown Slip Painted (V-I), Slip Painted Light on Dark III, and Frankish Incised Sgraffito was locally produced (White 2009), but also unglazed utilitarian vessels, such as cooking pots, were still manufactured in Corinth (Joyner 2007).

5.3 **Modes of pottery production: technology and production organization**

One of the major limits to investigating modes of production in Byzantine Corinth, an aspect that can also be extended to Sparta and Argos, is the scant and fragmentary sources of information available on kiln sites. The study of the social context of manufacture and of the phases of production is mainly possible on the basis of the investigation of workshop areas in association with tools and material related to the activities carried out there. In the case of Corinth, surface finds allow one to locate, within the space, the presence of pottery workshops, which may then be used to suggest chronologies; however, none of them has been fully and stratigraphically excavated and documented. Moreover, in the specific instances of the Forum kilns, even though the kiln structures have been discovered, the absence of detailed recording of the stratigraphic units makes it impossible to carry out an analysis of the functional areas, of the use of the space in the workshop or of the area surrounding the kiln installation. Therefore, it becomes very complicated to reconstruct the nature, the structure and the features of the Corinthian pottery workshops, which, consequently, limits our understanding of the chaîne opératoire of the ceramic production.

The knowledge of the spatial organization of a pottery workshop, through an analysis of the spatial distribution of tools, wasters, architectural features and ceramic artefacts, would allow one to understand how the workshop space was used. The identification of the different working areas of a pottery manufactory centre, such as the crafting area, the storage area, and even the discard areas, would make it possible to estimate the potter’s productivity. The dimensions, the planimetry and layout of the workshop, together with a detailed analysis of the kiln structure could, in fact, also set the background for the quantification of daily production, data that would be
useful for evaluating the organization of the workshop and the economic conditions of its owner (Blitzer 1990; Hasaki 2011). Moreover, not being able to understand the organization of the crafting space also makes it difficult to evaluate how the workshop could have been related to the urban topography. An important question for investigating the process of pottery production is whether production took place in domestic buildings, with production organised within a household, or if it was arranged in non-residential workshops. Such a distinction is not always straightforward and requires a careful analysis of the depositional process and formation of the contexts under investigation (Skibo 1999: 7). A relevant point of enquiry would be to define if and how the workshop was related to the living area of the potter’s family, for example: whether it formed a single unit, or was a more extensive industrial workshop or was set in a large-scale manufacturing context outside the residential area, in a setting of non-household production. This information would, for instance, allow one to question the economic impact of pottery production on the local community, evaluating the condition of the potter, who was perhaps the owner of the manufactory centre (Annis 1987, 1988). All this data in fact could suggest whether the modes of production were related on a household level or whether it would be possible, upgrading in terms of production organization, to identify a household industry, an individual industry, a workshop industry, or a large-scale industry (Peacock 1982; Annis 1988; Arnold 1991; Mannoni & Giannichedda 1996: 255-265). A resulting question would be whether pottery production was a seasonal activity that, for instance, could have been associated with agricultural production, or it was a full-time work. This question has often been related to environmental and climate conditions, which could limit the production in certain seasons (Peacock 1982; Arnold 1985).

In the case of Corinthian finds, although the surface collection can indicate provenance and suggest the nature and quantity of production, it cannot provide information about the scale of production. Therefore, it would be risky to assess, on the basis of Peacock’s classification (1982: 8), whether a large-scale production was taking place in the Byzantine period, since it would need to be proven by high quantities of artisanal debris, which cannot be associated with household and non-domestic workshops. Furthermore, it would also be impossible to assess whether production evidence found in household contexts could be indicative of a part-time or
low-intensity production. Nevertheless, some observations still can be drawn about Corinthian workshops. Judging from the ceramic finds in close proximity to the kiln sites, it can be hypothesised that kiln sites were not always similarly organised in Byzantine Corinth. From the 9th to the 11th centuries, it is worth highlighting that the kiln finds confirm that the manufacturing of glazed pottery was carried out in conjunction with unglazed coarse and cooking wares in the same workshop, which was also noted in case of the Acrocorinth kiln site. Together with unglazed ceramics, the few quantities of glazed tableware were mainly made in the forms of chafing dishes and brown glazed cups in cooking ware fabric (Sanders 1995b: 87-88). It might be worth considering if the local production of glazed ware, being quite low in terms of quantity until the beginning of the 12th century, was of a scale small enough not to require a separate, specialized manufacture. Moreover, in the 8th and 9th centuries local production of glazed and unglazed ceramics was limited in quantity, requiring the importation of cooking vessels and chafing dishes. Only beginning in the mid-10th century, the local industry was satisfying the demand for cooking vessels, storage containers and pots for food preparation and, the importation of these types of utilitarian vessels decreased. The local production of tableware was also limited, and in fact from the late 8th to early 9th centuries and again from the mid-10th to the early 12th centuries the market for glazed tableware was dominated by the Constantinopolitan white ware types, which were, nevertheless, imported in very small quantity, until the beginning of the 12th century making up less than 3% in average of the total weight of the glazed fraction of the pottery assemblage (Sanders 2003b: 390-391, 394, fig. 23.7).

Finally, it is worth observing how when the importation of white wares resumed in the mid-10th century, imports of cooking vessels were quite limited in quantity and by this time up to the beginning of the 12th century, these tended to be unglazed, or sparsely glazed white ware kettles (cf. paragraph 4.7 on unglazed white ware), probably originating from the same source as the other imported white wares.

However, an important change took place between the end of the 11th century and the beginning of the 12th century. When White Wares ceased to be imported, petrographic analysis clearly shows that the new types of glazed tableware started

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19 Catalogued chafing dishes nos. 5 and 6; discussion on glazed cups with sparse petal decoration in page 229.
to be made locally with the adoption of a fabric recipe that was distinctly different from the unglazed plain ware locally produced until this time (White 2009). Data pertaining to the adoption of a new fabric recipe is of absolute importance, considering that ceramic manufactory is generally shaped by a strong inherited tradition. Pottery making, as other craft production is one of those human practices transmitted and inherited through social learning (Shennan 2006, 2013). Petrographic and ethnographic studies show that potters would generally follow the know-how learnt during apprenticeships to the master potter, substantially following ‘inherited technical gestures’ (Roux 2016: 110). Potters generally pass down their knowledge and skills within their own household, generation by generation. In this way potters learn how to select the clays, the raw materials used as temper and learn how to make a good clay-paste for manufacturing. They also learn the different steps for manufacturing, including types of shapes and dimensions, as well as the drying time for different clay recipes and shapes. These skills are generally transmitted as hands-on knowledge learned in the workshop or in the household context. Changes in pottery typologies and in production technologies can be associated with relevant cultural and economic changes, which are also documented in the restructuring of the manufacturing organization. The development or acquisition of different technologies can cause changes in the organization of production, such as in the scale of production, the management of manufacturing space, and the quality and quantity of skills required. The production organization can be developed or constrained due to multiple different reasons; whether or not technology itself can be a cause of changes in the production organization, changes can be related to multiple factors, which should be investigated in the socio-economic context of the community in which the potters operated (Mannoni & Giannichedda 1996; Arnold 1999: 59-60; Roux 2010, 2013, 2016; Shennan 2013). Dynamic changes in technology should, in fact, be connected to new or changing social or economic conditions (Day 2004).

In the example of Corinth, a change in workshop organization in this period is suggested by wasters found among the surface finds, which leads one to hypothesise that, by the 12th century, some workshops tended to be dedicated to the production of fine glazed wares and others to coarse and cooking wares (Sanders 2000). The

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introduction of the new fabric recipe for manufacturing glazed wares appears to coincide with changes in the manufacturing organisation, which caused a separation in the kiln arrangement and encouraged a more specialised production (White 2009). Moreover, it is worth highlighting that, according to a macroscopic observation of the unglazed utilitarian vessels’ fabric, this change in the fabric recipe was not taking place in the production of coarse and cooking wares, which from the 12th century onwards continued to be made in the same fabrics used in the preceding period. The only exceptions to this are some examples of unglazed tableware types, mainly bowls, which resemble shapes generally manufactured as glazed vessels; it could be proposed, then, that they might have been produced in the same workshop. Therefore, pottery production in Corinth underwent an important reorganisation and transformation over the Middle Byzantine period. The quantity of locally produced ceramics appears to increase through time, with an important escalation in the 12th century.

On the basis of the reorganization of pottery workshops, it should be considered if, in the Early and Middle Byzantine periods to the late 11th – early 12th century, potters were part-time workers who were possibly also involved in agricultural activities. It follows, then, that the reorganization of the pottery workshops in the 12th century correspond to a restructuring of the pottery manufactory and its labour organization. Locations like Corinth, which were subject to seasonal rainfalls, would encourage manufacturers to focus pottery production in warmer and dryer seasons of the year and would, therefore, make it possible for potters’ households also to carry out a part time agricultural activity (Arnold 1993: 15-26). This topic of enquiry can be approached, on the basis of the available evidence, by evaluating the level of specialization, standardization and intensification of the pottery production.

5.4 Specialization, standardization and intensification of pottery production

Scholars have generally put the term ‘specialization’ in relation to ‘standardization’ even though, it should be pointed out, there is neither a consensus nor a comprehensive definition as to what is meant by ‘specialization’. Standardization has generally been investigated by analysing metric variations of pottery dimensions,
through a statistical approach. However, there is no agreement regarding the validity of this approach, because metrical values cannot always be reliable for evaluating manufactory standardization (Rice 1991: 277 – 279; Longacre 1999; Kotsonas 2014).

Furthermore, different skills of the individual potters can cause differences in the vessels. The level of skill is not directly proportional to standardization, scale and the level of production, since further factors may also be influential (i.e. mould made production requires fewer skills and can increase the scale of production). Additionally, uniformity of vessels can be the result of market requests, of production techniques and of the potter’s desire to estimate production quantities. Increases in the scale of production should not be exclusively related to standardization, because such increases could also result from market requests (Arnold 1999: 79-80, 2000).

Finally, it should be considered that scalar errors of approximately 5% or more (Eerkens 2000: 667), causing variations in weight of shape, can exist even in intentionally standardised assemblages (Eerkens & Bettinger 2001: 494-95).

These definitions of standardization and specialization become more valuable if we consider the manufacturing process as a sequence of technological choices interconnected with the potter’s socio-economic cultural context. This sequence of choices includes factors such as: artisanal tradition and technological choices, environmental and geographical conditions, the socio-cultural system and political and economic conditions, combined with beliefs and religion, all of which affect the potter’s choices and the chaîne opératoire (Kolb 2011). In the specific example of unglazed Byzantine ceramics, an analysis of standardization and specialization in relation to the socio-economic environment could begin with a focus on the Byzantine cooking pot, with its peculiar round bottom, spherical body shape and two handles. These typical morphologic characteristics of Byzantine stewpots in Corinth are documented from the Late Antiquity throughout Byzantine history. Furthermore, this consistency in characteristics also corresponds to the continuous adoption of the so-called chert and quartz fabric recipe, which was widely used by Corinthian potters for the production of unglazed utilitarian vessels. This fabric recipe has been petrographically tested and verified to be in use throughout Late Antiquity and through both the Byzantine and Frankish periods (Joyner 2007, Graybehl 2010). This technological consistency among Corinthian potters can be interpreted as an
awareness of the need to produce a well-functioning cooking pot suitable for local cooking practices and desired by the market. Technical choices operated by the potter, in fact, were also influenced by performance characteristics of a vessel: thermal, chemical and mechanical parameters are essential to navigating market demand, even though potters had no scientific background and pot performance was based on empirical knowledge. This know-how is the basis for the interaction between people and artefacts. In fact, pots respond to technical performances, which could achieve consumer requests and tastes. Due to these reasons, Byzantine stewpots, as is the case with other types of utilitarian objects, were able to go through a long period of stability before a single technical change was made. A change in the fabric recipe sometimes necessitates other alterations in the design to mitigate any effects that alter performance. This is the main reason that pottery technology is generally considered to be conservative and characterized by long periods of design stability, particularly in the case of utilitarian vessels. Once a pot with a specific fabric recipe and design adequately performs, it is kept as is; otherwise any changes in technical choice can cause inadequate performance, which would compromise the usability of the object (Schiffer & Skibo 1997; Skibo & Schiffer 2001: 141-147).

Nevertheless, over the Early and Middle Byzantine periods, stewpots in Corinth underwent a series of changes in shape details. Through quantification analysis, it is possible to highlight changes among the different, identified types of this form of cooking pot, specifically a major change in the variation of rim profiles from the Late Antiquity (Slane & Sanders 2005) to the 13th century (cf. paragraphs on cooking ware vessels in Chapter 4). Differences, observed through a diachronic perspective, in the different types presented in this project might be explained as the results of multiple causes, one of which is continuous change.
Figure 5.2. Triangular rim stewpots from late 11th century to mid 13th century.

This type of change, related to shape details, can occur when there is continuous learning between generations and among the masters of specific artisanal crafts. By
quantifying cooking pots from the Middle Byzantine period, it is possible to observe that changes in shape details, such as the rim, of Corinthian stewpots, in diachronic sequence, seem to conform to a cycle of ca. 40 years, potentially a span of time that would correspond to a single generation. Triangular rim stewpots can be adduced as a good example of transformation of shape details within the same form (Figura 5.2). Therefore, the transformation of shape details within a form might be ascribed to a case of modification applied to transmitted knowledge, a mechanism which is observable when it is possible to recognize inherited characters practicing elements of innovation (Shennan 2009).

Additionally, in the case of Corinth, the diverse types of spherical stewpots, identified as being from the 6th to the 13th centuries, can exclude any case for discontinuous change among the artisanal tradition. Discontinuous change, it is worth noting, only takes place when there is a complete cessation of transmission of know-how, which generally happens when a population abandons a place, is replaced or the social components associated with the knowledge disappears (Roux & Courty 2013). It is worth highlighting that this data further supports the idea that pottery also continued to be produced in Corinth during the course of the 8th and 9th centuries, albeit in very limited quantities, as the archaeological evidence so far suggests.

The chrono-typology presented in the previous chapter shows that there are also variations in shape among stewpots with similar chronology produced in Corinth. However, the degree of variation changes. On a related note, I would like to clarify that the hypothesis I am about to present is a research question should be tested through petrographic analysis, since fabric identifications in the presented research are based on macroscopic analysis. 21 If we consider types of coarse and cooking wares, it is possible to observe that, until the late 11th century, there is a major variation in types and subtypes, even within the same form. This trend is clearly visible, for instance, in the collar rim stewpot (paragraph 4.6.1) and in domestic containers, such as the lagenes (paragraph 4.8.5). However, the variability of types and subtypes does not appear to correspond to a similar variation in the fabric recipes adopted for the production of these vessels. This consistency in the fabric recipe suggests that this high degree of shape diversification may be the result of a less standardized and

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21 The method applied for fabric identification is explained in detail in Chapter 3, Paragraph 5.
specialized manufactory, and it should probably not be related to diverse workshops being simultaneously active in Corinth.

The major exception to this trend is the so-called ‘Otranto type’ amphorae, the production of which appears to start during the course of the 9th century and continue through to the late 11th century. This type of amphora, likely produced in Corinth, is very consistent in terms of fabric and shape characteristics, with very few changes over the centuries (paragraph 4.8.2).

This variability in pottery types and subtypes appears to decrease at the beginning of the 12th century. 12th and 13th century pottery types seem to indicate an increased level of pottery specialization, which can be observed in the following data. Stewpots are still characterized by a round bottom, almost spherical body and by a vertical, short rim, which – by the 12th century – becomes triangular in section. 12th and 13th century stewpots can be mainly grouped as triangular rim stewpots (paragraph 4.8.7). This major trend in the cooking pot shape is one of the evidence indicative of a high degree of standardization, as compared to the higher variability in types and subtypes of the previous period. This increased level of standardization in the 12th century cooking ware manufacture is not sudden, this change in the manifacture process takes places over a period of time that could be placed between the very late 11th century and the first decades of the 12th century. Triangular rim stewpots, type 1, in fact includes more subtypes and shape variations. Moreover, the manufacture and the rim and body profile of triangular rim stewpot, type 1 do not seem to be consistent compared to types 2 and 3, which can be dated circa from the middle 12th century. Subtypes of the triangular stewpot type 2, in fact, are related to the presence of decorative patterns, such as the application of a vertical plastic rib (i.e. subtype 2.B), or because of the smaller dimension, (i.e. subtype 2.C), suggesting how triangular rim type 2 and type 3 stewpots have less variables in shape detailed, appearing more standardised in their morphology.

However, petrographic analysis stresses the use of different cooking fabric recipes in the same chronological range for the production of types 2 and 3 of triangular rim stewpots, as elucidated by Joyner’s study (2007). The stratigraphy suggests that different fabric recipes are used to make triangular rim stewpots with the same chronological range. Therefore, these differentiations in fabric adopted for the production of types 2 and 3 might suggest that a diverse and increased number of
workshops, working contemporaneously, were producing a type of pot that was considered in fashion in the marketplace. Similarly, lagenes, too, appear to have a higher variability in shape until the late 11th century (paragraph 4.8.5), compared to the more standardized 12th century types, which are produced in diverse fabrics and, from the mid-12th century onwards, begin to include matt-painted decoration (paragraphs 4.8.7-9).

A petrographic sampling could test this hypothesis and, therefore, assess that the identification of a fewer number of fabrics adopted up to the late 11th compared to the increased number of fabric recipes of the 12th and 13th century triangular rim stewpots and lagenes might be probably due to a growing number of operating workshops in Corinth. A final piece of evidence on this subject might be found in the grooves incised around the triangular rim stewpot. The incised groove is not always executed and does not appear to be consistent as a decoration specific to a chronological range; consequently, it begs the question as to whether it might, instead, be connected to a potter’s decorative intent and might even be indicative of a specific workshop. A similar question might be raised in the case of vertical rib decoration, which is documented in a few instances in the course of the second half of the 12th century, and more commonly in the 13th century triangular rim stewpots. Similarly, this question can also be raised in the case of the matt painted decoration on lagenes. All this evidence, which operates with varying degrees of reliability, might suggest the presence of multiple workshops contemporaneously working in Corinth, workshops which presumably increased in number throughout the late 11th - early 12th century.

Finally, it is important to highlight that the increased level of specialization, indicated after the reorganization of the Corinthian workshops in the 12th century, seems to correspond to an intensification of production. Both glazed and unglazed wares are produced in increased quantities with no break in continuity, a phenomenon that is more visible from the mid-10th century, compared to the previous century, and is even more noticeable beginning in the first quarter of the 12th century. The increased quantity of glazed wares in the archaeological assemblages moved from 1% at the early 11th century, to 2% in the mid-11th century, to 3% present at the beginning of the 12th century, reaching almost 8% around the mid-12th century and almost 15% by the end of the same century (Sanders 1999: 159, fig. 2).
A similar increase is visible in the output of unglazed wares ceramics. By the mid-10th century, the typology is enriched, no longer limited to cooking pots and storage vessels as it was in the Early Byzantine period. From the mid-10th century, types of table wares are locally produced, such as cups, pedestal bowls in shapes that resemble white glazed wares and jugs. The kitchen set is also enriched by basins and large bowls, which could have been used as part of the dining set. Finally, jars appear as types of ceramics used for storage. During the course of the 11th century the types of unglazed wares produced in Corinth are further increased not only in quantity but also in variety. For instance, tankards appear as a new component of the table set and domestic storage vessels, such as the lagenes, become a popular type of container in this period. In the course of the 12th and 13th centuries the output of unglazed production continued to increase. However, some 10th and 11th century types changed in shape, such as cups and pedestal bowls; this is evidenced by the fact that, by the 12th century, they started resembling the new types of glazed wares that were part of the Corinthian dining set.

This data set brings up several different questions. Some are related to the economic significance of this production, as well as how it is possible to interpret the different trends, including quantity of importation and of local production of ceramics. Craft specialization has generally been related, by various scholars, to social complexity, particularly in relation to socio-political factors (Rice 1981), economic aspects, the intensification of agricultural exploitation (Feinman et al. 1984, 1986) or environmental factors, which can affect population growth and, consequently, the complexity of social organizations and their economic structures (Rise 1991: 259). The intensification of production is the result of an economic development that can be related to an increase in investments of labour and resources, as well as connected to the efficiency and scale of production. To measure the intensification of production, for which pottery can be analysed as a case study, standardization is indicative of an incremental rise when it is observed through a large-scale comparison of ceramic assemblages of a site and related to a regional context (Morrison 1994; Rice 1996: 179). The economic significance of the intensification of pottery production will be assessed in the next chapter.

22 Please refer to the seriation charts and to appendix A on the ceramic assemblages for a quantification of the unglazed wares.
5.4.1 Interregional context of pottery standardization

Another degree of standardization within ceramic production might be observed on an interregional level. It is possible to view this standardization through an analysis of the types of cooking and coarse wares. Such an analysis would make it possible to determine how technological choices might be interconnected with the potter’s socio-economic cultural context. We will begin this analysis by examining once again the spherical cooking pot, to which the Byzantine Corinthian community appears to have been accustomed, presumably because it was connected to a type of cooking practice and, possibly, to specific kitchen furniture. However, this form of stewpot was not unique to Corinth.

In the example of the spherical stewpot with a round bottom, Corinth shared similarities in shape with Argos, as was presented in the previous chapter (Piérart & Thalmann 1980), and with Nichoria (Rosser 1983).

This shape of cooking pot has also been found within Middle Byzantine contexts in Athens (Frantz 1938: 458, fig. 20, Saraga 2004: 272 fig. 10 and 11), and in Thebes (Armstrong 1993: 301-303, no. 27, 30). Moreover, although in fewer quantities, it has been found in association with handmade vessels in Sparta and in Butrint (Hodges & Logue 2007, Hodges 2008, Sanders 1993, Vroom 2012).

Nevertheless, these similarities in shape are not consistent throughout the entire Byzantine Empire. For instance, in the eastern part of the Byzantine Empire, including Asia Minor and Crimea, and as is documented in excavations like Constantinople, Hierapolis and Cherson, spherical stewpots were not commonly produced and were not commonly used; instead here flat base cooking pots were preferred (Arthur 1997; Hayes 1992: 56-59; Arthur 2004; figure 5.3, a).

Therefore, considering the cooking ware currently published upon and available, round bottom type stewpots do not appear to be the cooking vessel generically associated with Byzantine culture all over the empire (Arthur 2004: 323). It is interesting to note that, as previously mentioned, apart from glazed table ware, only cooking pots in the shape of kettles were imported from workshops located in the area of Constantinople from the mid-10th to the early 12th century, likely travelling with the glazed white wares.23 The flat base vessels, adopted in the eastern part of the empire, were not often imported into the areas in which the round shaped ones were

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23 Cf. Chapter 4, Paragraph 4.7 on the morpho-typological description of White Ware Kettles.
already widely used. In Corinth assemblages, for instance, I could identify very few examples of imported flat base stewpot among the lots studied that were dated up to the middle of the 13th century (figure 5.3 b).

![Figure 5.3. Flat base cooking pots. A: 1 and 2 from Hierapolis, 3 from Cherson (Arthur 2004: 324). B: imported cooking found in Corinth.](image)

It is likely that this shape was not in response to the demands of the Corinthian market, nor to a differing design of the kitchen furniture. In commenting on the mass-production of unglazed cooking wares, J. Hayes stated that, while Constantinopolitan exports to other Byzantine regions are documented between the 6th and the 8th century, ‘however, the later (10th to the 12th century) series do not seem to have been found elsewhere, which is surprising in view of their superior quality’ (1992: 53). In the Byzantine period, stewpots in Corinth were largely only imported between the 8th and 9th centuries; however, these types of cooking vessels, it is worth noting, still were round bottomed in shape.

In highlighting the close parallels between Corinthian unglazed ceramics and those found in other regions, it is worth adding a few considerations involving the case of Argos. First of all, it is worth observing that unglazed ceramics dated to 9th – 11th century period are not well documented. Nevertheless, similarities between Argive finds and Corinthian cooking and coarse ware vessels are very close from the 12th century onwards. In the case of cooking ware, a macroscopic analysis of fabric suggests that stewpots with triangular rim shape, as well as small cooking pots resembling Corinthian types, were locally made in Argos.
Figure 5.4. Cooking pots A: from Athens (Frantz 1938: 458, fig. 20), B: from Sparta (Sanders 1993: 278, fig. 13), C: Otranto (Leo Imperiale 2004: 335, fig. 4).

Unfortunately, it was not possible to analyse in person the 11th and 12th century coarse wares published by Piérart and Thalmann (1980) in order to assess their fabrics.
Nevertheless, as was noticed in the previous chapter, diverse examples of jugs and lagenes, dated to the Middle Byzantine and Frankish periods from the Agora excavation, appear to be identical in shape to the Corinthian examples. Petrographic analysis on Argive Byzantine ceramics would be extremely advantageous in investigating modes of production and the relationships between Byzantine Argos and Corinth.

The similarities between Corinthian ceramics and those in Southern Apulia are striking. For instance, the Byzantine stewpot from Corinth and the Byzantine spherical cooking vessel found in Salento, which was locally produced there between the 8th and 11th centuries, are almost identical in terms of shape and dimension (Patterson & Whitehouse 1991: 113-115 in Cipriano et al. 1991; Patterson & Whitehouse 1992: 92-94, nos. 405-412, 416; Leo Imperiale 2004). This stewpot type has been named by Italian archaeologists as the Corinto-Mitello type, because Mitello is the name of the plot excavated in Otranto where a workshop producing this form of stewpot has been discovered (Arthur et al. 1992; Leo Imperiale 2004; fig. 5.4 C). Arthur has highlighted that, while in Corinth the Byzantine spherical stewpot follows the Late Antique type of cooking pot, in Salento they are a novelty compared to the typical flat base cooking vessels used in Late Antique Salento. Moreover, the Corinto-Mitello stewpots are not similar to cooking vessels found in central and northern parts of Apulia, nor in the rest of the Italian peninsula, where they are characterized by a flat base (Arthur 2010: 81-82). Furthermore, Corinto-Mitello stewpots were neither commonly used in Southern Italian territories that were under the Byzantine authority, like in Calabria (Raimondo 2002), nor were they commonly used in Sicily (Arcifa 2010a and b; Arcifa & Longo 2015).

However, Arthur’s analysis, regarding the changes in cooking vessels types at the beginning of the Byzantine period in Salento, does not correspond to a change in stewpot manufactory in Corinth between 7th and 8th century. As has been observed in the previous paragraph, Corinthian potters continued to produce stewpots in the Early Byzantine period that had been part of their repertoire of cooking vessels since the Late Antique period. The shape of early Byzantine cooking can be considered a later development on the Late Antique stewpot. This data suggests that an earlier production of coarse and cooking wares of Byzantine tradition took place first in Corinth and only later influenced the local Southern Apulian ceramic manufactory, as is also proved by the production of the Otranto amphora type. This hypothesis is also
supported by archaeologists studying the Salento finds (Patterson & Roberts 1992: 112-113).

This degree of standardization between Corinthian and Southern Apulian cooking pots is further stressed by the so-called ‘Otranto type’ amphorae, type 1 (see paragraph 4.8.2 on this amphora).

Figure 5.5. Otranto type amphorae. A and B are photo and drawing of a Corinthian example, catalogue entry no. 188. C is a misfired Corinthian amphora, catalogue entry no. 190. D is an example from Otranto (Arthur 1992: 205).

In this specific instance, petrographic analysis would be relevant for comparing the Corinthian types to the almost identical Apulian examples, since Corinth amphorae
wasters of this type have been found in the Hadji Mustapha kiln site and a macroscopic analysis of the Apulian examples that I could personally carry out seems to suggest that the finds from Salento were similar, but not identical to the Corinthian amphorae (figure 5.5). Kiln sites related to this type of amphora have not been identified so far in Salento, but the high number of finds in Otranto and in the rest of Salento has made it possible to develop speculations concerning the local production of these amphorae (Arthur 1992: 206); macroscopic analysis further supports the hypothesis that multiple workshops in Apulia and in Corinth were contemporaneously producing this same type of amphora.

Consequently, it is worth asking for a reassessment of the ‘Otranto type’ amphora, which has been found in diverse sites around the Mediterranean Sea, in order to evaluate where the Apulian and the Corinthian amphorae were transported. The ‘Otranto type’ amphorae have been documented in diverse sites in Albania (Leo Imperiale 2014: 330-32), in Butrint (Reynolds 2004), along the eastern Adriatic coast (Arthur et al. 2015), likely in Thebes (Armstrong 1993: nos. 14-26), in Beotia (Vroom 2003:155-156) in Italy, separate from the Apulian finds (Auriemma 2004; Arthur 1992, 1999; Arthur & Auriemma 1996, 1997), in Sicily, in Palermo (Nef & Ardizzone 2014), in Taormina and even on Malta island (Arcifa 2010b).

Contemporaneous production of the same type of amphora in Salento and in Corinth may be related to the transported content, which has been hypothesised to be wine (Arthur & Auriemma 1996), or olive oil according to very recent residual analysis carried out on Apulian finds (Arthur et al. 2016: 112-113). Residual analysis on the Corinthian examples would be advised in order to support this hypothesis and, consequently, to infer that this specific amphora form might have been considered as a type of ‘packaging’ for good quality olive oil,\(^{24}\) since both Apulian (Arthur 1992: 207) and Corinthian olive oil were renowned for their quality in the Medieval period (Sanders 2003a and 2003b). However, since no clear archaeological or historical evidence is currently available to support any interpretation, other hypotheses cannot be dismissed in explaining the adoption of an identical amphora type in these two regions, such as, due to management of the production and distribution of this good by the central authority.

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\(^{24}\) On the concept of amphorae as ‘packaging’ cf. Zanini 2010.
Corinthian and Southern Apulian ceramic assemblages suggest a high degree of standardization and diffusion of morpho-functional traits of ceramics, which were shared between potters working in these two geographic areas. Furthermore, it is not only stewpots and amphorae, locally and contemporaneously produced, that are similar in these two regions. Among the coarse wares other similar types can be highlighted. Jugs in an orange-red fabric, burnished and containing gouged decoration, have been documented in diverse sites over the Byzantine empire dated around the 10th and 11th century, such as in Constantinople, Cherson, Ephesus, in the Aegean area, in Butrint (Hayes 1992: 50; Vroom 2005: 68-68), and in Corinth. However, here in Corinth, as in Salento, there is also a local production that probably imitates this type of jug both characterized by a fabric, whitish in colour (figure 5.6).

Ethno-anthropological studies suggest that the standardization of morpho-functional types between two regions that formerly had different pottery typologies might be informed by the intent to produce vessels that would have been in demand in the market. Generally, this process of imitating mechanisms takes place after the rupture of a socio-economic equilibrium between the two communities and when significant socio-economic changes have taken place (Roux 2015).

It might be worth considering if geo-political manoeuvres might be ascribed as some of the multiple factors leading to the standardization of ceramic assemblages.
between these two regions. Along with the reconquest of Apulia, under Byzantine authority in the late 8th century, the imperial decision by Leo VI to transfer 3000 freedmen from the Peloponnese to the Theme of Longobardia was one of these manoeuvres that might have impacted standardization (Theophanes Continuatus: 321.3-6; Ševčenko 2011. Cf. paragraph 6.6 on the topic of population transfer). The diffusion of morpho-functional traits of ceramics between these two geographic regions might be the result of a complex interaction between the communities of Salento and of the Peloponnese. With research in its current state, the evidence is not sufficient to assess if the imitation of the shape and of the fabrics was the result of direct transmission, wherein a potter would have provided technical guidance, or if the type similarities were the result of an indirect transmission accomplished through the observation of shapes. Nevertheless, table, storage and cooking wares are indicative of a technological transfer from the Byzantine territories, probably mainly from the Peloponnese, to the Theme of Longobardia. This region, in fact, as suggested by both the ceramic evidence and the historical sources, became a central place of connection between the eastern coasts of the Adriatic Sea under the Byzantine authority and the rest of Italy (Leo Imperiale 2014).

5.5 Pottery consumption

Before proceeding on to the economic analysis, some notes on the consumption of vessels are presented here, since both cooking practices and knowledge of food processing are essential components of social and economic cultures. Understanding the use of a pot means trying to investigate what generates the demand for the product, since the request for certain types of pots causes the need for production and exchange (Sillar 2000). Therefore, an insight into technology, in reference to the cultural context, is essential to understand production organization. Technology should not be exclusively examined as the result of organizational features, since it can actually influence sociocultural aspects, such as the skill required for manufacturing (Arnold 1999: 80). The analysis of the technological features of vessel, in order to estimate performance and suitability of cooking vessels for culinary practices, has not been assessed through scientific

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25 For ethno-anthropological studies on this topic, see Eerkens & Lipo 2007, Roux 2015.
analysis, a process that would be useful for testing the mechanical properties and thermal stresses to which cooking vessels could have been subjected. Organic residual analyses, too, have not currently been applied to Corinthian examples, even though they would offer a great opportunity to determine the use of coarse and cooking vessels, which would ultimately clarify the relationship between form and usage (Roumpou et al. 2013).

Morphology is one of the most immediate ways to investigate functional properties. An analysis of their features, including body shape, handles and dimensions, makes it possible to understand how a pot was used and to identify when available written sources could provide further information. Vessels are mainly associated with storing, processing, transporting and serving food and liquids. They are closely related to recipes, table manners, different courses and available food. In the case of storage vessels and table ware, the present work cannot add any significant information concerning their intended use. It is probably that storage vessels were used for the preservation of food, but it is only possible to more pointedly hypothesize, according to written sources, that they were used for the storage of olives, cheese, preserved fruit and sauces (Bakirtzis 2003, François 2010: 354). However, without any scientific analysis is not possible to reach a more specific interpretation. Lagenes are characterized by their thin walls, which suggests that they might have been mainly used in domestic contexts, rather than for bulk transportation on long distances. Furthermore, the narrow mouth of lagenes make it likely that they were used for storage, possibly of liquids. Pithoi and pitharia, apart from liquids, could have also been used to store beans and cereals, or even fruit (François 2010: 359, 363). Stamnia, also probably used for storing liquids, enriched the Byzantine set of table ware along with Jugs, cups bowls, as well as glazed plates and bowls (Bakirtzis 2003: 98-99). In the kitchens, basins and large bowls were used for food processing and preparation. According to written sources, stewpots were used for the slowing cooking of meat, fish and vegetable soups, a cooking method that presented an alternative to grilling these foods (François 2016: 332). The narrow rim of Byzantine stewpots suggest that they might have been used for slow boiling. This interpretation might be supported by the presence, in few examples, of darkish black, median strips on the inner surface of a pot, which could be due to the carbonization of fats on a pot, as would take place during the boiling of food, like in the case of a stew (figure 5.7).
Moreover, a black horizontal line, which is sometimes visible in the interior of a pot, can inform the level up to which the pot was filled with content (Skibo 1992: 149); in the case of Corinthian examples, stewpots were generally filled up to two-thirds. However, the majority of vessels does not preserve marks or dark stains on the inner surface, a trend which does not allow to statistically assess carbonization patterns. Finally, literary sources document that apart from food cooking, stewpots could be used for medicinal and other chemical mixture preparation, for food preservation, and for heating water (Bakirtzis 2003: 41-43).

The variety of shapes, and the presence of a flat base or of round bottom, seems to be related to the dimension of the cooking pot. The flat base was generally associated with smaller cooking pots that had a rim ranging between 8 to 11 cm in diameter and a height between 10 to 12 cm, with an average capacity of circa 0.75 litre. Round shape stewpots are a minimum of 15 cm in diameter and the large examples are around 24 cm in diameter; this variability in dimension is documented only from the mid-10th century onwards. It is worth noting that, before the 12th century, stewpots with spherical body shapes had a rim diameter ranging between 11.5 to 15 cm, and the cauldron, similar to a stewpot, but larger, had a diameter between 19-20 cm. During the course of the 12th and 13th centuries, triangular rim stewpots typically have a capacity ranging from 1 to 5 litres and tend to be have a diameter between 11-18 cm; larger diameters are quite rare. Through observing the fire marks on the small cooking pots with a flat base, it is evident that they were generally put next to the fire, whereas
the round shape ones were put on the fire or, with the use of a tripod, or more often the sooting patterns suggests that the cooking pot was suspended over the fireplace (figure 5.8; Arthur 2007a; François 2010: 339-349, on use-alteration traces: Skibo 1992, 2013; Skibo & Schiffer 2008).

As shown in the catalogue, few lids are found in Byzantine contexts, leading one to wonder if, instead of clay, other materials were preferred for closing the cooking pots. Two clay collar stands, from contexts dated to the second half of the 12th century, have been identified in the studied lots from Corinth excavations (fig. 5.9, A); they are wheel-made, 19 and 20 cm in diameter with a height of 7.5 cm, and might have been used to support cooking pots, as is suggested by the finds from the 9th century Bozburun shipwreck (Hocker et al. 1998a: 15, fig. 6). Very similar stands have also been found in Spartan contexts dated to the mid-13th century (fig. 5.9, B).
As a final remark, it is worth noting that archaeological excavations have not yet identified kitchens in Byzantine houses in Greece and it has generally been hypothesised that cooking may have taken place in the open space of the central courtyard of Byzantine houses, where hearths have also been identified and with the use of metal tripods (Sigalos 2003: 203-204). However, the possibility of the existence of a kitchen within the rooms of a Byzantine house should not be completely dismissed and, furthermore, it might be worth considering if mudbricks might have been used for the construction of fireplaces. The use of mudbrick from ancient times up to pre-industrial times in Greece is widely documented; mudbricks were used not only for wall construction, but also for kiln structures, where mudbricks were covered with a thick coating of watery clay or mud that would have become as solid as a plaster layer after the first firing process (Hasaki & Raptis 2016). Additionally, ethnographic examples from Greece, such as standing mud-brick rural houses, as well as examples from around the world, document the use of mudbrick for the construction of fireplaces, cooking hearths and ovens (fig. 5.10; Sillar 2000: 105-107).

Figure 5.10 Standing mudbrick house and fireplace in the north-east Peloponnese (photos by the author).

During recent excavations, still unpublished, of two middle Byzantine house complexes, one located south of the Forum area in Nezi field and the other north of the Roman theatre in Corinth, possible evidence of different shapes and types of hearths have been brought to light. In one instance, the hearth was rectangular in
shape, made of mudbricks with burn traces and associated with ashy deposits. This firebox was located in the corner of a room, laid against the wall that was facing outside the house complex. The second type of hearth is characterized by a ring shape structure, made of packed clay and also in these instances they have been discovered filled with ashy deposits and located within the inner space of rooms. Finally, though less secure in the identification, are possible hearths made of tiles laid horizontally and set on a layer of clay. No clear evidence of burning has been identified making the identification unsecure, however, the two examples so far excavated in Middle Byzantine house have been found overlaid by ashy deposits. Moreover, it could be possible this layer of tiles is the evidence of a floor of a firebox made of tiles and bricks, which is a type of hearth documented in Corinth in the Frankish complex, Unit 1, rooms 2 and 8 and in Unit 3 (figure 5.11).
It is worth noting that the excavators of the Frankish complex have also identified a frame over the hearth which might have been used to suspend the pots over the fire (Williams & Zervos 1994: 11).

Even though the archaeological evidence is still insufficient to draw any conclusive definition of a Byzantine kitchen, it might be possible that this type of fireplaces identified in the Frankish complex might have been in use also in the Byzantine period. Moreover, the use of mudbricks and packed clay for the construction of hearths may possibility provide an answer to the lack of archaeological evidence of hearths located within the rooms of Byzantine houses.

In conclusion, this chapter analysing aspects of specific technological choices has tried to investigate the patterns of decisions that characterize specific technological systems, which may be used as evidence of socio-economic features. Looking for technological features in long-term practices makes it possible to identify internal and external constraints, as well as desires, that are useful in understanding the socio-economic context of the people that used these pots. The goal of the next chapter is to contextualise this data and evaluate the nature of the intensification of pottery production.
An economic interpretation of ceramics is only possible through a study of shapes, fabrics, chronology and of spatial distribution. The essential basis for conducting any sort of analysis on ceramics is that pottery, as is the case with any archaeological evidence, is discovered through the adoption of systematic methods of excavation and recording. Moreover, to reaffirm the validity of their historical interpretation, these analyses should be carried out through a quantitative approach. Only in this way is typology, then, able to provide a chronology for the ordering of pottery types. Additionally, fabric characterization and an understanding of the technological processes of pottery manufacturing, through a petrographic approach, are essential methods of research for establishing a pottery classification from which any valid economic interpretation may be formed.

An essential counterpart to the productive aspects for constructing any hypothesis on economic history is the investigation of pottery distribution. The quantification of spatial distribution of ceramics, through the calculation of quantified finds per site-base, allows one to gain a picture of the spatial dimension of exchanges on a local to an interregional scale. Nevertheless, the historical and economic interpretations that will be obtained through the application of these methods of research will be partial and fragmentary.

