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# Forschungen zur geschichtlichen Landeskunde der Steiermark

Band 60

Herausgegeben von der  
Historischen Landeskommision für Steiermark

Kirk Patrick Fazioli

# Technology, identity, and time

Studies in the archaeology and historical anthropology  
of the eastern alpine region from late antiquity to the  
early middle ages

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## VORWORT

Mit der vorliegenden Online-Publikation beginnt die Historische Landeskommission für Steiermark ihr Vorhaben, nicht oder nur schwer in Druckform erhältliche wichtige Arbeiten zur Archäologie der Steiermark einem interessierten LeserInnenkreis unentgeltlich zur Verfügung zu stellen und vor allem auch den digitalen Daten dieser Arbeiten ein möglichst langes Weiterleben zu garantieren.

Die US-amerikanische Dissertation von Patrick Fazioli ist eine derartige wichtige ungedruckte Arbeit zur Archäologie der Steiermark, die eine konkrete Beschäftigung vor Ort (im Umfeld von Wildon), also aus der ganz eigentlich steirischen Archäologie heraus, mit einem Außenblick auf die steirische und österreichische Archäologie verbindet. Dieser Blick ist in der ganz anderen Forschungstradition begründet und stellt über die unmittelbaren Forschungsfragen Faziolis hinaus eine lesens- und bedenkenswerte Position außerhalb unserer gewachsenen fachlichen Gewohnheiten und vielfach auch außerhalb der Vorgangsweisen der in Österreich vorherrschenden „deutschen“ Ur- und Frühgeschichtsforschung mit ihrem starken Zwang zu formalen Typologisierungen dar.

Besonders wichtig scheint auch Faziolis Behandlung von Forschungsgeschichte *innerhalb* der Zeitgeschichte: Sie wird so anstelle des üblichen abzudienenden Katalogs, wer was wo einmal geschrieben hat, zu einer Hinweisgeberin, warum das eine erforscht, das andere nicht erforscht wurde, warum die eine Meinung immer noch vertreten und die andere gar nicht erwähnt wird, und somit zu einem integrativen Teil der ganz aktuellen Archäologie, die ja in sich schon zeitgebunden und nur in ihrer eigenen Geschichtlichkeit deutbar ist. Und diese Geschichtlichkeit ist nicht nur dem Biografischen der einzelnen – seinerzeit und jetzt – handelnden Personen abzulesen, sondern den zeitgeschichtlichen Gegebenheiten von Einbettung der Wissenschaft in Apparate, Netzwerke und Ideologien und von Benutzung der Wissenschaft für Apparate, Netzwerke und Ideologien. Gerade deshalb, um die vielleicht da und dort noch vorherrschende Meinung einer sozusagen im luftleeren Raum schwebenden „wertfreien“ Archäologie ins rechte Licht zu rücken, sollte die Arbeit bei an steirischen Themen arbeitenden ArchäologInnen und Studierenden bekannt werden. Wer das der Dissertation von Fazioli vorangestellte Zitat von Walter Benjamin aus dem Jahr 1940 liest, wird sogleich verstehen, was gemeint ist.

Fazioli beschäftigt sich innerhalb seiner Dissertation mit mehreren Themenkreisen, deren teilweise unerwartete Verquickung den besonderen Reiz ihrer Lektüre ausmacht.

Zwei Themen sind zeitlich verankert: zum einen steht der Zeitraum zwischen 300 und 900 nach Christus im Fokus, also jene Zeit, in der der Ostalpenraum aus dem Römischen Reich heraus und in das Mittelalter „geriet“ – Manfred Lehner hat sich auch in seiner, von Fazioli noch nicht rezipierten Grazer Habilitation „Binnennoricum – Karantanien zwischen Römerzeit und Hochmittelalter. Ein Beitrag zur Frage von Ortskontinuität und Ortsdiskontinuität aus archäologischer Sicht“ aus dem Jahr 2009 damit beschäftigt. Zum anderen wird ebendiese Zeit in der verzerrenden (?) Spiegelung aus einer anderen Zeit betrachtet, im Blick des deutschen „Imperialismus“ und der Archäologie des Nationalsozialismus auf Spätantike/Frühmittelalter.

Zwei weitere Themen sind methodologisch mit einem stark naturwissenschaftlich-technischen bzw. archäometrischen Aspekt verknüpft: Keramiktechnologie und Rekonstruktion von Kulturlandschaften. Beides wird anhand der Feldforschung von Fazioli an der mittleren Mur („Middle Mura“) exemplifiziert. 2006 und 2007 nahm Fazioli als Absolvent der University at Buffalo an Ausgrabungskampagnen des Kulturparks Hengist (Wildon) teil. Im Zuge von Notgrabungsmaßnahmen wurden damals die Reste eines hallstattzeitlichen Gräberfeldes sowie einer frühmittelalterlichen Siedlungsstelle in der Flur Rasental, Gemeinde Wildon, aufgedeckt. Die Grabungstätigkeiten erweckten Faziolis Interesse an der außergewöhnlichen archäologischen Fundlandschaft rund um Wildoner Schlossberg und Buchkogel. In den Jahren 2009 und 2010 führte Fazioli schließlich eigenverantwortlich archäologische Surveys und geochemische Bodenanalysen in der Region Hengist sowie im südlichen Bezirk Graz-Umgebung durch, die der Erforschung dieser herausragenden historischen Kulturlandschaft dienen und aus denen interessante Daten für die 6000jährige Siedlungsgeschichte dieses Raumes hervorgingen.

Zwei zusätzliche Themen durchziehen sozusagen die Dissertation von ihrem Anfang bis zu den Schlussfolgerungen: Die Bedingtheit von Archäologie als Wissenschaft von den materiellen Hinterlassenschaften und die Frage nach einer Umsetzung von Erkenntnissen der Archäologie in das Erkennen oder Erzeugen (!) von Identitäten. Damit begibt sich Fazioli vor dem Hintergrund einer angloamerikanischen Diskussionstradition an jenen Punkt, wo es zu überlegen gilt, für welche Zeit Archäologie Geschichte „macht“ – für das Frühmittelalter oder für das jeweilige Jetzt?

All dies kann man mit Gewinn bei Fazioli nachlesen, in einer durchaus anderen Terminologie als in diesem rezensionsartigen Vorwort – Fazioli ist eben nicht der deutschen und humanistischen (im Sinne des späteren 19. Jahrhunderts) Tradition verbunden wie die Verfasser desselben.

*Bernhard Hebert, Christoph Gutjahr und Gernot P. Obersteiner*

*In memoriam*

*Barbara Leitinger*  
*(1931 – 2011)*



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My extended stays abroad would have been terribly lonely and boring if it weren't for the hospitality and generosity of the entire Leitinger family, who welcomed me into their home and became a second family, as well as the endlessly informative and entertaining cultural and archaeological excursions, courtesy of one I. M. Hrovatin! My final and deepest thanks and love go out to my family – mother, father, brother, sister, grandparents, aunts, uncles, cousins, and in-laws – who always remained patient and understood the marathon that is dissertation research. Finally, my most profound appreciation is reserved for my lovely wife Rachel, without whom none of this (quite literally!) would have been possible. I love you.

Die Geschichte ist Gegenstand einer Konstruktion, deren Ort nicht die homogene und leere Zeit  
sondern die von Jetztzeit erfüllte bildet.