A possible path by which the analysis of ceramics can overcome the partial nature of the record may be to investigate both the contingent dimension of the human actions that pottery evidence can document, which could be related to the histoire événementielle of the Annales school and the cultural, and the socio-economic superstructures in which human actions took place. The primary goal would be to propose an historical hypothesis highlighting the interaction between short-term human agency and medium-term and long-term phenomenal structures (Bintliff 2004: 191-192).

On the relevance of these methodological approaches for the economic interpretation of ceramics, see Greene 2005.
In the context of pottery studies, research may be developed that analyses continuity and changes in ceramic technology, the increase or decrease of types and quantity of pottery production, and local and interregional scale of ceramic distributions, all observed in a diachronic perspective. The basic assumption in studying pottery as evidence for economic complexity, is to consider ceramics as one of the goods that consumers would have bought on the basis of their purchasing power, which is determined by their level of incomes and by its price (Blake 1978, Blake 1980). As Blake has pointed out, ‘pottery is an elastic consumption commodity because it is inessential and its function can be performed by vessels made in other materials. Its degree of elasticity would depend on its relative price and on taste, custom and other socio-cultural factors, which may have made a necessity of a want. Vessels may provide evidence of demand by assessing on what types of sites, ranked on a socio-economic scale, they are found’ (Blake 1980: 59). This data would then offer one perspective through which it may be possible to picture the Byzantine economy, as is reflected in this research project. An increasing corpus of numismatic evidence and text studies provide rich material essential for glimpsing the socio-economic superstructures of the Byzantine Empire in which farmers, artisans, merchants and landowners set their socio-economic activities.

Economic, fiscal and monetary policy, ruled by the imperial authority, provided the framework in which economic activities took place. These activities not only included those carried out by the higher classes of the society, but also ordinary and everyday transactions that can generally be analysed through the material record, exchanges which could also have taken place as non-monetary exchanges.

The existence of a market in which exchanges were taking place was possible because the political authority guaranteed that no political constraints could limit and restrict trade; they also provided materials and institutional infrastructures, such as public building, roads, as well as a legal system through which even fairs and markets were regulated and it guaranteed a valid system of measures and weights (Laiou 2002b; Entwistle 2002; Laiou & Morrison 2007; Whittow 2013).

To further assess this matter it is required a glimpse into the entity and the degree of sophistication of the Byzantine economy. In relation to socio-economic interpretations, despite contrasting ‘primitivist’ or a ‘market oriented’ approaches, it is unquestionable that wealth in the Byzantine empire, as in other pre-modern
societies, was essentially based on landownership, and that agrarian activities were at the core of the Byzantine economy. Farmers, free peasants and landowners were all economic agents, although they contributed to economic activities to different degrees. Agricultural exploitation, land management and, consequently, the relationship between aristocratic landowners and farmers has been at the centre of a debate among historians concerning the feature characteristics of the socio-economic structures of the Byzantine empire, in contrast with those of the ancient world. This debate has emphasised that economic structures changed during the course of the 7th and 8th centuries, bringing to an end what appears to be the Late Antique economic prosperity documented by texts and archaeological evidence.

Chapter 1 analysed how historians and archaeologists have intensely debated the models, modes and proxies of ‘primitive’ versus ‘modern’ interpretations of ancient economies. An increased corpus of archaeological evidence and written sources is more strongly supportive of the view of a Roman and Late Antique market economy (Whittow 2008: 481-482, Whittow 2009, 2013). It might be worth highlighting studies carried out by J. Banaji (2008) and P. Sarris (2011, 2012a, 2016), which have analysed how the aristocratic landowners were active economic agents, contributing to the prosperous economic growth between the 4th and the 6th centuries. Moreover, it has been observed that both Late Antique and Middle Byzantine documents similarly record how landowners exploited their estates, cultivated them by directly managing slaves (paidaria) or peasants tied to the estate (enapographoi geôrgoi), or rented their properties to independent farmers (Sarris 2012a). Landowners highly valued their properties and attempted to gain the maximum profit from them, a concept defined in Byzantine texts as autourgia. Laiou clarifies that ‘mills, vineyards, olive groves, salt pans, meadowlands, brickyards, and shops were in that category; their construction or development was considered melioration of the land and was protected in all sorts of ways, both by contracts of land tenure (emphyteusis) and by imperial privileges that assured the use of the improved land to the owner. The high value placed on autourgia

27 Whittow (2009) provides a summary of the historical debate on the diverse historical interpretations concerning rent and tax as an expression of diverse forms of exploitation. Wickham (1984, 1985) supports the idea of distinction between rent and tax, whereas Berktay (1987) and Haldon (1989) support the idea that the payment of tax or rent did not affect production and social conditions.
has little to do with the ideology of self-sufficiency and much more to do with ideas of profitability and profit’ (2002c: 1129).

Sarris, in comparing early Byzantine estate management in Egypt to the economic growth in Anglo-Norman England, observes that, similarly, landowners invested capital to produce a surplus which would have been commercialised in urban contexts. The agrarian production would have provided food and primary sources that could be sold by merchants or transformed by artisans, who could have sold their products directly or indirectly in the urban markets. These exchanges established commercial networks between cities and the countryside. Furthermore, the generation of wealth in the agricultural sector could, consequently, raise the economic growth of a society directly or indirectly involved in land exploitation (Sarris 2012a).

Moreover, scholars have highlighted how an increase in production and commercialization is strictly related to an increased level of monetization (Carrié 2002, 2013; Sarris 2012a: 279-281). Land productivity, monetization, manufacturing productivity and trade are all interconnected sectors that can determine economic growth or, in an inverse trend, an economic crisis. Additionally, as discussed in Chapter 5, Paragraph 4, diverse anthropological studies on ceramics have investigated the close relationships between the expansion of ceramic manufacture and the changes in the pottery assemblages with the intensification of agricultural exploitation and economic competition (Rice 1991). The causes of the intensification of production are multiple and interconnected, including the development of the economic system, with increased methods of productivity related to the growth of demand. Changes in the economics of production may be indirectly related to population growth and the increase of land exploitation, both of which can further lead to craft specialization (Costin 1986: 349). The prosperity or the crisis of pottery industry should be observed in the context of the level of agricultural productivity, which was the base of all pre-modern, included the Byzantine one, economies. The following paragraphs are dedicated to a more in-depth analysis of these topics.

Before proceeding, it is worth specifying that the Byzantine economy was based on both monetary and nonmonetary exchanges, some of which include payments in kind, barter and exchanges of services, which could be classified in terms of civic activities or, on a smaller scale, in terms of household labour. These two forms
of exchange were complementary and varied in extent of use throughout the course of all Byzantine history (Laiou 2002b). As analysed in Chapter 3, Paragraph 2, monetary and nonmonetary exchanges are based on the same principle: two objects or services can be exchanged one for the other on the basis of a recognised value between the two exchanged goods. This value and relationship can be expressed for any good or service desired, and the value need not be expressed exclusively in terms of money. The paucity or the abundance of these goods would have affected their value. Following the previously discussed economic relationship between landowners and peasants, the degree of monetization can affect the farmer's economic conditions, since it is connected to the ability to generate economic growth, which, in a pre-modern economy, is based on how land was managed and exploited and the quantity of commercialized surplus (Whittow 2013: 152-153).

This theory can be analysed to further investigate economic decline at the end of Late Antiquity; since in comparison, the fiscal model might still better justify this crisis in the light of the barbarian invasion and the crisis of the annona system. As stressed by Whittow, whether the archaeological and textual evidence suggests that the Late Antique economy could have been a market one, it needs ‘conceptual frameworks that would allow us to accept Carrié’s picture (of an economy driven by market forces), while providing a persuasive explanation for late antique economic decline’ (2013: 145). To assess this topic, it is necessary to consider a multitude of factors, the first of which pertains to numismatic evidence, which will be analysed in the next paragraph.

6.2 Contextualizing the pottery evidence: economics during the ‘Dark Ages’ and the perspective of the Late Antique legacy

An investigation into the structure, the range and the rate of this economic change in the Early Byzantine period can be realised by analysing in detail the causes and the characteristics of the Late Antique economic growth. Scholars agree that the Late Antique economy appears to have come to an end, but they disagree on the causes, and Late Antiquity is presented with different chronologies in different areas of the Empire. In order to proceed with research in this way, it is necessary to understand the economic condition of Corinth in the Late Antique period, the nature
and degree of productivity and the level of demand and supply of the Corinthian market, examined in relation to regional and interregional contexts.

It is important to specify, however, that the archaeological record from the late 6th century onwards is not abundant, and that there is a limited number of deposits dated between the 7th century and the 10th century. As has been discussed, the Forum area, beginning in the late 6th century, ceased to be the core of political and economic activities in the city of Corinth. Instead, these activities were moved further East, as is suggested by a new circuit defined by the Late Antique city walls. Therefore, the evaluation of the archaeological record in Corinth during this period is in a preliminary stage, since it is based on the stratigraphy excavated in an area that, by the late 6th century, had become a suburb of the city of Corinth (Chapter 3, fig. 3.1). Nevertheless, it is still possible to draw some preliminary conclusions.

Diverse archaeological evidence, as presented in Chapter 2, Paragraph 2, documents a relative social and economic wealth in Corinth until the late 6th – early 7th century. The monumental constructions taking place are diverse, including the new Late Antique walls and the Lechaion basilica; additionally, ceramic evidence testifies to lively and interregional networks of exchanges. This phase of floridity in Corinth is similarly recorded in texts and archaeological evidence in the rest of the Byzantine empire (Whittow 2008: 481). However, ceramic evidence is also indicative of the changes in the economic trend from the late 6th century, since pottery assemblages from this period highlight an increasing regionalism of goods used by the Corinthian population, a phenomenon not exclusive to Corinth, but observed in diverse contexts on the Mediterranean scale (Sanders & Slane 2005: 290). For example, imports of lamps, from both regional and interregional producing centres, were reduced in quantity, regardless of their availability. Red-slipped fine wares and Late Roman micaceous Aegean Ware were imported in significantly lesser quantities after the late 6th century and the variety of imported amphorae is reduced to the Palestinian and Late Roman 2. Interestingly, the decline of imported ceramics corresponded to a growth in local manufactory production, a trend which lasted until the third quarter of the 7th century (Hammond 2015). Increased production in local manufactory, corresponding to an inverse trend in reduced importation, questions the hypothesis that the reduction in importing goods might not be contingent to a decrease in demand of the Corinthian market. On the contrary, it may be hypothesised that the
crisis of the annona system might have impacted the interregional system of networks of exchanges by which goods reached international markets (McCormick 2001: 115-119).

The ceramic evidence might be indicative of a transformed economic trend caused by multiple factors, which can be investigated considering multiple evidence. To begin with, an analysis of the socio-economic structures of the Late Antique economy may provide hints for understanding how economic output transformed in the 7th century. Studies by J. Banaji and P. Sarris have investigated the complexity of the Late Antique economy, on the basis of papyri and legal evidence. Large estates were managed by an aristocracy, the members of which held imperial offices, and were also engaged in commercial agricultural productivity, which boosted related economic activities and economic growth (Banaji 2001: 39-88, 134-170; Sarris 2011, 2012a, 2016). This economic growth was made possible because the State provided a stable fiscal and administrative system, which also could guarantee currency stability. This perspective of the economic prosperity has been further assessed by Carrié who have emphasised how Late Antique economy was highly monetised (2003, 2012). Moreover, Banaji analysed, how the role of the State in Late Antiquity would have been important in expanding the circulation of gold through the payment of an increasing number of wages of officials, which would have invested this money on urban and rural possession to implement their productivity (2007: 87-88, 213-221, 258-259). Aristocratic landowners had available cash, through their official salaries, which was used to fuel investments and other economic activities (Whittow 2008: 482; Sarris 2011: 258).

Texts document the stability of the administration in charge of the fiscal system during the Late Antique period, as well as during the Middle Byzantine period. This stability is suggested through the control of interest rates charged on loans, an element that is indicative of the existence of a credit and banking system (Sarris 2011: 282-283). Aristocrats were not the only individuals responsible for extending credit; the existence of a private sector of banking is documented in the Late Antique major cities, like Constantinople, Ravenna and Alexandria. The higher concentration of administrative structures and trading activities both would have required higher coin circulation (Cosentino 2014: 246-247). For example, in the case of Corinth, coin stray finds document a high level of monetization until the first quarter of the 7th century. It
might be argued that the constructions from the Late Antique period up to the early 7th century was promoted through an imperial policy of public investments on infrastructures while other major monuments, such as religious structures, attest to an existing patronage in this period capable of spending part of its incomes on construction activities. The increase demand for labour also can be described as one of the multiple factors that caused the increase of money circulation. The evidence on the quantity of circulating coinage is indicative of the state of the economy, since the relationship between bronze and gold coins reveals the integration between the demand for money by the local population and the purchasing power of the imperials officials, both civic and military, which may be identified as one of the channels for the distribution of gold coins (Tedesco 2016: 182).

The excavation data from major urban sites around the Mediterranean show a high number of coins, suggesting the presence of an increased quantity of coins found in Late Antique archaeological contexts dated from the 6th century up to the first quarter of the 7th century (figs. 6.1-6.6; Morrisson 2002). The factors that generated this large number of circulating coins in the Late Antique period may be manifold, nevertheless they generated a clear economic policy of expansion of the money supply by the central authority. This phenomenon could be due to increased expenditures faced by the imperial administration. Among multiple possible factors, it could be hypothesised that the imperial authority, which had a monopoly over coinage, incremented the supply of coins when it had to face higher spending, as would have been the case with an increase in the number of imperial officials or when the central power had to cover the costs of increased military services. Particulary in this last instance, diverse scholars, such as Wickham (2005) and Sarris (2009), have pointed out that one of the major reasons that the imperial authority required a larger quantity of issued coinage was because the Late Roman army was paid in coin.
Figure 6.1 Coin stray finds from Constantinople (St. Polyeuktos) (Morisson 2002: 919, fig. 6.6).

Figure 6.2 Coin stray finds from Athens (Morisson 2002: 919, fig. 6.5)
Figure 6.3 Coin stray finds from Corinth (Morisson 2002: 921, fig. 6.9).

Figure 6.4 Coin stray finds from Aphrodisias (Morisson 2002: 917, fig. 6.1).
Figure 6.5 Coin stray finds from Ephesos (Morrisson 2002: 920, fig. 6.8).

Figure 6.6. Coin stray finds from Sicily (Morrisson 2002: 920, fig. 6.8).
The resulting extensive circulation of coinage in the 6th century is considered to be one of the causes of the increase in commodity exchanges (Sarris 2009). As explained by Sarris, the high level of monetization offered the landowners the opportunity to acquire land property and investments, as well as to commercialise and transform activities and production into commodities. Moreover, this economic trend was not exclusively experienced by the aristocratic landowners, but also farmers and peasants, though in a smaller scale, were able to commercialise their agricultural surplus (2010: 26, 31).

This phenomenon of economic growth can be described in a cause and effect relationship also to the expansion in monetary supplies, albeit indirectly and proportionally. The increased level of monetization can be further evaluated as exogenous factor generating an increase in the supply of money, which can also cause an increase in the price level. It is worth observing that the distribution of money balances does not immediately and directly causes an increase in price level. Some degree of causality exists between changes in the quantity of circulating money, whether instantaneous or gradual, and changes in the price level related to the demand and offer of goods. However, it is because of the increased investments that the real demand is raised with the multiplier effect of augmenting, income, outcome and employment (Jones 2014: 338-340, figs. 6.7 and 6.8).

The effect of an increased money supply on income and on price level is related to the level of investments on the aggregate demand, which, according to Keynesian theory, can be defined as the sum of private consumption expenditures, investment expenditure, the government’s expenses on services and goods, as well as the excess of export over imports, defined as the net exports.

28 This phenomenon is determined by the demand and supply of money. Specifically, according to the Keynesian interpretation of the quantity theory of money, when money supply increases, the rate of interests tends to fall, allowing an increase of the volume of investments. Unfortunately, there are no sources available to check the changes in the rate of interest in this period. However, legislation, promulgated in the Justinianic period and updated around the 11th century is documented, which established the maximum interest that senators, merchants and the rest of the population could apply on loans. Reiterated prohibitions show that even clerics used to lend money with interest (Oikonomides 2005: 218-219, 224-225).
Therefore, economists postulate that a monetary policy that also changes the rate of growth of the money supply can, consequently, change the rate of inflation, resulting in people spending more quickly. A larger money supply can generate an increased demand for goods: when there is an increased money supply, which takes places at a rate faster than production, it can generate a demand-pull inflation (fig. 6.9). The consequences of inflation are not always adverse; a mild rate of inflation can consequently be linked to economic growth (Jones 2014: 341).
Figure 6.9 Shift of aggregate demand curve (http://www.slideshare.net/opaprb/ch13-9301579).

To contextualise this phenomenon within Late Antique economic history, this would correspond to an opportunity for the imperial aristocracy, for instance, to have access to gold coins distributed by the imperial government through its offices, which would then be invested into agricultural production on their own estates.

Furthermore, this theoretical economic model might provide an explanation as to why the economic growth, documented by the archaeological evidence and the textual evidence, did not drastically cease in the first decades of the 7th century, but actually grew on a local scale. In the instance of Corinth, it might be postulated that the documented Late Antique economic prosperity could be related to a public demand for goods, such as investments in construction, agricultural activity and military service, that might have generated a demand for labour, which would have the effect of raising incomes (wages) of people involved in these activities. Additionally, as seat of a metropolitan bishopric and major urban centre of the Peloponnese in this period, it can be reasonably hypothesised that in Corinth major landowners, also members of the Byzantine aristocracy, might have been actively managed and invested money to increase the productivity of their own estates.

Multiple factors of production, such as agricultural productivity and manufacturing production over an extended period of time, might have sustained the demand of goods. Until the early 7th century an important and increased circulation of coinage could have been a further element to stimulate the demand for goods, as economic growth can be likewise defined as a consequence of a demand-pulled inflation. Inflation is the change of money, value or rate in connection to aggregate supply and demand, which affects the price level. It is very difficult to estimate an inflationary rise in prices from written sources in a pre-modern economy; however, in the case of the

29 Please refer to Paragraph 7 in this Chapter for the definition of factors of production.
6th and early 7th centuries, it appears to be possible to observe in the written record an increase of cereal product price in this period (Morrisson 2002: 830).

From the late 6th century onward, the standard cost of living had become difficult, as may be observed through coin evidence. The 7th century is generally described as the period that witnessed the decline of the follis. This bronze coin, introduced by the reform of Anastasius I in 498, began to experience improvements in weight and changes in iconography promulgated by Justinian I in 538/9. The follis had a weight of 18g from 512-538 and from 542-565; this latter period followed the Justinian reform, which introduced large folles. However, the stability of this bronze currency did not last long, since the follis weight had decreased to 11-12g by the reign of Herakleios (Morrison 2010: 35). The exchange rate between folles and solidus changed from 180 folles per solidus in the mid 6th century, to 720 folles per solidus by the last decades of the same century (Sarris 2006: 227). Moreover, the progressive reduction in circulation of the fractional follis underscores the inflationary state of the economy during the late 6th century. For instance, the pentanoummion and the dekanoummion almost disappear during the late 6th century. The final examples of pentanoummion are minted under the reign of emperor Constantine IV, while the dekanoummion was struck for the last time during the time of Constantine V, and the half follis ceased to be struck by the reign of Theophilos (Morrisson 2010: 35). It has been estimated that if, in the 5th century, the basic needs for a single person corresponded to 3 nummi, the same needs would have required 24 nummi by the late 6th century (Morrisson 1989: 239-260, 244-259). In sum, this inflationary state caused a decrease of the purchasing power of the follis.

In this socio-economic context, it should be pointed out that the Byzantine Empire had to face multiple critical events, such as the imminent military campaigns in the East of the Empire. The Persian invasion of Asia Minor, Syria, Palestine and Egypt started in 610, and some of these territories were lost to the Arabs by 647. Moreover, between 649 and 655, the islands of Cyprus, Rhodes and Cos were temporarily lost by the Byzantine Empire (Whittow 1996: 69-89). This state of warfare caused not only an additional increase in the military costs that the central government had to face during the 7th century, but it also causes a loss of revenues from the East of the Empire. Moreover, due to the Persian invasion of Egypt in 616, the regular shipments of Egyptian grain for the annona came to an end. For all these reasons, it might be
possible to argue that the empire was not able to maintain the policy of increased money supply, which had been adopted in the course of the 6th century in order to sustain increased expenditures, particularly the additional money spent on the military. The quantification of stray coins from urban sites documents a drop in coin finds during the course of the 7th century.

This phenomenon has generally been interpreted as ‘showing a drastic decline of a monetary economy during the Dark Ages’ (Treadgold 2002: 147). A further approach has been suggested by Brubaker and Haldon, who observe that the lack of coins issued during the course of the second half of the 7th and 8th centuries can be evidence for a government policy whose major concern was tax collection, therefore stressing the fiscal value of coinage for the Empire, which in this time was disregarding its economic involvement in the market exchange. This historical interpretation may provide an additional element to understand the economic situation in this period and it can be further developed when additional data are taken into account. Between 628/9 and 629/30 the emperor Heraclius deliberately decided to dismantle the Eastern side of the modified Diocletian pattern of coin production. All the regional mints, except those in the exarchates of Africa and Italy, were closed, leaving the Constantinopolitan mint as the only operating mint on the Eastern side of the Empire, including the territories in Greece and those in the Balkans still under Byzantine control. Nevertheless, from this date it is possible to notice a drastic drop in coin circulation in the urban centres, and even in Constantinople where there still was an operating mint. Excavations of the church of St. Polyeuktos show a level, continuous rate of coin loss during the course of this period (fig. 6.1; Hendy 1985: 417-418).

The only exception to this trend appears to take place during the reign of Constans II (642-668), not only in Constantinople, but in diverse cities of the empire, including Corinth. Constans II promoted the production of follis, always minted in Constantinople but by then distributed through Thessaloniki, which used to host one of the main mints throughout the empire (Hendy 1985: 417-424). However, the drastic reduction in coins issued definitely took place by the end of the reign of Constans II (Brubaker & Haldon 2001: 118). It is reasonable to hypothesise that the imperial economic policy came to such drastic conclusions because of the augmented costs of military expenses in the course of the 7th century and because of the loss of territorial possessions, which corresponded to a decrease in the tax base. The military
campaigns were absorbing almost all the resources of the empire. Due to the increased military expenditures, economic resources were concentrated where they were most required, leaving the mints operating in Italy, Africa and Constantinople, which was the main mint close to the Arab border, where the coin supply was necessary to cover military costs, and to assuage security concerns that the imperial authority had. It has been estimated that the territorial losses in this period caused a reduction in the imperial revenues by 75%. Reasonably, due to the lack of monetary resources, the Heraclian emperors decided by the late 7th century that soldiers would no longer be paid in cash, as it was seriously lacking; instead, they were paid in land properties and donatives, which were paid in instalments (Harl 1996: 218). This economic policy would therefore explain Brubaker and Haldon’s vision of coinage with ‘fiscal functions’ and as the major source to restructure the tax revenues in this period: the state had to guarantee its vital incomes (2001: 149).

However, Heraclius’ decision to close the mints did not leave the economy of the Eastern provinces of the Empire unaffected; in that period, as has been observed, they were experiencing a state of inflation. Nevertheless, the consequences of this were not immediately negative. On the contrary, the reduction of money supply might actually have compensated for this high rate of inflation. Referring to the condition of the supply and demand of goods, this monetary policy can explain why the economic structure did not immediately experience a negative effect due to the reduction of circulating coins, but actually could have experienced advantages with a decrease in the cost of goods. The Eastern provinces were not in urgent economic need and, likely due to inflation, were able to economically exist without operating mints for a period of time; even Heraclius himself probably would not have foreseen that the mints would reopen only two centuries later. By the 7th century, when coin production was restricted, the previously struck coins continued to be in circulation in the following decades (Morrison 2002; Lightfoot 2002). It is worth highlighting that this short hiatus in money supply consequently has created complications for archaeologists attempting to date on the basis of coin evidence in 7th and 8th century contexts, which explains why, for long time, this period appeared to be archaeologically invisible. Furthermore, it is worth noting that the economic policy of coin issue reduction can be advantageous for controlling inflation when carefully managed; nevertheless, if perpetrated for too long a period it can cause the reverse effect: deflation. Deflation
is a state of economic recession, often the result of clear economic policy: coin supply and transactions decrease and there is not enough coinage to sustain the aggregate supply, with a consequent reduction of transactions (exchanges) and consequently incomes (Termine 1998: 287-288). The case of deflation is symmetrical to that of inflation; therefore, in a similar fashion, deflationary episodes do not instantaneously take place when there is a decrease in money supply. A change in the quantity of coins generally has a causal relationship with changes in price, and there is always a lag between these two economic events (Jones 2014: 337). The continued military campaigns, persisting through the course of the 8th century, saw the Byzantine emperors fighting against the Arabs, the frequent campaigns in the Bulgarian territory and the loss of Ravenna, which fell to the Lombards in 751 (Haldon 2005: 62); results of these events did not allow for diverse outcomes: the military costs could not let the mints in the regions of the Eastern empire reopen. Therefore, the drastically reduced coin circulation might have inevitably affected the local economy, which started to suffer since almost no capital was supporting the local industry.

A further observation can be made by analysing the types of the few coins found in this period: not bronze, but silver coins, which were not generally used as petty currency. Silver, in the coinage system, had always been considered a secondary metal, because the monetary system was bimetallic, meaning that, until the introduction of silver coinage, it was exclusively based on gold and copper (Grigson 1999: 12-13; Whittow 2008: 469). When exactly Heraclius decided to issue a new silver coin, the hexagram, is still subject to debate. This new issue was probably conceived a few years before the resolution to close the mints in the Eastern Empire, and it can be interpreted as a further indication of the scarce monetary availability in the Empire in this century. Moreover, it appears that this issue only would have been possible after Heraclius who, in agreement with the Church and primarily after 621, appropriated ecclesiastical precious metal for issuing this new silver coin, which was probably used as cash to pay the administration wages (Yannopoulos 1978; Hendy 1985: 494-495). However, it is interesting to point that the hexagram swiftly declined in usage, probably due to the paucity of sources to mint this coin, and was it already out of circulation when the emperor Leo III Isaurus issued a new silver coin, the milaresion, perhaps between 720 and 741 (Hendy 1985: 501).
By the 8th century, a time of paucity of sources and resources, the economic difficulties might have been so austere that the only way to provide income for the Byzantine treasury came from the confiscation of lands owned by the Roman Church in Sicily and Calabria, and from the transfer of the ecclesiastical jurisdiction of these regions, together with the Illyricum, from Rome to Constantinople. Moreover, Leo III decided that the tax-revenues from these areas should be directed to the Imperial Treasury in Constantinople, excluding the Church of Rome (Theophanes, Chronographia, p. 410; Mango & Scott 1997: 568).

Leo III reached such a drastic fiscal decision in the context of the notorious Iconoclastic controversy; he promoted the persecution of clerics and monks in the name of this dispute, which was later exacerbated by Constantine V, who decided to confiscate the monastic properties and treasures largely needed by the imperial State (Ronchey 2002: 15). The only exception, in fact, to the paucity of coin circulation comes from the third quarter of the 8th century when the Emperor Constantine V required the payment of taxes in cash, specifically in gold coins. This request, though only to a slight extent, might have influenced a certain degree of monetization, even in the countryside (Laiou & Morrisson 2007: 51-52). This economic evaluation of the Iconoclastic dispute does not aim to reduce this complex, dogmatic debate to an interpretation based solely on economic needs, but such an evaluation may still provide further evidence to explain the nature of such a contentious and severe debate.

During the course of the 8th century, the micro-economy of the Byzantine Empire was affected by a substantial decrease in capital. Even though conclusions are difficult to draw due to the absence of secure pottery dates, it appears that the local pottery industry probably suffered from severe economic constraints in a state of deflation, causing them to drastically reduce the volume of local production. Consequently, in household contexts, a reduction in wages could lead to a reduction in income, whether in cash or not, which could prevent the household from purchasing necessary goods or services. However, in the case of rural populations, it might be possible to speculate that the household would have guaranteed its provisions through subsistence production. Nevertheless, in the case of people not directly involved in farming activities, such as members of an urban population, they might experience a decrease in their standard of living because they would have to
rely on the market for their provisions. The decline in monetization and, consequently, in household incomes can lead to a reduction in circulating coins, which reduces demand and, therefore, reduces production, thereby creating a domino effect that results in a reduction in cash to pay wages and precipitates a spiral of economic decline. However, these economic constraints are not only due to a state of warfare, but are also due to a concomitance of factors, which will occupy the analyses and discussion in the following sections.

6.3 Population dynamic demography and its financial impact: the case of the pandemic plague and of climate change

From 541 to circa 750, a pandemic of bubonic plague sporadically washed over the lands around the Mediterranean Sea, extending its wave far East to Persia and as far North as to the British Isles, in the process affecting Syria, Anatolia, Greece, Italy, Northern Africa and Spain (Little 2007: XVI). The bubonic plague never settled for too long in any single territory, but it affected some territories several times, with breaks in infection ranging in length from six to twenty years. The plague significantly and continuously affected the Mediterranean population for over two hundred years (Little 2007: 3). Numerous written sources from disparate cultural areas document the pestilence and its social, political, religious and economic effects on the afflicted population; these texts and authors include: the Ecclesiastical History of John of Ephesus, Procopius of Caesarea’s Persian War, Agathias, Evagrius in Greek, Gregory of Taur and Paul Diacon in Latin, and the Arabic poet Hassan Ibn Thabit, just to name a few of the more well-known sources. While some historians have questioned the reliability of these sources, due to exaggerations and hyperboles detailing the harmful outcomes of plague, all the sources unanimously agree that the virus had severe implications for humans, resulting in high mortality rates and harsh impacts on the economy and the financial system (Kennedy 2007: 87).

When the plague broke out in a city, the urban population fled away to escape the epidemic. This phenomenon is documented in several urban centres during the 6th and 7th centuries, even taking place in Constantinople (Stathakopoulos 2007:111-112). Breakouts of the plague might have caused people to flee from afflicted cities, because of the population’s desire for a better quality environment and more
favourable living conditions. The fear of being infected with the disease might be adduced as a further explanation for the phenomenon of growing suburbs, the appearance of new villages and the decay of the urban centres. However, the rural population was also harmed by the bubonic plague. A passage by John of Ephesus describes a countryside where: 'crops of wheat in fertile fields located in all the regions through which we passed from Syria up through Thrace, were white and standing but there was no one to reap them and store the wheat. Vineyards, whose picking season came and went, shed their leaves, since winter was severe, but kept their fruits hanging on their vines, and there was no one to pick them or press them' (Lives of the Eastern Saints 17.1; Brooks 1923: 261, in Little 2007: 7). Procopius, too, stresses how dire the demographic and economic situation was in the countryside, reporting how Justinian refused to remit taxes to landowners even though their workers and farmers were drastically reduced in number by the plague (Anec. 23.19; Dewing 1935). This piece of information, as pointed out by P. Sarris, becomes relevant when inserted into a wider frame of archaeological and numismatic sources in order to understand how the reduction of the agrarian population might have affected the economy, specifically reducing the State tax revenues, which were mainly based on land taxation (Sarris 2007: 127). In fact, it is reasonable to hypothesize that, in the long term, the plague caused agrarian depopulation which might have negatively affected the State incomes. Nevertheless, the central authority had to maintain certain, relevant types of public spending, due to ongoing warfare, and a reduction of its income might have influenced important manoeuvres in monetary policy. It has been pointed out that during the course of the second half of the 6th century Justinian, followed by his successors – albeit with additions and modifications, introduced a series of light-weight solidi. However, the purpose of these light-weight solidi is still questioned and is still an object of debate. The majority of the finds appear to come from territories that were not under Byzantine control, suggesting that they might have been used for transactions with foreign authorities, in particular with the German world (Sear 1974: 26; Grierson 1982: 52-53, 95, 99-100; Hendy: 1985: 492-493).

Almost contemporaneously, the heavy follis was debased, with its weight reduced during the course of the second half of the 6th and 7th centuries from 22 gr during Justinian’s reign to 11-12 gr under Maurice and persisting through the first years of Heraclius’ reign (Morrison 2015: 18-21). Sarris has pointed out how this monetary
policy might be the interpreted as the fiscal outcome of an agrarian depopulation (Sarris 2007: 129). However, as pointed out in the previous paragraph, in analysing the coin stray finds, the drastic reduction in coin circulation does not take place before the mid-7th century. The numismatic evidence in relation to the demographic changes and the economic contingency might have brought the political authority, which had a monopoly over minting issue, to operate a clear monetary policy. In order to sustain public spending, the State might have operated what could be described in terms of economic theory as seigniorage. If a public authority reduces the content of the metal in a coin in proportion to the established price of a metal, the government can keep the saved quantity of metal as a source of income, through a policy known as seigniorage (Jones 2014: 336). Moreover, if the minting authority, in a condition of economic equilibrium, decides to produce extra coins with the metal obtained from the debased coins it can cause, according to some economics, what is called an ‘inflation tax’. An increase in circulating coinage can cause an increase in the price level not sustained by a parallel increment in the production level (Jones 2014: 337). However, in this specific historical context, the coin finds do not show an increase in circulating coinage but, instead, reflect an equilibrium as compared to the previous decades of the second quarter of the 6th century. Therefore, the coin debasement in the second half of the 6th century might be interpreted as a deliberate economic choice aimed at enabling the public authority to sustain its spending. For instance, the published expenditures would have been addressed towards infrastructures promoted by Justinian and, most of all, towards the state of constant warfare during the course of the 6th and 7th centuries. However, this increase in expenses was taking place during a period of long term decrease in tax revenues which, among several causes, was also due to the bubonic plague.

In terms of economic policy, it might be argued that the state of inflation was, therefore, not caused by the seigniorage, but by the growth of the aggregate demand, as analysed in the previous paragraph. Nevertheless, the hypothesized decrease in tax-revenue, in contrast with the continuous increase in public spending, might be adduced as a cause for closing of some of the mints in between 628/9 and 629/30.

A further effect of the bubonic plague on the rural population has been pointed out by P. Sarris: the plague affected the agrarian economy, drastically reducing the agricultural labour pool. The decrease in manpower potentially would
allow rural labourers to request higher wages or to renegotiate their land rents to a more favourable condition (Sarris 2007: 129). This phenomenon has been documented in detail, as well as widely and critically analysed, in the case of the great pestilence of the mid-14th century, commonly known as the Black Death. The plague has been considered to be an impacting agent in socioeconomic change, following the paradigm of a Malthusian analysis (Routt 2008). This can cause a change in the relationship between labour and its demand, allowing the rural workers to request higher wages so that landowners could ensure the cultivation of their properties. Furthermore, landowners not only had to deal with the need to increase wages for their labourers, but they probably also had to face the problem of scarce labour paired with abundant lands; as a result their lands remained uncultivated, likely causing a decrease in their income that was even more ruinous because taxation was not reduced.

To this dismal picture should be added the impact of climate change on epidemics and warfare. Dendroclimatologists have found evidence for a contemporaneous climate downturn, from the mid-6th to the mid-7th century, which they relate to three major volcanic eruptions. Analyses of tree rings have made it possible to identify how the climate might have suffered from a significant cooling down of the temperature during this period, which led the scientists to label it as ‘the Late Antique little ice age’ (Büntgen et al. 2016). Moreover, these scholars suggest that the change in climate condition might also be considered an additional impacting factor in the swiftness of the plague. For example, cooler temperature would have inevitably impacted the agrarian landscape. Considering that the Byzantine Empire, as the Roman Empire, was largely based on an agrarian economy, it is, therefore, legitimate to wonder if land productivity was adversely affected by this negative climate condition, causing reduction in food production and supply. It is also worth considering whether the socio-economic effects of the plague and the difficult climate condition, in addition to the economic crisis analysed in the previous paragraph, might mainly have affected the social class of the landowners. The landowners, for instance, heavily relied on the urban free markets where they could sell their estate surplus to

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30 This article is the last one of a series in publication on climate change over the last 2000 years. This project is conducted by researchers of the International Past Global Changes Project, part of the Euro-med2k.
people in cities around the Mediterranean, which were mainly dependent on imported foodstuffs. Even in the Constantinopolitan market, the *annona* would not have been able to provision the entire population (Carrié 2012: 20). The economic crisis, a decreased population and reduced agrarian productivity might have caused a reduction in their income.

M. Whittow and P. Sarris have clearly described the transformation of social and political life from Late Antiquity to the Byzantine period, with specific reference to the landowner class (Whittow 1996, 2008, 2009, 2013; Sarris 2006, 2012). It is worth bearing in mind, to support this view, that landowners do not appear to suffer such a severe economic crisis in locations where they were not subject to Byzantine authority, such as in the territories that, by that time, were under an Arab governor in Palestine, Syria and Egypt, or, in the case of the large estate in northern Gaul, under Frankish government (Whittow 2009). This data further supports the historical interpretation, proposed here, that the period of the ‘Dark Ages’ can be analysed in light of the macro- and micro-economic structures, including the monetary and fiscal policy of the Byzantine Empire. Consequently, it would be important to contextualize these changes in light of the archaeological evidence. Specifically, by the 7th century, the urban topography appears to change, being mainly dominated by ecclesiastical public buildings and military infrastructures, both of which are material evidence pointing to the change of a social and political order (Whittow 2009: 136). The next paragraph is dedicated to exploring this topic in light of newly available archaeological evidence.

6.4 Economic and social changes in the Early Byzantine period

Beginning in the late 7th century and continuing through the 8th and 9th centuries, the local pottery manufactory in Corinth was limited in terms of production, which brought about a change in the pattern of ceramic imports. It is worth noting that a good number of the ceramic vessels dated to this period are actually imported cooking ware and amphora, mainly of unknown origin. This data, contextualised within a picture of economic recession and possible deflation, generates a series of questions. Who were the consumers of these pots? Where were they made and what were they transporting? Where were they located in terms of geography and,
moreover, in terms of topography? Not all these questions can be answered, but in order to try to fully comprehend the changes that took place during these centuries, research should be directed towards these questions. Residual analysis of samples of the so-called globular amphora, found in a variety of geographical contexts, might provide relevant information on the nature of the production, which, in association with its geographical distribution, might also suggest the scale of production, its demand and distribution.\(^{31}\) Moreover, residual analysis can shed light on reuses of these vessels, which, considering such economic constraints, is more inevitable than hypothetical.

Provenance is a key question in investigating the production organization and the scale of distribution; in this respect, several different projects are already on their way (Poulou-Papadimitriou & Nodarou 2014; Testolini et al. 2016). It is, therefore, important to clarify that the historical hypothesis presented here is constructed on the basis of the archaeological evidence available with research in its current state. The 8th century picture could change when further excavations are carried out. This point is important to stress here because the topographical contexts in which these pots are found are essential to developing any further interpretation. With all this in mind, it is now crucial to step back in order to better contextualize our archaeological data.

Between 687 and 695 Corinth became the capital of the newly founded Theme of Hellas, which, around 786 and 788, was changed into the Theme of Peloponnesos (Avramea 1997: 36-37). Corinth was definitely the seat of a metropolitan bishop, which was ruled by an ecclesiastical exarch, whose competency was similar to a civil vicar. It is worth pointing out that Corinth, even though the city was under the political control of the Byzantine Empire, was under the authority of the Bishop of Rome until the reign of Leo III with the entire prefecture of Illyricum (Limberis 2005: 444-445). The bishop in Corinth probably operated as a civic authority, assuming the responsibilities of the

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\(^{31}\) Residual analyses have been relevant in shedding light on the multiple varieties of contents transported in amphorae, which should definitely not be limited to wine, olive oil or fish sauce. For instance, in a warehouse of the port of Classe (Ravenna - Italy), imported spatheia and cylindrical amphorae dated to the 6th century contained, regardless to their form, castor oil, which could have been used for medicinal uses, illumination or body care (Pecci et al. 2010). A Late Roman amphora found in Efestia (Lemnos) has also provided evidence of castor oil content, together with wine markers, suggesting a possible case of reuse (Camporeale et al. 2009: 226).
old curiales and covering the functions once performed by the local boule (Limberis 2005: 456-457; Brown 2008: 66). This phenomenon is clearly documented as, for instance, in Byzantine Italy where bishops had central importance in civic administration since they could elect the provincial governor, iudices provinciarum. Moreover, from the 7th century onwards they also became one of the biggest landowners within the Byzantine Empire, after the Byzantine state. One of the multiple factors that might explain this phenomenon might be observed in the economic constraints under which the civic landowners lived from the late 6th century onwards. Reduced incomes might have pushed landowners to donate their properties to the Church, in order to avoid state taxation in a period during which resources were necessary for the State to sustain its increased expenditures (Sarris 2006a: 228-234). In fact, landowners continued managing their estates through emphyteusis contracts (Falkenhausen 1982: 34).

In this context, it is reasonable to hypothesize that the public buildings of the Forum, from the second half of the 6th century onwards, lost their political and economic meaning for both society and the higher classes of that time; thus, there would have been no reason to invest capital in renovating them when different buildings were, by then, acquiring increased social and political meaning. As presented in Chapter 2, Paragraph 2, Corinth retained an urban character in this period, with evidence for occupation within and outside the Late Antique city walls in the lower city. Archaeological evidence is quite limited and a fortification phase securely dated to this period has not being identified; the area of Acrocorinth might have been occupied during the 7th to the 9th centuries, but the dating for this period of habitation is not definite (Athanasoulis 2009: 34-39). In the early 9th century, the emperor Constantine VII Porphyrogenetos recorded, in De Administratio Imperio, that the headquarters of the general of the theme were located εν κάστρῳ Κορίνθου. However, it has been pointed out that it is uncertain if this expression is referred to the city or to Acrocorinth itself (Athanasoulis 2009: 35). Diverse scholars have analysed how, during the course of the Late Antique period, there was a transformation of socio-political identities. Late Antiquity is indubitably a time of transition and transformation of the socio-political life of the Mediterranean communities. A different elite class managed the res publica outside of the traditional Roman institutions. The landowners that used to dominate the socio-economic and political scene during until the 6th...
century probably had to face a political and an economic crisis in the 7th century, which corresponded with the rising of a diverse elite, related to ecclesiastical and military institutions. The countryside was not depopulated and the urban settlement was not completely abandoned (Crow 2014: 306); however, they did suffer from a population decrease and, most of all, were subject to the multiple factors, previously presented, that changed the socio-economic nature of Byzantine society in this period.

In this state of social and economic transformation, it is worth mentioning an analysis carried out by Whittow of 8th century legal texts: the Farmer’s Laws and the Ekloga. These documents show that the imperial authority’s major concern in this period became the rural community’s social and juridical life, characterized more by free farm owners of their land, or hired labour, rather than estate landowners (Whittow 2009: 148-149). This piece of evidence appears to be more comprehensible in a context in which the labour pool was increasing its economic importance to the central authority and the landowners were suffering from an economic, social and political crisis. In this period, the texts document how the rural community became the base for the state tax-revenues, with a decrease in the landowners’ economic power. In order to provide further evidence to analyse this phenomenon, villages – not exclusively urban centres – should be the object of archaeological investigation. However, it is difficult to find evidence of a material culture that was probably mainly comprised of perishable material, given how the majority of household goods and tool were generally produced. Nevertheless, some important recent archaeological projects investigating villages have provided outstanding results. The excavation of 8th and 9th century Byzantine villages in Apulia, such as Quattro Macine (Arthur 1993b, 1998, Arthur et al. 1996), Apigliano (Arthur et al. 2015) and Supersano (Arthur et al. 2011), as well as Rocchicella-Mineo in Sicily (Arcifa & Longo 2015), are key topographical examples of contextualization.

These villages appear to be the result of farmers’ gathering around Late Antique small settlements, perhaps even residing in single familiar small farms, which developed and increased in number during the course of the late 7th, 8th and 9th centuries. The intense and detailed archaeological research carried out in the Byzantine territories of Southern Apulia shows an increase in the rural settlement, highly organised by the presence of a structured pattern of villages, which were able to produce an agricultural surplus probably intended for local, regional and even
interregional markets (Leo Imperiale 2015). The ceramic evidence from these villages indicates an improved economic condition for the agrarian population, as suggested by a significant quantity of locally manufactured ceramics. Moreover, the identification of glass and metal objects in these village contexts proves a clearly connection to a Byzantine craftsmanship, which is also demonstrated by local production of globular amphorae, as well as by cooking vessels and jugs, as in the case of the Apulian villages (Arthur et al. 2011, 2015; Leo Imperiale 2015), and by the globular amphorae in Eastern Sicily (Arcifa & Longo 2015). However, in the case of Italian villages, the majority of ceramics are of local manufacture; imports are very limited and generally only documented by globular amphorae. It is only from the second half of the 9th century that a variety of imported goods also reached inland settlements. Contrary to inland settlements, during the course of the 8th century, only the markets of the major centres along the coast include foodstuff and crafts (Arthur 2015: 11; Leo Imperiale 2015: 430). This last trend is very similar to the ceramic evidence documented in Corinth: during the course of the 8th and 9th centuries, it was reasonably still functioning as a complex urban marketplace.

In conclusion, farmers’ production or wages might have been enough to pay taxes and to satisfy a subsistence level; possibly they even became able to produce surplus objects for exchange and their income might have been enough to afford more than the basic needs for survival. The exchanges were probably not always monetary, but it is important to stress again that they took place in a context of general economic constraints, not of devastation. Nevertheless, in the case of Corinth, the decreased local pottery production and the importation of cooking ware and amphora are all evidence for an active economy, even though it was suffering from economic restrictions. It is reasonable to hypothesize that the imported goods circulating here need not have been the cheapest goods and products available in the market. Therefore, a future research question could be addressed towards the location and contextualization of more of the 8th and 9th century material culture. Even though farmers might have experienced improved labour conditions, according to evidence available from rural contexts, it nevertheless could be hypothesised that they were the major consumers of imported goods. Therefore, there is the important question of identifying, contextualising and topographically locating the material culture evidence. A question that this research leaves unanswered is the
characterization, in terms of the material culture, of these higher classes of ecclesiastical and military elites who rose to political and economic power in the Early Byzantine period in a context of possible counter-urbanization of the city of Corinth. Landowners in the 7th and 8th centuries continued to exist, and they were related to the ecclesiastical, imperial oikoi, members of a military aristocracy probably impacted by a reduced economic power, due to the multiple factors presented in this section.

This paragraph has tried to observe how changes in the economic structures, the decrease of monetization and related continuous warfare, within the context of climatic difficulties and the plague, may have impacted Late Antique economic prosperity. However, as will be discussed further, Late Antique socio-economic and political institutions were not dismantled, but rather were kept and adopted to the transformed socio-economic structures of the Middle Byzantine empire. Before proceeding to an analysis of this topic in the following paragraph, it is worth considering the economic contexts of the Early Byzantine cities around the Peloponnesse, particularly the effects of migration on the structural continuity of the agrarian economy.

6.5 The economic impact of immigration

Diverse scholars, as discussed in Chapter 2, have related the economic and social decline of the Antique institutions to the violent migration of Avars and Slavs towards the Southern Greek lands. By their pillages and devastations, they supposedly reduced the Late Antique cities to desolated and abandoned ghost hamlets, where the population struggled to survive, as they experienced a severe economic recession. In response to such arguments in the specific instance of Corinth, it has been observed that material evidence that can be related to an immigrant presence is very scant. This data seems to be consistent with the osteological analysis carried out by L. Kennedy, which has questioned the real presence of a non-indigenous origin in Late Antique and Early Byzantine Corinth. Her studies based on stable isotopic ratios from human teeth prove that a foreign presence was common through the history of Late Antique and Early Byzantine (6th to 8th century) Corinthian society, though in a way this refutes the historical reconstruction of an invasion, moving from a single region and heavily impacting the local community. Migrants, from multiple geographic regions, such as
possibly the Levantine coast, or the southern coast of Turkey and other unidentified areas, with diverse social status moved to Corinth and were incorporated into the social structure, as suggested by burial locations and typologies (Kennedy 2016).

It follows that in order to not over-estimate the catastrophic capability of these ‘invasions’ as a cause for decline, an initial, general point should be made about this migration: whatever its effects were on the socio-economic structure of the local communities, it was not as far reaching in degree or scale as in other Byzantine territories. The ceramic data presented in Chapter 4 from Sparta are indicative on this matter. It is worth considering if a smaller Slavic group settled in Corinth compared to a larger settlement group in Sparta. Nevertheless, even when the size of this migratory presence might have been more significant, such as in Laconia, it might actually not have been so threatening for the ‘Byzantines’, if one observes this matter in the context of traditional historiographic terms of opposition between ‘barbaric invaders’ and indigenous communities.

A further question can be raised regarding the real scale and impact of the Avar and Slav armies moving into the Peloponnese, which, according to the theory first elaborated by Jacob Philipp Fallmerayer in 1830, heavily depopulated this region. This theory has been widely debated among historians. On one side, historians have supported the idea of continuity of the Greek ethnicity in the Byzantine period. On the other, they have claimed a predominant Slavic ancestry of the Peloponnesian populations (Curta 2011 provides a review on this debate). A very recent study has quantitatively analysed the genetic heterogeneity of the Peloponnesian populations, over a sample of 241 individuals in the different districts of the peninsula. This project has revealed that Peloponnesian people are not genetically similar to the Slavs, as might be assumed, but rather are more closely related to the Italians – particularly Sicilians – with an average genetic similarity ranging between 85-96%. The Slavic population has a shared ancestry with the Peloponnesians to an extent that is less than 15%. This assessment ultimately rejects the notion of a predominant Slavic ancestry. Moreover, this analysis also does not seem to support the hypothesis of a resettlement on a large scale, directed by the Byzantine authority, of Armenians from Asia Minor into the Peloponnese. In summary, this study proves that Slavs did settle in the Peloponnese, as documented by the Slavic ancestry of the Peloponnesian population, but in relatively small quantities – even in the region of the Taigetus
mountain, where, as recorded in *De Administrando Imperio* by Constantine Porphyrogenitus, the Slavs withdrew after the Byzantine reconquest (Stamatoyannopoulos et al.: 2017). This study suggests that the scale and impact of the Avar and Slavic invasion has been overestimated.

To start observing this phenomenon from another perspective, and not exclusively as a threat, migration can be seen as movement towards more favourable socio-economic conditions. Migration, in this case, can be described as evidence for still active and alive socio-economic structures and, in this specific instance, the Byzantine ones. Even though Byzantine society was going through profound changes and economic constraints, migration would have hardly caused its collapse. On the contrary, the ceramic evidence from the 8th and 9th century contexts from Sparta indicates signs of resilience. It could even be hypothesized that it would not have been reasonable for these migrants to destroy and raze the sources of livelihood for which they migrated. The point is that the migratory movements can cause transformation in social and economic trends, which does not necessarily mean that catastrophic decline is due to their presence.32

Another approach that has been suggested is that these settlers, such as Slavic communities in the territory under Byzantine control probably underwent a process of Hellenization through the elements of cohabitation, relationship and, probably, integration, which was partially promoted by the conscription of the soldiers from frontier territories into the Byzantine army (Charanis 1959; Sanders 1995a; Vionis 2013b: 111-113). This picture might not exclusively have been a reality in the Peloponnese, such as in Laconia, but similar phenomena are also documented in Southern Italy and in Istria, both territories under the Byzantine authorities. In the Apulian instance, a first wave of Slavic immigration is dated to the 7th century, when Apulia was under the Lombard domination. Paul the Deacon, in his *Historia Longobardorum*, is the only source to document that the Duke of Benevento made them settle in the desert lands of Isernia, Boiano and Saepinum (in the territory North of Apulia). However, a second wave of Slavic migration took place at the beginning of the 10th century, when Apulia was again back under the Byzantine authority. This time the Slavs settled towards Monte Gargano, in North Apulia. Here the annals of Bari document that Michael, prince of Zaclumia, moved to Siponto around 927, probably

32 An important consideration in contemporary European contexts.
when he had to leave his homeland after the Bulgarian conquest. No sources record devastations or fights within the local community, since they probably occupied desolated lands that were scarcely inhabited. Still, until the 11th century, documents from Monte Gargano report not only Slavic names, but also entire communities, which were under the jurisdiction of a ‘Ţupano’, a Slavic official that operated his juridical power in autonomy under the Byzantine authority, but still under the Byzantine jurisdiction. This community was economically active and was not actually causing the breakdown of socio-economic exchanges. Communication and exchanges were still taking place, not only on a local level but also on an interregional scale, as is suggested by the donations to the Benedict monastery dedicated to the Virgin Mary on the Tremiti Islands (Apulia) by Slavs living on the other side of the Adriatic. Other communities of Slavs are documented in Calabria well into the 11th century, as indicated by the decision of Robert the Guiscard to enlist 70 Slavs in his army, because of their familiarity with the mountainous terrain. This pacific presence of Slavs in the Byzantine territories has led to hypotheses that Slavs were not only populating these isolated regions as farmers or slaves, but some of them were integrated into the Byzantine culture and into the administrative system. However, in this instance, it is likely that their names were Hellenised and, therefore, were less immediately visible in the written sources (Falkenhausen 1982: 94-95).

The movement of Slavs towards Greek lands would have not been without consequences, as a hosting community generally experiences challenges as well as advantages from immigratory movements. For instance, as the previous paragraphs have shown, Corinth, in the 6th and 7th centuries, was not affected by a major decline or by a drastic reduction in its economic wealth. A restriction in the exchanges and a decrease in the interregional trade, documented by the decline in imports during the 7th century, cannot be ascribed to a “Slavic” migration. Furthermore, if they actually ever settled in Corinth, they did not negatively impact the local economy, since, as documented by local pottery, the local manufactory industry from the 6th century to the 7th century increased. Finally, Slavs cannot be blamed for the 8th century economic constraints, which, as analysed, were the result of multiple factors.

On the contrary, in the view of migratory phenomena their presence might be interpreted not only as the result of military conscription, but also as the result of ‘agricultural mobility’ (Horden & Purcell 2000: 385). Horden and Purcell, in adopting
the phrase “agricultural mobility”, want to refer to the exploitation of different plots of land for agricultural opportunities, in relation to topographical diversity and across a distance that could be seasonally travelled by land or sea. In the specific instance of the “Slavic” migration, it might be hypothesized that this migration towards southern lands was aimed to find more favourable climatic conditions in a period during which multiple scientific analyses show conditions to have been ‘the little ice age’ (Büntgen et al. 2016). The point is that the Slavs not only were a resource for the Byzantine army, but also probably were involved in agricultural activities during a period of population decrease.

I do not intend to state here that the Byzantine authority organised the migratory phenomenon, but, when possible, it attempted to take advantage of an available labour source. For instance, in the early 9th century the emperor Nicephoros I, as recorded in chapter 49 of the De Administration Imperio, turned Slav prisoners of war into enapographoi, which can be interpreted as wage-labourers, and donated them to the metropolitan church of St Andrew in Patras (Sarris 2012a: 444). Another indirect reference can be found in the Placitium of Riziano, dated to the 804, when Charlemagne extended his authority on the peninsula of Istria, once a Byzantine territory. This document registers complaints against the Frankish Duke John, representative of the Frankish authority in Istria, from the local landowners who were blaming him for allowing the Slavs to settle in abandoned and uncultivated public or ecclesiastic lands, which they then started cultivating and used to pay rent to the Duke. As Levak has stressed, the complaint was not against the Slavs themselves, but because they were now paying rent to the Duke and occupying lands belonging to the local community (2011: 111). In this document there is no information on how the Slavs were settled on those lands. However, it suggests that the Slavs were familiar with farming activities and practices, knowledge that was probably related to a period of adaptation and acquisition of a know-how that was experienced when they settled in Istria in the 7th century, when this area was still a Byzantine territory. In fact, in the context of this early 9th century dispute and according to the information reported in the Placitium of Riziano, these Slavs were not coming from outside the region. Moreover, the cohabitation between local and Slavic populations is documented by
the presence of different funerary practices within the same cemeteries excavated in this region, which has been dated to the 7th and 8th centuries (Levak 2011: 115).

The question is, therefore, if the ceramic evidence in the Peloponnese, as it does in Sparta, actually documents the cohabitation of the indigenous community with an immigrant group, which might have started to become active in the local community by cultivating lands and locally producing objects, according to their traditional know-how (i.e. handmade pottery). We cannot exclude the possibility that they occupied lands owned by the indigenous, but it is also impossible to exclude the possibility that they occupied uncultivated lands, due to the decrease in numbers of the population, which affected the Mediterranean population in the Late Antique and Early Byzantine times.

However, in the case of Corinth there is very little evidence of artefacts that can be ascribed to a non-Byzantine manufactory tradition. On this specific instance, it might be worth analysing the few pottery fragments presented in the previous chapter the well-known case of the ‘wandering soldier’ grave, located in the colonnade of the South Stoa complex, which has generally been ascribes as evidence of a non-indigenous presence together with handmade, ‘Slavic’ pottery (Weinberg 1974). This single inhumation was found associated with a sword, a handmade pot, a belt buckle, a knife, and iron pin, an amber bead, a flint steel, and with a bronze trinket, and it has been dated to the 7th century AD, even though, as discussed in the previous chapters, the handmade pottery chronology is far from being secure and consolidated. Curta had recently observed how some of the objects found in this grave, such as the handmade pot, the amber bead and the belt buckle in this grave could be associated with the early Avar material culture identified in Hungary. On the contrary, he highlights how the type of built cist grave, seems to have comparison in Istria, northern Adriatic region and in Sardinia (2016: 422-423). It is worth adding that numerous examples of this type of grave have been identified in Corinth, and that this burial was not located in an isolated area, but it was actually surrounded by several graves in the south-west end of the Forum area. However, the object assemblage associated with it is fairly unique among those excavated in Corinth and does not reflect common funerary practices in Late Antique Corinth. Finally, it is worth highlighting the results of isotopic values on this skeleton, similarly to the analysed
nearby inhumations in the south-west end of the Forum area are consistent with a local origin (Kennedy 2016: 222, 334, 358).

In conclusion, the practice of equating types of material evidence to ethnic identity is far from conclusive. The ‘wandering soldier’ grave might actually be ascribed as an example of the necessity of investigating the archaeological record, not only in its integrity as stratigraphic units, but also within the wider context of the archaeological palimpsest, adopting multiple methods of research. All the archaeological and historical evidence, presented together with the genetic analysis on the ancestry of the Peloponnesian populations, seems to agree with Anagnostakis and Kaldellis’s philological analysis of the *Chronicle of Monemvasia* (2014). The Avar and Slavic presence in the Peloponnese has historically been interpreted to various ends, used to debate continuity versus rupture in terms of ethnicity and genetic origin, as well as of socio-economic identity, and even to discuss the end of the Late-Antique urban phenomenon. Ultimately, because it is impossible at this point to know how non-indigenous people settled in the Peloponnese and how many of them arrived, this phenomenon has been overstated as the main answer to diverse historical questions from the Middle Byzantine period to the modern times. The allochthone and immigrant presence within the Byzantine society seems to have been interpreted as the major cause of disruptions and crises. On the contrary, these disruptions should be investigated through the analysis of multiple factors on a regional and interregional scale, as discussed in the previous paragraphs.

6.6 **Continuity and change of the Middle Byzantine economic growth: the ceramic evidence in context**

During the course of the 9th century the economic trend that the Byzantine empire was on in the previous century began to change. The Balkans, the territories on the Black sea, the Aegean islands, Asia Minor, and, from 10th century, Southern Italy too, were again under stable control. An expansion of the controlled territories, which continued to expand during the 10th and 11th centuries, in marked contrast to the 8th century, led to political consolidation of the Byzantine territories in the Middle Byzantine period.
By the end of the 8th century, after 210 years from 541 to 750, with circa 18 outbreaks, the plague wave finally started decreasing (Stathakopoulos 2007: 105). The Middle Byzantine period is described as a period of demographic recovery (Treadgold 1988: 30; Lefort 2002: 269; Laiou & Morrison 2007: 92). If, as discussed in the previous section, diverse rural areas of the Byzantine empire remained depopulated, and probably uncultivated during the 7th and most of the 8th century, in the last decades of the 8th century there is evidence of a recovery in cultivation in diverse areas of the Byzantine territories, such as in Thessaly and Macedonia (Bintliff 1996: 1-18), in Apulia (Arthur 2006), and in the Peloponnese (Avramea 2005: 213-223). This increase in farmed lands is visible in the archaeological landscape by the transformation of settlement patterns, which corresponded to the creation of new villages or to the growth of existing villages. Furthermore, there was an expansion of cultivated lands, which is also documented by archaeobotanical and palynological evidence (i.e. for the villages in Salento Arthur et al. 2012).

The urban settlement, too, underwent significant changes in this phase of Byzantine history. As discussed in Chapter 2, Corinth, as the centre of Argos and Sparta, continued to exist through the 7th and 8th centuries. However, the core of the city, under the pressure of socio-economic transformations, was reduced in size. In the case of Corinth, 9th and 10th century evidence is quite scant and the identify of the core of the urban district is unknown, along with its public buildings and the location of the administrative centre (Athanasoulis 2013: 195). It is here suggested that the core of the Middle Byzantine city might have been located within the Late Antique city walls, which were probably still in use in this period. Additionally, pottery assemblages dated to the 9th and 10th centuries are also not abundant. Nevertheless, pottery evidence might still be indicative of major trends in the socio-economic transformation in Middle Byzantine Empire. To summarise the ceramic evidence, two major salient trends of Byzantine pottery can be highlighted. From the 9th to the mid-10th century, the pottery production in Corinth, 99% of which is of unglazed ceramics, does not appear to have any substantial changes in terms of typology of shapes. Production is mainly focused on cooking vessels and storage pots, the majority of which are amphorae, with a limited production of glazed chafing dishes. The quantity of both glazed and unglazed ceramics is quite limited in terms of dimension until the mid-10th century. Nevertheless, the pottery production shares similarities with other
Byzantine centres, indicating that the local manufacturing in Corinth had a certain degree of standardization, with Corinthian pottery being part of a ceramic koiné. However, until the middle of the 10th century, there is a noticeably small, but constant increase in terms of quantity of locally manufactured ceramics, which corresponds to an inversely slow decreasing trend in imports, mainly in the form of cooking vessels. Similarly, the luxury glazed white ware, almost absent from Corinthian tables during the course of the 9th century, reappears only beginning in the mid-10th century. A very similar trend is clearly visible in 9th and 10th century Spartan contexts.

This picture starts changing from the mid-10th century to late 11th-early 12th century. The local pottery manufactory started experiencing an ongoing increase in the local production, which seems to correspond to a rise in the variety of locally produced types. For instance, by the mid-10th century, unglazed wares were not limited to cooking and storage vessels, but table ware was also locally produced, which appears to be an unglazed Corinthian imitation of the imported Constantinopolitan glazed table ware shapes. In fact, the imports of white ware systematically increased during the course of the 11th century, coming to an end at the beginning of the 12th century.

To summarize, two major changes seem to appear in the quantity and quality of pottery production. A first transformation takes place around the mid-10th century with the expansion of the unglazed local production, associated with an increase in imports. A second change, which had a bigger impact on the local pottery industry, took place around the 12th century, when archaeological evidence indicates that Corinthian workshops underwent a significant reorganization, with an increase in local production of highly standardized glazed table ware, as analysed in Chapter 5. The proliferation of pottery workshops is documented by the local specialised manufactory of glazed wares which is documented in Argos by the identification of pottery wasters, since no 12th century kiln site has been identified so far (Vassiliou 2014: 294-302). Possibly in Sparta, too, glazed Byzantine pottery was also locally produced, but not before the mid-12th, according to the type of wasters brought to light (Sanders 1993). However, the local producers of glazed ware in Corinth, as in Argos and in Sparta, appears not to have been able to satisfy the request of the local market. It is not possible to be more precise in identifying the reason that the local industry was unable to sustain the market demand. One possibility is that the numerical demand
was higher than the output of the local workshops, rendering them incapable of sustaining the demand. It is also possible that the demand for glazed tableware was determined by fashion trends, as well as a desire for diverse designs and for diverse decorative motives, which could only be satisfied by the importation of glazed table vessels different from the local production. However, the importation of ceramics appears to be changing, since, by the 12th century, white glazed wares were no longer reaching Corinthian, Spartan or Argive markets. It is worth highlighting that the end of these imports does not correspond to an end in the production of these wares, since 12th century White ware glazed production is well documented in Constantinopolitan contexts (Hayes 1992: 30-34). However, it is unquestionable that the high demand for glazed tableware was sustained in Corinth, as documented by the pottery assemblages excavated in Corinth, which show a continuous increase in glazed ceramics through the 11th to the 13th centuries (Sanders 2002: 394; 2003: 651); a similar trend visible in Sparta (Sanders 1993) and in Argos (Vassiliou 2014). The location of the workshops from which these cities were importing glazed table wares during the 12th and 13th centuries is also still unknown. However, diverse scholars are tentatively testing the hypothesis of their collocation in an area in Northern Greece.33 Meanwhile, unglazed production also underwent major changes. The so-called Otranto-amphora type stopped being produced and was substituted with amphorae with high swung handles, made in several different fabric recipes, which, by now, was no longer characterized by the whitish, distinctive colour that was typical of the Otranto amphora type. The seriation of cooking vessels and lagenes suggest a higher degree of standardization in the manufacturing process, whereas increases in the types of local fabric recipes might be indicative of a larger number of active Corinthian workshops. On this last point, it is worth stressing the relevance of these data on the adoption of multiple fabric recipes by the 12th century in Corinth. Although, as indicated in the catalogue section of this work, this analysis is based on the macroscopic observation of fabrics; since only 12th century cooking ware fabrics have been petrographically investigated (Joyner 2007), it is important to highlight the relevance of such technological changes in the local pottery production. First of all,

33 Middle Byzantine production of Green and Brown Painted Ware, Fine Sgraffito Ware and Aegean Ware has been hypothesised in the cities of Thebes and Chalcis although kiln sites have not been located in these cities (Waksman et al. 2014).
it is important to observe that cooking pots in the 12th century do not appear to have a significant change in morphology, continuing to be characterized by a round base, a spherical body and a short, vertical rim. This continuity in morphology is relevant, since it indicates that there is not a major change in the usage of this vessels, nor probably in the culinary habits of the inhabitants of Byzantine Corinth. On the contrary, the change noticeable in the rim shape and in the fabric recipes hints at changes within potter working practices. The question that naturally follows is why these work practices are changing. First of all, in the case of the transformation of the rim shape, I believe that it is important to contextualise this datum: the triangular rim is not abruptly introduced at the beginning of the 12th century, but is the result of a long process of transformation that begins in the last decades of the 11th century and continues in the first half of the 12th century. It could be worth considering this long process of transformation as a case of continuous change, as explained in the previous chapter. This change, though, should also be contextualised within the reorganisation of the ceramic production centre, which took place by the 12th century. As archaeological data from the kiln site suggests so far, some workshops focus their production exclusively on glazed pottery by the first decade of the 12th century, whereas others only focus on unglazed ceramics, a reorganization that corresponded to a specialization and standardization of the pottery production. During this reorganisation, as the introduction of new fabric recipes of cooking pots suggest, it appears that the exploitation of local raw resources shifted, reasonably related to the reorganisation of the ceramic workshop. This phenomenon may be related to a more general transformation of the allocation of resources for ceramic production.

Changes in technology, as well as an increase in production and number of types, can be linked to the increased demand of the market, which was related to flourishing agricultural productivity (Blake 1978). The following analysis would like to test a possible methodological paradigm of interpretation to investigate how the major changes in the pottery assemblages, which took place around the mid-10th century, and then in the 12th century, are related to the transformation of socio-economic patterns.

To investigate this topic it is essential to consider a series of related factors. As stated by Laiou and Morrissorn, production, trend of trade and monetary economy, and agrarian productivity are all interconnected in the political framework. The Byzantine
state, in fact, provided the political integration and the fiscal, monetary and institutional background that ultimately influenced the economic development (2007: 49). It is, therefore, necessary, if we want to grasp the socio-economic context related to changes in the pottery assemblages in the Middle Byzantine period, to start this investigation from the primary features of the Byzantine economy, which, in the Middle Byzantine period, continued to be based upon land and its exploitation and taxation.

The crisis of the Late Antique landowners signified a change on the basis of the tax revenues from the 8th century, with a major focus on the village consisting of peasant landowners. Nevertheless, this change in the basic framework of land taxation did not mean that estates no longer existed. The State and the Church were the major landowners, followed by a transformed senatorial aristocracy, who were powerful landlords (Magdalino 2016). However, the multiple factors of economic crisis analysed in the previous section significantly impacted the economics of land exploitation at all levels of ownership. It has been analysed in the previous paragraph how, by the 8th century with the crisis of the Late Antique elite landowners, the agrarian landscape changed into one dominated by free landowning peasants. Villages became a feature of the rural landscape and, in fact, it is worth stressing how, by the 8th century, the Byzantine administration started rearranging its fiscal units per *choria*, villages that ended up collectively paying taxes from the 8th to the 10th centuries.

Scholars tend to agree that the population expansion took place beginning in the 9th century. However, the increase in cultivated lands in the 9th century should not exclusively be interpreted as a natural consequence of demographic expansion. It was also the result of the migration of non-Byzantine groups into the boundaries of the Byzantine empire, such as the settlement of Slavs in the Balkans and Peloponnese, which took place in the 8th century, as well as the movement of groups within the boundaries of the Byzantine empire, which could be described as an internal diaspora (Ahrweiler & Laiou 1998). For instance, communities of Greek origin moved to Calabria when Sicily passed under Arab control, mainly settling in less populated areas. Moreover, in the 8th, 9th, and 10th centuries an imperial agency, responsible for population transfers due to socio-economic and political reasons, is documented. An example of this is the decision by the emperor Basil I to settle 1000 freedmen in Calabria around 885-886, which was part of the legacy of the widow of Danelis, a
female estate owner from the Peloponnese (Grégoire 1953: 251 in Falkenhausen 1978: 26 and in McCormick 1998: 35, note 36). Theophanes Continuatus records that, a few years later, around 888, Leo VI sent 3000 freedmen, of the same provenance, in order to colonise the territories of Longobardia (Thephanes Continuatus: 321.3-6; Ševčenko 2011. On this section Falkenhausen 1978: 26 and in McCormick 1998: 35, note 36). This plan would not have exclusively secured control over reconquered territories, increasing the Byzantine segment of the settled population in this thema, in order to strengthen the military forces (Haldon 2016: 250). Moreover, repopulating these areas would also have had the effect of increasing the basis for tax collections, one of the major concerns of the Byzantine State in this period (Tedesco 2016: 189). Based on this data, it is reasonable to hypothesise that an increase in farming activities, through the occupation of uncultivated lands, was also the result of a clear imperial policy.

Population growth continued to be sustained in the Middle Byzantine period in a long-term wave that started by the end of the 8th century. This trend has been observed as one of the potential causes that might have increased the extent of cultivated lands due to the growth of the available labour force (Harvey 1989: 47-49). However, this intensification of cultivation was primarily able to guarantee a subsistence level, causing an overall rise in the economic level. Nevertheless, population growth does not automatically cause intensive economic growth through the increase in the extent of cultivated land, nor does it systematically develop the productive level (Laiou & Morrisson 2007: 90-91).

Investments in technology are essential to improve the production, however they are only possible when capital is available. Horden and Purcell have observed that the main technical intervention to cope with environmental risks in the agricultural landscape is related to water management. Variability in rainfalls, which is typical in a Mediterranean climate, requires technological developments, such as those related to irrigation. In defining how ‘the landscape of the microregion is the landscape of power’ (2000: 254), these authors have highlighted how, for instance, technological improvements are the result of a landowner’s desire to improve productivity with the aim of gaining more profit. Horden and Purcell clarify that ‘there is no other way in which we could expect elite power to manifest itself in the Mediterranean landscape except through the intensification or abatement of the adaptations which are - which must be - generated through the day-to-day interactions of local producers and
consumers’ (2000: 255). As an example of the technological impact on the agrarian landscape, these authors focus their analysis on the construction of watermills. Waterworks are also documented in the Byzantine agricultural landscapes, and specifically, waterpower was widely spread in Byzantine Greece, as documented by both archaeological evidence and written sources, even though there are no specific records related to Byzantine Corinth, Argos and Sparta (Raptis 2001, 2007). The Farmer’s Law registers the construction of watermills by peasants in the Early Byzantine period, whose management was delegated to the free farmers, who had unlimited and heritable rights on their estates, included on watermills (Raptis: 2007: 111). However, it is worth highlighting that the number of watermills only increases significantly from the second half of the 10th century onwards. Laiou and Morrisson postulated that the investment in water management required a preliminary outlay of capital, which only later could have been recovered by the increase in farming productivity. As a result of the expansion of private estates, it is likely that the estate landowners invested capital to increase the number of watermills (2007: 99).

The system of taxation is indicative of the transformation and intensification of land exploitation. The fiscal regulation remained mostly unchanged until the middle of the 10th century. Until this period, in fact, the Byzantine State tried to regulate profits, generally with the aim of avoiding the accumulation of wealth in few hands (Laiou & Morrisson 2007: 52-57). This was a major concern for the Early and Middle Byzantine State, which, in fact, also tried to prevent the elite, involved in administrative and military offices, from taking part in lucrative activities (for a discussion in detail of this topic, Chapter 1, Paragraph 2). However, if, by the 10th century, the central authority began to reiterate the limits on land acquisition for the higher ranks of the society (Laiou & Morrisson 2007: 69-70), it signified that the opposite trend was taking place. Through a slow process of wealth accumulation, officials in the Empire started increasing their land holdings. According to Oikonomides, during the course of the 10th century free peasant owners of small parcels of land were becoming the minority in the Peloponnese. In this region, by the mid-10th century, an increase in the number of

34 The only reference to pre-modern watermills in Ancient Corinth that I could identify are from the so-called Morosini map, a detailed record of the territory of Ancient Corinth and its neighbourhood, commissioned by the Venetian doge Francesco Morosini in 1687. Unfortunately, there is no evidence available so far for hypothesising that these watermills were already standing in the Byzantine period, though this hypothesis cannot be completely dismissed.
paroikoi is registered and the estate became the major form of land exploitation. Consequently, beginning in the 10th century, the tax-payment base started shifting from small landowners to large estate owners, whose lands were cultivated by rent-paying peasants (1994, 1996b: 125).

The historical and archaeological data presented thus far raises several questions. One of these questions is why, in the Middle Byzantine period, were free landowning peasants becoming tenant farmers (parokoi). It has been hypothesised that, because of the increase in the labour force, which was caused by the sustained demographic growth in the Middle Byzantine period, independent landowners started to have less social relevance and less economic power as compared to the 7th and 8th centuries. This phenomenon, associated with the capacity of large estates to produce more surplus that could be sold on the market, might be ascribed as a possible cause that determined the increase in estates and in parokoi, or tenant farmers (Tedesco 2016: 190, Banaji 2010: 72-79). Another question this evidence raises is what effect does this change in land exploitation have on the economy? Why, even though economic recovery is documented as beginning in the course of the 9th century, does it become more significant only in the mid-10th – 11th century? I will return to this topic and will approach it by analysing some trends in income distribution.

6.7 The Middle Byzantine economic recovery: the context of its multiple causes

Land exploitation and the ceramic industry, as well as other forms of production, can be related when considered them as factors of production. Labour, land, capital and ‘entrepreneurial activity’ are the four main factors of production, which, considered together, describe the total income in the economy. Incomes going to each factor or production or, more specifically, to the owners of that type of production are examined in the context of a theoretical economy by the theory of functional distribution. This allows one to examine how these factors of productions are compensated, generally through the analysis of how wages, rent of land, interests and profits are distributed and proportioned to the owners of these factors (Jones 2014: 23-24). For example, the income of a landlord depends on several factors, according to the economic activities with which he is involved. One of these factors might be land possession, which he or she might be partially managing directly or and
partially renting, as well as money-lending (Sarris 2016: 16-17). It is straightforward that an increase in owned land corresponds proportionally to an increase in his or her income. It, therefore, follows that the factors of distribution of income can explain the interaction between the demand for and the supply of these factors. As Jones has observed, ‘A change in the income distribution can lead to a change in aggregate demand because the consumption patterns of major groups of individuals differ. For instance, a shift in income from labor to owners of capital might precipitate a shift in demand from basic foods to “luxuries” or from consumption to saving’ (2014: 24-25).

This is not the place to discuss the theory of functional distribution of incomes in detail or to discuss the contentious debates concerning this neoclassical theory, which has been criticised for not considering the peculiarities of a market, the self-regulation of the market, or the value of ‘marginal products’.35 Still, this theory can provide a baseline for how the distribution of income can be related to the technologies of production. The distribution of income, in fact, is not only determined by the ownership of the property or of the means of production, but also by the socio-economic status of the owner. In almost all societies, including Byzantine society, the ownership was uneven, which affected the capacity of production and the socio-economic power on which it was based. These statements will be better framed by considering the following data.

Technological investments allow one to generate more profits. Economic growth might be related to the quantity of investments, which is accumulated by the owner’s or investor’s desire to gain more profit. Accordingly, every change in income can have an impact on economic growth, a connection which can be regulated by the political authority. Economists observe that if the allocation of income tends to be concentrated among one of the factors of productivity, social inequality increases. If, on the contrary, the political authority regulates income distribution, this social policy will correspond to an equal redistribution of the capital even though it might also be followed by a minor degree of economic growth. Therefore, the political authority

35 In more precise and technical terms, Jones states: ‘The neoclassical theory of income distribution has been criticized from several directions, primarily for its use of the construct of aggregate capital rather than a plethora of individual items of equipment and because “market imperfections” (a term […] generally used to refer to departures of industry structure from that of perfect competition […]]) cause the incomes to factors to differ from their values of marginal product (which equality is what lets us associate the output elasticities with factor shares)’ (2014: 24).
should manage a trade-off between social equity and economic efficiency (Fiaschi 1998: 319). The imperial agenda in the Early and Middle Byzantine periods expressly limited land acquisition. Basil II’s policy is indicative of this mentality, known for its measures against the expansion of private estates to the detriment of State properties and known for its continuous ambition to expand imperial land properties and corresponding agricultural production, which would have generated cash and kind incomes (Oikonomides 2002: 1005, 1023). Additionally, the maximum profit from commodity sale was set between 4% up to 16%, as documented in the Book of the Prefect, a clear instance of this policy (Oikonomides 2005: 226). The Byzantine empire, in fact, tried to pursue social equity by limiting the accumulation of wealth in the hands of the higher classes of society. However, within this socio-political framework, the State never aimed to establish full control over economic activities, since market forces operated in the Byzantine economy. A good example of this is in the lively market of land acquisition and the State’s decision that even basic commodities, such as grain, in the 9th and 10th centuries, should be traded in a free market; this free market was managed both by a private ‘entrepreneur’ and through the public supplying of grain directed to Constantinople. Moreover, there is not significant evidence for price and profit control outside Constantinople (Dagron 2002: 456). Even though land taxation, paid by landowners, was the major source of revenue for the Byzantine State, other levies were collected, which included household taxes, kapnikon, taxes on domestic animals, and taxes on commercial transactions, named kommerkion (Laiou & Morrisson 2007: 51-56). In this context, it becomes understandable why, even though emperors like Constantine V and Nikephoros I operated a clear financial policy in the late 8th and 9th century aimed at increasing state revenues through increased taxation, they promoted a series of reforms, after the economic constraints in the late 7th and 8th century, to remonetarize and incentivize economic growth, which was also accomplished through the concession of incentives to the merchant elite (Magdalino 2016).

This trend towards economic recovery seems to be evidenced also by a sevenfold increase in coin stray finds from the second quarter of the 9th century, as compared to the previous century when the numismatic finds in Corinth are scarce. In the case of Sparta, coins increased four times between the mid-9th and mid-10th century, together with the penetration of their coinage into the rural areas in the
Peloponnese (Penna 1996). However, it is worth noting that Nikephoros II ordered the issuing of light weight gold coins in the mid-10th century, which has been interpreted as a response to an increase in the coin supply in the context of augmenting the financial needs of the State; the State, again, operated under a monetary policy of seignorage, which was an increase in monetization related to economic expansion, in an inflationary state (Laiou & Morrisson 2007: 60, 88). The debasement of coinage, which started around the mid-10th century, was perpetrated until 1092, in an effort to sustain public expenditures, such as those related to military campaigns. Nevertheless, the sustained increase in the quantity of the coin supply, even though it was debased, did not negatively impact the economy, which, on the contrary, from the mid-10th century, experienced an increase in monetized transactions and inflation (Morrisson 1976; Oikonomides 2002: 1020). However, the debasement had reached such drastic level that, while the coinage was originally comprised of 70% gold, by the reign of Michael VII it contained only 10% gold. Due to this shift, these new coins required the addition of silver to the alloy, which had to come from the existing miliarysia, meaning that the miliarysia had to be melted and made into new silver coins, called nomismata, which were consequently debased to such a degree that, by the reign of Nikephoros Botaneititates (1079-1081), gold coins were primarily silver in colour, with a maximum composition of 10% gold (Morrisson 1985: 127-153). Consequently, the paucity of metals led to an absence of positive economic impact, which seignorage could otherwise have had on the State revenue, based upon the effects that this monetary policy would normally generate, as explained in the previous paragraph. The coinage reform of Alexios I Komnenos reordered monetary issuing, largely because it still had to face a scarcity of metal. As analysed by Hendy, the new gold coin still corresponded to a debased coin dated to 1028-56, and did not, therefore, restore the coinage back to the original pure-refined hyperpyron. Additionally, its division coins, the trachy aspron, and the smaller copper coins, the tetarteron and its half, created a complex and articulated coinage system (Hendy 1985: 513-517). The increase in the level of monetization accelerated during this period and, in the case of Corinth, doubled from 1034 to 1081, increased by another 30% between 1081-1143, and experienced a final increase of an additional 10% from the second half of the 12th century to 1204 (Penna 1996: 265-288). It has been debated whether this reform would have simply been intended for tax revenue or if it also had been
intended to sustain a diverse scale of exchanges, as for instance, is argued by Laiou and Morrisson (2007: 151).