-W. Benjamin, *Über den Begriff der Geschichte* (1940), Thesis XIV

## TABLE OF CONTENTS

	Page
Acknowledgments.....	iv
List of Figures.....	xi
List of Tables.....	xv
Abstract.....	xvi
<b><u>Introduction</u></b>	
Chapter 1	IS THE <i>POST-</i> IN POST-ROMAN THE <i>POST-</i> IN POSTCOLONIAL?
1.1	Archaeology and the Postcolonial.....1
1.2	Research Questions and Structure of the Dissertation.....5
<b><u>Part One: Interdisciplinary Approaches to Continuity and Change in the Eastern Alps</u></b>	
Chapter 2	THE SOUTHEASTERN ALPS AND NORTHERN ADRIATIC REGION (SEANAR) AD 300 – 900: THE HISTORICAL AND ARCHAEOLOGICAL FRAMEWORK
2.1	Introduction.....14
2.2	Continuity or Collapse in the Post-Roman West? .....18
2.3	The Late Roman Empire: Portents of Transformation.....25
2.4	The End of Roman Rule in the West: the Long Fifth Century.....38
2.5	Late Antiquity (c. AD 476 – 568).....52
2.6	The Early Middle Ages (c. AD 600 – 900).....63
2.7	Conclusion.....74
Chapter 3	CERAMIC TECHNOLOGY IN THE LATE ANTIQUE AND EARLY MEDIEVAL SOUTHEASTERN ALPS: MACROSCOPIC AND PETROGRAPHIC ANALYSES
3.1	Introduction.....75
3.2	Ceramic Petrographic Research in Archaeology.....76
3.3	Research Design and Methodology.....85
3.4	Results and Interpretation.....92

3.5	Summary and Conclusion: Ceramic Traditions in the SEANAR.....	116
Chapter 4	RECONSTRUCTING PAST HUMAN LANDSCAPES ALONG THE MIDDLE MURA RIVER VALLEY	
4.1	Introduction.....	121
4.2	Elements of Landscape along the Middle Mura.....	122
4.3	Results and Interpretation.....	142
4.4	Conclusion: Change and Continuity in Broader Context.....	174

**Part Two: Social Identity, Materiality, and Embodied Practice**

Chapter 5	A BRIEF HISTORY OF HUMANS AND NONHUMANS IN ANTHROPOLOGICAL AND ARCHAEOLOGICAL THOUGHT	
5.1	Introduction.....	175
5.2	‘Primitive’ Technology in Early Anthropology (c. 1860 – 1920).....	179
5.3	Thinking about Things in 20 <sup>th</sup> C. Anglo-American Archaeology.....	183
5.4	Components of a Contemporary Materiality Perspective.....	194
5.5	Conclusion: Where are we now?.....	206
Chapter 6	MATERIALITY, RELATIONALITY, COMPLEXITY: TOWARDS A MONSTROUS ARCHAEOLOGY	
6.1	Introduction.....	207
6.2	Elements of a Monstrous Archaeology.....	210
6.3	Addressing Action in Social Science Research.....	216
6.4	Beyond Culture and Society.....	230
6.5	Conclusion.....	235
Chapter 7	BEYOND ETHNICITY: SOCIAL IDENTITY, MATERIAL CULTURE, AND TECHNOLOGICAL CHOICES IN THE POST-ROMAN SEANAR	
7.1	Introduction.....	236
7.2	Barbarian Identity in the Historical Record.....	237
7.3	Barbarian Identity in the Archaeological Record.....	245
7.4	Technological Choices.....	258

7.5	Conclusions and Future Directions.....	268
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**Part Three: Identity, Temporality, and the Politics of the Past**

Chapter 8	GERMAN IMPERIALISM, NAZI ARCHAEOLOGY, AND THE EARLY MIDDLE AGES	
8.1	Introduction.....	270
8.2	Nazi Archaeology and German ‘Internal’ Colonialism.....	270
8.3	Medievalism and German Social Science.....	272
8.4	Slovenes in the German Imperial Imagination.....	278
8.5	Role of the Medieval past after WWI.....	280
8.6	Early Medieval Archaeology in the Southeastern Alps.....	282
8.7	Conclusion.....	290
Chapter 9	MEDIEVALISM, COLONIALISM, AND THE TEMPORAL LOGIC OF ANTHROPOLOGY	
9.1	Introduction.....	293
9.2	Medieval Studies, Postmodernism, and the Cultural Turn.....	295
9.3	The Medieval/Modern Periodization: Roots and Consequences.....	297
9.4	Medievalism, Colonialism, and the Spatio-temporal Hierarchy.....	302
9.5	Whither the Medieval in the Pre-History of Anthropology?.....	305
9.6	De-Enlightenment.....	311
9.7	Consequences.....	315
9.8	Conclusion.....	319
Chapter 10	TIME TO TRANSGRESS: ARCHAEOLOGY BEYOND MODERN TEMPORALITIES	
10.1	Introduction.....	320
10.2	Archaeology and the Times of Modernity.....	321
10.3	Two Categories of Time.....	324
10.4	B-Series Time in Archaeology and History.....	330
10.5	A-Series Time in Archaeology and History.....	341

10.6 Archaeological Implications and Conclusions.....357

**Conclusion**

Chapter 11 GENERAL CONCLUSIONS AND INTERPRETATIONS

11.1 Introduction.....361  
11.2 Continuity and Change in the Eastern Alps.....361  
11.3 Social Identity, Materiality, and Embodied Practice.....368  
11.4 Identity, Temporality, and the Politics of the Past.....373

**Appendices:**

A. Petrofabric descriptions with photographs.....380  
B. Provenience of ceramic samples from petrographic analysis.....398  
C. Ceramic typology from surveys (by transect).....402  
D. Ceramic typology from surveys (images).....428  
E. Tabulated test unit notes.....443  
F. Comprehensive results of phosphate analyses.....450

References Cited.....480

## LIST OF FIGURES

- Figure 1.1 Approximate boundaries of the broad region that constitutes the focus of this dissertation (© 2011 Google)
- Figure 2.1 The SEANAR during the Roman Provincial Period (after Horvat 1999:217)
- Figure 2.2 Various Layouts of Upland Fortified Settlements (after Ciglencečki 2008:506)
- Figure 2.3 Regions in the SEANAR granted to the Lombards by Justinian (after Ciglencečki 1999a:298)
- Figure 2.4 Typical Early Medieval 'Slavic' Pottery from southern Austria (after Rodriguez 1992:161)
- Figure 3.1 Basics of Optical Microscopy (after Mason 2004:22)
- Figure 3.2 Comparison of phases from the various sites selected for analyses
- Figure 3.3 Sites selected for ceramic compositional analyses in this study (© 2011 Google)
- Figure 3.4 Geological Map of Slovenia (after Mioč 2003:5)
- Figure 3.5 Aerial Photo of Tonovcov grad (after [http://iza.zrc-sazu.si/En/Raz\\_TG.html](http://iza.zrc-sazu.si/En/Raz_TG.html))
- Figure 3.6 Site Map of Tonovcov grad (after [http://iza.zrc-sazu.si/En/Raz\\_TG.html](http://iza.zrc-sazu.si/En/Raz_TG.html))
- Figure 3.7 Photos of Tonovcov grad ruins (Photos by author, summer 2009)
- Figure 3.8 Relative Proportions of Macroscopic Fabric Groups by Phase (after Modrijan 2008:90)
- Figure 3.9 Site Map of Tinje (after Ciglencečki 2000:48)
- Figure 3.10 Plan View and Picture of Building 4 (after Ciglencečki 2000:48)
- Figure 3.11 Plan View and Picture of Building 5 (after Ciglencečki 2000:33, 34)
- Figure 3.12 Site Map of Rifnik (after Bolta 1981)
- Figure 3.13 Aerial Photo of Koper (© 2011 Google)
- Figure 3.14 City Plan of Modern Koper (black dot indicates site location) after Cunja 1996
- Figure 3.15 Byzantine Style Belt Buckle with Carolingian Decoration from Koper (from Cunja 1996)



- Figure 3.16 Photos and Site Map of Koper showing building phases: green = Late Antique, yellow = Early Medieval (adapted from Cunja 1996)
- Figure 4.1 Location of Project Area in Broader Region (© 2011 Google)
- Figure 4.2 Project Boundaries and Hydrology along the Middle Mura River
- Figure 4.3 Geological Map of Wildon Region (adapted from [www.gis.steiermark.at](http://www.gis.steiermark.at))
- Figure 4.4 Locations of previous excavation in the Wildon Region
- Figure 4.5 Soil phosphate levels in the project area
- Figure 4.6 Example of Soil Stratigraphy in Ploughed Field (ECK TU1; photo by author)
- Figure 4.7 From *Blaeu Atlas* (1630s – 1660s)
- Figure 4.8 From *Vischer Karte* (1678) (from [www.gis.steiermark.at](http://www.gis.steiermark.at))
- Figure 4.9 From *Josephinische Landesaufnahme* Map (1787) (from [www.gis.steiermark.at](http://www.gis.steiermark.at))
- Figure 4.10 From *Franziszischer Kataster der Gemeinde Unterahaus* (1823)
- Figure 4.11 From *Franziszischer Kataster der Gemeinde Stocking* (1823)
- Figure 4.12 Historic Ceramics collected in Surveys (darker color indicates higher density)
- Figure 4.13 Prehistoric Ceramics collected in Surveys (darker color indicates higher density)
- Figure 4.14 Copper Age Flint Axe (photo by author)
- Figure 4.15 Late Bronze Age and Early Iron Age Ceramics (photos by author)
- Figure 4.16 Graphite La Tène Rim Fragments (photo by author)
- Figure 4.17 Late Roman Child's Burial with Glass Beads (image courtesy Wildon Museum)
- Figure 4.18 Some typical Roman period ceramic decorations (photos by author)
- Figure 4.19 Some Early Medieval ceramics (photos by author)
- Figure 4.20 Examples of Late Medieval Rim Styles (photos by author)
- Figure 4.21 Examples of Metal Surface Finds: 1869 Hungarian Krajezar (Ger: Kreuzer) on left; button with grape motif on right (photos by author)
- Figure 4.22 Examples of Early Modern Rim Styles (photos by author)

- Figure 4.23 Historic Iron Knife from TU GLUD 1, Level 3 (photo by author)
- Figure 4.24 Historic Iron Fork (?) from TU ECK 1a, Level 4 (photo by author)
- Figure 4.25 Spatial Correlation of High Prehistoric Surface Density to Freshwater Sources
- Figure 4.26 Transects with High and Late Medieval Diagnostic Ceramics in Afram, Stocking, and Sukdull
- Figure 4.27 Transects with Early Modern Diagnostic Ceramics in Afram, Stocking, and Sukdull
- Figure 4.28 Spatial Correlation of High Historic and High Prehistoric Surface Density
- Figure 4.29 Spatial Relationship of High Phosphate Areas with High Surface Densities
- Figure 4.30 Correlation of Prehistoric Ceramics, Historic Ceramics, and High Phosphates at Göttling
- Figure 4.31 Soil Phosphate and Artifact Levels with Locations of Test Units
- Figure 6.1 Comparison of Traditional Culture Framework and 'Monstrous' Approach
- Figure 7.1 Regional Summary of Slavic Material Culture across East-Central Europe (after Brather 2004a:326)
- Figure 7.2 Traditional Linear Conception of Subject and Objects
- Figure 7.3 Monstrous Approach to Subject-Objects
- Figure 7.4 Two Types of Potter's Wheel (from Rye 1981:74)
- Figure 7.5 Chaîne Opératoire of Ceramic Technological Choices at Tonovcov grad
- Figure 7.6 Chaîne Opératoire of Ceramic Technological Choices at Tinje
- Figure 7.7 Chaîne Opératoire of Ceramic Technological Choices at Koper
- Figure 8.1 Early Medieval Germanic Settlement of the SE Alps, according to Dinklage (1941b:240)
- Figure 9.1 Cultural Origins of "Modern" Europe (from Dussell 2000:467)
- Figure 9.2 Commonly Cited 'Differences' between the Medieval and Modern World
- Figure 9.3 The Spatio-Temporal Hierarchy
- Figure 10.1 Different Categories of Time according to McTaggart (adapted from [http://en.wikibooks.org/wiki/Consciousness\\_Studies/The\\_Philosophical\\_Problem](http://en.wikibooks.org/wiki/Consciousness_Studies/The_Philosophical_Problem)). Permission of use granted under GNU Free Documentation License
- Figure 10.2 Based on Husserl's (1966) Time Diagram
- Figure 10.3 Based on Lucas' (2005) Adaptation of Husserl's Time Diagram

- Figure 10.4 The Author's Own Version of the Time Diagram
- Figure 10.5 The Movement of Time as a Spiral; image generated by author
- Figure 10.6 Zeno's Arrow (after Lucas 2005:20)
- Figure 10.7 Two means by which humans interpret the temporal persistence of nonhumans (after Jones 2007:59).

## LIST OF TABLES

Table 3.1	Fabric Groups from Tonovcov grad
Table 3.2	Fabric Groups from Tonovcov grad by period
Table 3.3	Fabric Groups from Tinje
Table 3.4	Fabric Groups from Tinje by period
Table 3.5	Fabric Groups from Rifnik
Table 3.6	Fabric Groups from Koper
Table 6.1	Action Hierarchy
Table 7.1	Firing Environments and Pottery Color

## **ABSTRACT**

This dissertation explores aspects of the Late Antique and Early Medieval periods in the eastern Alpine and northern Adriatic region of Central Europe by integrating archaeological, anthropological, and historical approaches to the past. The themes of technology, identity, and temporality crosscut the three major parts of the thesis: (1) examining continuity and change from Late Antiquity to the Early Middle Ages (c. AD 300 – 900), (2) exploring the complex interplay of social identity, material culture, and embodied practice, and (3) considering the role of the medieval past in contemporary political and historical ideologies.

Part One investigates aspects of historical change and continuity in the centuries following the collapse of Roman political authority in Central Europe. These patterns are examined at both the regional and local levels through a variety of archaeological methods. Chapter 2 outlines the historical and archaeological frameworks, assessing aspects of continuity in this region (settlement, demographic, social, etc.), along with processes of ‘culture contact’ and Christianization. Chapter 3 addresses the question of continuity versus change from the perspective of ceramic technology, utilizing macroscopic and microscopic analyses to examine the manufacture of pottery at four settlements in this region that bridge the Late Antique – Early Medieval transition. Results from the petrographic investigation indicate that coarse-ware ceramics exhibit a high degree of compositional variability across the southeastern Alpine and northern Adriatic region. Chapter 4 constitutes a scalar shift in the examination of change and continuity, providing greater temporal depth in a more localized geographical region. Past human landscapes were reconstructed along sections of the middle Mura river valley in southeastern Austria using a battery of interdisciplinary methods (pedestrian surface collection, soil chemical sampling, and documentary research). The results from the surveys suggest that major

demographic changes occurred during the Early Iron Age and High/Late Middle Ages, with comparatively little surviving material traces from Roman and Early Medieval periods. The landscape reconstruction also revealed important long term spatial patterns in terms of settlement, land-use, and human activity beyond individual sites.

Part Two situates the historical and archaeological issues outlined in the previous chapters within a broader theoretical framework that considers the relationship between social identity, embodied practice, and material culture. Chapter 5 provides a brief history of anthropological and archaeological conceptualizations of this complex relationship, from the 19<sup>th</sup> century through current approaches, focusing on the ‘materiality’ perspectives that have recently gained favor across the social sciences. Chapter 6 builds upon these emerging perspectives by sketching the possibilities for a ‘monstrous archaeology’, which combines elements of materiality, relational ontology, and complexity theory. It reveals how traditional means of exploring the agent/structure paradox rely on a problematic understanding of human society and culture that is ultimately divorced from the material world; a more ‘symmetrical’ approach is forwarded that blurs the ontological divide between humans and nonhumans. Finally, Chapter 7 provides an empirical case study for this new approach, through a detailed investigation of ‘barbarian ethnicity’ in early medieval history and archaeology. The ceramic data presented in Chapter 3 is revisited in order to examine aspects of technological choice through the *chaîne opératoire* perspective. Embodied practice, which mediates the co-construction of people and things, is argued to be a more sophisticated alternative to traditional ‘ethnic’ interpretations of early medieval social identity.

Finally, Part Three is comprised of three chapters, each of which explores aspects of the ‘power of the past’ along thematic axes of social identity, colonialism, and temporality. Chapter 8

situates eastern Alpine early medieval archaeology in the first decades of the 20<sup>th</sup> century within the context of European colonial ideologies by illustrating how the indigenous Slavic-speaking populations (in both the present and medieval past) were constructed as a ‘colonial Other’ by Germanic imperial social science. Chapter 9 builds upon such uncanny intersections of the medieval and modern, exposing the implicit temporal logic of the discipline of anthropology. It traces how a primitivized medieval ‘Other’ was created alongside its non-Western counterpart in the course of the modernist project. Although anthropologists have long recognized their discipline’s complicity in the creation of the latter, the existence of the former remains largely overlooked. Finally, Chapter 10 explores the different means by which archaeological, anthropological, and historical research have broached the key issue of *time*, and proposes an alternative approach to temporality – based on the aforementioned relational ontology – that avoids the pitfalls of traditional linear and uniform models. Dissolving the ontological boundary between the past and present (as well as between people and things) opens up these disciplines to a more sophisticated and efficacious means of studying human societies *in* and *through* time.