It may be hypothesised that peasant households could be partially integrated into a market economy; this interaction with the market economy would partly depend on inter-household exchange, particularly in case of seasonal-based activities, such as pottery production could have been in Corinth in the 9th and 10th centuries. This economic setting might provide an example of the level of productivity growth, albeit on a narrow scale, until the mid-10th century when the upper classes increased their economic power, based on an increase in land holdings. However, during the course of the 11th century, this trend changed even further when large estate landowners began to benefit from certain privileges, known as exkousseiai, which included benefits such as tax exemptions; these became systematic by the late 11th century. The institution of the pronoia, a form of monetary tax grant is also ascribed to the late 11th century and was substituted by official services offered to the State by the taxpayer. One of the multiple effects of this policy was the extension of the land tax to tenant farmers. Therefore, estate owners could have shared fiscal benefits, granted by their acquired privileges, with their paroikoi. Consequently, it has been suggested that it would have become economically convenient for peasants to sell their lands, boosting the phenomenon of estate properties in the Byzantine agricultural landscape (Oikonomides 1996a: 211-212; Banaji 2010: 72-79). Laiou and Morrisson observe that ‘strictly in terms of his payments in taxes and/or rent, the peasant lost from the expansion of the large estate; i.e., the level of exploitation rose. But in terms of per capita income, the eleventh-twelfth-century peasant was better off than his ninth-century counterpart, because of the fact that his cash-crop producing assets were made more valuable through the impact of market enlargement’ (2007: 111).

The exemption of tax payment in coins has led scholars to question if the 11th and 12th century Byzantine economy was less monetized. Coin stray finds suggested a constant increase in monetization from the 10th to the 12th century, with no break in continuity. Moreover, both Oikonomides and Magdalino have analysed how the

36 This topic has been widely debated among historians, like Ostrogorski (1954) who associated the concept of pronoia to feudalism. Lemerle (1979) one of the first to provide a diverse interpretation of its institutional role in the Byzantine society. A summery on the topic is provided by Laiou & Morrisson 2007: 157-158.
increase in land tax exemption corresponded to an increase of other monetized taxes and levies during the 12th century (Magdalino 1995: 39; Oikonomides 1996a: 218-219). It not possible to estimate what impact these changes had on the tax revenues, due to the absence of numerical documentation. However, the increase in land possession, which was also sustained by an imperial policy of augmented concession of state lands of private owners and by the tax exemption, definitely caused an accumulation of income in the hands of social elites – mainly aristocrats. This surplus could have, then, been channelled into the market, boosting the exchanges (Laiou & Morrisson 2007: 158-159). This process is in line with Alexios I Komnenos’s reform of tax collection, which was demanded and tendered to a powerful provincial elite and was no longer managed by public officials. This process appears to be aligned with the concession of lands and the tax exemption that defined a systematic policy of decentralization of the State authority and of its fiscal power beginning in the late 11th century. This changed political economy from the Comneniam period allowed the concentration of income in the hands of rich landowners, aristocrats and wealthier merchants. These incomes came from military concessions, administrative office positions, and the holding of monastic institutions over tax-payers and free householders, who also formed the labour force for their estate properties (Sarris 2012a: 448-449). By the late 11th century, the reduced impact of the State on fiscal management retained the accumulation of wealth in the higher classes of the society (Laiou & Morrisson 2007: 161).

Increased land possession and investment in methods that would boost productivity generated agricultural surplus, thereby sustaining economic growth in the Byzantine empire. The agricultural surplus would have been pushed through the economy of exchange, which generates developments for diverse sectors of the economy. Money now would not have been collected by State officials and, therefore, would not have been put back in circulation through State expenditures. With the decentralization of the fiscal system, the provincial administrator, who was in charge of tax collection, became one of the main stimuli for coin circulation. This process of monetization, with the increasing number of circulating coins, might also have sustained and increased exchanges. It is also likely that economic growth would be the result of such an increase in exchanges.
Increases in demand goods, such as quality of wines, cheese, silk, and pottery would also have benefitted other classes of society, including the middlemen involved in those transactions and the artisans and manufactory owners involved in production. Demand and exchange of agricultural goods as well as manufactured objects were taking place within the city, where the urban community would have sustained the demand. The middle class, possibly involved in trade and secondary production together with the elite, would have boosted the request of both semi-expensive goods, and also luxury items. Late 12th century Corinth is described by Choniates as a lively emporion (Historia, ed. by Dieten 1975: 74); however, Corinth was not exclusively a Byzantine city in which exchanges were taking place, but it also included manufacturing and production activities, such as pottery, glass, and metal working. Wine and oil production were also present, as suggested by the presence of presses. Evidence for each of these activities may be found in the archaeological record, as in 12th century contexts in the area south and west of the Bema church complex (Sanders 2002: 652), but it is reasonable to suggest that other manufactory activities were also present, particularly textile production (Jacoby 2004: 225). Significant changes in the pottery production in Corinth, specifically the reorganization of the pottery manufacture and its increased output by the beginning of the 12th century, could, therefore, be the result of this transformed setting of economic and fiscal structures presented in this paragraph. However, the topography of the Middle Byzantine urban landscape of Corinth still needs to be clarified, since what has been so far been attributed to the 11th and 12th centuries, such as the glass factory and the silk factory published in Corinth XI and Corinth XVI volumes, should not be dated before the 13th century on the basis of updated pottery chronologies (Sanders 2002, 2016; Athanasoulis 2013). Consequently, a restudy of Corinth topography and stratigraphy, with associated ceramics and numismatic evidence, is more than recommended in order to contextualize the Middle Byzantine house complexes so far securely identified southwest and southeast of the forum area (Sanders 2013).

The detrimental decrease in tax revenues for the central authority corresponded to an increase in wealth among the middle and higher classes of the society; these incomes further increased their enlarged land possession and involvement in manufacturing and entrepreneurial businesses. However, the
expansion of non-state economic activities, connected to decentralized socio-economic policy, was not without consequences. One of these consequences was that taxation came to be unequally distributed, which mainly aggravated the lower strata of society, as recorded by Michael Choniates, Metropolitan Bishop of Athens in the late 12th century (Laiou & Morrisson 2007: 160, on Choniates Herrin 2013: 119). Additionally, this decentralization policy and the consequent reduction of tax revenues impacted the State’s spending possibilities, weakening the central administration on multiple frontiers. How the Byzantine Empire, during the course of the 11th century, struggled to guarantee coastal security has been analysed; such security was only possible through the naval military support of the Venetians, which, for example, allowed Alexios I to defeat the Norman assault on the Byzantine territories. Alexios I, probably due an absence of economic funds, further sustained this alliance with Venice in order to gain naval support for coastal security, presenting, in exchange, the concession of extensive commercial privileges (Knigh 2014: 18). It has been discussed how the substantial presence of Italian merchants might have boosted the economy in the regions in which they operated (Armstrong 2009b). It cannot be excluded that presence of Italian merchants increased the demand for certain products in the market; however, as it has been discussed in this paragraph, the growth of the Byzantine economy started earlier in the Middle Byzantine period. The 12th century, following a series of administrative reforms and the decentralization of the Byzantine authority, experienced a growth of the economy of exchange.37

The aim of this project was to investigate the Byzantine economy in the Peloponnese through pottery evidence. An analysis of 13th century contexts, however, shows that the Frankish conquest did not negatively impact pottery production, which, on the contrary, continued to significantly increase. Cooking wares were, until the late 13th century, still produced according to the Byzantine fashion: a round-shape stewpot with a triangular rim. Unglazed storage vessels with matt painted decoration, however, show evidence of continuous transformation in shape and decoration. This trend was, however, was neither abrupt nor contingent. Several authors have observed that population growth was still taking place in the 13th century, accompanied by sustained agricultural productivity and by an industrial development

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37 This expression, in the context of Byzantine economy, has been adopted by Laiou and Morrisson (2007: 163).
(Morrisson 2005). The growth of the exchange economy has actually been related to the end of the Byzantine authority, which had been limiting the exchanges and trade on some production, also fully controlled through a monopolistic industry or by forbidding its exportation (Jacoby 1992). The Franks in the principality of the Morea, as the Latin new political entity established in diverse regions of the former Byzantine Empire were intent on preserving the Byzantine economic infrastructures in order to guarantee the continuity of exploitation. In this context the circulation of Latin “imitatives” and the possible extended use of late 12th century coins, which were adopted with the absence of Frankish coinage, can be explained (Penna 1997). Particularly they were interested in keeping the management of key sectors of the economy stable, such as cultivation, pastoral activity, cheese, wool and silk production, to mention some of the most important for guaranteeing revenue.

The 13th century Experienced a significant increase in trade that had the effect of sustaining the manufactory industry and the agricultural sector of production. The supply of products for export to the West, as well as local, regional and Mediterranean exchanges, were sustained by a proliferation of credit and cash brought by commercial and banking activities (Jacoby 2001). The Byzantine manufactory tradition started to change significantly only toward the end of the 13th century, when the political connections between the Kingdom of Sicily and the province of Morea were formally established by the Treaty of Viterbo (1267) and market exchanges between these two regions began to increase. However, this is another topic of research and is not a major focus for this project.
CONCLUSIONS AMONG MATERIAL EVIDENCE, ARCHAEOLOGY AND ECONOMIC HISTORY

7.1 Summary

This PhD research project has been focused on the study of utilitarian, unglazed ceramics with the aim of identifying economic circles in the Early and Middle Byzantine Peloponnese. Many scholars have remarked both that unglazed wares received little attention in the first studies on Byzantine ceramics and that unglazed wares are still not as accurately investigated as glazed wares. The majority of publications concerning Byzantine utilitarian vessels are based on the important study on Corinthian ceramics by T. S. MacKay (1967) and on the first major synthesis on ‘fireproof cooking pots, transport vessels and storage containers’ by C. Bakirtzis (1989a, 2003). Although much of MacKay’s work retains its value, the author herself emphasises ‘the catalogue does not give a full picture of the development and changes in particular forms, and is inadequate for some periods, both in quantity and variety of shapes presented’ (1967: 273). Furthermore, as has been analysed in Chapters 2 and 3, the ceramics that MacKay presents were dated according to the associated glazed ware chronology, which had previously been established by C. H. Morgan (1942). Nevertheless, despite MacKay’s observation that her catalogue did not provide a full picture of Byzantine unglazed ceramics, the same problem was evident in 1992, when Hayes observed that ‘the study of Byzantine pottery has until very recently been concentrated almost entirely on the glazed ware, and particularly the later, more ornamental ones’ (1992: 4). G. Sanders (1993), as well as J. Vroom (2003: 58) and E. F. Athanassopoulos (2016: 40), has since moved towards a similar observation on the state of unglazed, utilitarian vessels. Thus, the first goal of this thesis has been to reassess unglazed pottery in order to overcome deficiencies due to the lack of suitable dated material. In Chapter 4 I have presented a typology and seriation, which in the future can be further refined and amended as research advances.

While chronologies are not the exclusive goal of ceramic studies, here they are considered fundamental to framing any type of historical or socio-economic interpretations. A study on chronology is useful as it can provide supplemental evidence concerning the fine, glazed sherds in context assemblages from
archaeological excavations. Moreover, in assemblages that lack a significant quantity of fine diagnostic decorated pottery, unglazed utilitarian ceramics, particularly cooking ware, are able to provide chronological evidence for dating stratigraphic units. This consideration may be even more relevant if related to survey material, since very small quantities of glazed ceramics are found and are preserved well enough to provide accurate dating; therefore, the chronology presented in this project may provide tools to date unglazed ceramics, which can then be considered as an additional dating tool for investigating historical landscapes.

In the last few decades, studies have started focusing on utilitarian vessels, outlining how they may be used as evidence for investigating cultural and economic identities. More specifically, in the context of Byzantine studies, this recent research has been focused on pottery function, shedding light on food consumption and culinary habits on the basis of the morphological parameters of the vessels. These culinary habits are then further analysed in relation to relevant information in written sources and in artistic representations (Papanikola-Bakirtzis 2005; Vionis 2001, 2013; Vroom 2012, 2015). Furthermore, these studies have proposed historical interpretations regarding cross-regional similarities and trends, which are used to define different economic and cultural areas throughout the millenary history of the Byzantine Empire (Arthur 1989, 2007a, 2007b, 2012; Arthur & Auriemma 1996, Déroche & Spieser 1989, Vroom 2011, 2012).

Despite this renewed attention on utilitarian vessels, the modes of production and the economic significance of these vessels (beyond their use for moving goods) have rarely been studied, leaving unsolved issues concerning their chronology. With the exception of the two major excavations at Saraçhane (Hayes 1992) and Otranto (D'Andria & Whitehouse 1993), this paucity of published material on unglazed Byzantine ceramics has led me to base my research on Byzantine utilitarian ceramics from the excavations at Corinth (ASCSA). My main region of study has since been further narrowed down to the Eastern Peloponnese, specifically to the sites of Argos and Sparta. The main points that I had to consider as I prepared my own research approach for studying unglazed, utilitarian vessels were the nature and the limits of the sites examined in this project. Following this, I developed a definition and set of identifications for the ceramic samples, a selection of reliable deposits, and a classification and seriation of the ceramic samples (see Chapter 3 for the full
methodology applied in this study). Vessels made of a heat resistant fabric were grouped in the cooking ware typology. Unglazed, utilitarian vessels that were not used around fire and were generally useful for processing and storing food have been categorized as coarse ware. Those vessels that have a finer fabric than the coarse ware vessels, generally used as part of table ware and lacking any glazed surface treatment, were labelled as plain ware. Finally, a diachronic study was determined to be the most sensible approach.

7.2 Ceramics and socio-economic questions

The present project would like to test how it is possible to gain information on socio-economic identities through the study of unglazed ceramics. Widespread, unglazed vessels are a valuable proxy, when analysed in association with their archaeological context, for defining economic paradigms and, in this specific instance, Byzantine culture. Utilitarian artefacts, pots included, are characterized by a conservative nature, since the practical aspects of ordinary use had to be taken into account when producing these objects. Thus, fashion and decorative motifs were generally not considered or held only minimal relevance in the manufacture of these types of objects. Consequently, changes in ceramic technology, such as in the fabric recipes, as well as transformations of the ceramic assemblage and shapes of utilitarian vessels are of considerable importance in investigating changes in the society or in the economy of a cultural group. These types of changes in ceramic manufacturing may be related to changes in political structure and organization, changes concerning contacts and movement of people, or changes at the core of economic productivity, specifically pertaining to agriculture. While the changes discussed here are within the context of the Byzantine economy, it is worth noting that the same methodology for approaching socio-economic identity would be useful for analysing any pre-modern economy.

One of the goals of this project has been to identify and quantify the modes and levels of ceramic production and consumption by the local industry of Corinth, which may then be related to the wider economic context of the urban settlement of this city. It follows that these trends need to be related to political and economic patterns on the larger scale of the Byzantine empire, which had a major role in
influencing economic circles, as all political authorities have on their national economies.

The approach applied in this research project is not innovative, and archaeological research over the last few decades has improved methodologies for investigating economic history through a variety of categories of material evidence. The categories of sources are multiple, including production, exchange and use of goods, fashion trends and changes in tastes, numismatics, urban and rural settlements and topography, demography, nutrition, environment and husbandry. It is necessary to be aware that these fields of research require different methods of investigation and that they all suffer from limitations to the kind of information that they can provide; nevertheless, all these topics of research can provide relevant data for reconstructing the dynamics of the economic history of a society (see Chapter 1, Paragraph 2 for a summary on the debate and state of economic history between the archaeological and historical disciplines).

In the context of this research project, the first step for investigating the economic history of Byzantine Corinth, in relation to the cities of Argos and Sparta, has been to quantify changes in trends of the production and the consumption of ceramics. This approach has resulted in data pertaining to the quantification of ceramics, which I have then analysed in the context of the socio-economic history of the Early and Middle Byzantine Peloponnese. This method of research is not innovative per se; for instance, it has been adopted in observing changes in production and consumption in Medieval Europe (Dyer 2005, Molinari 2011, 2014; Molinari & Orecchioni 2017). Specifically, this approach is relevant for addressing the variation in intensity and quantity of demand for goods in a diachronic perspective. The material evidence, which, in this specific case study, is utilitarian ceramics, is then tested in the context of written and numismatic sources, which can adduce information on economic trends, including changes in revenue related to land management and exploitation, taxation and fiscal administration. The increase or decrease in demand for goods, generated by variation of incomes, affects production, which can be observed, for instance, in the changing number of active workshops. In analysing changes in the production and demand for goods, which can be considered as evidence for an increase or decrease of incomes, it is important to evaluate the variation of quantity and types of available vessels in a specific chronological context.
This analysis needs to take into account transformation in technologies and methods of production, changes in shapes and of the variety of pots for multiple functions, as well as fashion and trends of decorative styles. For instance, increased wealth can also be related to an increased individualism, which can determine the transformation of shapes and dimensions of tableware and, consequently, cause changes in dining habits, as documented by the transformation of the dining set.

In this respect, the first topic for debate in the present project has been the transformation of the economic dynamics of production and consumption at the end of Late Antiquity. This transformation of the socio-economic structures is associated, in the case of Corinth and in several other cities in the Mediterranean region, with an important topographical change at the end of Late Antiquity. The forum area, once core to socio-political and economic activity, became merely a suburb of Byzantine Corinth. While some historical sources credit this change to a ‘Slavic’ invasion, any evidence for this event being related to a ‘Slavic’ invasion is almost completely absent. Nevertheless, the presence of an allochthone material culture, which can be associated to a non-Byzantine cultural group, is undeniable in Corinth and in the rest of the Peloponnese. However, it is important to note that this project has questioned the real impact and the scale of the effect that this presence could have had on the local population. To this end, Corinth can be considered a key example. Why, even though the ‘Slavic’ presence is not as richly documented in Corinth as in other sites of the Peloponnese, did the city undergo such an important transformation in the urban topography and economic structure, as documented by the archaeological record? The factors that have led to such a severe socio-economic transition are multiple. The ceramics analysed in the present study can provide further evidence for defining and relating this phenomenon not to an external, single phenomenon, such as the ‘barbarian’ invasion, but to a set of radical changes in socio-economic structures on a Mediterranean scale.

By the late 7th century, a further reduction in the interregional circulation of ceramics is documented in Corinth, with the near-disappearance of African Red Slip ware and of imported amphorae, which probably had been used to transport wine. Moreover, in this period, a decline in the scale of the local pottery industry may be observed, along with a simplification of the types of wares produced. This simplification is documented, thus far, by a very small variety of functional types of
cooking pots, amphorae and pitchers, which are still the product of professional work. Due to the reduced output of the ceramic production, potters in this period probably would be considered semi-professional; it can be hypothesised that they were part-time artisans and, therefore, could have also been involved in other activities, particularly farming activities. Nevertheless, these artisans were professional in the sense that they were still using a wheel, continued to adopt some of the fabric recipes widely used in Late Antiquity cooking pots and formed their vessels into shapes that bore similarities to 7th century shapes. Moreover, it is not possible to assess any condition of economic autarky in this period. Even though the near absence of coinage and the reduction of the economic transaction on an interregional scale is attested, long distance exchanges still involved a segment of the community at Corinth. The majority of cooking pots, and certain types of so-called ‘globular amphorae’, found in deposits dated to the 8th and 9th centuries are imported. Furthermore, the table sets were enriched by the importation of chafing dishes, which started to be imitated locally by the 9th century. It should also be added that, for a short period between the late 8th and early 9th century, Constantinopolitan white table wares were also used in Corinth, albeit in a limited quantity. The almost complete lack of coinage makes it impossible to assess the nature and the context of the economic transaction in which these ceramics were exchanged. However, the presence of these types of glazed table wares, cooking pots and amphorae is documented mainly in important political and strategic locations, i.e., in Sparta or in Italy in centres such as Rome, Naples or Otranto. Consequently, it might be hypothesised that the distribution of these vessels was selective and was related to the Byzantine authority; nevertheless, patterns of distribution cannot be generalized and applied to all the territories that were part of the Byzantine empire. However, at the current state of research, it is not possible to infer a more detailed hypothesis on the nature and real scale of this distributional network.

From the 10th to the 11th century, in terms of ceramic production, the variety of types and the aesthetics of ceramics do not drastically change. In terms of local production of unglazed vessels, an increase in types of utilitarian ceramics is visible. Additionally, an increased level of standardization, compared to the Early Byzantine period, is noticeable, as well as an increased output of ceramic production and consumption, which could also be related to an increase in the population due to the
end of the plague waves. It is worth highlighting that, when local production appears to be able to satisfy local requests, the imports of sparkling cooking ware decrease and are almost absent by the first half of the 10\textsuperscript{th} century. However, the local production of glazed table ware continues to be limited to brown glazed chafing dishes and mugs, with few attempts to imitate Constantinopolitan glazed table vessels. The presence of imported vessels in contexts of usage analysed in this project is very limited in terms of quantity and provenance. Up to the first decades of the 12\textsuperscript{th} century, glazed table ware was almost exclusively imported from Constantinopolitan workshops. However, imported white wares were not widely spread among the local population despite the fact that larger quantities were imported during the 11\textsuperscript{th} century. This is probably because white wares might be evidence for table manners and culinary habits that were not commonplace, instead likely related to the higher ranks of the society.

The presence of these imports from the mid-10\textsuperscript{th} century slowly increases; if this increase in ceramics is analysed together with the increase in production of the local industry and the continuous increase in bronze coinage from the mid-10\textsuperscript{th} century into the 12\textsuperscript{th} century, these pieces of evidence attest to a slow process of economic recovery.

Archaeological evidence documents a significant change, beginning in the 12\textsuperscript{th} century. There is an important expansion of the types and shapes of utilitarian objects, which increase also in terms of quantity and standardization. Moreover, glazed table ware ceased to be imported from Constantinopolitan workshops and started to be locally produced, along with the adoption of new decorative motifs, such as sgraffito, and with more articulated technological procedures borrowed from the Islamic pottery tradition. These new types of table wares were also produced with the adoption of a new fabric recipe, which is indicative of an important reorganization and sophistication of the pottery production in Corinth. By the 12\textsuperscript{th} century Corinthian pottery production had become highly specialised, with distinctive workshops dedicated to the production of glazed and unglazed ceramics, which introduced a new variety of shapes, evidenced both in glazed and unglazed table ware. Sanders observes that chafing dishes, the communal vessels of table ware, were substituted for individual plates and bowls, which gradually became more common in the course of the 12\textsuperscript{th} century in Byzantine Corinth with the spread of new table manners (Sanders
Furthermore, morphological types expanded, along with diverse, locally produced decorative styles, including Slip Painted Light on Dark, Slip Painted Light on Dark Dotted style and Spatter Painted Ware, Green and Brown Painted I and II, Sgraffito Measles and Dark on Light Slip Painted Ware, Sgraffito Style II and Sgraffito Measles. A very articulated glazed production started at the end of the 11th century and expanded significantly from the second quarter of the 12th century. However, Corinthian tables were also enriched by imported glazed wares, such as Spatter Painted, Green and Brown Painted I, II and III, Light on Dark Slip Painted I and II, Dotted Ware, Painted Sgraffito, and Sgraffito Freestyle. The unglazed production was also enriched, with a large variety of types of ceramics for both solid and liquid food, such as cups, jugs, bowls, basins, lagenes and jars.

The increased quantity of glazed wares in the archaeological assemblages moved from 1% at the early 11th century, to 2% in the mid-11th century, to 3% present at the beginning of the 12th century, reaching almost 8% around mid-12th century and almost 15% by the end of the same century (Sanders 1999: 159, fig. 2). This increase of the glazed ware and the increase in the output and consumption of the Corinthian ceramic industry, including the unglazed wares output of the pottery industry at that time, is indicative of the large and widely spread use of ceramics by the 12th century. The expansion of the morphological typology and of the variety of decorative styles are indicative of an enlarged demand on the market, which the artisans had to meet and satisfy, as well as a transformation in dining habits, as documented by iconographic sources (Vionis 2009, Vroom 2015). To this point, it is worth highlighting that paintings also document how higher classes of society used pottery, together with glass and wooden objects. These sources suggest that ceramics were not simply cheaper versions of more expensive metal objects. Consequently, the diffusion of ceramics and the increase in their scale of production can be indicative of a wider diffusion of specific types on a wider social scale. Particularly in the case of fine table ware, the broadening of the consumptions of ceramics, which previously circulated in a very limited quantity, together with the diffusion of bowls for individual guests, might be indicative of favourable economic trends and, consequently, a radical transformation.

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38 This denomination of wares follows Morgan typology (1942), which is widely recognised outside Corinth. I have here used this denomination to be clear to a wider audience of scholars, even though I am aware that this categorization, being based on decorative styles, is in need of a redefinition and updates, since it does not consider fabrics and shapes.
of consumption habits.39 This trend does not appear to come to an end after the so-called ‘sack’ of the Normans, since the city was not radically impacted by the siege guided by George of Antioch under the reign of Roger II of Sicily in 1145. This economic phase of expansion is both confirmed by the geographer Al-Idrīsī in 1154 as well as later in the 12th century by Nicetas Khoniates; both recorded that Corinth was a wealthy town, an ‘emporion’ (Al-Idrīsī, Jaubert 1840: 122-126; Nicetas Khoniates, 74-5; Dieten 1975). Moreover, the 12th century is characterized by a further expansion of the circulating bronze coinage, an additional indication of the improved condition of the monetary exchanges in Corinth.

Finally, Corinthian pottery production does not appear to be negatively impacted by Frankish conquest in 1210, when Frankish domination was established in the region and Corinth became an essential garrison for Geoffrey de Villehardouin. Ceramic production kept increasing in the 13th century, with transformations in the decorative styles of glazed and matt painted wares and a continuity of shapes of the unglazed, utilitarian vessels. The Frankish authority appeared to have tried to leave the local population in place, with the aim to not impact the local and regional economies.

In order to reconstruct the economic history of a region from the archaeological record, the economics of ceramics have to be put in comparison with observable goods in other cities, minor centres and rural settlements. The evaluation of the dynamics of consumption, as well as changes in trends in offer and demand, can be analysed by examining the variety of goods available within a specific chronological range and in relation to a specific topographical context. However, as has been observed, the published ceramics of the Early and Middle Byzantine period are limited and partial. Nevertheless, it is still possible to draw some hypotheses. Both the cities of Argos and Sparta, according to the evidence so far available, appear to suggest a visible increase in pottery production and consumption. However, the development of the economics of ceramics, as documented in Corinth, is visible in these other, minor urban settlements, albeit with some decades of delay. These centres have poor archaeological documentation from the 10th and 11th centuries. In contrast, the increase in level of production, consumption and trade, as well as the

39 On a similar phenomenon in the late 13th to the 14th century, Lazio and Tuscany is analysed by Molinari 2011
major expansion of the ceramic industry, all of which is documented in Corinth by the 2nd quarter of the 12th century, seems also to take place in the urban contexts of Sparta and Argos by the 3rd quarter of the 12th century. The major concentration of elite socio-political relevance of Corinth, the more efficient networks of trade and exchange, and large-scale productivity in such contexts might explain this divergence. Moreover, an important role may have been played in this economic expansion by the monetary exchanges, which would have benefitted from the increase of circulating bronze coinage. As has been analysed in Chapter 6, the debasement of coinage, which started around the mid-10th century, continued until 1092 in an effort to sustain public expenditures. Nevertheless, the sustained increase in the quantity of the coin supply, even though it was debased, did not negatively impact the economy, which, on the contrary, from the mid-10th century onwards experienced an increase in monetized transactions and inflation. Additionally, the monetary and economic policies implemented by the emperor Alexios I further boosted the economy, having a major effect in urban contexts where the middle and higher classes of society would have requested goods produced by skilled. The improvement of agricultural productivity was also essential for supporting and sustaining this economic expansion, due to the fact that the urban market was interdependent with the rural environs.

7.3 Concluding remarks and future work

Archaeology can provide a significant contribution to the investigation of economic history, including that of the Byzantine economy. Specifically, it makes it possible to demonstrate that the Byzantine economy was not static and immovable with limited possibility of development. The archaeological and numismatic evidence document that the economy started recovering from the mid-10th century with the development of an economy of exchange and the diffusion of bronze coinage. This was a slow process of economic revival, which led to the economic expansion that is visible in the archaeological record from the first half of the 12th century in Corinth and, some decades later, in other smaller urban centres in the Peloponnese, indicating an expansion of consumption.

This socio-economic transformation can suggest questions concerning the use of ceramics as indicators of economic development and can generate inquiries for
future work. For instance, it might be worth asking if a similar assemblage was adopted exclusively or operated alongside alternative utilitarian objects and when it was in use by the rural population. Research on villages and rural settlements would address this kind of question. Ceramic assemblages have started shedding light on the Medieval countryside, such as were found during the excavation at Pylos in Elis of a 13th century rural dwelling on the Armatova hill (Coleman & Abramovitz 1986), and at the archaeological levels excavated in the northeast gateway at the Palace of Nestor (Davis & Stocker 2013), in Kythera (Coldstream & Huxley 1972), Nichoria (Rosser 1983), Messene (Yangaki 2006) and Methone (Pallas 1968). Furthermore, survey projects have been investigating the Nemeian Valley (Athanassopoulos 2016), the Laconia (Armstrong 2002), the western Corinthia (Sutton 1990) and central Arcadia (Pikoulas 1988; Forsén et. al 1996). A crucial point with the majority of these publications is that they are in need of a restudy of the ceramics in order to update chronological identifications, which would then allow one to assess topographical development and socio-economic transformation of these regions. Nevertheless, it is possible to observe that urban case studies, like Messene (Yangaki 2006), seem to follow the trend observed in Argos and Sparta. By contrast, rural settlements, like those in Pylos, Nemea and Laconia, appear to be engaged in the economy of exchanges in the very late 12th century, but mainly begin in the 13th century.

The presence of glazed table ware in such contexts later in the 12th century might raise the question as to whether there has been an increase in the production of these wares, making them cheaper products, which might allow for their wider consumption into rural contexts. The relationship between the presence of sherds, the population, and settlement development might also be a fruitful area for examination. For example, it might be observed that economic development allowed those in the countryside to access ceramics that were once almost exclusively used in urban contexts by the middle and high ranks of society. However, to further investigate this point it might be worth also asking if these ceramics were actually becoming more affordable, since not only did workshops increase their output, but also the number of workshops increased. Cases like Argos and Sparta document the local production of ceramics during the course of the second half of the 12th century. Consequently, a way to answer to this question would be to analyse the fabrics of the vessels found in the rural contexts in order to investigate if they were local imitations.
or were imported and, in the latter case, from where they were possibly imported. It
could be suggested that these ceramics became cheaper due to being more widely
produced and due to an expansion of the ceramic industry. As a result, it is likely that
the higher classes of the society would have started looking for new, more exclusive
products to purchase as status symbols. To this point it might be worth asking if the
importation of glazed ceramics in Corinth, contemporaneously to the local production
of glazed table ware, might be interpreted in this way.

Focusing back on the case of Corinth, I believe that we are only at the
beginning of the investigation of the urban Byzantine economy, which necessarily
needs to be addressed through a multidisciplinary effort in order to investigate various
aspects of the Byzantine economic history of this city. The analysis of production,
trade, consumption, and development in a diachronic perspective, together with the
usage of money and the regional and interregional retail systems in which it was
connected, should be further investigated to evaluate the economic performance of
this city.

As has been observed in Chapters 1 and 2, the paucity of published unglazed
utilitarian vessels is a major limitation that does not allow for a quantitative analysis of
the distribution of Corinthian production on both a regional and interregional scale,
which would provide further evidence for the economic process in the wider
hinterland and beyond. Moreover, a major limit to this project is that the relative
chronology of the presented typology of the ceramics has been associated to the
absolute chronology on the basis of coin evidence. It would be essential to further test
the proposed chronology on the basis of scientific analysis, such as Carbon-14 or
Oxygen isotopes on associated organic material, or thermo-luminescence dating for
ceramics, to mention some of the available methods.

In terms of socio-economic assessment of future work, it would be extremely
useful to apply residual analysis to unglazed ceramics. This scientific method of
chemical investigation would be able to provide useful information on the diverse
usage and function of vessels, through an analysis of organic residues absorbed by the
ceramics. This method, in the context of an interdisciplinary approach to the study of
ceramics, would include typological and technological analyses that would be able to
assess the diverse functions that a pot could have throughout the course of its life
cycle. Pots had multipurpose functions, even those that can have a sharp classification
in a typology, a key example of which are amphorae. An analysis of the original contents is the only method for investigating this topic through a meaningful approach. This method would be useful in understanding culinary habits, determining the presence of vegetarian or animal food, and examining the usage of dressing and other liquids such as olive oil, wine and honey. Cooking practices and methods of food storage can also be investigated; whether the pot was put on embers, in direct contact with flames or next to a fire can be determined by the different levels of absorption of lipids by the base, body or rim of a pot. Moreover, residual analysis is also relevant for assessing production and commercial patterns on a local and regional scale, which may shed light on the real content of transport amphorae (Orton & Hughes 2013: 254-258; Pecci 2004, 2009, Pecci et al 2010; Quercia 2008). In relation to the present study, an example could be an analysis applied to the so-called Otranto amphora and lagenes to investigate interregional and local transportation and storage of liquids, as well as potentially to shed light on the culinary tradition, if stewpots were subject to this type of analysis.

A further method by which to develop an analysis of the urban economy would be by expanding the sample of the ceramics, since, during the course of this study, unique examples of shapes have been identified and it raises the question as to whether these objects are rare examples or suffer from a limited sample size. It has already been pointed out that the excavations have thus far investigated what was a suburb of Byzantine Corinth. To better investigate the city’s economic life, it would be important to further investigate the commercial and artisanal urban landscape, expanding the research within the perimeter of the Late Antique city walls.

There are still multiple paths to explore to further understand the city’s consumer economics, its architectural environment and the relation of the city to the surrounding regions and in relation to agricultural production. This project has aimed to provide a further tool to refine the chronological dimension for the understanding of the historical development, not only of Corinthian economy, but also of other Byzantine regions.

Corinth was an important central place, in terms of connectivity, with two harbours, one to the West, at Lechaion, and one to the East, at Kenchreia on the Saronic Gulf. Thanks to these harbours Corinth continued to be one of the main intersections in the Mediterranean network from the Late Antique through Byzantine
times. Moreover, this city had a high concentration of elite and middle class, due to its socio-political relevance in the geo-political Byzantine system. It is likely that the presence of these strata of society further boosted the role of Corinth as a local, and possibly regional, market. This market was characterized in the 12th century by specialized trade, which supplied the residents of Corinth, but probably also served the nearby areas. Small scale workshops and shops may have populated the urban landscape, together with large-scale manufacture units and highly specialized productive activities directly connected to a Mediterranean trade system. Resolving the issues in dating the topographical development of Corinth and systematically excavating the area East of the Forum would be important for further understanding the economic history of this city and its local outcomes, particularly within the context of the wider historical processes to which it is was connected and which determined the economic history of Corinth.
APPENDIX A: CERAMIC ASSEMBLAGES

This section presents a description of the pottery assemblages, their archaeological and stratigraphic contexts. Lots are grouped per their location within the topography of Byzantine Corinth. Descriptions of each area also includes associated references to excavation notebooks and numbers of the archaeological contexts, with an introductory description of the stratigraphy and a characterization of the archaeological layers. Following this, the archaeological evidence is contextualised and is interpreted in relation to any historically relevant topographical contexts. The pottery Lots are then divided into categories of fine, plain, coarse and cooking wares. Ceramic types are identified and quantified and the weight, expressed in kilograms, is presented in brackets.

Panagia South

Area located east of the Roman Villa and south of the Late Roman Bath.

LOT-1998-10
NB 908, p. 52, B. 45. Elevation from +94.09 to +93.16.
This deposit is characterised by red sand with very heavy concentrations of rubble, stone, tiles and squared brick, as well as a large amount of broken marble revetment located southeast of the Bath, which was possibly deposited during the final dismantling operation of the Late Antique bath. This operation produced a remarkable quantity of dump fill, reaching up to almost 0.50 m of thickness.
This fill contained large fragments of pottery, which included sherds that, when mended, reconstructed a substantial portion of the original vessels, suggesting that this was a primary deposit. The large quantity of Late Antique pottery may come from the dismantled structure and the earth dug up from the area of the Bath, which then became residual in this dump fill. This deposit lays below a Middle Byzantine context dated to the 1st half of the 12th century (SU 44). To this Middle Byzantine period belongs a series of deposits, mainly dump fill, characterised by black earth.

Context 45 was laid on a series of general fills dated to between the 7th to 9th centuries, overlaying 7th century deposits (SU 56). The second half of the 5th century to the 7th century is marked by a series of fills without any specific associated activities, save for the presence of three roof tile graves, dated to around the 7th century. Most likely their memory was forgotten, or their graves were simply ignored, when the area was again occupied in the 8th century.

Content of this deposit corresponded to 21.08 kg of pottery; 3,522 kg was saved.

**Fine Ware**
Afrs form 99, almost complete profile, 1 (0.055). Residual.

**Coarse Ware**
No. 2 (Lot-1998-10-3) Early Byzantine amphora, 1 rim (0.165).
No. 10 (Lot-1998-10-4) Early Byzantine amphora, 1 rim (0.01).
Amphora, wheel-ridged, body sherd 1 (0.1) cf. Lot-1998-12-1.
Late Roman micaceous ware jar, toe, 1 (0.046), residual.
Late Roman stamnos, rim 1 (0.126), residual.
Late Roman stamnos, flat base, 5 (0.55), residual.

**Cooking Ware**
No. 15 (C-1998-21), stewpot with flanged lip, complete profile (0.54).
No. 20 (C-1998-22), stewpot with straight, flaring, tapered rim, rim 1 (0.45).
No. 21 (Lot-1998-10-1), stewpot with straight, flaring, tapered rim, rim 1 (0.074).
No. 29 (Lot-1998-10-2) stewpot with flanged rim, rim 1 (0.144).
Stewpot, gold mica body sherd 3 (0.053), cf. Lot-1998-11-5.
Cooking ware, local fabric cf. Lot-1998-10-2, body sherd 8 (0.112), handle 7 (0.22).
Silver sparkling inclusion fabric (cf. C-1963-753), body sherd 2 (0.045), handle 1 (0.022).

LR jar, rim 1 (0.03), residual.
LR, cooking pot, rim 5 (0.77), residual.
Hellenistic cooking pot, rim 1 (0.026), handle 1 (0.01), residual.

Date: late 7th to 9th century on the basis of the pottery and stratigraphy. The high quantity of Late Antique pottery might be considered residual in relation to the human operation which generated this dump fill (the dismantling of the bath).

**LOT 1998-11**
NB 908, p. 55, B. 46. Elevation from + 94, 10 to + 93.05.
This deposit is stratigraphically contemporary and related to the same human activity as SU 45 and 68. As the previous Lot, it is characterised by red sand and debris, such as squared bricks, stones, roof tiles and few fragments of marble revetment, but, as a
whole, they are found in a smaller quantity than in the previous deposit. However, this layer is distinguished from the other SU by a higher concentration of back ash. A total weight of 38.61 kg of pottery has been recovered; 7.43 kg were kept.

**Fine Ware**

1 LRC form 3 with rouletting, rim 1 (0.03), residual.
LRC probably form 3, base 1 (0.05), residual.
Late AfRS, base 1 (0.046).
Late AfRS, body 1 (0.031).
LRC, form 5, rim 1 (0.017), residual.
Attic RS, as Sanders 1999, no. 5, rim 1 (0.031) residual.
Roman red slip, 6 body sherds (0.021), residual.

**Coarse Ware**

No. 3 (Lot-1998-11-2), globular amphora, rim 1 (0.057).
No. 11 (Lot-1998-11-7) Early Byzantine amphora, rim 1 (0.215).
Early Byzantine amphora, as Sarachane 35, Boeotia?, rim 1 (0.18).
Jug as no. 13 (C-1974-48), rim 9 (0.469), base 4 (0.3).

LR amphora (African?) with outwardly thickened rim, bevelled in lip, rim 1 (0.035). Residual.
Amphora LR 2, as Slane and Sanders 2005, no. 4.10, rim 3 (0.076).

**Cooking Ware**

No. 16 (Lot-1998-11-5) stewpot with straight, flaring rim, rim 1 (0.738).
No. 25 (Lot-1998-11-8) stewpot with straight, flaring, tapered rim, rim 1 (0.07).
No. 17 (Lot-1998-11-4) stewpot with flaring rim, concave profile, rim 1 (0.47).
No. 30 (Lot-1998-11-3) stewpot with flaring, flanged rim, rim 1 (0.037).
No. 31 (Lot-1998-11-6) stewpot with flaring, flanged rim, rim 1 (0.034).
Stewpot as Lot-1998-10-2, rim 3 (0.038).
Stewpot as C-1998-21 rim 7 (0.129).
Lid as Sanders 1999, no. 21, rim 1 (0.025).
Lid as Slane & Sanders 2005, no. 4.31, handle 4 (0.187),
Lid as Slane & Sanders 2005 no. 3.33, rim 4 (0.68).
LR stewpot as Slane & Sanders 2005, no. 4.27 and 4.28, rim 19 (0.362).


Inventoried: MF-1998-10 one fragment of opus sectile.

Date: late 7th to 9th century on the basis of the pottery and stratigraphy. The high quantity of Late Antique pottery might be considered residual in relation to the human operation which generated this dump fill (the dismantling of the bath).

**LOT 1998-12**

NB 908, p. 99, B. 68. Elevation from + 93.92 to + 92.80.
This deposit is stratigraphically contemporary and related to the same human activity as SU 45 and 46. The SU matrix is characterized by a light reddish to dark sand, with a
patch of ashy sand. Still, debris, such as bricks and tiles, have been found in this deposit. A total weight of 11.96 kg of pottery was recovered; 2.095 kg were kept.

Fine Ware
Afrs 1 broad flaring rim with molding, rim 1 (0.018), residual.
LRC, form 3, rim 1 (0.05), residual.
Afrs form 50B with spiral grooves, rim 1 (0.019), residual.
Hellenistic, rim 2 (0.01), 1 attic disc (0.08), residual.

Coarse Ware
No. 6 (Lot-1998-12-1) globular amphora, rim 1 (0.175).
No. 7 (Lot 1998-12-4), table amphora, descendent of Late Roman Amphora 2?, rim 1 (0.123)
Amphora as Lot-1998-12-4, rim 2 (0.214), body sherd 12 (0.5).
Amphora as Slane & Sanders 2005, no. 4.26, rim 1 (0.054).

Cooking Ware
Gold sparkling inclusions, body sherd 2 (0.06) as Lot-1998-10-1.
Handmade cooking pot, combed decoration, body sherd 1 (0.012).
Handmade cooking pot, body sherd 1 (0.01).
LR cooking pot as Sanders 1999, no. 17, rim 1 (0.014)
LR cooking pot as Sanders 1999, no. 19, rim 1 (0.04)
LR cooking pot as Slane and Sanders 2005, no. 3.31, rim 1 (0.027) Residual.
LR lid handle as Sanders 1999, no. 26, (0.02).

Date: late 7th to 9th century on the basis of the pottery and stratigraphy. The high quantity of Late Antique pottery might be considered residual in relation to the human operation which generated this dump fill (the dismantling of the bath).

LOT 1999-22
NB 913, p. 119, B. 50; NB 920, p. 11, B 04; p. 157, B 79. Elevation from + 93.32 to +92.63. These deposits are located south of the Late Antique Bath and their matrix is composed of red sand, with a large quantity of debris, such as tile and worked stones, together with worked pieces of marble. They might be interpreted as dump fills with debris from the dismantling operation of the Long Building south of the Bath. Additionally, the pottery, particularly the cooking ware, appeared in large fragments that could be mended, suggesting that they might further be interpreted as dump fills in primary deposition. The total weight of the ceramics corresponded to 18.70 kg, of which 13.91 kg were saved.

Fine Ware
No. 1 (Lot-1999-22-1), red matt painted disc, foot 1 (0.022)
Afrs, unidentified base, 1 (0.008), residual.
Unidentified roulette Afrs, body sherd 1 (0.005), base 1 (0.03), residual.
Afrs, form 99, thin wall, rim 1 (0.003), residual.
Afrs unidentified, body sherd 1 (0.002), residual.
Coarse Ware
No. 12 (Lot-1999-22-4) Early Byzantine Amphora, rim 1 (0.244).
Late Roman Amphora II, body sherd 4 (0.085).
Amphora as Slane and Sanders 2005, no. 4.26, body sherd 40 (1.35).
Basin as Sanders 1999, no. 15, rim 1 (0.034).
Lid as Sanders 1999, no. 20, handle 1 (0.026), residual.
Gaza amphora, body sherd 1 (0.061), residual.
Palestinian amphora, body sherd 1 (0.036), residual.
Gan amphora, rim 1 (0.08), handle 1 (0.16), residual.

Cooking Ware
No. 24 (Lot-1999-22-2) stewpot with straight, flaring, tapered rim, rim 1 (0.65).
No. 18 (C-1999-57) collar rim stewpot, complete profile 1 (0.667).
Stewpot as Lot-1998-10-1, body sherd 1 (0.012).
Stewpot as C-1998-21, rim 1 (0.025).


Date: 8th to 9th century on the basis of the pottery. It is stratigraphically equivalent to Lots 1998-10, 11 and 12.

LOT 1999-29
NB 920, p. 17, B 07. Elevation from + 93.510 to + 92.750.
This deposit is a low retaining wall of rough stones and tiles, probably built to facilitate the removal and the demolition of the Long Building south of the Bath. This lot was stratigraphically overlaid by Lot 1999-22. This context revealed 1.01 kg of pottery and all 1.01 kg was saved.

Coarse Ware
Late Roman Amphora II, body sherd 1 (0.018).
Micaceous water jar, body sherd 1 (0.047), residual.
Palestinian amphora, body sherd 1 (0.02), residual.

Cooking Ware
No. 19 (Lot-1999-29-1) stewpot with straight flaring rim, rim 1 (0.111)

Date: 8th to early 9th century, according to pottery and stratigraphy.

LOT 1999-59
NB 913, p. 175, B. 77. Elevation from + 92.75 to + 92.60. Grave number: 1999-08.
This context is the grave fill under a tile cover. This grave was partially damaged by the excavation of a robbing trench during the course of the 12th century.
The preserved fill included 1.27 kg of pottery, all of which was kept.

Fine Ware
LRC, form 3, rim 1 (0.008), residual.
Coarse Ware
No. 9 (Lot 1999-59-1) amphora, rim 1 + non joining 31 body sherd (0.67)

Cooking Ware
No. 22 (Lot 1999-59-2) stewpot with straight, flaring, tapered rim, rim 1 (0.075).
LR cooking pot rim as Sanders 1999, no. 17, rim 1 (0.031), residual.

Date: second half of 8th to early 9th century according to pottery and stratigraphy.

LOT 2003-24
NB 959, p. 29, B. 7.; B. 8, p. 31. Manhole 2003-1. Elevation from +92.07 to +91.42 m. These contexts are the fills identified in a stone-built well, approximately 2 m deep, located north of a water channel, which is connected to two triangular openings covered by two stones at one meter deep. The top two deposits were clearly distinguished according to changes in matrix colour, soil composition and concentration of inclusions (SU 7 and 8). The other two contexts excavated in the lower part of the well were artificially created in order to avoid contamination, with a thickness of 0.60 m each. These last two deposits revealed pottery dated to the late 5th and 6th century; worth mentioning is a complete profile of a dish LRC, form 1 A, found almost at the bottom of the well. All deposits were 100% sieved.
The two upper contexts, of later chronology, were characterized by stone inclusions and fragments of marble revetment, which might suggest when the well stopped working as a manhole and was, instead, possibly used as a rubbish pit. These two fills revealed 5.88 kg of pottery, all saved.

Fine Ware
Chafing dish lid, brown glaze, rim 1 (0.035).

LRC shaped, base 1 (0.019) residual.
ESB, 1 base (0.023), residual.
AfRS, unidentified form, rim 1, body sherd 2 (0.031), residual.

Coarse Ware
(C-2003-27) Imported amphora (possible Aegean provenance) (0.4).
Pre-medieval amphora body sherd 24 (0.45), 4 handles (0.26).

Cooking Ware
No. 42 (Lot-2003-24-1) Collar rim stewpot (0.028).
No. 43 (Lot-2003-24-2) Collar rim stewpot (0.042).
Body sherd, 7 (0.086), handle of stewpots, (byzantine according to fabric) (0.034).
Stewpot as Sanders 1999 no. 18, rim 1 (0.019), residual.
Late Roman, close shape, base 1 (0.037), body sherd 1 (0.008).

Other
Stopper cut down from LR 2 amphora, complete profile, 2.

Date: 9th to first half 10th century, on the basis of pottery.
LOT 1998-18
NB 909, p. 98, B 70. Elevation from + 93.34 to + 93.23.
This deposit is located in Room 2 of the so-called Long Building. This complex was not completely dismantled after the 7th century and some of its rooms were still in use during the Middle Byzantine period. This deposit documents the usage of this room, together with the later deposit (Lot-1998-17) which overlays it.
Lot 1998-18 is a deposit characterised by a brown soil with a few fragments of tile and stone, found in the northeastern corner, which also corresponds to the corner of the room. It does not appear to be a floor surface, which is better visible within this room in the 10th century (Lot-1998-17); instead this deposit might be considered the result of a cleaning-up operation. It is laid on top of a floor made of sand and cement, dated to the Late Roman period (NB 913, B. 5). The deposit was 100% sieved and all pottery saved (1.92 kg). The large joining fragments suggest that pottery in this deposit was in primary deposition.

Coarse Ware
No. 184 (Lot-1998-18-2) Jug (0.1).
Middle Byzantine amphora, wheel-ridged body sherd 5 (0.25).
Jug, red fabric, burnished, body sherd 1 (0.009).
Jug, plain, body sherd 1 (0.009).
Late roman amphora 2, body sherd 1 (0.025).
Late roman amphora, body sherd 7 (0.38).

Cooking Ware
No. 40 (Lot-1998-18-1) Collar rim stewpot (0.129)
Handle, Byzantine fabric, 1 (0.019).
Late Roman stewpot, handle (0.03).

Date: 9th to first half 10th century, possibly early 10th, according to pottery and stratigraphy.

LOT 1999-42
NB 918, p. 100, B. 079; p. 110, B. 087. Elevation from + 92.41 to + 92.13.
The deposit is composed, up to 50%, of large fragments of tiles and pebbles. This area might have been involved in construction activity related to the Long Building in the Middle Byzantine period, which needed an earth movement operation. Here a series of rubbish pits dated to the 10th and 11th centuries have been identified. Several pots have been found in large fragments and could be mended. A total weight of 8.06 kg of pottery was found; 4.48 kg has been saved.

Fine Ware
LRC, form 10 C, rim 1 (0.018), residual.
Chafing disc (C-1999-24), complete profile 1 (1.21)

Coarse Ware
Red broad band matt painted amphora, Apulian? body sherd 1 (0.073).
Otranto amphora type, rim 1, body sherd 7 (0.195).
Middle Byzantine jar, wheel-ridged body, flat base, base 1 (0.179).
Burnished Jug, body sherd 2 (0.016).

Date: 9th to first half 10th century, possibly early 10th, according to pottery and stratigraphy.
Polished Jug, body sherd 3 (0.04).
Amphora (Lot-1999-42-4) Early Byzantine? Rim 1 (0.16).
Late Roman amphora, body sherd 5 (0.153), rim 3 (0.07), handle 1 (0.027).

Cooking Ware
No. 44 (Lot-1999-42-2) collar rim stewpot, concave profile, rim 1 (0.107)
No. 23 (Lot-1999-42-3) tapered, flaring rim stewpot, rim 1 (0.013)
No. 27 (Lot-1999-42-1) concave thickened rim stewpot, silver sparkling inclusions, rim 1 (0.041).
Silver sparkling inclusions fabric, body sherd 1 (0.016).
Gold micaceous inclusions, body sherd 1 (0.011).
Stewpot as Sanders 1999, no. 19, rim 1 (0.023), residual.

Date: 9th to first half 10th century according to pottery and stratigraphy.

LOT 1999-21
The matrix of this deposit is loose, reddish brown in colour and of silty sand composition. 50% of inclusions are characterised by fragmentary tiles and large pebbles. This deposit is possibly related to a secondary deposition of the destruction debris of the Long Building located south of the Bath. The ceramics, in fact, suggest a high degree of residuality. 0.60 kg of a total 3.10 kg of pottery has been saved.

Fine Ware
White Ware Kettle, body sherd 1 (0.014).

Coarse Ware
Jug as C-1974-48, rim 1 (0.011), body sherd 6 (0.089), flat base 1 (0.023).

Cooking Ware
(Lot-1999-21-1) Flanged rim stewpot (0.072).
(Lot-1999-21-2) Flanged rim stewpot (0.123).
Stewpot as Lot-1999-22-2, 1 (0.028)
Body sherd 3, silver sparkling inclusions fabric (0.034).

Pre-medieval, 1 (0.022).

Date: first half of the 10th century according to stratigraphy.

LOT 1998-28
Notebook 911, p. 100, B. 55. Elevation from + 94.39 to + 93.96.
This stratigraphic unit is characterised by a soft, brownish-black matrix, with pebbles and fragmentary tiles as inclusions. Stratigraphically, this deposit is the fill of a pit, overlaid by the floor of one of the rooms of the 12th century complex. The crosswall within this room is laid on the eastern edge of this pit. 11.02 kg of pottery has been found in this context; 8.59 kg has been saved.
Fine Ware
Chafing disc, cf. Sanders 1995b, no. 2, rim 3 (0.11).
White Ware, fruit stand, yellow glaze, foot 1 (0.003).
Measles Ware, bowl, body sherd 1 (0.003), contamination.

Plain Ware
White Ware, kettle, body sherd 1 (0.004).
White Ware, mug, body sherd 1 (0.004).

Coarse Ware
Small jug as C-1937-1273, body sherd 1 (0.009).
Jug as Lot-1977-47-28, body sherd 1 (0.01).
Jug as Lot-1977-47-18, base 14 (0.45).
Burnished jug, handle round in section 1 (0.014), body sherd 4 (0.077).
Middle Byzantine Jug, plain, body sherd 17 (0.128).
Otranto amphora type as no. 185, body sherd 138 (2.95) handle 3 (0.57), rim 3 (0.016), dimple base, 1 (0.018).
Amphora, non-local fabric, body sherd 18 (0.437).
Pre-medieval, body sherd 47 (1.41).

Cooking Ware
No. 46 (Lot-1998-28-1) Collar rim stewpot, type 1-B, rim 1 (0.066).
No. 45 (Lot-1998-28-5) Collar rim with concave profile stewpot, type 1-A, rim 1 (0.047).
No. 28 (Lot-1998-28-2) Concave thickened rim stewpot, silver sparkling inclusions, rim 1 (0.056).
No. 178 (Lot-1998-28-3) Handmade beaker, rim 1 (0.01).
Stewpot as Lot-1998-11-3, rim 1 (0.015).
Silver sparkling fabric as Lot-1998-28-2, non-joining body sherd 1 (0.026).

Body sherd 33 (0.354).
Pre-medieval, body sherd 1 (0.003).

Coin

Other
Small find: 1 sombrero lid.

Date: First half of 10th century according to pottery and stratigraphy. The fragment of Measles Ware is a possible contamination from the above stratigraphic unit dated to the 12th century.

LOT 2002-03
Notebook 948, p. 96 B 49, p. 97, B. 50. Elevation from + 93.73 to + 93.34. These two deposits correspond to the fills of a robbing trench used to loot a Late Roman wall. The black soft matrix of this deposits is differentiated by the higher concentration of rocky inclusions in the lower deposit. 1.63 kg of pottery were saved, from a total of 5.34 kg.
Coarse Ware
No. 205 (Lot-2002-03-01) Plain rim, large amphora, rim 1 (0.9).
No. 251 (Lot-2002-03-02) Matt painted lagena, type, 1, rim 1 (0.7).

Date: second half 12th century according to pottery and stratigraphy.

PANAGHIA VILLA

Located southwest of the Late Antique bath complex is a Roman villa, dated circa to the 3rd century. This urban house is a lavish domus decorated with intricate geometric mosaic floors and a marble fountain, as well as two peristyle courts. Numismatic evidence suggests that this complex was probably destroyed during the time of Constantine. A sequence of destruction layers has been excavated over this villa, producing no evidence of construction activity during the Late Antique and Early Byzantine periods. After a period of abandonment, the area is newly occupied during the course of the 5th century, with the construction of a new domus which is contemporary with the bath complex in the northeast area of Panaghia Field. Above the Late Roman levels, over the debris of the Roman villa, excavations have revealed a sequence of Middle Byzantine deposits, mainly dump fills and rubbish pits. These are possibly connected to the requalification and construction activity underway in this period, south of the area once occupied by the Late Antique bath, where the so-called Long Building was located.
Architectural features are dated to during the 12th century in Panaghia Field (Sanders 1999: 441-443).

LOT-1999-25
Elevation from + 93.21 to + 92.66. 100% sieved.
This Lot includes the fills of a wide, shallow pit identified below a hard-packed surface. A total amount of 41.43 kg of pottery has been found and all of it was saved.

Fine Ware
White Ware Polychrome, dotted and cross decoration, base 1 (0.009)
White Ware, Green and Brown Glaze, as Sanders 1995b, no. 118, rim 1 (0.007)
White Ware, Green Glaze cup, body sherd 2 (0.002)
White Ware, Yellow Glaze, cup, base 1 (0.001)
White Ware, Green Glaze, bowl, rim 1 (0.003), body sherd 2 (0.011).
White Ware, pedestal plate, foot 1 (0.003)
Chafing disc, lid, not local fabric, rim 1 (0.009)
Chafing disc, local fabric, rim 2 (0.052), body sherd 2 (0.033).
Chafing disc, 10th century type, rim 1 (0.020).
Pre-medieval, body sherd 26 (0.363).

Plain Ware
White Ware, kettle, handle 2 (0.035), body sherd 20 (0.161), blackened surface with few, sparse drops of yellow glaze.

**Coarse Ware**

Incised jug as C-1937-2274, body sherd 1 (0.026).
Jug as Lot-1992-89-5 body sherd 18 (0.219), foot 1 (0.214).
Jug, plain body sherd 60 (0.642),
Jug as Lot-1992-87-20, body sherd 2 (0.025).
Jug as Lot-1990-54-11, rim 1 (0.35).
Jug as Lot-2009-89-12, body sherd 2 (0.02).
Jug, flat base, 5 (0.15).
Small jug, flat base, 1 (0.05), cf. Lot-2009-89-5.
No. 326 (Lot-1999-25-13), pedestal bowl, type 4, rim 1 (0.045).
Pedestal bowl, type 3, as Lot-1996-36-2, rim 1 (0.02), body sherd 1 (0.029).
Pedestal bowl, type 3 as Lot-1996-36-1, rim 1 (0.02)
Bowl as Lot-1989-15-14, rim 4 (0.087)
Cup cf. Lot-1989-5-31, stand 1 (0.03).
Jar, Lot-1999-25-5, rim 1 (0.33).
Jar, Lot-1999-25-6, rim 1 (0.4).
Jar, Lot-1999-25-12, rim 1 (0.034).
Pithos, Lot-1999-25-7, rim 1 (0.43).
Otranto type amphora, as C-1937-2297, body sherd with incised wavy line 17 (1.053),
wheel-ridged body sherd 1233 (7.287), concave base 1 (0.017), handle 6 (1.31).
Lagena, type 1, as Lot-2009-07-5, handle 4 (0.47).
Basin as Lot-1992-87-17, rim 1 (0.12).

Pre-medieval, body sherd 161 (2.707)

**Cooking Ware**

No. 86. (Lot 1999-25-1), Triangular rim stewpot, type 1, rim 1 (0.038).
No. 87. (Lot 1999-25-10), Triangular rim stewpot, type 1, rim 1 (0.014).
No. 95. (Lot 1999-25-2) Collar rim stewpot, type 3, rim 1 (0.15).
No. 63. (Lot-1999-25-3) Collar rim stewpot, type 3, rim 1 (0.033).
No. 67. (Lot-1999-25-4) Collar rim stewpot, type 3, rim 1 (0.03).
No. 64 (Lot-1999-25-8) Collar rim stewpot, type 3, rim 1 (0.035).
No. 62 (Lot-1999-25-11) Collar rim stewpot, type 3, rim 1 (0.023).
Triangular rim stewpot, type 1, as Lot-1999-25-1, rim 11 (0.214).
Triangular rim stewpot type 1-C, rim 1 (0.035).
Triangular rim stewpot, type 1, as Lot-5117-08, rim 2 (0.033).
Triangular rim stewpot, type 1, as Lot-5117-15, rim 1 (0.03).
Triangular rim stewpot, type 1, as Lot-5117-14, rim 1 (0.018).
Collar rim stewpot, type 3, as Lot-1999-25-2, rim 9 (0.108).
Collar rim stewpot, type 3, as Lot-1999-25-8, rim 3 (0.062).
Collar rim stewpot, type 3-C, as Lot-1996-36-13, rim 10 (0.113).
Collar rim stewpot, type 3, rim 2 (0.031).
Collar rim stewpot, type 2-A, as Lot-1996-36-8, rim 1 (0.006).
Collar rim stewpot, type 2, as Lot-2009-89-26, rim 1 (0.032).
Outwardly thickened rim stewpot, type 1, as Lot-1990-54-19, rim 3 (0.109).
Small cooking pot, type 1, as Lot-1989-8-34, rim 2 (0.09).
Small cooking pot, type 1, flat base 4 (0.08)
Byzantine stewpot, handles 50 (2.08), body sherd 358 (4.25)

Pre-medieval body sherd 16 (0.31)
Roman/Late Roman water pipe, body sherd 1 (0.25)

Date: Late 11th to early 12th century according to pottery and stratigraphy.

LOT-1996-36
NB 885, p. 6, B. 4; p. 17, B. 14; p. 24 B. 19; p. 25 B. 20. Pit no. 1996-7. Elevation from +94.1 to +92.77. 100% sieved.
This lot includes a sequence of fills in a rubbish pit, which was excavated through Late Antique deposits. This bothros has revealed an important quantity of pottery, preserved in large fragments, for a total weight of 68.299 kg, of which 61.058 kg was saved. The majority of the pottery is unglazed utilitarian vessels, corresponding to 37.774 kg coarse ware and 17.493 kg of cooking ware, whereas the fine ware had a total weight of 1.541 kg. Together with the pottery, these deposits also revealed a high quantity of animal bones, including bovine, hovicaprid and cuttlefish. Moreover, large fragments of marble revetment, metal artefacts and worked bones have been discovered (Notebook 885, pp. 25-26). Additionally, a coin hoard has been identified in association with the stratigraphic unit no. 14 of this pit. A total of 11 Anonimus Follis, Class A2 coins have been found in two physically separate groups within the same deposit.

Fine Ware
White Ware, green glaze cup with vertical rim, handle 1 (0.015).
White Ware, green glaze, cup, body sherd 1 (0.003).
White Ware, jug, with thin layer of green glaze, body sherd 1 (0.003).
White ware plate, yellow glaze, Lot-1996-36-4, rim 1 (0.022).
Chafing dish, clear glaze, Lot-1996-36-5, local fabric, rim 1 (0.16).
Chafing dish, brown glaze, local fabric, body sherd with handle attachment 2 (0.029).
Chafing dish, no glaze on outer surface, brown glaze on inner surface, local fabric, rim 1 (0.014), cf. C-1937-2269.
Conical lid of chafing dish, brown glaze, local fabric incised decoration of wavy lines and alternated dots, rim 1 (0.053).
Chafing dish (imported fabric) with incised decoration of intersecting lines, rim 1 (0.014), foot 1 (0.013).
Conical lid of chafing dish, imported fabric, brown glaze, rim 1 (0.022).
Chafing dish (imported fabric as lid) rim 1 (0.007), body sherd (0.039), body sherd with incised decoration body sherd 3 (0.008).
Brown glazed cup, local fabric, rim 1 (0.006), body sherd 4 (0.010), cf. C-1974-55A.

Green and Brown Slip Painted Ware V, glaze painted, no overglaze, bowl, body sherd 1 (0.01), contamination.
Pre-medieval, body sherd 9 (0.065).

Plain Ware
No. 181 (Lot-1996-36-22) White Ware beaker, flat base 1 (0.086).
White Ware beaker, base 1 (0.021), similar to Lot-1996-36-22, but smaller in diameter (diam. base: 0.04).
White ware beaker as Lot-1996-36-22, base 1 (0.075), body sherd 20 (1.06).

**Coarse Ware**
No. 323 (C-1996-32) Pedestal bowl, complete profile (1.008).
No. 324 (Lot-1996-36-1) Pedestal bowl, complete profile (0.6).
No. 325 (Lot-1996-36-2) Pedestal bowl, complete profile (0.42).
Pedestal bowl as Lot-1996-36-2, rim 14 (0.45), body sherd 9 (0.8), foot 2 (0.05).
Pedestal bowl as Lot-1996-36-2, but smaller in diameter (diam. rim 0.14), rim 13 (0.25), foot 1 (0.01).
Pedestal bowl, type 3, as Lot-1996-36-1, rim 8 (0.35), body sherd 3 (0.25).
No. 336 (Lot-1996-36-3) cup, complete profile (0.08).
No. 343 (C-1996-31) Two handle tankard, complete profile (0.114).
Small bowl as Lot-1989-8-44, rim 3 (0.01).
Jug as Lot-1990-55-11, rim 4 (0.078).
Jug as Lot-1990-54-15, rim 1 (0.08).
Burnished Jug as Lot-1992-89-5, body sherd 40 (0.37), disc foot 4 (0.15).
Burnished Jug, as Lot-2009-89-6, body sherd 8 (0.052), flat base 1 (0.3).
Middle Byzantine Jug, plain body sherd 175 (1.1), disc foot 3 (0.29), flat base 11 (0.06), handle round in section 10 (0.25), oval in section, 8 (0.2), handle with central spine, 1 (0.05).
Jug as Lot-1977-47-8, rim 1 (0.004).
Jug with white matt painted decoration as Lot-1992-92-19, body sherd 1 (0.02).
Jug with white matt painted decoration as C-1937-2293, body sherd 5 (0.09).
Tankard with white matt painted decoration as C-1937-2292, body sherd 1 (0.02).
Cup as C-1996-31, rim 1 (0.01).
Jug as Lot-2009-89-5, rim 1 (0.005) body sherd 4 (0.068).
Jug as Lot-1977-47-28, rim 17 (0.076), neck 3 (0.1).
Strainer, Jug, 1 frgt (0.01)
Small cup as C-1937-732, rim 5 (0.02), body sherd 1 (0.01).
Amphora as Lot-1996-36-18, rim 3 (0.05).
No. 220 (Lot-1996-36-11) Lagena, type 2-A, rim 1 (0.031).
No. 200 (Lot-1996-36-12) Amphora, type 1, rim 1 (1.6),
Amphora as Lot-1996-36-12, rim 2 (0.04).
No. 201 (Lot-1996-36-17) amphora, type 1, rim 1 (0.4).
Amphora as Lot-1996-36-17, handle 6 (0.67).
No. 353 (Lot-1996-36-19) Outturned rim jar, rim 1 (0.1).
No. 345 (Lot-1996-36-20) Pithos, rim 1 (0.3).
(Lot-1996-36-21) Imported Amphora, handle 1 (0.7)
Middle Byzantine Amphora, plain body sherd 488 (13.15).
Otranto type amphora, wheel-ridged body sherd 101 (3.828), body sherd with incised line, body sherd 5 (0.22), handle with high central spine, 3 (0.18).
Legana body shape, type 1-A, as Lot-1991-82-4, body sherd 3 (1.4).
Fractional amphora, body sherd 1 + handle attached 1 (0.4)
No. 362 (Lot-1996-36-10) Cooking Ware Collared Jar, rim 1 (0.2).
Jar as C-1937-2296, base 3 (3.4), body sherd 1 (0.3).
Byzantine lamp, foot 1 (0.04).
Pre-medieval amphora, handle 2 (0.15), rim 8 (0.01), body sherd 11 (0.422).
Cooking Ware

No. 48 (Lot-1996-36-8) Collar rim stewpot, type 2-A, rim 1 (0.25).
Stewpot as Lot-1996-36-8, rim 12 (0.4).
No. 49 (Lot-1996-36-14) Collar rim stewpot, type 2-A, rim 1 (0.36).
Stewpot as Lot-1996-36-14, rim 3 (0.04).
No. 50 (Lot-1996-36-23) Collar rim stewpot, type 2-A, rim 1 (0.028)
No. 54 (C-1996-33) Collar rim stewpot, type 3-A, complete profile 1 (0.93).
No. 55 (Lot-1996-36-6) Collar rim stewpot, type 3-A, complete profile (1.15).
No. 56 (Lot-1996-36-7) Collar rim stewpot, type 3-A, complete profile (0.7).
Stewpot as Lot-1996-36-7, rim 14 (0.6).
No. 61 (Lot-1996-36-13) Collar rim stewpot, type 3-C, rim 1 (0.28).
Stewpot as Lot-1996-36-13, rim 19 (0.694).
No. 66 (C-1996-34) Collar rim stewpot, type 3-C, complete profile 1 (0.265).
No. 79 (Lot-1996-36-15) Cauldron, type 2-B, rim 1 (0.955).
Cauldron as Lot-1996-36-15, rim 1 (0.01).
No. 80 (Lot-1996-36-16) Cauldron, type 2-B, rim 1 (0.19).
Cauldron, type 1-B as C-1937-2295, rim 1 (0.042).
Collar rim stewpot, type 2-A, as Lot-1996-36-23, rim 1 (0.035).
Stewpot, collar rim, type 2-A, rim 3 (0.08).
Collar rim stewpot, type 3-B as Lot-1991-77-2, rim 1 (0.01).
Collar rim stewpot, type 3-B as Lot-2009-89-21, rim 3 (0.1).

Pre-medieval, rim 9 (0.08).

Coins
1996-137 to 147: Anonymous issue, class A2, 969-1030 (hoard)
1996-156: Sicyon group B, ca. 196-160/150 B.C.
1996-159: Constantine VII, Class 5, 945-950.
1996-160: Illegible copper coin, possibly Late Byzantine (1092-1024) or Greek (100-31 B.C.).
1996-162: Illegible copper coin, possibly Late Byzantine (1092-1024) or Greek (100-31 B.C.).

Date: Probably first half 11th, but mainly mid- 11th century according to pottery and stratigraphy. The coin hoard provides a terminus post quem for the pottery in this lot, because of the nature of the context in which they have been found – a rubbish pit. Reasonably, these coins were discarded when they went out of circulation and were not usable anymore for transactions.
This area is located c. 30 m west of Panaghia bath.

LOT-2002-36
NB 953, B. 9, p. 21, B. 10, p. 23. Elevation from + 91.77 to + 90.04.
This lot includes the fills of a robbing trench. The matrix of the upper deposit, loose and reddish in colour, was rich in stone, tile fragments and architectural fragments, whereas the lower one was blackish and richer in ash. Below this deposit the foundations of a Late Antique wall were exposed, which was part of a complex located west of the Late Roman bath. Pottery is preserved in large, joining fragments, suggesting a primary deposition of these deposits. 100% sieved. 3.49 kg of 10.17 kg saved.

Fine Ware
Plain green glazed fenestrated chafing dish (C-2002-19), rim 1 (0.35).
Impressed White Ware, yellow glaze, dish, base 1 (0.060).
Light on Dark Slip Painted I, bowl, body sherd 1 (0.035).
Green and Brown Slip Painted II, bowl, body sherd 1 (0.007).
Plain Yellow Glaze, bowl, body sherd 1 (0.007)

Coarse Ware
No. 309 (Lot-2002-36-4), bowl, rim 1 (0.024).
Jug as Lot-1992-89-11, base 1 (0.035).
Jug as Lot-2009-89-13, body sherd 1 (0.112).
No. 246 (Lot-2002-36-1), black matt painted lagena, type 1, rim 1 (0.614).
Lagena, rim shape as Lot-2002-36-1, rim 1 (0.013).
Red matt painted lid, handle 1 (0.064).
Basin as Lot-2009-51-3, rim 1 (0.034).
Transport amphora, type 2, as Lot-1989-08-39, handle 1 (0.175).
No. 296 (Lot-2002-36-5) basin, rim 1 (0.188).

Pre-medieval, body sherd 3 (0.193).

Cooking Ware
No. 101 (Lot-2002-36-2) Triangular rim stewpot, type 1, complete profile 1 (0.817).
Triangular rim stewpot, type 1, as Lot-5117-11, rim 1 (0.125).
Stewpot, handle 3 (0.089).

Date: first quarter of the 12th century on the base of pottery and stratigraphy.

LOT-2002-05
West of the Panaghia Bath, large circular rubbish pit of 4.5/5 m in diameter. The diverse characteristics of the matrix has made it possible to distinguish 9 diverse fills in this bothros, which have also revealed high concentration of animal bones.
43.89 kg of pottery saved of 103.2 kg originally found.

Fine Ware
White Ware, plain yellow glaze, pink fired, base 1 (0.071).
White Ware, plain yellow glaze, bowl, body sherd 2 (0.056).
White ware, plain green glaze, plate, base 1 (0.026), body sherd 2 (0.075).
Measles ware, bowl, rim 1 (0.007), base 2 (0.048), body sherd 4 (0.089).
Painted sgraffito, body sherd 5 (0.099), base 1 (0.051), bowl, complete profile, 1 (0.385).
Sgraffito as Corinth XI cat. no. 1250, fig. 107, disc, rim 1 (0.027), base 5 (0.154), body sherd 7 (0.095); bowl, rim 4 (0.142), base 1 (0.045), body sherd 6 (0.167); bowl waster, base 1 (0.024), carinated bowl, rim 1 (0.046).
Sgraffito, as Corinth XI cat. no. 1103, fig. 104 b., disc, body sherd 1 (0.026).
Slip plain green glaze, bowl, rim 1 (0.042), body sherd 1 (0.013), base 1 (0.045).
Slip, plain green glaze, cup, body sherd 2 (0.018), base 1 (0.018).
Slip, plain yellow glaze bowl, rim 2 (0.025), body sherd 8 (0.065), base 1 (0.014), disc, rim 2 (0.038).
Light on Dark Slip Painted II, Jug body sherd 1 (0.012), plate rim 1 (0.17), bowl, rim 2 (0.03), bowl/plate body sherd 2 (0.035).
Jug, green and brown slip painted, handle 1 (0.025).
Green and Brown slip Painted II/II, bowl, body sherd 1 (0.024).
Green and Brown slip Painted II (brown glaze worn), bowl, body sherd 2 (0.07).
Green and Brown Slip Painted II/III, carinated bowl, rim 16 (0.299), body sherd 12 (0.048), base 2 (0.044).
Green and Brown Slip Painted, III, bowl, rim 3 (0.078) body sherd 3 (0.092), base 1 (0.097).
Green and Brown Spiral Style, bowl, rim 1 (0.007).
Syrian, alkaline glaze, bowl, rim 1 (0.024), base 1 (0.043).
Slip, plain green glaze, lamp body sherd 1 (0.013).
Slip, plain green glaze, juglet, rim 1 (0.016), base 3 (0.092), handle 1 (0.013), body sherd 7 (0.05).
Spatter painted dish, rim 1 (0.063).
Chafing dish, bowl, body sherd 1 (0.036).
Pre-medieval, body sherd 15 (0.209).

Coarse Ware
Bowl, Lot-2002-05-1, complete profile, 1 (0.092).
Bowl as Lot-2002-5-1, base 1 (0.026).
No. 285 (Lot-2002-05-9) Incised Jug, body sherd 1 (0.068).
Jug as Lot-1992-92-19, body sherd 1 (0.096).
Proto-geometric Jug, body sherd 1 (0.027), base 1 (0.056).
Jug as C-1997-59, body sherd 6 (0.089).
Jug as Lot-1989-08-40, handle 1 (0.043), body sherd 1 (0.017).
Jug as Lot-1990-55-10, handle 1 (0.021).
Jug as Lot-1992-100-86, foot 2 (0.12), body sherd 15 (0.18).
Jug as Lot-1992-100-79, body sherd 1 (0.02).
Jug, body sherd 66 (0.89), body sherd with groove 11 (0.19); handle round in section with; disc foot 5 (0.09); flat base 3 (0.045).
Jug as C-1937-1183, handle with spine, 5 (0.1).
Bowl as Lot-1989-8-44, complete profile, 1 (0.04).
Jug as Lot-2009-89-12, base 11 (0.5).
No. 361 (Lot-2002-05-2), Jar, rim 1 (0.395).
Jar as Lot-1999-25-6, rim 1 (0.03).
Jar as Lot-1998-8-19, rim 1 (0.084).
Pedestal bowl, type 5 ac C-1992-79, foot 5 (0.104).
Pedestal bowl, type 4 as C-1992-28, foot 1 (0.022).
Matt painted lagena, type 1 as Lot-1989-08-17, handle 1 (0.039).
Matt painted lagena, type 1, as Lot-2002-03-02, body sherd 27 (0.6).
Matt painted lagena, type 2, as Lot-1997-44-30, rim 2 (0.099).
Lagena, type 2 as Lot-1992-89-3, rim 4 (0.297), handle 6 (0.54).
Lagena, type 2, as Lot-1992-92-7, rim 1 (0.04).
Lagena, type 2-A, as Lot-1996-36-11, rim 1 (0.05).
Lagena, type 3 as Lot-1992-89-16, rim 5 (0.738), handle 7 (0.7).
Triangular rim lagena, rim 1 (0.07).
Plain rim amphora, type 3 as Lot-1992-87-21, handle 3 (0.675).
Transport amphora, type 1, as Lot-2009-51-1, handle 6 (0.96)
Amphora, wheel-ridged body sherd 230 (6.68), plain body sherd 46 (2.8), dimple base 3 (0.102).
Amphora, Otranto type, body sherd 1 (0.02).
Basin as Lot-1992-87-17 rim 3 (0.148).
Basin as Lot-1992-90-3, rim 1 (0.103).
Basin as Lot-1992-89-08, rim 1 (0.088).
Pithos as Lot-1999-27-5, rim 1 (0.335).
Pithos as Lot-1997-44-29, body sherd 1 (0.15).

Pre-medieval 90 (4.88).
Cooking Ware

No. 111 (Lot-2002-05-3) Triangular rim stewpot, type 2-B, rim 1 (0.047).
No. 105 (Lot-2002-05-6) Triangular rim stewpot, type 2-A, rim 2 (0.58).
No. 132 (Lot-2002-05-5) Outwardly thickened rim stewpot, type 1, rim 1 (0.025).
No. 131 (Lot-2002-05-7) Outwardly thickened rim stewpot, type 1, rim 1 (0.038).
Collar rim stewpot, type 2 (Lot-2002-05-08), rim 1 (0.018).
Collar rim stewpot, type 2, as Mackay 1967, no. 97, cf. Lot-2009-89-26, rim 1 (0.056).
Collar rim stewpot, type 3, rim 1 (0.23).
Triangular rim stewpot, type 2, as Lot-1992-100-66, rim 1 (0.036).
Triangular rim stewpot, type 2, as Lot-1989-08-05, rim 6 (0.194).
Triangular rim stewpot, type 1, as Lot-5117-05, rim 2 (0.047).
Triangular rim stewpot, type 1, as Lot-1999-25-10, rim 1 (0.01).
Triangular rim stewpot, type 1, as Lot-5117-07, rim 1 (0.02).
Triangular rim stewpot, type 1, as Lot-5117-8, rim 1 (0.034).
Triangular rim stewpot, type 1, as Lot-5117-06, rim 2 (0.049).
Triangular rim stewpot, type 1, as Lot-5117-11, rim 1 (0.025).
Triangular rim stewpot, type 1, as Lot-5117-09, rim 1 (0.04).
Triangular rim stewpot, type 1, Lot-1990-54-17, rim 1 (0.015).
Triangular rim stewpot, type 1, as Lot-1989-08-06, rim 1 (0.013).
Cauldron, type 1, as Lot-2009-89-27, rim 2 (0.02).
Small cooking pot, type 3, rim 1 (0.018).
Small cooking pot, type 1, as Lot-1989-08-34, rim and handle 1 (0.044).

Small cooking pot, flat base 1 (0.018).
Handle 25 (1.55), body sherd 114 (1.8), base 1 (0.012).