## CHAPTER 1

### IS THE *POST*- IN POST-ROMAN THE *POST*- IN POSTCOLONIAL?<sup>1</sup>

*All archaeology today is postcolonial.*

- C. Gosden<sup>2</sup>

#### **1.1. ARCHAEOLOGY AND THE POSTCOLONIAL**

The postcolonial critique has been one of the most significant and influential political, epistemological, and ethical revolutions of the past quarter century. Although strident anti-colonial sentiments were expressed in the postwar era by a number of intellectuals (DuBois 1945, Arendt 1951, Fanon 1952, Césaire 1955), the founding of ‘postcolonial studies’ as a coherent intellectual movement has been largely indebted to the work of three seminal figures—Edward Saïd, Gayatri Chakravorty Spivak, and Homi Bhabha. Their brilliant and often scathing critiques of Western scholarship have powerfully shaped the primary research agendas of contemporary postcolonial studies: investigating the ways in which Western art, literature, and other academic endeavors have supported and justified European imperialism by perpetuating a stereotyped portrait of the colonized Other (e.g. Saïd 1978); articulating a conceptual space in which the voices of colonized, marginalized, oppressed, or otherwise ‘subaltern’ groups can be heard (e.g. Spivak 1988); and exploring the complex dynamics of colonial interaction, particularly the negotiation of identities between colonizer and colonized (e.g. Bhabha 1994).

Although this research agenda originated in literary and critical theory, it spread quickly throughout the academy, exerting tremendous influence on disciplines ranging from anthropology, sociology, and geography, to history, political science, women’s studies, and

---

<sup>1</sup> With apologies to Kwame Anthony Appiah (1991)

<sup>2</sup> Gosden 2001:241



philosophy. Explicitly archaeological engagements with this perspective first occurred somewhat sporadically in the 1990s (Biddick 1993, Webster 1997, van Dommelen 1997), but have grown exponentially in the past decade<sup>3</sup>. How have archaeological approaches to the past and present been influenced by postcolonialism? Although the ever-expanding corpus of ‘postcolonial archaeology’ defies simple categorization, I identify here – building upon Matthew Liebmann’s (2010) categories – three primary lines of inquiry in postcolonial archaeology, which roughly correspond to the research agendas of the major figures outlined above:

(1) the ‘*Bhabha group*’: research that examines processes of colonization and colonial rule in the archaeological record, particularly through a lens of hybridity, creolization, or syncretism (e.g. Webster 1997, Woolf 1997, Tronchetti and van Dommelen 2005, Stein 2005, Fahlander 2007, Hingley 2008, Naum 2010);

(2) the ‘*Saïd group*’: research that considers how archaeological constructions of the past have constituted an ideological extension of colonial and imperial hegemonic power (e.g. Trigger 1984, Munzi 2004, McNiven and Russell 2005, Habu et al 2008); and

(3) the ‘*Spivak group*’: research that seeks to adopt multi-vocal approaches to the archaeological past through greater inclusion of indigenous voices (Ucko and Layton 1999, Smith and Wobst 2005, Watkins 2005, Hamilakis and Duke 2007, Allen and Phillips 2010)<sup>4</sup>.

The tremendous thematic diversity of this literature illustrates the increasingly widespread impact of postcolonial studies on 21<sup>st</sup> century archaeological thought. It is critical to recognize that contemporary ‘postcolonial archaeology’ has expanded beyond topics directly related to the practice of archaeology in the West’s former colonies (although it certainly continues to include such important work). However, it now permeates every corner of the discipline, encouraging *all*

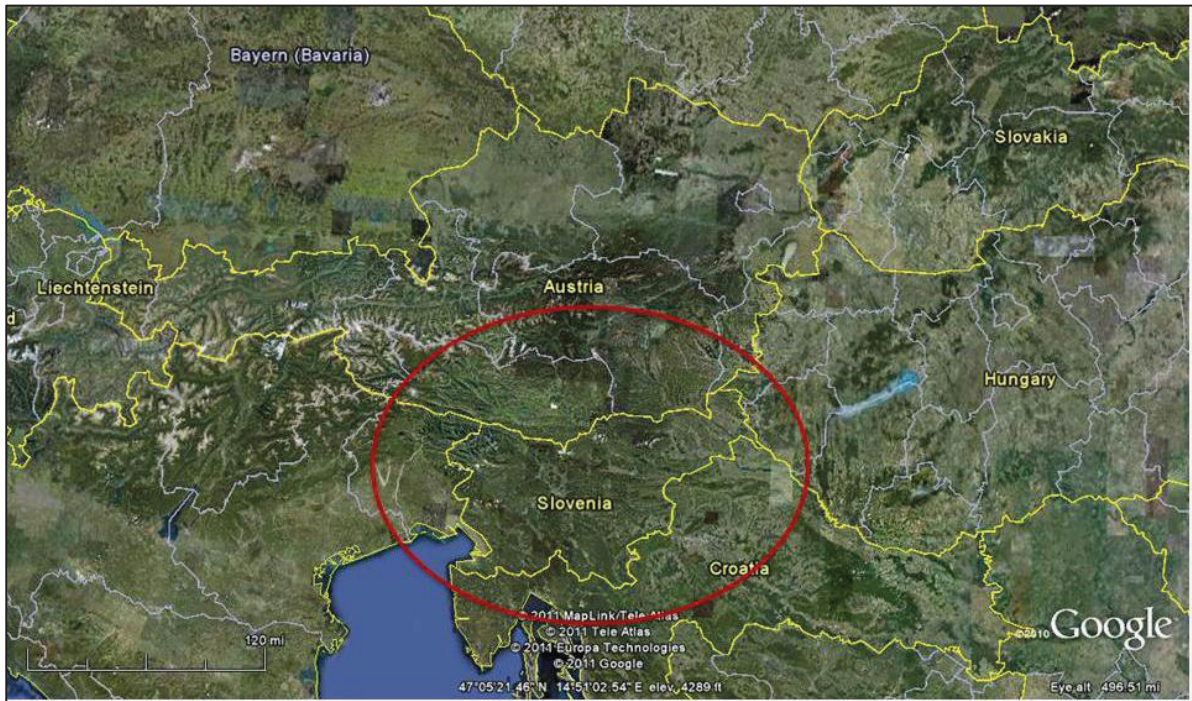
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<sup>3</sup> See especially Gosden 2001, Given 2004, Lucas 2004a, Johnson 2006, Hauser and Hicks 2007, Hamilakis 2008, Leone 2009, as well as contributions in Stein 2005, Liebmann and Rizvi 2008, Lydon and Rizvi 2010.

<sup>4</sup> It should be noted that such approaches are not mutually exclusive.

archaeologists – whether or not they work in traditionally ‘post-colonial’ settings – to rethink some of the most fundamental issues in our discipline, from our relationship with the local communities, both Western and non-Western (e.g. McGuire 2008), to the socio-political implications of the ‘pasts’ that we produce (e.g. Kohl 1998, Turner 2007), as well as many of our long-held assumptions concerning the nature of intercultural contact (Lightfoot et al. 1998, Cusick 1998, Silliman 2005), political domination and resistance (Miller, Rowlands, and Tilley 1989), and the complex construction of human identities (Gardner 2007). Simply put, the postcolonial critique serves as a constant reminder of the ethical obligations and political responsibilities that accompany the inherent *power* of archaeological knowledge and the pasts that we generate. As Chris Gosden’s epigraph at the beginning of this chapter intimates, ‘postcolonial’ no longer simply refers to a particular kind of archaeology, but rather expresses most profoundly the epistemological *condition* in which all archaeology is now located.