Body sherd with silver sparkling inclusions, body sherd 1 (0.013)
Brown Glaze mug, body sherd 1 (0.005)

Pre-medieval 16 (1.095).

Coin


Date: 2nd to 3rd quarter 12th century according to pottery and stratigraphy.
LOT-2009-07
NB 1103, B. 6145. Elevation from + 84.56 to + 84.49.
This lot is located along the northwest wall, in the room northwest of the courtyard of the Byzantine house complex. The fill was laid on an earthen floor and it was characterized by an exceptionally large quantity of joining fragments of white ware utilitarian vessels. A significant number of animal bones and shells have been also found in this deposit, which was 100% sieved. 25.69 kg of pottery was found, all of which was saved.

Fine Ware
Slip plain glaze 1, rim 1.
Maghred imported plate, rim 1
White Ware plain glazed, handle 1, body sherd 1.
White Ware with sgraffito decoration, body sherd 1.
White Ware slip painted, rim 1.
White Ware polychrome, body sherd 1.
Pre-medieval, body sherd 21.

Plain Ware
No. 180 (Lot-2009-07-1) White Ware kettle, complete profile (0.461).
No. 181 (Lot-2009-07-2) White Ware kettle, complete profile (0.831).
No. 182 (Lot-2009-07-3) White Ware kettle, complete profile (0.907).
No. 183 (Lot-2009-07-4) White Ware kettle, complete profile (0.677).
White Ware kettles, 150 rims, 82 handles, 18 bases. 1972 body sherd.

Pre-medieval, body sherd 60.

**Coarse Ware**

No. 202 (Lot-2009-07-6) Plain amphora rim, type 2, rim 1 (0.171).
No. 212 (Lot-2009-07-5) Lagena, type 1, rim 1 (0.384).
Pedestal plate, type 3 as C-1996-32, foot 1 (0.129).

**Cooking ware**

Collar rim stewpot, type 3 as C-1996-33, rim 3 (0.391).

Pre-medieval, rim 4.

**Coins**

2009-53: ½ follis, Justin II (569-572 AD) or Tiberius II (579-582 AD).
2009-54: Illegible, Late Roman minimus?
2009-55: Pentanummium, possibly Justinian I or Justin II (527 – 5278 AD).

**Other**

MF 2009-8: bronze lid; MF 2009-12: iron door hinge or padlock.

Date: late 11th - early 12th century according to pottery and stratigraphy.

**LOT-2009-51**

NB 1103, B. 6409. Elevation from + 84.54 to + 84.19.
This deposit is the fill from a rubbish pit located at the south boundary of the courtyard of a Byzantine house.
The original weight of pottery found corresponded to 27.96 kg, of which 4.84 kg have been kept.

**Fine Ware**

White Ware Polychrome bowl, rim 2 (0.012), as Sanders 2001, no. 25;
White Ware Polychrome, rim 1 (0.003), as Sanders 2001, no. 2.
White Ware, plain green glaze, bowl, with outwardly thickened rim, bevelled in lip, shallow groove around mid lip, rim 1 (0.003) body sherd 2 (0.001).
White Ware, plain green glaze, close shape (jug ?), body sherd 3 (0.004).
White Ware, plain brownish yellow glaze, shallow bowl (diam. 0.15), rim 1 (0.005).

**Plain Ware**

White Ware kettle, base 1 (0.072), body sherd 2 (0.01).

**Coarse Ware**

No. 192 (Lot-2009-51-1) Transport amphora, type 1, rim 1 (0.272).
No. 201 (Lot-2009-51-2) Transport amphora, type 2, rim 1 (0.77).
No. 302 (Lot-2009-51-3) Basin, rim 1 (0.24).
No. 356 (Lot-2009-51-4) Jar, rim 1 (0.188).
No. 357 (Lot-2009-51-5) Jar, rim 1 (0.061). Basin as Lot-1992-90-3, rim 1 (0.055). Otranto amphora type as as no. 185, rim 1, handle 1 (0.181), body sherd 7 (0.41). Lagena, type 3, rim 1 (0.017). Plain rim amphora, type 2, rim 1 (0.049). Bowl, rim 1 (0.018). Trefoil plain jug, rim 1 plain (0.013). Cup as C-1937-2278, rim 1 (0.006)

Pre-medieval, rim 2 (0.008) handle jug 3 (0.046), body sherd 1 (0.05).

**Cooking Ware**
Outwardly thickened rim stewpot, type 1, as Lot-1990-54-19, rim 1 (0.014). Lid as C-1977-228 (0.03). Silver sparkling micaceous cooking ware, body sherd 1 (0.015).

**Other**

**Coins**

Date: late 11th to early 12th century according to pottery and stratigraphy.

**LOT-2009-89**
NB 1103, b. 6612. Elevation from + 84.58 to + 82.9.
This lot includes all the fills from a rubbish pit excavated in the northwest corner of a room, located in northwest side of a Byzantine house complex. Pottery has been found in large joining fragments, together with some intact vessels. A total amount of 73.72 kg of pottery has been found of which 67.62 kg were preserved.

**Fine Ware**
White ware, unidentified open shape, yellow glaze, body sherd 1 (0.001). White ware plain yellow glaze, pedestal plate, groove below rim, rim 1 (0.041). White ware plain yellow glaze disc, slightly outturned rim, 1 (0.006), cf. Sanders 1995b, no. 136. White ware, plain green glaze, pedestal plate, rim, 1 (0.005), body sherd 1 (0.011), cf. Sanders 1995b, no. 97. White ware, plain green glazed pedestal plate with impressed bird, foot 1 (0.11). White ware, plain green glazed cup, handle 2 with appliqué (0.023) body sherd 1 (0.001). White ware, plain glazed cup, yellow glaze, handle 1 (0.002), body sherd with incised decoration body sherd 2 (0.017), rim 1 (0.001) cf. Sanders 1995b no. 142. White ware, plain yellow glaze lid 1 (0.008), Sanders 1995b, no. 82 (0.008). Slip plain glaze bowl, rim 1 (0.001), contamination. Pre-medieval 84 (0.3)
Plain Ware
White ware kettle rim 1 (0.001) body sherd 1 (0.001).

Coarse Ware
No. 290 (Lot-2009-89-5) Small jug, base 1 (0.111).
No. 288 (Lot-2009-89-6) Jug, base 1 (0.222).
No. 346 (Lot-2009-89-7) Tankard, rim 1 (0.061).
No. 301 (Lot-2009-89-8) Basin, rim 1 (0.071).
No. 292 (Lot-2009-89-9) Juglet, white matt painted decoration, base 1 (0.207).
No. 291 (Lot-2009-89-10) Juglet, base 1 (0.137).
No. 289 (Lot-2009-89-13) Jug, base 1 (0.168).
Jug, as C-1937-2270, body sherd 10 (0.365), base 1 (0.094).
Jug, white matt painted decoration, as C-1937-2293, shoulder 1 (0.043).
Jug as C-1937-2271, rim 1 (0.010).
Incised jug as C-1937-2274, body sherd 1 (0.004).
Jug as Lot-1992-89-5, base 1 (0.032).
Jug as C-1937-2270, shoulder 1 (0.055), neck 1 (0.06).
Jug as Lot-1937-36-5, base 2 (0.041).
Tankard as C-1937-2290, rim 1 (0.014), body sherd 1 (0.015).
Pedestal plate, type 2, as C-1937-733, rim 1 (0.009).
Lot-2009-89-1, Lagena, body type 1, base 1 (1.729).
No. 222 (Lot-2009-89-2) Lagena, type 1, rim 1 (0.211).
No. 236 (Lot-2009-89-16) Lagena, type 2, rim 1 (0.410).
No. 227 (Lot-2009-89-11) Lagena, type 3, rim 1 (0.175).
No. 228 (Lot-2009-89-18) Lagena, type 3, rim 1 (0.591).
No. 233 (Lot-2009-89-19) Lagena, body type 1, bottom 1 (0.553).
No. 237 (Lot-2009-89-4) Lagena, body type 2, body sherd 1 (0.218).
(Lot-2009-89-17) Imported amphora, rim 1 (1.773).
Otranto amphora type, as C-2009-11, body sherd 1 (1.537).
Lagena, body type 1, body sherd 53 (5.89).
Lagena, type 3, handle 2 (0.373).
Middle Byzantine amphora/Lagena, body sherd 33 (4.796), handle 6 (0.768).
Lid, one complete handle, 1 frgt, cf. C-1963-573 (0.352).

Pre-medieval, body sherd 83 (2.88).

Cooking Ware
No. 53 (Lot-2009-89-26) Collar rim stewpot, type 2, rim 1, (0.672).
Lot-2009-89-20 Collar rim stewpot type 2, rim 1 (0.741).
Lot-2009-89-28 Collar rim stewpot, type 2, rim 1 (0.430).
Collar rim stewpot, type 2, as Lot-2009-89-28 rim 3 (0.194).
Collar rim stewpot, type 2, as Lot-1996-36-8, rim 8 (1.539).
Collar rim stewpot, type 2, rim 3 (0.831).
No. 73 (Lot-2009-89-27) Cauldron, type 1, rim 1 (0.367).
Lot-2009-89-23 Cauldron, type 1, rim 1 (0.617).
No. 59 (Lot-2009-89-21) Collar rim stewpot, type 3, rim 1 (0.538).
Collar rim stewpot, type 3, as C-1937-2294 2 complete profile (1.043), rim 6 (1.88).
Collar rim stewpot, type 3, as Lot-1996-36-7 rim 1 (0.637).
Collar rim stewpot, type 3, as Lot-1996-36-6 rim 4 (1.202).
Collar rim stewpot, type 3, rim 1 (0.065).
Triangular rim stewpot, type 1 rim (0.197).
Triangular rim stewpot, type 1, rim 3 (0.057) as Lot-1990-54-17.
Small cooking pot, type 2, as Lot-1990-54-12, rim 1 (0.01).
Small cooking pot, type 1 as Lot-1996-36-9, rim 1 (0.039).
Body sherds 501 (7.996), base 8 (0.195), handle 29 (0.78)
Silver, micaceous cooking ware, body sherd 4 (0.053)

Pre-medieval 10 (0.183).
Date: late 11th century on the basis of stratigraphic and pottery evidence.

LOT 2010-17
NB 1104, B. 6882, 6883. Elevation from + 84.34 to + 83.32.
This lot is located along the northwest wall, in the room west of the courtyard of the Byzantine house complex. The matrix of this deposit is made of a rubble fill and it was characterized by an exceptionally large quantity of joining fragments of amphora fragments. The original weight of pottery found corresponded to 23.22 kg, of which 20.59 kg have been kept.

Fine Ware
African red slip ware, bs 7
Pre-roman, 48 bs
Pre-medieval, 9 bs

Coarse Ware
Middle Byzantine amphora, Otranto amphora type, bs 60 (5.447), handle 1 (0.116), rim 1 (0.025).
Middle byzantine fruit amphora (C-2010-17), 1 complete profile (6.27).
Middle byzantine pitcher, grooved bs 1 (0.015).

Cooking Ware
Flanged, flaring rim stewpot with gold sparkling inclusions, as Lot-1998-11-5, rim 1 (0.012).
Collar rim stewpot, type 1, rim 2 (0.087).
Stewpot, concave thickened rim, silver sparkling inclusions, rim 1 (0.011)

Coin 2010-66: 1 Follis of Leo VI (886 A.D. - 912 A.D.)
Date: late 9th – 1st half 10th on the base of pottery and stratigraphy. The coin provides a terminus post quem.
Excavations in the Roman temenos of Temple E, located beyond the west end of the Roman Forum, were carried out in the late 1980s to determine the chronology and the architectural history of this complex (Williams & Zervos 1990). In the southeastern quarter of the temenos, a Byzantine phase is mainly characterised by the looting activities associated with pre-medieval architectural structures, which may be identified by a series of robbing trenches, filled with dumped materials. (Williams & Zervos 1990: 340-341).

LOT-1989-08
NB 814 p. 46 B 36, p. 154 B 84. Elevation from +84.36 to +83.09.
These deposits were located below the Frankish Court. Sieved.
The matrix was characterized by a dark greyish fill, found over and within the robbing trench of the north stylobate of the south colonnade of the Peribolos. These deposits overlay a compact, reddish fill, dated to the late Roman period, into which the robbing
trench was excavated. The ceramics have been found in large, joining fragments, suggesting a primary deposition for these deposits. However, the presence of a relevant quantity of glazed and unglazed ceramics, datable to the 11th century, is worth pointing out. It might be hypothesised that this robbing trench had been used a rubbish dump between the 11th and 12th centuries. It might be possible to argue that the fills had a tendency to slope down towards the centre of the trench as more material was dumped into it. This might explain the mixture of later and earlier material into the stratigraphic units.

A total amount of 126.36 kg of pottery has been found, all saved.

**Fine Ware**

White Ware, yellow glaze, open shape, body sherd 1 (0.002).

White Ware, Plain Green Glaze, bowl, base 1 (0.05); rim 1 (0.008).

Measles Ware, carinated bowl, rim 1 (0.1); bowl, rim 27 (0.69), base 11 (1.05), body sherd 31 (0.35), complete profile, 1 (0.55).

Green and Brown Slip Painted I-II, bowl, rim 8 (0.25), base 3 (0.12), body sherd 6 (0.05); juglet, body sherd 3 (0.014), handle 1 (0.006); cup, rim 10 (0.03), base 2 (0.01), body sherd 8 (0.02).

Green and Brown Slip Painted III, bowl, rim 4 (0.41); base 3 (0.21), body sherd 6 (0.1).

Sgraffito as Corinth XI cat. no. 1250, fig. 107, disc, rim 1 (0.01), body sherd 2 (0.012), carinated bowl complete profile, 1 (0.3); bowl complete profile, 1 (0.09).

Dark on Light Slip Painted, bowl, rim 6 (0.088), body sherd 10 (0.05).

Plain yellow glaze, cup, body sherd 1 (0.02).

Dark plain yellow glaze, bowl, rim 1 (0.003), body sherd 4 (0.011).

Spatter Ware, bowl, rim 2 (0.04), body sherd 1 (0.01).

Plain Green Glaze, cup rim trefoil 1 (0.004), rim 3 (0.003); base 1 (0.01), body sherd 1 (0.002).

Plain Green glaze, small jug, rim 1 (0.01), base 1 (0.01), body sherd 3 (0.06); bowl, complete profile 1 (0.008), rim 1 (0.02), base 2 (0.07); carinated bowl, rim 2 (0.03); cup, complete profile 1 (0.1), rim 14 (0.05), body sherd 1 (0.02), handle 1 (0.001).

Plain Green Glaze, lamp, complete profile 1 (0.05).

Chafing dish, body sherd 4 (0.04).

Frankish, Plain Green Glaze, bowl, body sherd 1 (0.01) contamination.

Zeuxippus, type 1, rim 1 (0.01) contamination.

Pre-medieval, body sherd 9 (0.11).

**Plain Ware**

White Ware, kettle, body sherd 5 (0.02).

**Coarse Ware**

No. 311 (Lot-1989-08-45), carinated bowl, complete profile, 1 (0.65).

No. 317 (Lot-1989-08-44) hemispherical bowl, complete profile, 1 (0.05).

Hemispherical bowl, Lot-1989-08-12, rim 1 (0.015).

No. 308 (Lot-1989-08-25) bowl, rim 1 (0.095).

No. 278 (Lot-1989-08-26) Jug, rim 1 (0.026).

No. 279 (Lot-1989-08-40) Jug, rim 1 (0.02).

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40 A detailed analysis of the fine wares is presented in Williams & Zervos 1990, and by G. Sanders (PhD Thesis 1995).
No. 277 (Lot-1989-08-35) Jug with strainer, body sherd 1 (0.12).
Jug as Lot-1990-55-15, rim 5 (0.01), handle 9 (0.02).
Jug as Lot-1989-8-26, body sherd 2 (0.06).
Jug as Lot-1989-08-40, handle 1 (0.08).
No. 360 (Lot-1989-08-46) jar, rim 1 (0.34).
No. 359 (Lot-1989-08-19) jar, rim 1 (0.2).
No. 358 (Lot-1989-08-20) jar, rim 1 (0.1).
No. 242 (Lot-1989-08-48) triangular rim lagena, rim 1 (0.5).
No. 241 (Lot-1989-08-27) triangular rim lagena rim 1 (0.2).
No. 247 (Lot-1989-08-17) Matt painted lagena, type 1, rim 1 (1.12).
No. 248 (Lot-1989-08-18) Matt painted lagena, type 1, rim 1 (0.58).
No. 194 (Lot-1989-08-39) Transport amphora, type 2, rim 1 (1.31).
Lagena, type 3, as Lot-2009-89-18, rim 1 (0.18), handle 1 (0.15), body sherd 2 (0.02).
Imported amphora as Lot-2009-89-17, rim 1 (0.12), body sherd 3 (0.09).
Transport amphora, type 2, as Lot-1989-08-39, rim 4 (0.35), handle 5 (1.93).
Triangular rim lagena, as Lot-1989-08-27, rim 1 (0.04).
Triangular rim lagena as Lot-1989-08-48, rim 16 (0.1).
Basin as Lot-1992-87-17, rim 4 (0.43).
Basin as Lot-1991-77-09, rim 3 (0.2).
Pithos as Lot-1992-90-12, rim 2 (0.95).

Pre-medieval 9 (0.18).

Cooking Ware

No. 103 (Lot-1989-08-04) Triangular rim stewpot, type 1, rim 1 (0.1).
No. 97 (Lot-1989-08-07) Triangular rim stewpot, type 1 rim 1 (0.06).
No. 104 (Lot-1989-08-06) Triangular rim stewpot, type 1, rim 1 (0.04).
No. 106 (Lot-1989-08-05) Triangular rim stewpot, type 2, rim 1 (0.14).
No. 128 (Lot-1989-08-01) Outwardly thickened rim, type 1, rim 1 (0.09).
No. 136 (Lot-1989-08-08) Outwardly thickened rim stewpot, type 2, rim 1 (0.1).
No. 137 (Lot-1989-08-09) Outwardly thickened rim stewpot, type 2, joining Lot-1989-15-07, rim 1 (0.2).

Outwardly thickened rim stewpot, type 2 as Lot-1989-08-08, rim 2 (0.02).
Outwardly thickened rim stewpot, type 2, as Lot-1989-15-09, rim 1 (0.07).
Triangular rim stewpot, Lot-1989-08-10, type 1-C, rim 1 (0.15).
Triangular rim stewpot, type 1, as Lot-1989-08-06, rim 10 (0.14).
Triangular rim stewpot type 1, rim 3 (0.05).
Triangular rim stewpot type 1 as Lot-5117-10, rim 4 (0.05).
Triangular rim stewpot type 1-C, rim 4 (0.05).
Triangular rim stewpot type 2, rim 7 (0.4).
Collar rim stewpot, type 3-A, Lot-1989-08-33, rim 2 (0.07).
Collar rim stewpot, type 3, rim 7 (0.1).
Collar rim, type 4, rim 2 (0.04).
Lot-1989-08-34, small cooking pot, type 1, rim 1 (0.02).
Lot-1989-08-02 small cooking pot, type 2, rim 1 (0.05).
Small cooking pot, type 2 (Lot-1989-08-3), rim 1 (0.05).
Small cooking pot type 2, rim 1 (0.01).
Small cooking pot, type 3 (Lot-1989-08-11) rim 1 (0.04).
Small cooking pot, type 3, rim 11 (0.08).
Body sherd 949 (8.58), handle 75 (1.82).

Pre-medieval 44 (0.37)

Other
C-1989-2 Green glazed goblet
L-1989-1 Glazed lamp

Coins
Coin 1989-54: illegible (Roman?);
Coin 1989-251 disintegrated.
Coin 1989-252 illegible.

Date: Second-third quarters 12th century on the base of pottery and stratigraphy. Coins provide a terminus post quem.

LOT-1989-15
This Lot includes a series of fills, diverse in the colour and consistency of the matrix, excavated in the robbing trench of the north stylobate of the south colonnade of the peribolos. This robbing trench was used as a rubbish dump, with the material probably dumped from the southern section of the trench. It might be argued that the fills tended to slope down towards the centre of the trench as more material was dumped into the trench. This might explain the mixture of earlier and later material within the stratigraphic units (Sanders 1995b: 233).
A total amount of 96.353 kg of pottery has been found, all saved.

Fine Ware
White Ware, plain yellow glaze, body sherd 1.
White Ware, plain green glaze, cup, handle 1.
Duochrome Sgraffito, green glaze, disc, body sherd 3.
Dotted Ware, bowl, body sherd 1.
Measles Ware, bowl, rim 3.

A detailed analysis of the fine wares is presented in Williams & Zervos 1990 and by G. Sanders (PhD Thesis 1995).
Green and Brown Slip Painted II, cup, rim 5, handle 1, base 1, body sherd 2.
Green and Brown Slip Painted I/II, bowl, rim 3, base 2, body sherd 13.
Green and Brown Slip Painted III, bowl, rim 3, body sherd 5, base 2.
Dark on Light Slip Painted I, bowl, rim 7, body sherd 5, base 1.
Light on Dark Slip Painted, bowl, rim, 2, body sherd 1.
Developed-Style Sgraffito, as Corinth XI cat. no. 1103, fig. 104 b., disc, rim 3, body sherd 4, base 1: bowl, rim 1.
Painted Sgraffito, bowl, rim 1, body sherd 2.
Sgraffito as Corinth XI cat. no. 1250, fig. 107 (all pieces worn), yellow glaze, plate, body sherd 3.
Plain Green Glaze, bowl, rim 5, base 1, body sherd 9.
Plain Green Glaze cup, rim 2, handle 2.
Plain Yellow Glaze, juglet, rim 2, body sherd 4.
Plain Yellow Glaze, bowl, rim 6, body sherd 21, base 3.
Chafing disc, rim 1, body sherd 8.
Pre-medieval, body sherd 210.

Plain Ware
White Ware, kettle, body sherd 1 (0.001).

Coarse Ware
Jug as Lot-1989-08-40, handle 1 (0.02).
Jug as Lot-1992-89-5, foot 7 (0.21), body sherd 35 (0.46).
Jug as Lot-1992-89-11, foot 3 (0.31).
Jug as Lot-2009-89-12, base 14 (0.85).
Jug as Lot-1992-100-84, body sherd 2 (0.63).
Jug as Lot-1990-55-10, body sherd 4 (0.035).
Jug as Lot-1989-8-26; rim 4 (0.01).
Jug as Lot-2009-89-6, base 14 (0.1).
No. 316. (Lot-1989-15-14) bowl, complete profile, 1 (0.51).
Bowl as Lot-1989-15-14, rim 3 (0.17).
Bowl as Lot-1989-8-25, rim 1 (0.05).
Lot-1989-15-06, burnished bowl, rim 1 (0.08).
No. 341 (Lot-1989-15-16) cup, complete profile, 1 (0.05).
Proto-geometric Jug, body sherd 1 (0.01).
Transport amphora, type 2, as Lot-1989-08-39, rim 2 (0.2), handle 8 (1), body sherd 1 (0.38).
Amphora Otranto type, body sherd 11 (0.485).
Imported Amphora, (Lot-1989-15-15), rim 1 (0.09), + 1 rim (0.015).
No. 240 (Lot-1989-15-20), triangular rim lagena, rim 1 (0.1).
Triangular rim lagena as Lot-1989-08-48, rim 8 (0.05).
Lagena, type 2, as Lot-1992-89-3, rim 1 (0.01).
Black matt painted lagena, cooking ware fabric, as 1992-89-7, handle 2 (0.05).
Triangular rim lagena, rim 1 (0.02).
Lagena, type 1-B as Lot-1992-92-16, rim 4 (0.15).
Lagena, type 1-B as Lot-1992-92-10, rim 2 (0.09).
Imported amphora as Lot-2009-89-17, rim 1 (0.02).
Matt painted lagena, type 1 as Lot-1989-08-17; body sherd 7 (0.387).
Matt painted lagena, type 1, as Lot-1989-08-18; body sherd 10 (0.12).
No. 312 (Lot-1989-15-04) Basin, rim 1 (0.1).
Basin as Lot-1992-87-17, rim 2 (0.16).
Basin as Lot-1992-100-82, rim 2 (0.14).
Basin as Lot-1989-15-04, rim 1 (0.05).
Basin as Lot-1992-90-3, rim 1 (0.02).
Jar as Lot-1989-08-19, rim 1 (0.02).
Lot-1989-15-19 Large basin, rim 1 (0.6).
Pre-medieval, body sherd 22.

Cooking Ware
No. 102 (Lot-1989-15-1) Triangular rim stewpot, type 1-C, complete profile, 1 (0.42), + 1 rim (0.02).
No. 130 (Lot-1989-15-2) Outwardly thickened rim stewpot, type 1, rim 1 (0.12).
No. 134 (Lot-1989-15-08) Outwardly thickened rim stewpot, type 2, rim 2 (0.23).
No. 133 (Lot-1989-15-09) Outwardly thickened rim stewpot, type 2, rim 1 (0.15).
(Lot-1989-15-10) Outwardly thickened rim stewpot, type 2, rim 1 (0.1).
No. 154 (Lot-1989-15-17) Small cooking pot, type 2, rim 1 (0.03).
No. 155 (Lot-1989-15-11) Small cooking pot, type 2, base 1 (0.22).
Triangular rim stewpot, type 1, as Lot-1989-08-06, rim 4 (0.04).
Triangular rim stewpot, type 1, as Lot-1989-08-07, rim 8 (0.32).
Triangular rim stewpot, type 1, as Lot-5117-6, rim 3 (0.03).
Triangular rim stewpot, type 1- C, rim 2 (0.03).
Triangular rim stewpot, type 1-A, rim 2 (0.02).
Triangular rim stewpot, type 2, as Lot-1989-08-05, rim 1 (0.01).
Triangular rim stewpot, type 2, rim 16 (0.39).
Collar rim stewpot, type 3, rim 3 (0.066).
Collar rim, type 4, rim 5 (0.08).
Outwardly thickened rim stewpot, type 2, as Lot-1989-08-08, rim 4 (0.04).
Outwardly thickened rim stewpot, type 2, as Lot-1989-15-09, rim 2 (0.21).
Outwardly thickened rim stewpot, type 2, as Lot-1989-08-09, rim 3 (0.03).
No. 178 (Lot-1989-15-18) Handmade beaker, rim 1 (0.12).
Small cooking pot, type 1, as Lot-1989-08-34, rim 2 (0.011).
Small cooking pot, type 2, rim 1 (0.01).
Small cooking pot, type 3, as Lot-1976-245-15, rim 5 (0.07).

Body sherd 1299 (4.91); handle 65 (1.763), base 24 (0.465).
Pre-medieval, body sherd 44 (0.35).

Coins

Date: 2nd to 3rd quarter of the 12th century according to pottery, stratigraphy and coins.
TEMPLE E, SOUTHEAST: DECUMANUS

Excavations in the area located south of Temple E during the 1980s revealed the continuation of the main East-West road of the Roman grid system, the major Decumanus. Some contemporary rooms, or possible shops, have been discovered, suggesting that this complex was continuously occupied at least until the Late Roman period (William II & Zervos 1988). It is unclear at the current state of research if this area was inhabited during the Early Byzantine period. The main evidence for the occupation of this neighbourhood during the 8th century is a case of enchytrismòs, an infant grave found in an amphora (Grave 1991: 15, amphora No. 8 in catalogue). The stratigraphy here is complex to investigate, since the Byzantine and Frankish levels of occupation overlay on the Roman and Late Roman ones. Therefore, the major evidence for the inhabitation of this area is dated from the Middle Byzantine to the Frankish period, during which four different architectural phases have been identified by the excavators (William II & Zervos 1988: 100). The occupation of this area should be analysed in light of the architectural development documented in the so-called Frankish area, located south east of Temple E. Considering that this structure is only partially excavated, the nature of the occupation of this complex is uncertain at the current state of research. However, it is possible to hypothesise that this complex was used as a dwelling during the course of the Late Byzantine period.

LOT-1992-84
NB 851 p. 16 B 8, p. 20 B 11, p. 24 B 14, p. 31 B 20, p. 32 B 21, p. 35 B 23. Elevation from +87.123 to +86.333.
This lot included dump fills located in Room 1 of the Byzantine complex, probably indicating the last phase of usage for this room. The large, joining fragments of the cooking vessels suggest a primary deposition for these deposits. All 169.87 kg of pottery was saved.

Fine Ware
Green and Brown Slip Painted III, bowl, rim 1, foot 1, body sherd 3 (0.073).
Light on dark Slip Painted IV, bowl, body sherd 1 (0.015).
Light on Dark Slip Painted III, bowl, foot 1 (0.049).
Frankish Slip Painted III, bowl, foot 1 (0.025).
Sgraffito as Corinth XI cat. no. 1250, fig. 107, disc, foot 1, rim 3, body sherd 8 (0.197).
Sgraffito, as Corinth XI cat. no. 1103, fig. 104 b. (ca. 1160- ca.1200), disc, body sherd 4 (0.075).
Incised-Sgraffito (Medallion-Style), bowl, rim 5 (0.1).
Measles Ware, bowl, foot 1 (0.085).
Incised-Sgraffito, Intermediate Style, as Corinth XI, cat. no. 1491, fig. 127, bowl foot 2, rim 1 (0.175).
Champlevé, as Corinth XI, cat. No. 1698, fig. 142, rim 1 foot 1, body sherd 4 (0.168).
Incised-champlevé as Corinth XI, cat no. 1698. Fig. 144b, disc, foot 1 (0.007).
Protomaiolica, disc, foot 1 (0.015).
Green and Brown Slip Painted V, bowl, body sherd 3 (0.071).
Green and Brown Slip Painted V (I dots decoration) bowl, rim 12, body sherd 3, foot 1 (0.549).
Green and Brown Slip Painted V (II dots and linear decoration), rim 18, body sherd 17 (0.754).
Green and Brown Slip Painted V (III spirals) foot 1, rim 3, body sherd 2 (0.196).
Frankish Slip Painted brown and yellow glaze, bowl, foot 1, rim 3, body sherd 3 (0.086); Jug, body sherd 1 (0.007).
Aegean Ware, disc, rim 3 (0.029).
Frankish incised-sgraffito (C-59-122), bowl, rim 3, foot 2, body sherd 2 (0.19).
Frankish sgraffito as C-1977-8, disc, rim 10 (0.333).
Frankish incised as C-1934-813, bowl, foot 2, rim 1 (0.146).
Frankish incised-sgraffito bowl, foot 9 (0.826), body sherd 27 (0.412), rim 27 (0.612).
Frankish painted sgraffito, bowl, rim 1 (0.006).
Frankish, plain sgraffito, bowl, foot 6 (0.377), rim 26 (0.536), body sherd 69 (1.2).
Glazed lamps, 11 almost complete profiles, 1 handle (0.743).
Slip plain yellow glaze, bowl, rim 2 (0.029), small bowl, foot 1 (0.017).
Slip plain green glaze, juglet body sherd 1 (0.023), cup handle 3 (0.004).

**Coarse Ware**
Matt-Painted amphora, cf. C-1960-304, body sherd 59 (1.3).
Trefoil jug, handles 14, rim 8 (0.9).
Basin, as Lot-1997-47-28, rim 2 (0.8).
Pilgrim jar, matt painted, base 1 (0.2).
10 combed body fragments (0.035).
Lagena, type 4, handles 62 (1.5), rim 5 (0.2) as Lot-1997-47-12.
Proto-geometric Jug, body sherd 1 (0.2).

**Cooking Ware**
No. 143 (C-1992-56) Folded rim stewpot, complete profile, 1 (1.047).
No. 145 (Lot-1992-84-26) Folded rim stewpot, complete profile, 1 (0.677).
Folded rim stewpot, C-1992-54, complete profile, 1 (1.1).
Folded rim stewpot, Lot-1992-84-65, complete profile, 1 (0.295).
Folded rim stewpot, Lot-1992-84-67, rim 1 (0.879).
No. 144 (Lot-1992-84-68) Folded rim stewpot, rim 1 (1.033).
Folded rim stewpot, as Lot-1992-84-68, rim 12 (0.216).
No. 118 (C-1992-53) Triangular rim stewpot, type 3, complete profile, 1 (1.776)
No. 119 (Lot-1992-84-50), Triangular rim stewpot, type 3, rim 1 (0.715).
No. 120 (Lot-1992-84-53) Triangular rim stewpot, type 3, rim 1 (0.492).
Triangular rim stewpot, type 3, Lot-1992-84-51, rim 1 (0.498).
No. 123 (Lot-1992-84-69) Triangular rim stewpot, type 3 with vertical rib, complete profile, 1 (1.55).
No. 124 (Lot-1992-84-63) Triangular rim stewpot, type 3 with vertical rib, rim 1 (1.725).
Triangular rim stewpot, type 3, as Lot-1997-44-19, rim 3 (0.095).
Triangular rim stewpot, type 3, as Lot-1997-44-20, rim 5 (1.59).
Triangular rim stewpot, type 3 with vertical rib, rim 8 (0.764).
Triangular rim stewpot, type 3, rim 4 (0.128).
Triangular rim stewpot, type 3 as Lot-1992-84-50, rim 75 (7.2).
Triangular rim stewpot, type 3, as Lot-1992-84-53, rim 36 (1.058).
Triangular rim stewpot, type 3, as Lot-1992-84-51, rim 12 (1.028).
Collar rim stewpot, type 4 as Lot-1997-47-4, rim 3 (0.083).
No. 139 (C-1992-55) Outwardly thickened rim stewpot, type 3, rim 1 (0.75).
Stewpot as C-1992-55, rim 1 (0.143).
Outwardly thickened rim stewpot, type 3, rim 2 (0.074).
No. 169 (Lot-1992-84-57) Small cooking pot, type 5, rim 1 (0.08).
No. 167 (Lot-1992-84-59) Small cooking pot, type 4, base 1 (0.421).
Small cooking pot, type 4, Lot-1992-84-62, base 1 (0.204).
No. 166 (Lot-1992-84-55) Small cooking pot, type 4, rim 1 (0.126).
No. 165 (Lot-1992-84-56) Small cooking pot, type 4, rim 1 (0.066).
No. 164 (Lot-1992-84-64) Small cooking pot, type 4, rim 1 (0.208).
No. 168 (Lot-1992-84-61) Small cooking pot, type 4, base 1 (0.303).
Small cooking pot, Lot-1992-84-54, type 4, base 1 (0.26).
Small cooking pot, type 4, Lot-1992-84-58, rim 1 (0.177).
Small cooking pot, type 4, Lot-1992-84-60, base 1 (0.137).
Small cooking pot, type 4, rim 1 (0.157).
Small cooking pot, type 4, as Lot-1992-84-64, rim 1 (0.1)
Small cooking pot, type 4, as Lot-1992-84-54, body sherd 4 (0.198), flat base 2 (0.226).
Small cooking pot, type 4, as Lot-1992-84-55, rim 2 (0.087), base 1 (0.156).
Small cooking pot, type 4, as Lot-1992-84-56, rim 2 (0.022).
Small cooking pot, type 4 as Lot-1992-84-61, body sherd 1 (0.164), base 1 (0.093).
Small cooking pot, type 4 as Lot-1992-84-62, base 1 (0.107).
Small cooking pot, type 3 as C-1992-62, rim 2 (0.017).

Cooking pot body sherd 204 (3.4), handle 87 (1.6).

Pre-medieval: 11 (0.307).

Coin

Date: third quarter of the 13th century, according to stratigraphy and pottery.

LOT-1992-100
NB 797, p. 145 B 103 to p. 163 B. 121. Elevation from + 85.539 to 74.143. Well 1988-01.
A well built from stone and tile, located south of Room 1 of the Byzantine complex, has been excavated into nineteen different stratigraphic units. The narrow diameter of the well and the water present in its the lower section did not allow for a clear identification of the diverse fill matrixes. Therefore, in order to avoid contamination between different fills, the excavator arbitrarily changed stratigraphic units every ca. 60 cm. The unglazed ceramics have been found in large, joining fragments, mended into 35 almost complete cooking pots and 6 Jugs. 5.373 kg of fine ware was found among a total of 248 kg of pottery, all was saved and 100% sieved.
The joining fragments of the cooking pots from diverse stratigraphic units, and their quantification, have permitted a reconstruction of the stratigraphy of the well and its chronology.

Fine Ware
White Ware, Yellow Glaze, open shape, body sherd 3, juglet, body sherd 1, disc body sherd 2.
White Ware, Green Glaze, plate, rim 5, body sherd 4.
White Ware, Impressed Ware, Yellow Glaze, plate, foot 1.
Polychrome White Ware, cup, body sherd 2.
Polychrome White Ware, type II, plate, body sherd 1.
Light on Dark Slip Painted I, plate, rim 2, body sherd 1.
Light on Dark Slip Painted II, plate, rim 2.
Dotted Slip Painted Ware, green glaze, bowl, 1 body sherd, cup, body sherd 1, foot 1.
Sgraffito as Corinth XI cat. no. 1250, fig. 107, yellow glaze, plate, 1 rim, 4 body sherds, all joining, 1 rim, 2 body sherds.
Spatter Painted, bowl, body sherd 1.
Plain Brown Glaze, Petal ware, cup, body sherd 1.
Green and Brown Slip Painted I, small jug, base 2, body sherd 2, bowl, rim 1, body sherd 3, cup, base 1, stem 1.
Green and Brown Slip Painted II-III, bowl, body sherd 1, cup body sherd 1, hemispherical bowl, rim 2, body sherd 1.
Green and Brown Slip Painted III, bowl, rim 4, body sherd 1, base 1, complete profile, 1.
Green and Brown Painted Spiral Style, plate, body sherd 1.
Plain Green Glaze, Slip Painted, bowl, complete profile, 1, rim 6, base 3, body sherd 7, carinated bowl, rim 4, body sherd 8, jug body sherd 5.
Plain Green Glaze, Slip Painted, cup, rim 6, base 1, handle 4, body sherd 6.
Plain Brown Blaze, Slip Painted, bowl, rim 1, body sherd 1, jug, rim 2, base 2, plate, rim 1, cup, rim 2.
Plain Yellow Glaze, Slip Painted, plate, rim 1, body sherd 2, cup body sherd 3, juglet base 1.
Duochrome Sgraffito, plate, body sherd 2.
Sgraffito as Corinth XI cat. no. 1250, fig. 107, green glaze, rim 1, base 2, body sherd 5.
Sgraffito, as Corinth XI cat. no. 1103, fig. 104 b., green glaze, plate, body sherd 3, yellow glaze body sherd 2.
Measles Ware, plate, rim 2, body sherd 2, bowl, rim 1, body sherd 2.
Incised-champlevé as Corinth XI, cat no. 1698. Fig. 144b, plate, rim 1.
Blue Frit, body sherd 2.
Chafing dish with plaster decoration, plain brown glaze, stand decorated with boar and details added by impressed and hatches and incisions, body sherd 3.
Chafing dish, as Sanders 1995b no. 7, incised wavy line below rim, glossy dark brown glaze, rim 4, body sherd 2.
Chafing Dish, White Slip Painted inside, unslipped outside, incised wavy decoration and hatches outside, rim 2.
Chafing Dish with plastic decoration, Dark Plain Green Glaze, stand, body sherd 2.
Ottoman porcelain, coffee cup, rim 1. Contamination.
Ottoman II bowl, rim 1. Contamination.
Pre-medieval: 132 body sherds (0.817 kg)

Plain Ware
White Ware kettle, handle 1, body sherd 2.