The following dissertation seeks to engage on a number of levels with the broad, inescapable implications of the postcolonial critique, specifically through the study of the Late Roman Empire and the Early Middle Ages (c. AD 300 – 900) in the eastern Alpine and northern Adriatic region of Central Europe. This area includes the entirety of the modern nation-state of Slovenia, large sections of southern Austria and northern Croatia, as well as smaller portions of what is today northeastern Italy (Friuli) and western Hungary (see Figure 1.1). Drawing on ceramic compositional analyses, interdisciplinary landscape reconstruction, historiographical research, and theoretical models, a variety of relevant topics are addressed, from aspects of continuity and change in this region in the wake of Roman political disintegration, to the intimate relationship among human identity, embodied practice, and material culture, as well as role of the early medieval past in contemporary political and intellectual discourse.



**Figure 1.1**  
**Approximate boundaries of the broad region that constitutes the focus of this dissertation**  
**(© 2011 Google)**

At first glance, postcolonialism may appear a curious choice for the region, period, and research questions under investigation. Yet, as observed above, postcolonial approaches are being applied to an increasingly wide variety of archaeological investigations. Although, to be sure, the following chapters constitute neither an exhaustive nor explicit study of postcolonial perspectives in archaeology, the central themes of this dissertation are nevertheless inspired by such approaches, and are therefore gathered together under this theoretical umbrella. The remainder of this introduction provides the basic framework of the dissertation, which is divided into three distinct though interrelated parts, each of which addresses different aspects of the major themes – identity, materiality, and temporality.

## **1.2. RESEARCH QUESTIONS AND STRUCTURE OF THE DISSERTATION**

### **1.2.1. Part One: Interdisciplinary Approaches to Continuity & Change in the Eastern Alps**

The first topic of interest explored in this dissertation concerns the enduring questions surrounding the nature of the transformation of the Late Roman world into the Early Middle Ages in the eastern Alpine and northern Adriatic region. This enigmatic period of Central European ‘proto-history’ has various historical appellations (‘post-Roman period’, ‘Migration Period’, ‘Late Antiquity’, ‘Early Middle Ages’, etc.) depending on national tradition or disciplinary convention. However, here I conceptualize it as a postcolonial *intermezzo*, chronologically situated between the disintegration of Roman political and economic hegemony in the 5<sup>th</sup> century AD, and the rise of another expansionist state (the Carolingian Franks) in the late 8<sup>th</sup> century with the intention of establishing a *new* Roman Empire.

The intervening centuries (c. AD 450 – 750) were characterized by a weak (or in some cases nonexistent) state apparatus, political decentralization, a general lack of security, significant demographic movement, the partial breakdown of long-distance trade and communication, and the rapid transformation of social identities. Although the Western Roman Empire technically disappeared in the 5<sup>th</sup> century, both ‘Romanized’ and ‘barbarian’ peoples throughout the region were shaped by its political and cultural legacy for centuries afterward. When viewed in this manner, post-Roman Central Europe has many significant parallels with other post-imperial eras of world history, such as the decolonization of Africa in the early 20<sup>th</sup> century or the current post-Soviet period in Eastern Europe and Central Asia. Although each post-imperial situation is conditioned by its own particular circumstances, their socio-historical similarities invite the possibility of informative cross-cultural comparison.

Chapters 2 through 4 specifically address issues of continuity and change in the eastern Alpine region during this important transitional period. Chapter 2 offers an extensive (if not exhaustive) account of the major historical events and social processes in this region from the fourth through ninth centuries AD, drawing from textual and archaeological evidence. Since postcolonial approaches are frequently concerned with the dynamic interactions of the ‘global’ and ‘local’ (e.g. Lightfoot 1995), Chapter 2 is structured in this manner; I first outline the broader political, economic, and social context during each period, and then examine changes at individual settlements in the eastern Alps, drawing on the important insights of recent archaeological excavation.

Postcolonial theory also informs issues of social, political, and religious identity raised in Chapter 2. Post-imperial periods are generally characterized by fluid and shifting identities, as the hierarchical structures of empire yield to complex local and regional dynamics (van Dommelen 1997). A number of important questions are raised within this context: what happened to the ‘indigenous’ Romanized populations in this region after the collapse of imperial authority and desertion of urban centers? What was their relationship with the new Germanic and Slavic-speaking groups that emerged during this period? How did these numerous ethno-linguistic groups negotiate the uncertain socio-political landscapes of a post-imperial world? This chapter assesses the recent archaeological evidence that has yielded some surprising new possibilities.

Chapters 3 and 4 present the results of original material culture analyses aimed at contributing to the themes outlined in Chapter 2, particularly the question of whether the post-Roman centuries in the eastern Alps were ultimately characterized by *continuity* or *change*. Of course, this is a complex and multifaceted issue, as different kinds of historical processes (political, economic,

religious, cultural, ethnic, etc.) often unfold at different paces, making any assessment of 'historical change' largely dependent upon the particular issue under scrutiny. With this in mind, a multi-scalar approach is adopted, permitting such issues to be investigated at three levels: (1) a broad, regional scale across the southeastern Alps, (2) a targeted, but comprehensive examination of local landscapes, and (3) individual household activity.

Chapter 3 focuses on these issues at a regional level, particularly in terms of ceramic technology. It provides the results of macroscopic and microscopic fabric analyses on local, coarse-ware ceramics drawn from four post-Roman settlements located across the southeastern Alps and northern Adriatic region. Questions of technological continuity are addressed by identifying differences and/or similarities among these ceramic fabrics over both time and space. This chapter provides a fascinating snapshot of changes in ceramic production across this region, and serves as a useful point of comparison with extant written records.

Chapter 4 shifts scales, building upon the aforementioned theme of long-term change in the eastern Alps, but at a *local* rather than regional level. It outlines the results of intensive archaeological landscape reconstruction conducted over the course of several field seasons along sections of the middle Mura river valley in the southeastern section of Austria. The *longue durée* evolution of cultural landscapes within a small (~4 km<sup>2</sup>) section of this river valley is traced from earliest prehistory through the early modern period, with particular attention given to the Roman to Early Medieval transition. A multidisciplinary approach is adopted, integrating data generated from pedestrian surface collection, geochemical soil survey, and historical research. This scalar shift permits archaeological investigations of greater temporal sensitivity and depth, in terms of settlement and land use, and therefore serves as a useful complement to the largely synchronic nature of the ceramic analyses presented in the previous chapter. It also provides important

complementary lines of evidence for considering issues of change and continuity, such as land-use, settlement patterns, and human activities beyond individual sites. The smallest scale – production at the level of individual households – is further pursued in Chapter 7.

### **1.2.2. Part Two: Social Identities, Materiality, and Embodied Practice**

The second part of the dissertation (Chapters 5 through 7) situates the issue of (social) identity introduced in Part One within a broader conceptual framework. The theoretical point of departure is the new and innovative perspectives often grouped under the rubric of materiality studies, which question an absolute ontological division between people and ‘things’. These approaches articulate an alternative conception of the role of material culture in the construction and constitution of human societies. Although not generally connected to postcolonial theory, materiality approaches share many of the same underlying epistemological concerns, such as the deconstruction of modernist dualisms and questioning the inherent superiority of Western metaphysics (cf. Guardiola-Rivera 2008, Latour 2010). For example, non-Western conceptions of animism – long derided by Euro-American anthropologists as naïve fetishism – have been recognized as strikingly congruent with recent attempts to build a more inclusive and ‘symmetrical’ perspective of human-object relations (see Pedersen 2001, Ingold 2006, Sillar 2009).

In order to provide a broader historical context for the relationship between humans and things, Chapter 5 provides a brief excursion into anthropological and archaeological thought on the issue of ‘material culture’ from the mid-19<sup>th</sup> century institutionalization of these disciplines through contemporary materiality approaches across the social sciences. This chapter attempts to trace the complex intellectual genealogy of this movement, which has stemmed from a number of disciplines, and seeks to highlight the similarities and differences between contemporary

‘materiality approaches’ and previous archaeological paradigms (e.g. culture-history, processual, and post-processual).

Chapter 6 expands upon the disciplinary history presented in the previous chapter by offering a new theoretical framework for not only considering the relationship between humans and material culture, but ultimately to transcend such ontological distinctions. It outlines the principle elements of a ‘monstrous’ archaeology, which combines concepts from materiality approaches, relational ontology, and complexity theory in order to think beyond the human/object divide that underlies modern social theory. The conceptual advantages of this approach are illustrated in the context of archaeological debates over the nature of social action (i.e. structure versus agency). Finally, the parameters of a new relational social ontology are sketched, which ultimately aims to replace the problematic concepts of ‘culture’, ‘society’, and ‘ethnicity’ as traditionally formulated in the social sciences.

Chapter 7 draws upon the avenues of inquiry articulated in Parts One and Two by introducing the problem of ‘ethnicity’ in the Late Roman and Early Medieval world. It is clear that numerous ‘barbarian’ peoples played a key role in the transformation of the Western Roman Empire. Yet how are we to understand the nature of these various socio-ethnic groups? This is the central question of Chapter 7, which begins with a historiographical review of perspectives on social identity (i.e. ethnicity) among historians and archaeologists of Late and post-Roman Europe. Following intellectual developments in disciplines such as anthropology and sociology, these scholars came to recognize that not only were social identities fluid and contextual during Late Roman and Early Medieval Europe, but that their expression in particular categories of material culture could no longer be taken for granted. This has led some early medieval archaeologists to completely renounce the efficacy of material culture for examining social identities (Brather



2004) while others have maintained that the question of ethnic identity must continue to be interrogated archaeologically (Curta 2007).

The very concept of ‘ethnic identity’ fails to hold up in light of the relational social ontology outlined in Chapter 6. Instead, the *co-creation* of peoples and things is investigated through the framework of technological choices in ceramics production. Drawing on the data presented in Chapter 3, ceramic fabrics serve as proxy indicators of the numerous choices made by the potter in the creation of her product. Therefore, these local coarse-ware ceramics can be used not just for exploring issues of technological continuity and change, but also for accessing the embodied practices and cultural choices made by the potter at the level of the household.

These hypotheses are operationalized through the *chaîne opératoire* approach, which serves as the critical ‘middle range theory’ for exploring the relationships among social identity, embodied practice, and material culture. It is through such ‘skilled practices’ (Ingold 2000) that the potter can negotiate the spectrum of possible choices offered by her social identity as well as the tactile qualities of the physical medium with which she performs her daily tasks. In a relational social ontology, neither the agency of human subject nor material object is privileged, since they are considered ontologically inseparable, existing only as hybrids (Serres 1980).

### **1.2.3. Part Three: Identity, Temporality, and the Politics of the Past**

In the final section of the dissertation, questions of historical change, social identity and materiality are analytically broadened through a rethinking of their relationship to a ubiquitous but often overlooked variable in the social and historical sciences – that of *time*. Chapters 8

through 10 are also inspired by a postcolonial perspective, specifically the role of the (medieval) past in the creation and maintenance of imperial and colonial ideologies. The ‘medieval’ has always maintained an ambiguous relationship with the ‘modern’, which has alternately conceptualized its temporal predecessor as both Self and Other, depending on the particular political agenda. Inspired by postcolonial deconstructions of ‘culture’, this section develops an analogous approach to the notion of a uniform, static, and homogeneous ‘Middle Ages’.

Chapter 8 investigates the consequences of constructing the medieval as ‘Self’ by examining the collision of medieval and modern identities in the context of early 20<sup>th</sup> century Germanic imperial fascination with east-central Europe. This chapter explores how the medieval past, in concert with German social science, was used to justify Germanic political and cultural hegemony over Slavic-speaking communities across the eastern Alps. The early medieval peoples who spoke Germanic and Slavic languages were viewed as the direct ancestors of modern German and Slavic communities of this region; therefore, even ‘scholarly’ interpretations of these groups uncannily mirror 20<sup>th</sup> century racial stereotypes and geo-political struggles.

A close reading of the work of two major figures in German medieval archaeological scholarship demonstrates that archaeologists also had a key role in the construction of a past suitable for imperial interests in the region. Perhaps even more surprising, this investigation reveals that archaeology during the Nazi period was not only a product of fascist racial purity and European hyper-nationalism – as eloquently demonstrated by Arnold (1990, 1999), Wiwjorra (1996), and Härke (2000), among many others – but that it must also be considered a variation on Western colonialist ideologies being concurrently implemented in Africa, Asia, and the Americas.

Chapter 9 explores the consequences of the construction of the medieval as a radical ‘Other’ within the discipline of anthropology. It begins by tracing the roots of a supposed *supersession* of the Medieval by Modernity (through the Renaissance, Reformation, and Enlightenment) that frames the basic historical narrative of the West. It reveals how the concept of a ‘Dark Ages’ was nothing more than an invention of Renaissance humanists who sought to emphasize the historical importance of their own intellectual undertaking. Despite such propagandistic origins, the ‘medieval’ quickly filled a ‘savage slot’ in the Western historical consciousness, paralleling the racial/cultural hierarchy formulated by European colonialists during the same period (Dagenais and Greer 2000). This chapter explores how anthropology has internalized this stereotyped understanding of the medieval (particularly in contrast to the early modern) through an investigation of the discipline’s own autobiographical narrative. It then examines some of the unintended consequences of this temporal severing of the modern from the pre-modern for contemporary anthropological practice.

Concluding Part Three’s thematic focus on the interplay of temporality, identity, and politics, Chapter 10 provides a detailed investigation into the notion of time in anthropological, archaeological, and historical thought, examining the intellectual roots of the modernist notions of time that underlie the constructions of the medieval outlined in the previous two chapters. It explores how the ‘standard’ notion of time (as a linear, singular, and homogeneous external parameter) underwrites the very logic of historical and archaeological research; it conditions us to think of time in terms of *space*, and places an unbridgeable gap between the ‘past’ and ‘present’. This undergirds the tripartite division of ‘Western civilization’ into the Ancient, Medieval, and Modern worlds, where the ‘Middle Ages’ constitute nothing more than an unfortunate interruption in the historical progress of Antiquity and Modernity.

The final section of Chapter 10 outlines the possibility for an alternative understanding of time in archaeology by drawing on the relational and materiality perspectives developed in Part Two. Following the insights of French philosophers Henri Bergson, Gilles Deleuze, and Michel Serres, the advantages of a complex, nonlinear and non-spatialized conception of time are articulated, where time is neither a wholly external, independent variable, nor entirely subsumed within individual or social consciousness. Rather, time is understood as generated through the dynamic interactions of humans with the world, the assembling of heterogeneous entities. Therefore the 'past' is never actually 'gone away' but constantly folds back onto the present. This new conception of time opens up numerous possibilities for archaeologists to engage with their material in a novel fashion, and to adopt a more theoretically nuanced, ethically sound, and truly anti-colonial understanding of the past.

## CHAPTER 2

### **THE SOUTHEASTERN ALPINE AND NORTHERN ADRIATIC REGION c. AD 300 – 900: HISTORICAL AND ARCHAEOLOGICAL FRAMEWORK**

#### **2.1. INTRODUCTION**

The disintegration of the Western Roman Empire and its replacement by early medieval ‘barbarian’<sup>5</sup> polities is one of the most significant long-term historical processes in shaping the modern Western world. This transition from Classical to Medieval Europe has alternately fascinated and perplexed historians and archaeologists for centuries. How are we to conceptualize this rapid, wholesale shift in the political, social, and cultural makeup of the European and Mediterranean regions? What processes instigated such a transformation? What was the political, legal, and ideological relationship of these early medieval states to their imperial Roman predecessor? Such questions are central to Part One of this dissertation.

The following chapter investigates questions of transformation, change, and continuity in the southeastern Alps and northern Adriatic region (hereafter SEANAR) from approximately AD 300 – 900. This region today encompasses the whole of the modern nation-state of Slovenia, as well as significant portions of southern Austria, northeastern Italy, and northwestern Croatia (see Figure 1.1). The chapter outlines the basic historical framework of this long and complex period, with particular focus on how an ever-expanding body of archaeological evidence has helped to alternately reinforce and undermine traditional narratives derived from the textual sources.

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<sup>5</sup> There is no general consensus concerning the appropriate terminology for the various non-Roman populations that play such a pivotal role in this period. While the term ‘barbarian’ has undeniable negative connotations, I use the term here (following James 2009) in a value-neutral sense to describe these ethnically, linguistically, and politically diverse peoples from northern and eastern Europe and Central Asia. This retains the initial use of the term, which simply described non-Greek (and later, non-Roman) peoples.