Coarse Ware
Proto-geometric Jug, body sherd 7 (0.15).
No. 286 (C-1992-89) imported incised jug rim 1 (0.769).
No. 275 (Lot-1992-100-84) jug, base 1 (0.3).
No. 274 (Lot-1992-100-79) jug, complete profile, 1 (0.95).
No. 260 (Lot-1992-100-86) jug, base 1 (0.8).
Jug, Lot-1992-100-94, rim 1 (0.25).
No. 284 (Lot-1992-100-87) Trefoil Jug, rim 1 (0.35).
Burnished Jug, Lot-1992-100-77, complete profile, 1 (0.25).
Matt painted jug, C-1992-91, base 1 (0.6).
Matt painted jug, C-1992-82, complete profile, 1 (0.812).
Jug, C-1992-83, rim 1 (0.577).
No. 270 (Lot-1992-100-90) Jug base 1 (0.75).
Jug as Lot-1992-100-90, base 1 (0.629).
Jug as C-1992-82, handle 1 (0.7).
Jug as C-1992-83, rim 1 (0.006).
Stamnos as C-1992-84, rim 9 (0.627), complete profile, 1 (1).
Jug as C-1992-87, body sherd 1 (0.03), rim 2 (0.146).
Jug as Lot-1992-100-86, rim 2 (0.461), foot 1 (0.05)
Jug as Lot-1992-100-94 rim 1 (0.014).
Jug as Lot-1992-100-79, rim 2 (0.68), body sherd 8 (0.15).
Jug as Lot-1989-08-40, handle 2 (0.763).
Jug as Lot-1990-55-11, rim 2 (0.07).
Jug with incised decoration, as C-1992-89, handle 2 (0.35).
Stamnos, C-1992-84, complete profile, 1 (1.367).
Juglet as Lot-2009-89-10, complete profile, 1 (0.1).
No. 343 (Lot-1992-100-92), cup, complete profile, 1 (0.25).
Cup as Lot-1992-100-92, rim 2 (0.279).
No. 342 (C-1992-85) Cup, complete profile, 1 (0.243)
Cup as Lot-1992-100-92, rim 2 (0.018).
No. 329 (Lot-1992-100-89) Pedestal Bowl, type 5, complete profile, 1 (0.75).
Pedestal bowl, type 5, as C-1992-89, complete profile, 1 (0.616).
No. 328 (C-1992-88) Pedestal bowl, type 5, complete profile, 1 (0.798).
Pedestal bowl, type 5, as Lot-1992-100-89, rim 3 (0.662).
Pedestal bowl, type 5, as C-1992-79, rim 2 (0.045).
Pedestal bowl, type 4, as C-1992-28, body sherd 3 (0.18).
Bowl as Lot-1989-08-44, rim 1 (0.12).
Large bowl as Lot-1992-87-27, rim 21 (0.09).
Basin, Lot-1992-100-82, complete profile, 1 (2).
Basin, Lot-1992-100-76, as Lot-1998-100-82, complete profile, 1 (0.125).
Basin, as Lot-1992-100-82, rim 6 (0.659).
Basin as Lot-1992-87-17, rim 1 (0.107).
Basin as Lot-2002-36-5, rim 5 (0.282).
Basin as Lot-2009-51-03, rim 1 (0.087)
Pithos Lot-1999-25-07, rim 1 (0.102).
Jar as Lot-1989-15-12, 1 rim (0.1).
Jar as 89-8-19, rim 1 (0.083).
Amphora, Lot-1992-100-85, Günsenin I, rim 1 (1.5).
Imported amphora, C-1992-43, complete profile, 1 (2).
No. 204 (Lot-1992-100-97) Plain rim, large amphora, type 3, rim 1 (0.3).
Amphora as Lot-1992-100-97, rim 1 (0.014).
Plain rim amphora, type 3, as Lot-1992-87-18, rims 1 (0.144).
Plain rim, large amphora, type 3 as Lot-1997-47-16, rims 3 (0.082).
Transport amphora, type 2, as Lot-1989-08-39, rim 5 (0.545), handle 3 (0.6)
Transport Amphora, type 1, as Lot-1992-90-10, rim 1 (0.130).
Matt painted lagena, type 2, as Lot-1997-44-30, but not matt painted, rim 2 (0.15).
Matt painted lagena, type 2, as Lot-1997-44-30, rim 3 (0.45).
No. 250 (C-1992-90) Matt painted lagena, type 1, rim 1 (0.660).
Red matt painted lagena as C-1992-90, body sherd 70 (2.06), handle 2 (0.2).
Matt painted lagena, type 1, as Lot-2002-03-02, body sherd 1 (0.14).
No. 243 (Lot-1992-100-95) triangular rim lagena, rim 1 (0.28).
Triangular rim lagena, as Lot-1992-100-95, rim 7 (1.102).
Triangular rim lagena, Lot-1992-100-83 as Lot-1997-47-14, rim 3 (0.522).
Triangular rim lagena, as Lot-1997-47-14, rims 3 (0.023).
No. 245 (C-1992-86) Lagenes with outwardly thickened rim, complete profile, 1 (2.016).
Lagenes with outwardly thickened rim as C-1992-86, rim 1 (0.02), base 1 (1.483).
Stand, Lot-1992-100-93, complete profile, 1 (0.8).
Amphora/Amphora body sherd 8457 (89.97), handles 303 (17.6).

Pre-medieval: body sherd 40 (0.37 kg).

**Cooking Ware**

(Lot-1992-100-10) Triangular rim stewpot, type 3, complete profile, 1 (1.65).
No. 115 (Lot-1992-100-37) Triangular rim stewpot, type 3, complete profile, 1 (1.291).
Triangular rim stewpot, type 3, Lot-1992-100-23, complete profile, 1 (1.321).
Triangular rim stewpot, type 3, Lot-1992-100-33, as Lot-1992-100-37, complete profile, 1 (1.35).
Triangular rim stewpot, type 3, Lot-1992-100-35, as Lot-1992-100-37, rim 1 (0.447).
Triangular rim stewpot, type 3, Lot-1992-100-44, as Lot-1992-100-37, complete profile, 1 (1.3).
Triangular rim stewpot, type 3, Lot-1992-100-2, rim 1 (0.337).
Triangular rim stewpot, type 3, Lot-1992-100-40, rim 1 (0.95).
Triangular rim stewpot, type 3, Lot-1992-100-72 as Lot-1992-100-2, rim 1 (0.078).
Triangular rim stewpot, type 3, as Lot-1992-100-37, rim 3 (0.3).
Imported cooking pot, C-1992-81, complete profile, 1 (0.592).
No. 110 (Lot-1992-100-66) Triangular rim stewpot, type 2, complete profile, 1 (1.2).
No. 114 (Lot-1992-100-67) Triangular rim stewpot, type 2, complete profile, 1 (1).
No. 109 (Lot-1992-100-68) Triangular rim stewpot, type 2, complete profile, 1 (1.1).
No. 107 (C-1992-68) Triangular rim stewpot, type 2, complete profile, (1.15).
No. 108 (Lot-1992-100-41) Triangular rim stewpot, type 2, complete profile, (1.25).
Triangular rim stewpot, type 2, C-1992-80, complete profile, 1 (1).
Triangular rim stewpot, type 2, as Lot-2002-05-06, rim 4 (0.055), complete profile, 1 (0.75).
Triangular rim stewpot, type 2 as Lot-2002-05-03, rim 1 (0.104).
Triangular rim stewpot, type 2, Lot-1992-100-16, complete profile, 1 (0.8).
Triangular rim stewpot, type 2, Lot-1992-100-13, complete profile, 1 (0.8).
Triangular rim stewpot, type 2, Lot-1992-100-38, complete profile, 1 (1.2).
Triangular rim stewpot, type 2, Lot-1992-100-73, complete profile, 1 (0.90).
Triangular rim stewpot, type 2, Lot-1992-100-27, complete profile, 1 (0.8).
Triangular rim stewpot, type 2, Lot-1992-100-56, complete profile, 1 (1.5).
Triangular rim stewpot, type 2, Lot-1992-100-30, as C-1992-68, complete profile, 1 (0.524).
Triangular rim stewpot, type 2, Lot-1992-100-19, as C-1992-68, complete profile, 1 (0.5).
Triangular rim stewpot, type 2, Lot-1992-100-26, as C-1992-68, rim 1 (0.093).
Triangular rim stewpot, type 2, Lot-1992-100-31, as C-1992-68 complete profile, 1 (1.1).
Triangular rim stewpot, type 2, Lot-1992-100-32, as Lot-1992-100-41, complete profile, 1 (1.09).
Triangular rim stewpot, type 2, Lot-1992-100-17, as Lot-1992-100-41, rim 1 (0.2).
Triangular rim stewpot, type 2, Lot-1992-100-45, rim 1 (0.095).
Triangular rim stewpot, type 2, Lot-1992-100-59, as Lot-1992-100-41, rim 1 (0.6).
Triangular rim stewpot, type 2, Lot-1992-100-71, as Lot-1992-100-66, rim 1 (0.09).
Triangular rim stewpot, type 2, Lot-1992-100-21, as Lot-1992-100-67, rim 1 (0.13).
Triangular rim stewpot, type 2, Lot-1992-100-15, as Lot-1992-100-67, complete profile, 1 (0.7).
Triangular rim stewpot, type 2, Lot-1992-100-28, as Lot-1992-100-68, complete profile, 1 (1.1).
Triangular rim stewpot, type 2, Lot-1992-100-62, as Lot-1992-100-68, complete profile, 1 (0.7).
Triangular rim stewpot, type 2, Lot-1992-100-12, as Lot-1992-100-68, rim 1 (0.750).
Triangular rim stewpot, type 2, Lot-1992-100-61, as Lot-1992-100-68, rim 1 (0.1).
Triangular rim stewpot, type 2, Lot-1992-100-42, as Lot-1992-100-73, rim 1 (0.7).
Triangular rim stewpot, type 1-C, rim 1 (0.322).
Triangular rim stewpot, type 1, as Lot-2002-36-2, rim 2 (0.037).
Stewpot, Lot-1992-100-70 triangular rim, type 1, rim 1 (0.9).
Triangular rim stewpot, type 1, rim 3 (0.086)
No. 68 (C-1992-92) Collar rim stewpot, type 4, complete profile, 1 (1).
Collar rim stewpot, type 4, Lot-1992-100-46 as C-1992-92, rim 1 (0.279).
Collar rim stewpot, type 4, as C-1992-92, rim 1 (0.1).
Collar rim stewpot, type 4, Lot-1992-100-49 as C-1992-92, rim 1 (0.22).
Collar rim stewpot, type 4, Lot-1992-100-24, complete profile, 1 (1.2)
Collar rim stewpot, type 4, as C-1992-92, rim 1 (0.01).
Collar rim stewpot, type 3, Lot-1992-100-48 as Lot-1996-36-6, rim 1 (0.035).
Collar rim stewpot, type 3, Lot-1992-100-50 as C-1996-33, rim 1 (0.012).
Collar rim stewpot, type 3, Lot-1992-100-54 as C-1996-33, rim 1 (0.03).
Collar rim stewpot, type 3, Lot-1992-100-51 as Lot-1996-36-7, rim 1 (0.014).
Collar rim stewpot, type 2, as Lot-2009-89-26, rim 1 (0.1).
Inwardly sloping rim stewpot, Lot-1992-100-52, rim 1 (0.014).
No. 138 (Lot-1992-100-64) Outwardly thickened rim stewpot, type 2, complete profile, 1 (1).
Outwardly thickened rim stewpot, type 2, Lot-1992-100-22 as Lot-1992-100-64, rim 1 (0.121).
No. 160 (C-1992-61) Small cooking pot, type 3 complete profile, 1 (0.471).
No. 158 (C-1992-62) Small cooking pot, type 3, complete profile, 1 (0.3).
No. 161 (Lot-1992-100-43) Small cooking pot, type 3, complete profile, 1 (0.850).
No. 157 (Lot-1992-100-63) Small cooking pot, type 3, rim 1 (0.3).
Small cooking pot, type 3, Lot-1992-100-60, as Lot-1992-100-43, rim 1 (0.5).
Small cooking pot, type 3, Lot-1992-100-36, as Lot-1992-100-43, rim 1 (0.562).
Small cooking pot, type 3, Lot-1992-100-58, complete profile, 1 (1).
Small cooking pot, Lot-1992-100-53 as C-1992-61, rim 1 (0.041).
Small cooking pot, type 3 as C-1992-61, rim 1 (0.013).
Small cooking pot, type 3, Lot-1992-100-34, as Lot-1992-100-63, rim 1 (0.113).
Small cooking pot, type 3, Lot-1992-100-69, as Lot-1992-100-63, rim 1 (0.063).

Body sherd 1929 (11.07), handles 55 (1.2), base 4 (0.15)
5 body sherds with silver sparkling inclusions (0.1 kg).

Pre-medieval: body sherd 22 (0.177)

Other
Lamp, stand, few drops of green glaze, foot 1, body sherd 1.
Lamp, complete stand, with drops of white slip, traces of green glaze on top, complete profile, 3.

Coin
Coin 1992-279: Copper coin, Corinth mint? (400-146 BC)
Coin 1992-289: Illegible (Late Roman?)
Coin 1992-291: Illegible (Late Roman?)
Coin 1992-296: Illegible (Byzantine?).

Date: second half of the 12th century to early 13th century, according to pottery and stratigraphy. The pottery and stratigraphy suggest that the ceramics have been deposited over a long period of time.

LOT-1992-87
Notebook 851, p. 57 B 41. Elevation from + 86.18 to + 85.648.
This lot corresponds to the fill of a pit, whose brown matrix was rich in cobble and tile fragments, carbonized wood and animal bones, such as ovicaprid, bovine and porcine.
This pit was located in Room 1 and excavated from the fifth earthen surface in sequence. A total amount of 44.96 kg of pottery was saved, of which 1.317 kg (2.9%) was glazed.42

Fine Ware
White Ware Green Glaze, cup, handle 1, body sherd 2.
Duochrome Sgraffito, plate and bowl, rim 1 (bowl), base (plate), body sherd 1.
Measles Ware, disc, base 1, body sherd 2.
Green and Brown Slip Painted 1, carinated bowl, rim 1, body sherd 1.
Green and Brown Slip Painted, Spiral Style, bowl, rim 1, body sherd 5.
Green and Brown Slip Painted, II – III, bowl, 2 body sherds, 1 rim.
Light on Dark Slip Painted I, plate, rim 2, body sherd 2, base 1.
Dark on Light, plate rim 1.

Sgraffito as Corinth XI cat. no. 1250, fig. 107
Sgraffito, as Corinth XI cat. no. 1103, fig. 104 b. (ca. 1160- ca. 1200)
Incised-Sgraffito (Medallion-Style), as Corinth XI, cat. no. 1436, fig. 125.
Blue Frit, body sherd 1.
Slip plain yellow glaze, cup, rim 2, body sherd 2.
Slip plain dark yellow, bowl, body sherd 4.
Slip plain Green Glaze, bowl, rim 4, body sherd 8, base 2; 1 stand, 1 spout.
Chafing Dish, dark yellowish green, body sherd 2.

Pre-medieval: 1.

Plain Ware
White Ware kettle, body sherd 1 (0.01)

Coarse Ware
No. 259 (Lot-1992-87-19) burnished Jug, base 1 (0.33)
No. 268 (Lot-1992-87-20) plain Jug, handle 1 (0.15)
Jug as Lot-1992-100-8, body sherd 5 (0.01).
Jug as Lot-2009-12, base 6 (0.6).
Jug as Lot-1992-89-11, base 3 (0.15).
Jug as Lot-2009-89-6, base 6 (0.5).
Jug as Lot-1992-100-79, body sherd 2 (0.025).
Jug as Lot-2002-36-7, body sherd 2 (0.015).
No. 313 (Lot-1992-87-27) bowl, rim 1 (0.06).
No. 305 (Lot-1992-87-28) basin, complete profile, 1 (0.15).
No. 298 (Lot-1992-87-17) basin, complete profile, 1 (0.158)
Basin as Lot-1992-100-82, rim 2 (0.2).
Basin as Lot-2002-36-8, rim 2 (0.1).
Jar as Lot-2002-5-2, rim 1 (0.01).
No. 203 (Lot-1992-87-18), Plain rim amphora, type 3, rim 1 (0.448).
No. 206 (Lot-1992-87-21) Plain rim amphora, type 3, rim 1 (0.35).
No. 195 (Lot-1992-87-22) Transport amphora, type 2, rim 1 (0.25).
No. 196 (Lot-1992-87-26) Transport amphora, type 2, rim 1 (1.15).
No. 249 (Lot-1992-87-23) Matt painted lagena, type 1, rim 1 (0.15).
Black matt painted lagena, type 1, as Lot-2002-36-1, body sherd 5 (0.25).
Matt painted amphora, rim 1 (0.3).
Middle Byzantine amphora, body sherd plain 304 (2.9), wheel-ridge 137 (4.9), 2 with incised wavy line (0.08), bottom 11 (0.14).

Cooking Ware
Small cooking pot type 1, rim 1 (0.03).
Collar rim, type 4, rim 1 (0.02).
Triangular rim, type 1 stewpot, rim 5 (0.21).
Triangular rim, type 2 stewpot, rim 8 (0.193).
Outwardly thickened rim stewpot, type 2, rim 3 (0.137)

Body sherd 112 (2.3), handles 18 (0.55), base 7 (0.15).

Pre-medieval rim 5 (0.1).
Coin

Date: 2nd quarter of the 12th century according to pottery and stratigraphy.

LOT-1992-89
NB 851, p. 78, B. 56, p. 79 B. 57, p. 80 B. 58, p. 81, B. 59. Elevation from + 85.747 to + 84.154.
This Lot includes a series of deposits filling a rubbish pit. The soft brownish matrix was rich in inclusions, particularly of animal bones, as well as some fragments of architectural feature and worked marble.
51.06 kg of pottery has been found in this deposit, of which 50.6 kg have been kept.

Fine Ware
Frankish, bowl, Green and Brown Slip Painted, V, no overglaze, body sherd 1 (0.038), contamination.
Zeuxippus Ware, bowl, body sherd 1 (0.005), contamination.
White Ware, yellow glaze disc, body sherd 1 (0.029).
White Ware, green glaze cup, body sherd 1 (0.007), tapered lip 1 (0.001).
White Ware, polychrome, cup, body sherd 1 (0.005).
White Ware, polychrome, cup, body sherd 1 (0.019).
White Ware, green glaze, cup body sherd 1 (0.004).
White Ware, polychrome, body sherd 1 (0.009).
Dark green glaze, disc, (African import?), body sherd 1 (0.009).

Pre-medieval, body sherd 10 (0.072).

Plain Ware
White Ware kettle, body sherd 3 (0.119), handle 2 (0.062).
White Ware unglazed mug, flat base 1 (0.026).

Coarse Ware
No. 257 (Lot-1992-89-5) Burnished Jug, base 1 (0.28).
No. 258 (Lot-1992-89-6) Burnished Jug, base 1 (0.254).
No. 269 (Lot-1992-89-11) Plain Jug, base 1 (0.191).
Jug as Lot-1990-55-11, rim 1 (0.006).
Lot-1992-89-12, Imported incised Jug, body sherd 1 (0.220).
Jug as Lot-1992-89-5, foot 3 (0.154), body sherd 11 (0.119), handle round in section 1 (0.016), body sherd 1 (0.035).
Small jug as Lot-1977-34-5, base 1 (0.016).
Cup as C-1977-220, handle 1 (0.032).
Pedestal bowl, type 4 as Lot-1999-25-13, rim 1 (0.143)
Pedestal bowl, Lot-1992-89-14, type 3, rim 1 (0.193).
Pedestal bowl, type 3, as Lot-1996-36-1, foot 2 (0.077), rim 2 (0.018).
Pedestal bowl, type 3, as Lot-1996-36-2, foot 1 (0.14).
Bowl as Lot-1989-08-25, rim 1 (0.018).
No. 226 (Lot-1992-89-3) Lagena, type 2, rim 1 (0.133).
No. 229 (Lot-1992-89-16) Lagena, type 3, complete profile, 1 (1.748).
No. 235 (Lot-1992-89-15) Lagena, body type 1, body sherd 1 (1.849).
No. 235 (Lot-1992-89-4) Lagena, body type 1, 9 (0.203).
Lagena, body type 1, as Lot-1992-89-4, with drop of brown glaze, body sherd 1 (0.068),
body sherd no glaze 9 (0.24).
Triangular rim lagena, type 1 (Lot-1992-89-13), rim 1 (0.21) as Lot-1991-82-3.
Black matt painted lagena, type 1, cf. Lot-2002-36-1, rim 1 (0.1).
Lagena, type 1-B as Lot-1992-92-9, handle 7 (0.31), concave bottom 2 (0.036).
Lagena, type 1-B as Lot-1992-92-10, rim 1 (0.012).
Lagena, type 1-B as Lot-1992-92-16, rim 1 (0.004).
Lagena, type 2, as Lot-1992-92-7, handles 9 (0.575), rim 1 (0.022).
Lagena, type 2-A as Lot-1992-92-5, rim 1 (0.037)
Lagena, type 3, rim 1 (0.003).
Lagenes with outwardly thickened rim as Lot-1992-87-23, rim 1 (0.06) handle 1 (0.82).
Transport amphora, type 2 as Lot-1992-87-26, rim 1 (0.07), handle 5 (0.521), 1 complete
rim with handle (0.245).
Transport amphora, type 2 as Lot-1989-08-39, body sherd 1 (0.993).
Transport amphora, type 1 as Lot-2009-51-1, handle 2 (0.312).
Otranto type amphora, incised wavy line, body sherd 3 (0.049).
Jar as Lot-1999-04-2, rim 1 (0.138)
No. 297 (Lot-1992-89-8) Basin, rim 1 (0.505).
Basin as Lot-2009-51-3, rim 1 (0.217).
Large basin as Lot-1989-15-19, rim 1 (0.163)
Basin as Lot-1992-87-28, base 1 (0.492).
Basin as Lot-2002-36-5, rim 2 (0.195).
Jar as C-1963-575, body sherd 2 (0.163)
Bowl as Lot-1992-87-30, rim 1 (0.008)
Pithos as Lot-1999-25-07, rim 1 (0.112).
(Lot-1992-89-10) Stand, complete profile, 1 (0.215).
Medieval amphora/amphora wheel-ridge body sherd 54 (1.25).
Medieval plain table ware, body sherd 136 (3.25).

Pre-medieval 105 (2.207)

Cooking Ware
No. 88 (Lot-1992-89-1) Triangular rim stewpot, type 1, rim 1 (0.026).
Triangular rim stewpot, type 1, as Lot-5117-06, rim 1 (0.055).
Triangular rim stewpot, type 1, as Lot-5117-08, rim 3 (0.065).
Triangular rim stewpot, type 1, rim 1 (0.041).

Byzantine small cooking pot, flat base, 1 (0.021), handle with few drops of glaze, 1
(0.024).

Byzantine cooking fabrics, body sherd 97 (0.782), base with central bulge 1 (0.031),
handle 8 (0.363).

Coin

Date: first quarter of the 12th century according to pottery and stratigraphy.
LOT-1991-77

NB 841, p. 174 B 69, p. 184 B 74.

These deposits were characterized by a dark, soft matrix rich in pottery and fragments of marble architecture. These deposits correspond to the fill of a foundation trench. The excavation of these stratigraphic units has revealed a very compact reddish soil in which the trench was excavated. Sieved.

A total weight of 15.09 kg of pottery has been found and all was saved.

**Fine Ware**
- Green and Brown Slip painted I, bowl, foot 1 (0.044).
- White Ware, yellow glaze, cup, rim 1 (0.006).
- Chafing disc, body sherd 1.
- Pre-medieval, body sherd 6 (0.034).

**Plain Ware**
- White Ware kettle, body sherd 4 (0.167) body shape CF Lot-2009-07-2.

**Coarse Ware**
- No. 281 (Lot-1991-77-7) Incised Jug, not joining body sherd 3 (0.143).
- Jug as Lot-1990-55-10, body sherd 1 (0.04).
- Jug as Lot-2009-89-06, base 1 (0.06), body sherd 4 (0.025).
- Jug as Lot-2009-89-12, body sherd 1 (0.046).
- Trefoil Jug as C-1977-273, rim 2 (0.053).
- Pedestal plate, type 4 rim 3 (0.067), foot 1 (0.112).
- No. 303 (Lot-1991-77-08) Basin, rim 1 (0.209).
- No. 295 (Lot-1991-77-9) Basin, rim 1 (0.149).
- Lagena, body type 1, body sherd 12 (0.345).
- Lagena, type 2-A as Lot-1992-92-5, rim 4 (0.223).
- Lagena, type 1-B, as Lot-1991-82-5, rim 2 (0.017).
- Lagena, type 3, rim 1 (0.023).
- Lagena, type 1 as Lot-2009-89-2, rim 1 (0.009).
- Black matt painted lagena, cooking ware fabric, as Lot-1992-89-7, body sherd 3 (0.065).
- Otranto type amphora as Lot-1992-92-4, body sherd 14 (1.1).
- Transport amphora, type 2, as Lot-1989-08-39, handle 3 (0.303).

Pre-meditieval 155 (1.15)

**Cooking Ware**
- No. 129 (Lot-1991-77-1) Outwardly thickened rim stewpot, type 1, rim 1 (0.067).
- No. 60 (Lot-1991-77-2) Collar rim stewpot, type 3-B, rim 1 (0.047).
- No. 76 (Lot-1991-77-4) Cauldron, type 1-B, rim 1 (0.347).
- No. 84 (Lot-1991-77-5) Triangular rim stewpot, type 1, rim 1 (0.513).
- No. 112 (Lot-1991-77-3) Triangular rim stewpot, type 2, rim 1 (0.232).
- No. 113 (Lot-1991-77-6) Triangular rim stewpot, type 2, pot, rim 1 (0.02).
- Cauldron, type 1-B as Lot-1991-77-4, rim 2 (0.050).
- Collar rim stewpot, type 3-C, as C-1996-34, diam. rim 0.155, rim 1 (0.039).
- Collar rim stewpot, type 3-C, as Lot-1996-36-13, rim 1, 3 joining frgts (0.231).
- Collar rim stewpot, type 3, as Lot-1999-25-02, rim 1 (0.062).
- Collar rim stewpot, type 3, as Lot-1999-25-8, rim 1 (0.057).
- Collar rim stewpot, type 3 as Lot-1999-25-11, rim 1 (0.024).
Collar rim stewpot, type 1-B, as Lot-1998-28-1, rim 1 (0.072).
Outwardly thickened rim stewpot, type 1, as Lot-1990-54-19, rim 2 (0.038)
Triangular rim stewpot, type 1, as Lot-5117-5, rim 1 (2 joining frgts) (0.07)
Triangular rim stewpot, type 2, as Lot-1991-77-3, body sherd 1 (0.096).
Small cooking pot, type 1, as Lot-1996-36-9, rim 2 (0.941).
Small cooking pot, type 2 as lot-1989-15-17, rim 1 (0.007).
Small cooking pot, type 3 as Lot-1976-245-15, rim with handle 2 (0.056).

Small cooking pot flat base 5 (0.102).

Body sherd 260 (3.8), handle 9 (0.233), bottom 4 (0.076).

Pre-medieval 1 (0.011).

**Coin**


Date: first quarter of the 12th century on the basis of pottery and stratigraphy.

**LOT-1992-90**

NB 851, p. 88, B 65. Elevation from + 85.73 to + 85.381.
This Lot corresponds to the stratigraphic unit identified below Floor 5 in the eastern half of room 1 of the Byzantine Complex. From a total of 31.2 kg of pottery, 11.91 kg has been saved.

**Fine Ware**

White ware, green glaze, juglet, with handle over lip, rim 1 (0.006), body sherd 1 (0.001), handle 1 (0.003).
White ware, green glaze, cup, vertical upper body with bevelled in lip, 1 rim with attached handle (0.019).
White Ware, fruit stand, olive green glaze, rim 1 (0.022), high foot 1 (0.0019)
Chafing disc, brown glaze, unslipped, body sherd 2 (0.177).
Pre-medieval, body sherd 27 (0.211).

**Plain Ware**

White Ware, kettle body sherd 7 (0.071) cf. C-1977-336.
White Ware, mug, with scattered spotting yellow glaze, rim 1 (0.024), cf. C-1935-89.

**Coarse Ware**

Pedestal bowl, type 5 as C-1992-79, foot 1 (0.068), rim 1 (0.011)
Pedestal bowl as C-1992-88, rim 1 (0.024)
Pedestal bowl, type 4 as C-1992-28, foot 1 (0.07).
Incised jug (type 1), body sherd 1 (0.86).
Jug as Lot-1992-89-5, foot 4 (0.145)
Jug as Lot-1992-89-11, foot 6 (0.242)
Jug as Lot-1989-08-40, handle 1 (0.028).
Trefoil jug as Lot-1992-92-8, rim 3 (0.04).
Trefoil jug as C-1977-273, rim 3 (0.031).
Juglet as C-1937-2272, body sherd 1 (0.016).
Jug as C-1975-21, body sherd 1 (0.013).
Lagena, triangular rim, rim 1 (0.016)
Lagena, type 3, as Lot-1992-89-16, rim 1 (0.006).
Lagena, body type 1, base 8 (1.005).
No. 191 amphora, type 1 (Lot-1992-90-10), rim 1 (0.172); as Lot-1992-90-10 handles 7 (0.95).
Amphora, type 1, as Lot-1990-54-13, rim 1 (0.134), handle 1 (0.079).
Amphora, type 2, as Lot-2009-51-2, handle 1 (0.09).
No. 225 (Lot-1992-90-9), lagena, type 2, rim 1 (0.1).
Basin no. 300 (Lot-1992-90-5), rim 1 (0.092).
Basin no. 294 (Lot-1992-90-3), rim 1 (0.092).
Basin as Lot-1992-89-08, rim 2 (0.155)
Large bowl as Lot-1992-87-27, rim 1 (0.065).
Basin as Lot-1991-77-08, rim 1 (0.061).
Basin as Lot-1991-77-09, rim 1 (0.063).
Jar (Lot-1992-90-8) as Lot-2009-51-04, rim 1 (0.028).
Stand, complete profile, 1 (0.03), base 1 (0.024).
Pithos No. 349 (Lot-1992-90-12), rim 1 (0.303).

Pre-medieval: body sherd 3 (0.168), handle 3 (0.364), rim 1 (0.057), amphora toe 1 (0.06).

**Cooking Ware**
Collar rim stewpot, type 2, as Lot-1977-47-12, rim 1 (0.31).
Collar rim stewpot, type 3, as Lot-1996-36-7, rim 1 (0.023)
Collar rim stewpot, type 3, as Lot-1999-25-2, rim 1 (0.026).
Collar rim stewpot, type 3, as Lot-1977-34-15, rim 1 (0.17)
Collar rim stewpot, type 3 (Lot-1992-90-1), rim 1 (0.25).
No. 83 (Lot-1992-90-2), Triangular rim stewpot, type 1-A, rim 1 (0.104).
Triangular rim stewpot, type 1, as Lot-1999-25-1, rim 1 (0.019).
Triangular rim stewpot, type 1, as Lot-1999-25-10, rim 2 (0.027)
Triangular rim stewpot, type 1, as Lot-5117-08, rim 1 (0.011)
Triangular rim stewpot, type 1, as Lot-1990-54-17, rim 1 (0.030).
Outwardly thickened rim stewpot, type 1, as Lot-1990-54-19, rim 1 (0.018)
Small cooking pot, type 1, Lot-1992-90-7, rim 1 (0.031).
Small cooking pot, type 1, as Lot-1977-47-17, rim 1 (0.05)
Small cooking pot type 1, as Lot-1996-36-9, rim 2 (0.101)
Small cooking pot, type 1, flat base 2 (0.032).

Pre-medieval cooking ware, rim 5 (0.1), base 1 (0.165).

**Coin**

Date: Late 11th to early 12th century, according to pottery and stratigraphy.

**LOT-1991-82**
NB 842, p. 98, B 159. Elevation from + 85.238 to + 84.918.
This deposit is characterized by a hard, compact, whitish clayey matrix and is stratigraphically located above Floor no. 7, the earliest of the surfaces identified in Room 1. Excavation records suggest that the contexts grouped in Lot 1991-82 were not fully excavated in 1991. Lot 1992-92 appears to be the continuation of the excavation of these contexts and because of this reason these two lots have been quantified together in the seriation chart.

Finally, it should be noted that two lagenes, quantified in Lot 1992-92, had numerous joining fragments from Lot 1991-82.

Pottery has been found in large, joining fragments for a total amount of 34.35 kg, all saved.

**Fine Ware**

C-1991-31, in Sanders 1995b, No. 64, glazed, spouted mug.

Pre-medieval, body sherd 3 (0.019)

**Plain ware**

White ware kettle, body sherd 1 (0.03).

**Coarse Ware**

Pedestal bowl, type 3 as Lot-1996-36-1, body sherd 2 (0.114).

Jug as Lot-1992-92-8, body sherd 4 (0.033), handle 1 (0.025).

No. 211 (Lot-1991-82-1) Lagena, type 1-A, rim 1 (0.648).

Lagena, type 1-A, rim 1 (0.006), body sherd 3 (0.097).

No. 214 (Lot-1991-82-2) Lagena, type 1-B, rim 1 (0.11).

Lagena, type 1-B as Lot-1991-82-2, rim 1 (0.035).

No. 215 (Lot-1991-82-5) Lagena, type 1-B, rim 1 (0.228).

Lagena, type 1-B, as Lot-1992-92-16, rim 6 (0.265).

Lagena, type 1-B, as Lot-1992-92-9, rim 1 (0.006).

Lagena, type 1-B, as Lot-1992-92-10, rim 1 (0.039).

No. 239 (Lot-1991-82-3) Triangular rim lagena, rim 1 (0.523).

Lagena, type 2-A, as Lot-1996-36-11, rim 2 (0.054).

Lagena, type 2-A, as Lot-1992-92-5, rim 1 (0.001).

Lagena, type 2-A, as Lot-1992-92-7, rim 3 (0.05), body sherd 77 (1.09).

No. 232 (Lot-1991-82-4) Lagena, body type 1-A, body sherd 1 (1.127).

Lagena, body type 1-A, as Lot-1992-92-14, body sherd 10 (1.716), base 1 (0.297), handles 14 (0.612).

Lagena, body type 1-A, body sherd 147 (3.864), handle 4 (0.149), concave base 6 (0.518).

Amphora red broad band painted (Apulian?), body sherd 2 (0.1).

Middle Byzantine amphora, Otranto type, body sherd 1 (0.281).

Pre-medieval, body sherd 4 (0.22).

**Cooking Ware**

Collar rim stewpot, type 3-A, rim 1 (0.02).

Collar rim stewpot, type 2-A, 1 (0.004).

Byzantine cooking ware, bs 8 (0.07), handle 1 (0.008).
Date: This context is reasonably dated to the late 10th - 1st half 11th century, according to pottery and stratigraphy.

LOT-1992-92
NB 851 p. 121 B. 92, p. 124 B. 95. Elevation from +85.33 to +84.85. Not sieved. These deposits should be considered equal to Lot-1991-82. A total of 35.38 kg of pottery was found and all of it was saved.

Fine Ware
Pre-medieval fine ware, body sherd 8 (0.033).

Coarse Ware
No. 262 (Lot-1992-92-20) White Matt Painted Jug, as C-1937-2293, body sherd 1 (0.047).
No. 283 (Lot-1992-92-8) Trefoil Jug, rim 1 (0.047).
No. 189 (Lot-1992-92-4) Otranto type amphora, body sherd 1 (0.34).
No. 211 (Lot-1992-92-6) Lagena, type 1-A, rim 1 (0.065).
No. 215 (Lot-1992-92-9) Lagena, type 1-B, rim 1 (0.062).
No. 216 (Lot-1992-92-10) Lagena, type 1-B, rim 1 (0.146).
No. 217 (Lot-1992-92-11) Lagena, type 1-B, rim 1 (0.56).
No. 218 (Lot-1992-92-16) Lagena, type 1-B, rim 1 (0.046).
Lot-1992-92-13, Lagena, type 1-A as Lot-1996-36-18, body sherd 1 (0.935).
Lot-1992-92-9, rim 2 (0.079), handle 14 (0.466), concave bottom 8 (0.381).
Lot-1992-92-10, rim 3 (0.008).
Lot-1992-92-11, body sherd 4 (0.156).
No. 220 (Lot-1992-92-5) Lagena, type 2-A, rim 1 (0.174).
No. 221 (Lot-1992-92-7) Lagena, type 2, rim 1 (0.039).
No. 223 (Lot-1992-92-15) Lagena, type 2-B, rim 1 (0.032).
Lot-1992-92-5, rim 1 (0.009).
Triangular rim lagena as Lot-1991-82-3, rim 1 (0.066), body sherd 5 (0.38), concave bottom 2 (0.139).
Lot-1992-92-14, handle 1 (0.015), body sherd 14 (1.211), concave bottom 14 (0.790).
Middle Byzantine amphora, handle 6 (0.565).
Lamp, foot 1 (0.04), few drops of brown glaze.
Jar as Lot-1999-25-05, 1 (0.084).
Basin, horizontal rim, 1 (0.12).
Broad matt red painted amphora (Apulian?) concave bottom 1 (0.077).

Cooking Ware
Collar rim stewpot, type 1-A, as Lot-1999-42-2, rim 1 (0.03)

Pre-medieval, 9 body sherds (0.538).
No. 51 (Lot-1992-92-1) Collar rim stewpot, type 2-A, rim 1 (0.048).
No. 52 (Lot-1992-92-20) Collar rim stewpot, type 2-A, rim 1 (w. 0.05).
(Lot-1992-92-2) Collar rim stewpot with bevelled in lip, type 3-A, rim 1 (0.026).
Collar rim stewpot, type 3-A, as Lot-1996-36-6, rim 1 (0.012).
No. 81 (Lot-1992-92-3) Thickened rim stewpot, rim 1 (0.023).

Byzantine cooking ware, body sherd 2 (0.05), handle 3 (0.12).

Pre-medieval, rim 3 (0.089).

Date: Late 10th - 1st half 11th century, according to pottery and stratigraphy. This lot overlays Lot 1992-93, in which were found 2 Anonimus Follis, Class A2, dated 969-1030 AD (Coin 1992-240, 241). These two coins provide a terminus post quem for the pottery in this lot 1992-92.
Lot-1937-36. Pit no. 1937-1

NB 162 p. 162, 164, 166, 170. NB 163 p. 6, 10, 12, 14, 19, 23, 29, 33, 35, 42, 48, 52, 62, 75, 166, 170.

Elevations were related to the stylobate of the Bema, the South Stoa, the Temple of Apollo and the surface of the bedrock. The pit is located to the north of the N corner of the South Bath (Corinth I.V, plan IV Corinth XVI: 70-71, pl. 10.1) and south of the ‘Tower Complex’. During the Byzantine and Frankish periods, this area appears to have not been subject to any major architectural developments. The fills in this pit were mainly characterised by a thick, black, ashy matrix with a high quantity of bones and very large fragments of pottery found together with intact ceramic vessels. The bothros was excavated from the corner of the baths, sloping down towards a Hellenistic cellar, of which about 0.9 m was cut into the bedrock. The lower part of the cistern contained a dump of Hellenistic pottery, which was likely dug through the excavation of the pit in the Byzantine period. This pit was stratigraphically overlaid by late 12th century pottery and laid on Roman and Hellenistic ceramic evidence (Sanders 1995b: 273).
Fine Ware
C-1937-660 White Ware cup
C-1937-661 Petal Ware cup
C-1937-685 Brown glazed lid knob
C-1937-686 White Ware cup
C-1937-784 Brown glazed bowl
C-1937-785 Brown glazed cup
C-1937-1239 Chafing dish
C-1937-1323 White Ware Bowl
C-1937-1324 White Ware pedestal dish
C-1937-2267 White Ware cup
C-1937-2268 White Ware Bowl
C-1937-2269 Chafing dish
Lot 1937-36-16 Chafing dish
Lot 1937-36-17 Chafing dish
C-1937-2105 White Ware kettle, body sherd 1

Coarse Ware
No. 336 (C-1937-732) Plain cup, complete profile, 1 (0.167).
No. 337 (C-1937-1325) Plain cup, complete profile, 1 (0.3).
No. 321 (C-1937-733) Pedestal bowl, type 2, complete profile, 1 (0.412).
No. 265 (C-1937-2270) Plain Jug, base 1 (0.962).
No. 264 (C-1937-2271) Plain Jug, rim 1 (0.419).
No. 287 (C-1937-2272) Juglet, base 1 (0.164).
No. 271 (C-1937-2274) Plain incised Jug, base 1 (0.176).
No. 266 (C-1937-2275) Plain Jug, base 1 (0.558).
No. 272 (C-1937-2276) Plain incised Jug, base 1 (0.503).
No. 339 (C-1937-2277) Plain cup, complete profile, 1 (0.294).
No. 338 (C-1937-2278) Plain cup, complete profile, 1 (0.313).
No. 345. (C-1937-2290) Burnished tankard, rim 1 (0.044).
No. 347. (C-1937-2292) Burnished, white slip painted tankard, rim 1 (0.146).
No. 362 (C-1937-2293) Burnished, white slip painted Jug, body sherd 1 (0.244).
No. 363 (C-1937-2284) Jar, complete profile, 1 (0.524).
No. 354 (C-1937-2296) Plain storage jar, complete profile 1 (5.55).
No. 188 (C-1937-2297) Otranto amphora type, complete profile 1 (9).
No. 280 (C-1937-2280) Gouged Jug, base 1 (0.281).
C-1937-2282 Mug, complete profile, 1 (0.338).
C-1937-2279 Plain basin as Lot-1992-90-3, rim 1 (1.21)

Cooking Ware
No. 74 (C-1937-2281) Cauldron, type 1, bevelled in lip, complete profile, 1 (0.65).
No. 75 (C-1937-2295) Cauldron, type 1, with bevelled in lip, complete profile, 1 (1.816).
No. 82 (C-1937-2285) Thickened rim stewpot (0.43).
C-1937-2283 Thickened rim, type 1, complete profile, 1 (0.258).
No. 57. (C-1937-2288) Collar rim with bevelled in lip stewpot, type 3, complete profile, 1 (1.148).
No. 58 (C-1937-2294) Collar rim with bevelled in lip stewpot, type 3, complete profile, 1 (1.178).
Lot-1937-36-20 Collar rim with bevelled in lip stewpot, type 3, complete profile, 1 (0.98).
Other finds
MF-6539: glass goblet, MF-6540: glass goblet, MF-6541: glass goblet.