Naturally, any attempt to provide in a single chapter an exhaustive account of this entire region over the course of a half millennium would be folly; such an account would require a book-length volume (at least)<sup>6</sup>. Rather, I focus here only on those themes relevant to the research focus of the broader dissertation, which center on aspects of continuity and rupture during this tumultuous period—in terms of settlement, economy, society, and religious/social identity. Such issues have garnered extensive attention from historians and archaeologists working in this area (see especially Grafenauer 1969, Ulbert 1979, Bierbrauer 1979, Ibler 1991, Christie 1994, Mason 1998a, Ladstätter 2000b, 2001, Maraković and Turković 2006, Štih 2010), as they have for scholars of the post-Roman world more generally (see section 2.2 below).

### **2.1.1. Outline of the Chapter**

The first section of this chapter provides a brief overview of the debate among historians and archaeologists concerning the collapse of the Western Roman Empire and its relationship to the early medieval polities and societies that emerged in its wake. This review is important in order to properly situate the themes of historical ‘change’ and ‘continuity’ in broader historical context; in other words, to provide the reader with a basic understanding of the terms of this ongoing historical debate.

The remainder of the chapter then outlines the historical and archaeological framework of the region under consideration. It is divided among four sections ordered chronologically, covering the (1) Late Roman Period, (2) the ‘Long’ Fifth Century, (3) Late Antiquity (or the ‘Migration Period’) and (4) the Early Middle Ages, respectively. Each section begins with outlining the

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<sup>6</sup> For historical literature covering aspects of the Late Antique and/or early medieval SEANAR, see: Leeper 1941, Kuhar 1959, 1962, Mitscha-Märheim 1963, Lotter 2003, Wolfram 1987, 1995, Hödl and Grabmayer 1993, Bratož 1996, Kahl 2002, Baier and Kramer 2003, Baltl 2004. For more archaeologically-focused research, see: Ciglencečki 1987, Korošec 1979, Giesler 1997, Christie 2006, and Ladstätter 2000a.

basic historical narrative that explores the wider context of Late and post-Roman Central Europe; then each section focuses specifically on how the SEANAR fits into these regional processes by drawing from both textual sources and recent archaeological excavation in the region.

The first section (2.3.1) briefly describes the state of the SEANAR in the centuries following its incorporation into the Roman Empire (c. 16 BC – AD 250); it then surveys the major administrative, economic, and ideological reforms enacted by the Roman Emperors Diocletian and Constantine during the late 3<sup>rd</sup> through 4<sup>th</sup> centuries AD (referred to as the ‘Late Roman’ period). It specifically investigates how these changes impacted the secular and sacred landscapes of the SEANAR. Although the structural and ideological changes implemented by these emperors occurred long before the collapse of the Western Empire, they laid—in many ways—the foundation for the massive political and economic changes that characterized the following centuries.

The next section addresses the fifth century, a period traditionally viewed as marking the ‘official’ end of Roman political hegemony in the Western imperial provinces, as various barbarian peoples pushed across the *limes* (imperial borders), eventually carving their own autonomous polities out of the former imperial provinces. After providing a brief historical framework, I examine how these massive changes impacted the region under investigation. I address the problem of depopulation in the former Roman urban centers and explore the expansion of upland fortified settlements.

In the 6<sup>th</sup> century, Eastern Roman Emperor Justinian’s attempted reconquest of the Italian peninsula and eastern Alpine region instigated a long and violent struggle among Ostrogothic, Lombard, and Frankish interests in the region, resulting in significant long-term impacts on the

SEANAR. In this section I also address issues of continuity and change from the perspective of settlement patterns, Roman identity, and pagan ritual, providing examples from recent archaeological excavations across this region.

The final section addresses the seventh through ninth centuries AD (i.e. Early Middle Ages), a period that witnessed the spread of new political forces in the region that have shaped the ethno-linguistic composition of the SEANAR up to the present day—Slavic/Avar migrations from the east and Bavarian and Frankish expansion from the west. After a brief historical and archaeological overview, I turn once again to issues of continuity and change, examining the nature of the relationship between indigenous ‘Romanized’ peoples and the immigrating Slavic-speaking populations through a survey of settlements and cemeteries. The question of cultural contact during this period is an elusive one, with the complete absence of textual sources and a quite sparse and ambiguous material record.

The overall goal of this background chapter is to introduce the most important historical events and processes of this time and region—which, due to language barriers, remain unfamiliar to many Anglophone scholars—with a strong emphasis on archaeological datasets. As described in Chapter 1, I also seek to examine this period from an anthropological and postcolonial perspective, and to place it within cross-cultural and transhistorical context. My methodology strives for a cross-pollination of historical, archaeological, and anthropological method and theory, in the hope of providing a different perspective on one of the most significant historical transformations in Central European history, one that might provide insight into similar issues in both the distant and recent past, as well as the present.



## **2.2. CONTINUITY OR COLLAPSE IN THE POST-ROMAN WEST?**

### **2.1.1. The End of Civilization**

The ‘Fall of Rome’ has been a topic of unending interest to generations of historians and archaeologists, and continues to be viewed as a political and cultural shift of enduring historical consequence. The traditional historical narrative points to tremendous political, economic, social, and ideological upheaval in the transition from the Roman Empire to the Early Middle Ages, often viewed within the wider context of the Ancient/Medieval/Modern periodization of European history. This threefold division of ‘Western civilization’ was first articulated by Renaissance scholars, who grounded it in a specific historical teleology. They saw themselves as inheritors of the ideals and traditions of Antiquity, lost in the violent destruction of the Roman Empire and forgotten over the preceding millennium of cultural darkness and economic stagnation (see Chapter 9).

The supposed destruction of ‘Classical civilization’ at the hand of marauding barbarians had significant and grave political overtones for 18<sup>th</sup> and 19<sup>th</sup> century Western European historians: if ancient Rome could fall, why not modern London, Paris, or Vienna? The dangerous lessons provided by the collapse of the Roman world were at the forefront of many European scholars’ minds during this nascent period of modern historical inquiry (see Ward-Perkins 2005:ch. 1). These angst-filled sentiments were most eloquently articulated by British historian Edward Gibbon, whose *History of the Decline and Fall of the Roman Empire* would exert tremendous influence over all subsequent historical investigations of this topic. In his massive tome, published in six volumes from 1776 – 1788, Gibbon argued that the decadence of an effete Roman aristocracy—whose embrace of Christianity eroded traditional pagan civic virtues—coupled with barbarians’ insatiable lust for Roman wealth, precipitated the collapse of a

seemingly invincible empire and ushered in a prolonged era of religious dogmatism and cultural darkness. As French historian Andre Piganiol (1947:422) would later remark: “Roman civilization did not die a natural death. It was murdered.”

It is important to note that for Gibbon and others, the temporal division between the worlds of Classical Antiquity and the Early Middle Ages was reinforced by an equally rigid ethno-cultural binary between Roman (-ized) and non-Roman (i.e. barbarian) peoples. Such stereotypes of Romans (educated, hygienic, organized, and dispassionate) and ‘barbarians’ (ignorant, dirty, violent, ‘hot-blooded’) were present in the writings of the Late Roman authors themselves (see Ladner 1976, Mathisen 2006). Although most scholars no longer accept this simplified ‘ethno-cultural’ dichotomy, numerous examples from cinema and popular culture indicate that they continue persist in our collective historical imaginations. Even contemporary historians and archaeologists often cannot resist assigning peoples from this period “either to the toga or to furs and pantaloons” (Amory 1997:2).

This distinction has deeper consequences than just how we imagine Roman and barbarian peoples to have dressed or behaved. Clifford Ando (2008:41-42) notes how Romans “are fashioned as both actors in history and the objects of historical analysis. Tribal barbarians, on the other hand, are reduced to an anthropological category, and so deprived of both agency and diachrony”<sup>7</sup>. It is perhaps then not surprising that one can find numerous ‘anthropological’ or ‘ethnographic’ approaches to barbarian peoples (Ausenda, Delogu, and Wickham 2009, Barnish and Marazzi 2007, Green and Siegmund 2003, Jesch 2001, Wood 1999, Heather 1999, Hines

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<sup>7</sup> The primitivism that underlies depictions of medieval/barbarian peoples as well as colonized non-Western groups is further explored in chapter 9.