Coins
5-04-1937 coin no. 2: 1 Anonymous follis, Class J (1080-1085).
26-04-1937 coin no. 7: 1 Anonymous follis, Class A2 (976-1001).
11-06-1937 coin no. 1: 1 Anonymous Class D (1050-1060).

Date: probably third quarter of the 11th century. The Anonymous follis, Class J might be considered a contamination since it was found in the upper-most levels excavated above the pit. The Anonymous Class D follis was found with apparently undisturbed Hellenistic pottery only 0.10 m from the bottom of this pit, which corresponded to the floor of the cellar and, therefore, it is quite reasonable to consider this coin not to be a contamination. Moreover, the Anonymous Class A2 follis provides a terminus post quem of the last quarter of the 10th century.

Six glazed vessels found in this pit were published by C. Morgan, who proposed a 10th century chronology for this material (1942: nos. 2, 3, 99, 114, 176 and 186). Moreover, MacKay published three stewpots from this same deposit; however, she indicated that no coins were found in this pit, and a date of the first half of the 10th century was mainly based on the associated glazed ware (1967:291, nos. 92-94). Finally, an updated study of the glazed wares from this Lot has been proposed by Sanders, who suggests a mid-11th century date, providing a secure terminus post quem as the last quarter of the 10th century (1995b: 281-282).

LOT-1977-47
Bothros 1977-2
Elevation: +82.16 to +79.90.
Loose greyish-black fill of large pit.
The pottery recovered weighs, in total, 118.5 kg of which 0.696 kg (0.6%) is glazed (Sanders 1995b: 254).

Fine Ware
C-1977-166 White Ware chafing dish
C-1977-215a, and b Petal Ware cup
C-1977-217 Glazed White Ware juglet
Lot-1977-47-1 White Ware, chafing disc, rim 1 (0.0032)
White Ware, yellow glazed with vertical strokes, body sherd 1 (0.005);
White Ware, yellow glaze, with brown dots, bowl, body sherd 2 (0.006);
White Ware, plain yellow glaze, Jug, body sherd 1 (0.004);
White ware, yellow glaze with green patches, disc, body sherd 1 (0.0057).
C-1977-219 Chafing Dish (Sanders 1995b, no. 76)
C-1977-227, Chafing Disc, rim 1 (0.225).
Lot-1977-47-19, Brown glaze chafing disc, rim 1 (0.21).
Lot-1977-47-23 Brown glazed mug, body sherd 1 (0.1).

Pre-medieval, rim 1 (0.003).
Coarse Ware

C-1977-216 Brown Glazed cup
C-1977-218 Plain Pedestal bowl (0.111).
C-1977-220 Cup (0.126)
C-1977-221 Funnel (0.93).
C-1977-222 Pilgrim Flask (1.186).
C-1977-223 Lekane (1.235).
C-1977-232 Storage jar (2.620).
No. 185 (C-1977-233) Otranto amphora type, complete profile, 1 (2.57).
C-1977-234 Amphora with graffito, residual (0.036).
C-1977-235 Amphora with graffito (1.88).
C-1977-253 Trefoil Mouthed Jug (0.172).
C-1977-231 Fractional amphora (0.805).
Lot-1977-47-3 and 4 Plain Pedestal Bowl, rim 1 and foot 1 (0.09)
Lot-1977-47-5 Cup, rim 1 (0.025)
Lot-1977-47-6 Cup, rim 1 (0.03)
Lot-1977-47-7 Burnished Jug, base 1 (0.03)
Lot-1977-47-8 Jug, rim 1 (0.014)
Lot-1977-47-9 Jar, rim 1 (0.05).
Lot-1977-47-15 Amphora as C-1977-235, rim 1 (0.2).
Lot-1977-47-20, Cup, rim 1 (0.05)
Lot-1977-47-21 Middle Byzantine amphora as no. 185, rim 1 (0.15)
Lot-1977-47-22 Burnished pedestal bowl, rim 1 (0.08)
Lot-1977-47-24 Cup, rim 1 (0.04)
Lot-1977-47-26 Basin, rim 1 (0.06)
Lot-1977-47-28, Jug, rim 1 (0.05)
Lot-1977-47-29, Funnel, rim 1 (0.23)
Lot-1977-47-30, Cup, rim 1 (0.05)
Pilgrim flask, body sherd 1 (0.18) as Lot-1977-47-14; body sherd 1 (0.1) as C-1977-222.
Cup as Lot-1977-47-6, rim 2 (0.012).
Cup as Lot-1977-57-5, rim 1 (0.001).
Cup as Lot-1977-47-24, rim 1 (0.001).
Cup as Lot-1977-47-20, rim 1 (0.001).
Cup as Lot-1977-47-30, rim 2 (0.031).
Amphora, as C-1977-235, rim 1 (0.2) body sherd 6 (5.8).
Otranto amphora type as no. 185, body sherd 8 (4.3).
Trefoil Jug, with groove below lip and lower rim, rim 2 (0.01);
Picher as Lot-1977-47-28, rim 1 (0.04), handle 1 (0.01)
Lekane as C-77-223, rim 2 (0.25).

Pre-medieval amphora rim 2 (0.35), toe 1 (0.4); handle 3 (0.28).

Cooking Ware

No. 47 (Lot-1977-47-12) Collar rim with concave profile, type 2, rim 1 (0.27).
No. 70 (C-1977-224) cauldron, type 1-A, complete profile, 1 (1.744).
No. 71 (C-1977-226) cauldron, type 1-A, rim 1 (0.397)
No. 72 (Lot-1977-47-13) Cauldron, type 1-A, rim 1 (0.45).
No. 77 (C-1977-225) cauldron, type 2-A, rim 1 (0.487).
No. 78 (Lot-1977-47-11) cauldron, type 2-A, rim 1 (0.07).
No. 172 (C-1977-228) Cooking Bell (0.789).
No. 173 C-1977-229 Cooking Bell (0.140).
No. 174 (C-1977-230) Cooking Bell (0.249).
No. 148 (Lot-1977-47-10) Small cooking pot, rim 1 (0.2).
No. 149 (Lot-1977-47-17) Small cooking pot, rim 1 (0.01).
No. 150 (Lot-1977-47-18) Small cooking pot, base 1 (0.04).
Lot-1977-47-25 Concave thickened rim stewpot, silver sparkling inclusions, rim 1 (0.025).
Stewpot, as no. 47, rim 2 (0.28).
Cauldron as Lot-1977-47-13, rim 1 (0.01).
Cooking Ware cooking bell as C-1977-230, rim 1 (0.03).

Pre-medieval, stewpot, rim 1 (0.001)

**Coins**
Coin 1977-1126: Greek illegible.

Date: second-third quarter 10th century on the base of pottery evidence, and stratigraphic sequence
FORUM SOUTH-WEST

Excavations in this area were carried out by H. Robinson in 1959 and 1960 and were later continued by C. Williams from 1970 to the 1990s. Several rubbish pits (bothroi) have been excavated, which are stratigraphically located below rooms 2 and 4 of a Late Byzantine complex (Robinson 1960: 97). These rubbish pits appear to be located in an open area, or courtyard, and they were excavated in the bedrock.

South of this courtyard, excavations since 1989 have revealed a complex, which has provided evidence of an intricate neighbourhood, the so-called Frankish area, located west and southwest of the Forum area.

South of an east-west road, leading from the Forum area to the so-called Market Street of the Frankish area, is located a complex dated to the second half of the 13th to the 14th century, named Unit 7. Despite the fact that the architectural features were not completely preserved, due to several walls being robbed out, undisturbed floor levels, rubbish pits, tile destruction debris layers have been identified (Williams et al. 1998: 230). Below Unit 7, a domestic complex has been identified, which follows the traditional scheme of the Byzantine and Frankish house with rooms laid around a central, inner courtyard. Excavations in rooms nos. 1 and 3
have revealed roof tile debris deposits laid on packed earthen deposits, which are interpreted as floor surfaces. These deposits have a high quantity of cooking ware, preserved in large, joining fragments suggesting a primary deposition of this stratigraphic units.

LOT-1997-44
NB 898, p. 95, B 066, p. 96, B. 67, p. 126 B. 090.
A total of 40.23 kg of pottery was found and all of it was saved.

**Fine Ware**

White Ware impressed, yellow glaze, dish, body sherd 1.
Green and Brown Slip Painted III, bowl, rim 1, body sherd 1, cup, handle 1.
Sgraffito as Corinth XI cat. no. 1250, fig. 107, dish, rim 3, body sherd 2.
Incised-Sgraffito (Medallion-Style), as Corinth XI, cat. no. 1436, fig. 125, rim 2, body sherd 4, foot 2.
Incised-champlevé as Corinth XI, cat no. 1698. Fig. 144b, bowl, complete profile 1.
Sgraffito, as Corinth XI cat. no. 1103, fig. 104 b, body sherd 2.
Incised-Sgraffito, Free-Style, as Corinth XI, cat. no. 1558, pl. 51 h, bowl, rim 5, body sherd 5, base 2.
Champlevé, as Corinth XI, cat. No. 1698, fig. 142 A, body sherd 1.
Developed-Style Sgraffito, as Corinth XI cat. no. 1103, fig. 104 b. 4, dish, rim 1, base 1.
Green and Brown Slip Painted V, type III, bowl, rim 1.
Frankish incised-sgraffito (as C-59-122). (ca. 1200- ca. 1260), base 1.
Plain yellow glaze, slip painted (possibly parts of sgraffito dishes) rim 10, body sherd 7, base 1.
Plain green glaze, slip painted, rim 1, body sherd 2, base 1.
Protomaiolica Jug, body sherd 1, base 1.
Green and Brown Slip painted V, bowl, rim 1.
Late sgraffito, bowl, body sherd 2.
Frankish Plain yellow glaze, body sherd 1.

**Coarse Ware**

No. 263 (C-1997-59) jug, complete profile, 1 (0.22).
Burnished jug as C-1997-59. body sherd 20 (0.012), handle 6 (0.15), base 3 (0.07).
No. 314 (Lot-1997-44-26) bowl, rim 1 (0.1).
No. 315 (Lot-1997-44-27) bowl, rim 1 (0.1).
Bowl, as Lot-1997-44-26, rim 1 (0.05).
Proto-geometric Jug, body sherd 2 (0.05).
Jug as Lot-1992-100-87, rim 1 (0.05)
Imported amphora, C-1997-34, rim 1 (0.53), (cf. Popović 1989: 129, no. 1).
No. 197 (C-1997-58) Transport amphora, type 3, rim 1 (0.48).
Transport amphora, type 3, as Lot-1997-47-15, handle 1 (0.15).
Plain rim, large amphora, type 3 as Lot-1997-47-16, rim 1 (0.01), body sherd 8 (0.2).
No. 253 (Lot-1997-44-31) Matt painted lagena, type 2, base 1 (1.28).
No. 252 (Lot-1997-44-30) Matt painted lagena, type 2, rim 1 (1.2).
Matt painted lagena, type 2, as, to Lot-1997-44-31, body sherd 7 (0.15).
Matt painted lagena, type 2, as Lot-1997-44-31, handle 1 (0.2), body sherd 8 (0.55).
Lagena, type 4, as Lot-1997-47-12, body sherd 12 (0.65).
Matt painted lagena, type 1, as C-1992-90, handle 2 (0.19), body sherd 7 (0.3).
Black matt painted lagena, type 1, as Lot-2002-36-1, body sherd 4 (0.1), handle 3 (0.05).  
Black matt painted amphora, body sherd 4 (0.1), handle 3 (0.05) similar to Mackay 1967, no. 77 (painted wavy line).  
No. 299 (Lot-1997-44-28) Basin, complete profile, 1 (0.4).  
Basin, rim 2 (0.15), base 3 (0.1).  
No. 351 (Lot-1997-44-29) Pithos, rim 1 (8).

**Cooking Ware**

No. 116 (Lot-1997-44-17) Triangular rim stewpot, type 3, rim 1 (0.28).  
No. 121 Triangular rim stewpot, type 3 with vertical rib, Lot-1997-44-24, rim 1 (1.25).  
Triangular rim stewpot, type 3, Lot-1997-44-4, rim 1 (0.15).  
Triangular rim stewpot, type 3, Lot-1997-44-5, rim 1 (0.23).  
Triangular rim stewpot, type 3, Lot-1997-44-9, rim 1 (0.35).  
Triangular rim stewpot, type 3, Lot-1997-44-11, rim 1 (0.2).  
Triangular rim stewpot, type 3, Lot-1997-44-12, rim 1 (0.5).  
Triangular rim stewpot, type 3, Lot-1997-44-13, rim 1 (0.3).  
Triangular rim stewpot, type 3, Lot-1997-44-19, complete profile, 1 (1.25).  
Triangular rim stewpot, type 3, Lot-1997-44-20, rim 1 (0.6).  
Triangular rim stewpot, type 3, Lot-1997-44-21, rim 1 (0.5).  
Triangular rim stewpot, type 3 with vertical rib, Lot-1997-44-22, complete profile, 1 (1.25).  
Triangular rim stewpot, type 3, Lot-1997-44-23, complete profile, 1 (0.8).  
Triangular rim stewpot, type 3, with vertical rib, Lot-1997-44-3, as Lot-1997-44-22, rim 1 (0.5).  
Triangular rim stewpot, type 3, Lot-1997-44-8, rim 1 (0.15).  
Triangular rim stewpot, type 3, Lot-1997-44-10, rim 1 (0.2).  
Triangular rim stewpot, type 3, as Lot-1997-44-23, rim 3 (0.23).  
Triangular rim stewpot, type 3, with vertical rib, as Lot-1997-44-24, rim 4 (0.8).  
Triangular rim stewpot, type 3, with vertical rib, as Lot-1997-44-22, rim 26 (1.07).  
Triangular rim stewpot, type 3, as Lot-1997-44-11 rim 3 (0.05).  
Triangular rim stewpot type 3, rim 5 (0.35).  
Triangular rim stewpot, type 3, as Lot-1997-44-5, rim 13 (0.88).  
Collar rim stewpot, type 4, as Lot-1992-100-24, rim 2 (0.1).  
Collar rim stewpot, type 4, as Lot-1997-47-4, rim 3 (0.63).  
Folded rim stewpot, Lot-1997-44-14, rim 1 (0.24).  
Folded rim stewpot, Lot-1997-44-15, rim 1 (0.245).  
Folded rim stewpot, Lot-1997-44-16, rim 1 (0.18).  
Folded rim stewpot as Lot-1997-44-15, rim 2 (0.15).  
Folded rim stewpot, Lot-1997-44-6, rim 1 (0.22).  
No. 141 (Lot-1997-44-18) Outwardly thickened rim stewpot, type 3 rim 1 (0.05).  
No. 140 (Lot-1997-44-25) Outwardly thickened rim stewpot, type 3, rim 1 (0.9).  
Outwardly thickened rim stewpot, type 3 rim 1 (0.05).  
No. 162 (C-1997-39) Small cooking pot, type 4, complete profile, 1 (0.26).  
No. 163 (Lot-1997-44-1) Small cooking pot, type 4, rim 1 (0.2).  
Small cooking pot, type 4, Lot-1997-44-2, complete profile, 1 (0.3).  
Small cooking pot, type 4, as Lot-1997-44-2, rim 7 (0.12), base 2 (0.05).  
Small cooking pot, type 4, Lot-1997-44-7, base 1 (0.3).

Body sherd 236 (3.85), body sherd with central rib 2, (0.1), handle 46 (2.3).
Pre-medieval, rim 4 (0.15).

Coin

Date: 1st quarter 13th century on the base of stratigraphy and pottery evidence.

LOT-1997-47

Fine Ware
Green and Brown Slip Painted III, bowl, rim 1, body sherd 1.
Measles Ware, dish, base 1.
Light on Dark Slip Painted II, bowl, rim 3, body sherd 4.
Sgraffito as Corinth XI cat. no. 1250, fig. 107, dish, rim 1, body sherd 5, base 2.
Developed-Style Sgraffito, as Corinth XI cat. no. 1103, dish rim 4, body sherd 8, base 6.
Incised-Sgraffito (Medallion-Style), as Corinth XI, cat. no. 1436, fig. 125, bowl, rim 6, body sherd 6; dish, body sherd 3, base 3.
Incised-champlevé as Corinth XI, cat no. 1698. Fig. 144 b, base 1.
Plain yellow glaze, slip painted, bowl rim 7, lamp rim 2, juglet almost complete profile, 1, base 1; bowl rim 4, body sherd 4.
Plain Green Glaze, slip painted, lamp, stand 1; juglet, base 1, bowl rim 3, body sherd 2, cup handle 2.
Blue frit, juglet, rim 1, stand 1.
Late Painted Sgraffito, bowl, body sherd 1.
Frankish Sgraffito, bowl, body sherd 1.
Light on Dark Slip Painted III, body sherd 1.
Green and Brown Slip Painted V, bowl, type II, body sherd 4.
Green and Brown Slip Painted V, bowl, type III, body sherd 5.

Pre-medieval: body sherd 2.

Coarse Ware
Burnished jug as C-1997-59, rim 3 (0.02), body sherd 26 (0.22), base 7 (0.3), handle 7 (0.16).
Burnished Jug, as Lot-1992-100-86, base 5 (0.1), body sherd 19 (0.11), handle 2 (0.05).
Jug as Lot-1992-100-79, rim 2 (0.02), base 8 (1).
Bowl as Lot-1997-44-26, rim 1 (0.01), body sherd 2 (0.15).
Bowl as Lot-1992-87-27, rim 1 (0.02).
No. 207 (Lot-1997-47-13) Plain rim, large amphora, type 3, rim 1 (0.4).
No. 208 (Lot-1997-47-16) Plain rim, large amphora, type 3, rim 1 (0.4).
Plain rim, large amphora, type 3, as Lot-1997-47-13, body sherd 2 (0.3), handle 1 (0.1).
Plain rim, large amphora, type 3, as Lot-1997-47-16, body sherd 16 (0.5).
No. 198 (Lot-1997-47-15) Transport amphora, type 3, rim 1 (0.78).
Transport amphora, type 3, as Lot-1997-47-15, body sherd 1 (0.05), handle 1 (0.12).
No. 230 (Lot-1997-47-12) Lagena, type 4, complete profile, 1 (0.95).
Lagena, type 4, as Lot-1997-47-12, rim 2 (0.02), body sherd 1 (0.01), handle 1 (0.03).
No. 244 (Lot-1997-47-14), Triangular rim lagena, rim 1 (0.65).
Triangular rim lagena, as Lot-1992-100-95, body sherd 23 (0.3).
Triangular rim lagena, as Lot-1997-47-14, rim 3 (0.11), handle 6 (0.25).
Lagenes with outwardly thickened rim, as C-1992-86, rim 18 (0.2).
Matt painted lagena, type 2, as Lot-1997-44-31, body sherd 13 (0.6), handle 1 (0.05).
Matt painted lagena, type 1, as C-1992-90, body sherd 3 (0.05).
Matt painted amphora, rim 1 (0.05), body sherd 3 (0.1) similar to MacKay 1967, no. 78.
Basin as Lot-2002-36-5, rim 3 (0.597), body sherd 2 (0.11).

Pre-medieval: body sherd 2 (0.05).

Cooking Ware
No. 146 (Lot-1997-47-01) Folded rim stewpot, rim 1 (0.55).
No. 147 (Lot-1997-47-11) Folded rim stewpot, complete profile, 1 (0.4).
Folded rim stewpot as Lot-1997-44-16, rim 1 (0.03).
No. 117 (Lot-1997-47-03) Triangular rim stewpot, type 3, rim 1 (0.7).
No. 122 (Lot-1997-47-09) Triangular rim stewpot, type 3 with vertical rib, complete profile, 1 (1.55).
Triangular rim stewpot, type 3, Lot-1997-47-02, complete profile, 1 (0.65).
Triangular rim stewpot, type 3, Lot-1997-47-05, complete profile, 1 (0.95).
Triangular rim stewpot, type 3, Lot-1997-47-07, complete profile, 1 (0.75).
Triangular rim stewpot, type 3 with vertical rib, as Lot-1997-44-22, rim 9 (2.63).
Triangular rim stewpot, type 3, as Lot-1997-44-19, rim 6 (3.5).
Triangular rim stewpot, type 3, as Lot-1997-44-20, rim 32 (1.85).
Triangular rim stewpot, type 3, as Lot-1997-47-05, rim 30 (1.58).
Triangular rim stewpot, type 3, as Lot-1997-47-02, rim 16 (1.53).
Triangular rim stewpot, type 3, as Lot-1997-47-03 rim 11 (2.55).
Triangular rim stewpot, type 3 with vertical rib as Lot-1997-47-09, rim 3 (2.25).
Triangular rim stewpot, type 3, rim 5 (0.22).
Triangular rim stewpot, type 1, rim 2 (0.02).
Collar rim stewpot, type 4, Lot-1997-47-4, complete profile, 1 (0.65)
Collar rim stewpot as Lot-1997-47-4, rim 4 (0.17).
Small cooking pot, type 4, Lot-1997-47-06, complete profile, 1 (0.2).
Small cooking pot, type 4, Lot-1997-47-08, rim 1 (0.1).
Small cooking pot, type 4, as Lot-1997-47-06, rim 5 (0.03), base 4 (0.27).
Small cooking pot, type 4, as Lot-1997-47-08, rim 2 (0.1).

Cooking pot body sherd 230 (3.895), handles 46 (1.81).

Pre-medieval, body sherd 2 (0.05).

Other

Coin
Coin 1997-392: possibly Late Roman, 4th AD.

Date: 1st quarter 13th century on the base of stratigraphy and pottery evidence.
GREAT BATH ON THE LECHAION ROAD

LOT 5117
NB 398 p. 23 B 3, p. 48 B 4, p. 49 B 5, p. 52 B. 1 and 2. Elevation from +64.61 to +63.49. Not sieved.

This stratigraphic sequence has been excavated in 1968 in the course of the investigation of the Great Roman Bath, located north of the Forum, along the road to the Lechaion harbour. The Byzantine deposits, excavated in Room F of the Byzantine phase of this complex, were characterised by a high concentration of tiles and amphoras. 220 Middle Byzantine amphoras, of which 19 nearly are completely intact, were revealed under the roof collapse, with 1.251 Kg. (approximately 0.2%) of glazed pottery.

About 700 kg of unglazed pottery from this lot were discarded, with only the complete amphora and feature pottery fragments being kept. According to the nature of the pottery evidence, this deposit appears to be in a primary deposition, covered by the debris of the roof collapse. It was overlaid by a deposit with mixed Medieval to modern pottery and laid over a late 6th century deposit (Lot 5118). This room has been interpreted as a possible wine shop, adjoining the Lechaion Road.

Fine Ware
White Ware, Plain Green Glaze, cup, rim 1.
White Ware, impressed plain green glaze plate, body sherd 1.
White Ware plain yellow glaze cup, handle 1
Light on Dark Slip Painted I, green glaze, bowl body sherd 4.
Light on Dark Slip Painted I, yellow glaze bowl, body sherd 5.
Light on Dark dotted Ware, green glaze, bowl, body sherd 2, rim 2.
Brown glaze, bowl body sherd 4, juglet body sherd 1.
Light on Dark spotted Ware, juglet, base 1.
Green and Brown Slip Painted I, bowl rim 6, body sherd 4, base 1.
Green and Brown Slip Painted I, cup rim 1, body sherd 1, handle 2.
Spatter Painted, disc, rim 2.
Plain yellow glaze juglet, base 1, rim 1.
Plain yellow glaze bowl, body sherd 1.
Plain green Glaze, cup, body sherd 2, handle 3; rim 2.
Plain green Glaze, bowl body sherd 5.
Fine Sgraffito, small bowl, base 1.
Duochrome sgraffito, bowl, rim 1.
Plain Brown glaze, juglet, base 1, bowl, rim 1.
Spatter painted bowl, Lot-5117-1, body sherd 1.
Slip Painted light on Dark 1, bowl Lot-5117-2, rim 1.
Plain Brown Glazed chafing dish, Lot-5117-3 handle 1 (not local fabric).
Plain Brown Glaze Chafing dish, rim with handle attachment 1, base 1; rim 2, body sherd 2, base 1;
Plain Green Glaze Chafing dish, with intersecting band of four incised lines, stand body sherd 2, foot 1.
Brown glaze trefoil Jug, rim 1, body sherd 1.

43 For the location of this Lot refer to fig. 2.1.
44 Fine Ware has been studied by Sanders (PhD Thesis 1995).
Coarse Ware
Amphora, C-1968-35, complete profile, 1 (2.630).
Matt painted lagena, type 1, as Lot-1989-08-18, body sherd 12 (0.25).
Matt painted lagena, type 1, as Lot-1989-08-17, body sherd 24 (0.45).
Black matt painted amphora, Lot-5117-12, handle 1 (0.015).

Cooking Ware
No. 85. (Lot-5117-8) Triangular rim stewpot, type 1, rim 1 (0.441).
No. 93. (Lot-5117-5) Triangular rim stewpot, type 1 rim 1 (0.03).
No. 94. (Lot-5117-6) Triangular rim stewpot, type 1, rim 1 (0.052).
No. 89. (Lot-5117-7) Triangular rim stewpot, type 1, rim 1 (0.056).
No. 90. (Lot-5117-9) Triangular rim stewpot, type 1, rim 1 (0.15).
No. 91. (Lot-5117-10) Triangular rim stewpot, type 1, rim 1 (0.03).
No. 92. (Lot-5117-11) Triangular rim stewpot, type 1, rim 1 (0.06).
No. 95. (Lot-5117-14) Triangular rim stewpot, type 1, rim 1 (0.08).
No. 96. (Lot-5117-15) Triangular rim stewpot, type 1, rim 1 (0.02).
Triangular rim stewpot, type 1 as No. 88, rim 1 (0.01).
No. 126. (Lot-5117-13) Outwardly thickened rim stewpot, type 1, rim 1 (0.01).

Coin
Coin 1968-561: Late Roman follis, House of Constantine.

Other
MF 1968-23: lead ornament.

Date: first quarter of the 12th century, on the basis of pottery comparanda.
<table>
<thead>
<tr>
<th>DATE</th>
<th>LOT</th>
<th>COINS</th>
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<tbody>
<tr>
<td>late 7th to 9th century</td>
<td>1998-10</td>
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<td>Middle 11th century</td>
<td>1996-36</td>
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| 2nd -3rd quarter 12th century    | 1989-08 | 2. Tetarteron, Alexius I, 1092-1118, 1st coinage,
1. Tetarteron, Alexius I, 1092-1118, 3rd coinage
1. Tetarteron Alexius I, 1092-1118, 3rd coinage (imitation?)
1. Anonymous Follis Class K, 1085-92
1. Anonymous Follis Class C, 1085-92 |
<p>| 2nd -3rd quarter 12th century    | 2002-05 | 1. Tetarteron, Alexius I (1092-1118). |</p>
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<td>1. ½ tetarteron, Manuel I (1143-1180)</td>
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<td>1. follis? (octagonal clip)</td>
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Table A. 1. Contexts presented in the text with date range and coins useful for absolute dating.
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<td>15,89%</td>
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<tr>
<td>Imported stewpot (silver inclusions)</td>
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<td>30,32%</td>
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<td>0,48%</td>
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<td>Flanged rim stewpot (lot-1998-11-03)</td>
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<td>Handmade cooking pot</td>
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<td>handles + bases</td>
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<td>23,27%</td>
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Table A.2. Byzantine cooking ware types expressed as a percentage of all Byzantine diagnostic cooking ware pottery within the context, first part of chart.
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<tr>
<td>1,60%</td>
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<td>1,60%</td>
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<td>1,02%</td>
<td>1,60%</td>
<td>1,55%</td>
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<tr>
<td>1,66%</td>
<td>1,40%</td>
<td>3,05%</td>
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<td>8,98%</td>
<td>0,06%</td>
<td>1,66%</td>
<td>1,40%</td>
<td>3,05%</td>
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<td>8,98%</td>
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<td>8,01%</td>
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Byzantine cooking ware types expressed as a percentage of all Byzantine diagnostic cooking ware pottery within the context, second part of chart.
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<tr>
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<tr>
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<td>0.38%</td>
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<tr>
<td>Lagena, type 2</td>
<td>12.80%</td>
<td>0.09%</td>
<td>6.37%</td>
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<tr>
<td>Lagena, type 1</td>
<td>20.23%</td>
<td>4.60%</td>
<td>4.58%</td>
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</table>

Table A. 3 Byzantine lagenes types expressed as a percentage of all Byzantine diagnostic coarse ware pottery within the context.
APPENDIX B: FABRICS

This appendix presents photos of the fabrics taken with a 20-400x magnification USB Digital Microscope. The coarse ware fabrics have been described on the basis of petrographic criteria: colour, hardness, feel, fracture, inclusions and voids. Colour has been described according to the Munsell Soil Color Chart. The coarse ware fabrics have not been petrographically analysed, therefore they have been labelled in a sequential numbering and their descriptions have been based on the parameters presented in Chapter 3, paragraph 5. The cooking ware fabrics have been petrographically analysed by Joyner (2007), and the analysed samples have constituted the reference collection for macroscopically identifying the cooking fabrics in this project. Consequently, the cooking ware fabrics have been labelled according to the petrographic groups defined by Joyner. Also included in this appendix are sample photos of the cooking wares fabrics petrographically analysed by Joyner. For a detailed petrographic description of these cooking fabrics, reference is given to Joyner's publication.

1. Coarse ware fabrics

<table>
<thead>
<tr>
<th>Fabric 1 (Table B. 1)</th>
<th>Medium hard fabric, from pale yellow (2.5 YR 8/3) to light brown (7.5 YR 6/4) in colour, with frequent (0.25 - 1.5 mm) sub-rounded-spherical, white opaque inclusions, few (0.50 - 1.5 mm), subrounded-spherical, red (mudstone?) inclusions; irregularly shaped voids, conchoidal break. Smooth surface.</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.jpg" alt="fabric photo 1" /></td>
<td><img src="image2.jpg" alt="fabric photo 2" /></td>
</tr>
</tbody>
</table>
### Fabric 2. (Table B. 2)

Medium hard fabric, between reddish yellow (5 YR 7/6) and pink (7.5 YR 7/4) in colour, with white (lime?), rare (0.25 – 1.50 mm) rounded-spherical inclusions, few (0.50 - 1.5 mm), subrounded-spherical, red (mudstone?) inclusions and with rare black (0.5 - 1.5 mm) angular-spherical inclusion; frequent, rounded voids, conchoidal break. Smooth surface.

![Fabric 2 Image](image1.jpg)

### Fabric 3. (Table B. 3)

Very hard fabric, reddish yellow (5 YR 7/6) in colour with few black (0.5 - 1.5 mm) angular-spherical inclusions; rare (0.5 - 1.5 mm) red, rounded-spherical inclusions; few (0.25 - 0.5 mm), subrounded-tabular, white inclusions. Frequent, irregular shaped voids, smooth break. Smooth surface.

![Fabric 3 Image](image2.jpg)
### Fabric 4 (Table B. 4)

Medium hard, very pale brown (10 YR 7/4) fabric, with red, rare (0.25 – 1.50 mm) tabular-sub-rounded inclusions, rare, white (quartz?), rounded-spherical inclusions; regular, rounded voids, smooth break. Smooth surface.

![Fabric 4 Images]

### Fabric 5 (Table B. 5)

Medium hard fabric, reddish yellow (7.5 YR 6/6) in colour, with few (0.25 – 1.50 mm) white (quartz?) subrounded-spherical inclusions; rare (0.25 – 0.50 mm) orangish-red, rounded-spherical inclusions; rare (0.25 – 0.50 mm) grey, rounded-spherical inclusions. Irregularly shaped voids, conchoidal break. Smooth surface.

![Fabric 5 Images]
Fabric 7 (Table B. 6)

Medium hard fabric, from very pale brown (10 YR 7/3) to reddish yellow (5 YR 6/6) colour, with few (0.25 - 1.50 mm) black, sub-rounded-tabular inclusions; rare (0.25 - 1.50 mm), white, rounded-spherical inclusions; rare (0.25 – 0.50 mm) red, sub-rounded-spherical inclusions. Thin elongate voids, smooth break. Rough surface.

<table>
<thead>
<tr>
<th>0.50 mm</th>
<th>0.90 mm</th>
</tr>
</thead>
</table>

Fabric 8 (Table B. 7)

Medium-hard fabric, red (2.5 YR 5/6) in colour. Few (0.25-1.50 mm) tabular-angular white inclusions, few (0.25 - 1.50 mm) tabular-rounded grey inclusions; rare (0.25 – 0.50 mm) spherical-rounded gold (mica?) inclusions. Irregularly shaped voids, conchoidal break. Rough surface.

| 0.50 mm | 0.90 mm |
Fabric 9 (Table B. 8)

Medium hard fabric, from very pale brown (10 YR 8/4) to pale yellow (2.5 Y 8/4) in colour, with frequent (0.5 - 1.5 mm) reddish-black, angular-spherical inclusions; rare (0.25 – 0.50 mm) white (quartz?) rounded-spherical inclusions.

Rare, fine elongate voids, conchoidal break. Rough surface. Probably it is a finer version of the well fired chert and quartz fabric.

2. Cooking ware fabrics

Chert and Quartz fabric group, as Joyner group 2 (2007: 194-195, 208-211) (Table B. 9)
Quartz-Mudstone-Chert fabric, as Joyner group 6 (2007: 197-198, 221-225) (Table B. 10)

Sandstone fabric, as Joyner group 5 (2007: 196-197, 218-221) (Table B. 11)

Well-fired chert and quartz fabric (Joyner 2007: 198) (Table B. 12)
<table>
<thead>
<tr>
<th>Fabric Type</th>
<th>Notes</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chert fabric</td>
<td>Joyner group 1 (2007: 193, 206-208) (Table B. 13)</td>
<td></td>
</tr>
<tr>
<td>Mudstone well fired fabric</td>
<td>Joyner group 3 (2007: 193, 211-215) (Table B. 14)</td>
<td></td>
</tr>
<tr>
<td>Mudstone poorly fired</td>
<td>Joyner 2007: 196, 215-218 (Table B. 15)</td>
<td></td>
</tr>
</tbody>
</table>

![Chert fabric](image1)

![Mudstone well fired fabric](image2)

![Mudstone poorly fired](image3)
Figure A. 1. Imported bowl: no. 1.: imported globular amphorae: nos. 2-7.
Figure A. 2. Local coarse ware (late 7th – 9th century).
Figure A. 3. Imported cooking pot (gold sparkling inclusions).
Figure A. 4. Imported cooking pot (silver sparkling inclusions): nos. 2-7; local cooking pot: nos. 29-31.
Figure A. 5. Collar rim stewpot, type 1.
Figure A. 6. Collar rim stewpot, type 2.
Figure A. 7. Collar rim stewpot, type 3-A: nos. 54-57; type 3-B: nos. 58-60.
Figure A. 8. Collar rim stewpot, type 3-C.
Figure A. 9. Collar rim stewpot, type 4.
Figure A. 10. Cauldron, type 1.
Figure A. 11. Cauldron, type 2.
Figure A. 12. Thickened rim stewpot: nos. 81-82 Triangular rim stewpot, type 1-A: nos. 83-85.
Figure A. 13. Triangular rim stewpot, type 1-A.
Figure A. 14. Triangular rim stewpot, type 1-B.
Figure A. 15. Triangular rim stewpot, type 1-C.
Figure A. 16. Triangular rim stewpot, type 2-A.
Figure A. 17. Triangular rim stewpot, type 2-B: no. 111. Triangular rim stewpot, type 2-C: nos. 112-114.
Figure A. 18. Triangular rim stewpot, type 3-A.
Figure A. 19. Triangular rim stewpot, type 3-B.
Figure A. 20: Outwardly thickened rim stewpot, type 1-A: nos. 125-126; type 1-B: nos. 127-128; type 1-C: nos. 129—132.
Figure A. 21. Outwardly thickened rim stewpot, type 2.
Figure A. 22. Outwardly thickened rim stewpot, type 3.
Figure A. 23. Folded rim stewpot, type 1-A: nos. 142-145; type 1-B: nos. 146-147.
Figure A. 24. Small cooking pot, type 1: nos. 148-152; type 2: nos. 153-156.
Figure A. 25. Small cooking pot, type 3.
Figure A. 26. Small cooking pot, type 4: nos. 162-168; type 5: no. 169.
Figure A. 27. Lid: nos. 170-173. Funnel: nos. 174-175.
Figure A. 28. Handmade beaker.
Figure A. 29. Unglazed white ware, beaker: no. 179; kettle: nos. 180-183.
Figure A. 30.: Stamn: no. 184. Amphora, Otranto type, type 1, 1-A.: nos. 185-186; type 1-B: no. 187.
Figure A. 31. Amphora, Otranto type, type 1, 1-B.
Figure A. 32. Transport amphora, type 1: nos. 191-192; type 2: nos. 193-194.
Figure A. 33. Transport amphora, type 2: nos. 195-196; type 3: nos. 197-198.
Figure A. 34. Plain rim amphora, type 1: nos. 199-200; type 2: nos. 201-202.
Figure A. 35. Plain rim amphora, type 3-A: nos. 203-204; type 3-B: no. 205; type 3-C no. 206; type 3-D: nos. 207-208.
Figure A. 36. Lagena, type 1-A: nos. 209-212; type 1-B: nos. 213-215.
Figure A. 37. Lagena, type 1-B: nos. 216-218; lagena type 2-A: nos. 219-222.
Figure A. 38. Lagena, type 2-B.
Figure A. 39. Lagena, type 3: nos. 227-229; type 4: no. 230.
Figure A. 40. Lagena, body shape, type 1-A: nos. 213-233; type 1-B: nos. 234-235; type 2: nos. 236-237.
Figure A. 40. Triangular rim lagena, type 1: nos. 238-239; type 2: nos. 240-244.
Figure A. 41. Lagena with outwardly thickened rim: no. 245. Matt painted lagena: type 1-A: nos. 246-250.
Figure A. 42. Matt painted lagena, type 1-B: no. 251; type 2: nos. 252-253.
Figure A. 43. Burnished jug, type 1: nos. 254-256; type 2: nos. 257-260; type 3: nos. 261-262; type 4: no. 263.
Figure A. 44. Smoothed surface and grooved decoration jug, type 1-a: nos. 264-265; type 1-B: no. 266; type 2-A: nos. 267-268; type 2-B: nos. 269-270.
Figure A. 45. Incised jug, type 1: no. 271; type 2: nos. 272-276.
Figure A. 46. Incised jug, type 2-A: nos. 277-278; type 2-B: no. 279. Gouged jug: nos. 280-281.
Figure A. 47. Trefoil rim jug: nos. 282-284. Imported, incised jug: nos. 285-286.
Figure A. 48. Juglet, type 1: nos. 287-289; type 2: nos. 290-291; type 3: no. 292.
Figure A. 49. Lekane: type 1.
Figure A. 50. Lekane: type 2.
Figure A. 51. Large bowl: nos. 306-315; small bowl: nos. 316-317.
Figure A. 52. Pedestal bowl, type 1: nos. 318-319; type 2: nos. 320-321; type 3: nos. 322-324.
Figure A. 53. Pedestal bowl, type 4: nos. 325-326; type 5: nos. 327-329.
Figure A.

54. Cup.
Figure A. 55. Cup.
Figure A. 56. Tankard, type 1-A: nos. 344-346; type 1-B: no. 347.
Figure A. 57. Pithos: nos. 348-351; pithos lid: no. 352.
Figure A. 58. Storage jar.
Figure A. 59. Storage jar.
Figure A. 60. Collared jar.
Plate. 2. Sparta, imported globular amphora: no. 32; handmade beaker: nos. 33, 35; wheel-made beaker: no. 36; wheel-made stewpot: no. 37; imported stewpot (silver inclusion): nos. 37-38.
Plate 3. Corinth, local stewpots.
Plate. 4. Corinth, local stewpots.
Plate. 5. Corinth, local small cooking pot.
Plate. 7. Corinth, handmade beaker: nos. 176-177; white ware beaker: no. 179; white ware kettle: nos. 181-182.
Plate. 8. Corinth, local amphora.
Plate. 9. Corinth, local lagena.
Plate. 11. Corinth, local basin: nos. 292-304; local bowl: nos. 308-317.
Plate. 13. Corinth, local tankard: nos. 345, 347; storage jar: nos. 354, 363.
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