1997, Ausenda 1995, Wolfram 1988, Murray 1983), while a parallel literature for 4<sup>th</sup> – 6<sup>th</sup> century ‘Romanized’ communities is conspicuously absent.<sup>8</sup>

### **2.2.2. From Collapse to Transformation: A Long Late Antiquity**

An alternative perspective of the post-Roman world began to take shape in the early 20<sup>th</sup> century, which considered the traditional Antique/Medieval periodization to be unsatisfactory. The most famous proponent of this new perspective was Belgian historian Henri Pirenne. In his most celebrated work, *Mahomet et Charlemagne* (1937), Pirenne suggested that the ‘real’ break with Antiquity did not occur in AD 476 (the date, first proposed by Gibbon, that has since become enshrined in Western historiography), but rather with the Islamic conquests of the 7<sup>th</sup> century AD, which cut off the Mediterranean world from northern Europe. The ‘Pirenne Thesis’ (as it is now known) has provoked much controversy, and elements of his argument continue to be hotly debated today (see Hodges and Whitehouse 1983, McCormick 2001). Although several aspects of his thesis have since been called into question, Pirenne’s re-periodization of Late and post-Roman Europe remains significant, as it was the first to question the absolute break between Late Roman and Early Medieval Europe.

In recent decades, Irish historian Peter Brown has been the most vocal proponent of the idea that the Roman world saw continuity rather than catastrophic change after the socio-political upheavals of the fifth century AD<sup>9</sup> (see Brown 1971, 1978, 1982, 1998, and 2009). Brown and his students have become the standard-bearers of the concept of a ‘long’ Late Antiquity, which

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<sup>8</sup> For example, the ‘Studies in Historical Archaeoethnology’ series published by Camden House focuses almost exclusively on groups of Germanic and Scandinavian ancestry (Franks, Alamanni, Anglo-Saxons, Lombards, Ostrogoths, Visigoths, etc.) The question of Late Roman and Early Medieval barbarian ethnicity is further pursued in Chapter 7.

<sup>9</sup> As James (2008:21) notes: “If Peter Brown is not perhaps the Father of Late Antiquity, then certainly he is its presiding genius.”

emphasizes the vitality and dynamism of the European and Mediterranean worlds from AD 200 – 700. They fiercely reject traditional notions of ‘decline’ and ‘fall’ during this period, emphasizing instead ‘transformation’ or ‘revolution’. While Brown and colleagues should be commended for their avoidance of the teleological and moralist overtones of earlier historiography, they—like Gibbon—are often guilty of inappropriately drawing sweeping conclusions from geographically restricted and unrepresentative datasets.

It should not come as a surprise that many in the long Late Antiquity ‘school’ focus on the *eastern* part of the Roman Empire, where there *was* considerably less upheaval and destruction in the 5<sup>th</sup> and 6<sup>th</sup> centuries AD. These scholars also tend to focus on topics (such as art history and religion) where continuity is much easier to identify than, for example, in politics or economics (Ward-Perkins 2005:170). Nevertheless, this perspective has grown rapidly in popularity since the publication of Brown’s *The World of Late Antiquity: Marcus Aurelius to Mohammed* (1971). This historiographical movement has since given rise to several journals (*L’Antiquité Tardive*, est. 1993, *Journal of Late Antiquity*, est. 2008) as well as innumerable books<sup>10</sup>, articles, and monographs (Bowersock et al 1999, Cameron 1993, Demandt 2007). In recent decades, even general historical surveys of the Later Roman Empire and Early Medieval Europe have embraced aspects of this broader historical perspective (see Mitchell 2007, Collins 1991).

Although the continuity hypothesis seems stronger in the eastern half of the Empire (which, one must remember, officially ended in the 15<sup>th</sup> rather than the 5<sup>th</sup> century AD), some historians studying the post-Roman West have also questioned prevailing notions of decline and collapse.

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<sup>10</sup> See for example the ESF funded international project examining the period from AD 300-800, “The Transformation of the Roman World” Series, which has produced a number of important volumes.

For example, Canadian historian Walter Goffart (1980, 2006) has argued persuasively that the transformation of the Roman West had less to do with violent barbarian invasions than the incorporation and accommodation of non-Roman peoples into the Roman world. Goffart categorically rejects the traditional narrative that describes waves of barbarian peoples sweeping in from northern Europe and central Asia, smashing through the *limes*, and violently bringing down the empire. Rather, he insists that non-Roman peoples were willfully *invited* into the empire in order to fill the ranks of its armies and expand its tax base. While he does not deny that the fifth century was a period of upheaval and economic collapse, Goffart suggests that our traditional image of a Western Empire overrun by uncivilized, savage barbarians is—more than anything else—a legacy of Byzantine propaganda. His alternative perspective is neatly encapsulated in the following bold statement:

Western lands under Gothic or Frankish or even English kings, and underpinned by the Latin church, were as credible offshoots of late Rome as was the East Rome of Byzantium; they were as pure or impure in their Romanity as the city of Constantinople (2006:39).

For Goffart, the barbarians—who largely adopted Roman language, religion, customs, and law in their subsequent kingdoms—were not the cause of Rome’s collapse, but were rather her final conquest (see also Goffart 2008).

### **2.2.3. The Return of Collapse?**

While some historians have taken issue with Goffart’s unconventional perspective (Halsall 2007, Heather 2006), the trend over the past generation has certainly been one of questioning the scale and destruction of the fall of Rome, and attempting to emphasize the continuity of the Late Roman and Early Medieval worlds. Yet a more nuanced view of ‘catastrophe’ has been recently revived, as illustrated by British historian and archaeologist Bryan Ward-Perkins’ recent polemic *The Fall of Rome and the End of Civilization* (2005). Drawing primarily from archaeological

sources, Ward-Perkins highlights the “disappearance of comfort” in post-Roman Western Europe, with the collapse of regional trade networks and entire commercial industries. He rails against those aforementioned “historians who argue for a new and rosy Late Antiquity”, suggesting that a narrative solely focused on the peaceful transformation in the Western empire is equivalent to

focusing on the degree of collaboration and accommodation that took place in occupied France or the Channel Islands during the second world war, and arguing from this that the German presence was painless and uncontroversial (Ward-Perkins 2005:181).

While acknowledging the problems with using the term ‘civilization’ as a badge of superiority, Ward-Perkins (2005:178) still contends that “abandoning altogether the concept of ‘a civilization’ risks imposing too flat a view of the world’s cultures.” He argues that contemporary scholars can acknowledge that the transition from Roman to Early Medieval was one from technological sophistication to relative simplicity without burdening their observations with the moral judgments of earlier historians. Classicist J.H.W.G. Liebeschuetz takes a similar position in his *Decline and Fall of the Roman City* (2001:414, 415): “Some chose to see only transformation, but that is not the point of view taken in this book...The story of the city in Late Antiquity...abundantly merits to be described as decline.”

#### **2.2.4. The National and Disciplinary Contexts**

While this ideological battle between ‘continuists’ and ‘catastrophists’ (to borrow Ward-Perkins’ terminology) seems to be at present tilted in favor of the former, it shows no signs of resolution in the near future. As noted above, both national and disciplinary traditions, as well as general socio-historical context, appear also to play a role in the popularity of particular perspectives. ‘Mediterranean’ (i.e. French, Italian, and Spanish) scholars still tend to emphasize collapse from Antiquity to the Early Middle Ages, while ‘Germanic’ (German, Belgian, British) scholars seem

more likely to see elements of continuity. Ward-Perkins (1997) has suggested that the Italian preference for collapse may stem from a subconscious pride in their Classical heritage, or perhaps simply from living near the spectacular ruins of Ancient Rome, while a British sympathy towards continuity in post-Roman Italy might also be a consequence of a unconscious comparison with their own homeland, which naturally witnessed a much greater degree of upheaval.

A similar discrepancy among national traditions is also apparent in conceptions of barbarian peoples. While Mediterranean scholars have generally espoused the negative views of barbarians outlined above, many Germanophone historians prefer to see a noble and heroic side to the peoples of northern Europe, emphasizing the freedom and democratic nature of their institutions. It has been frequently pointed out that this discrepancy in perspectives of barbarians is tied up with nationalist ideals that permeated historiography in the 18<sup>th</sup> and 19<sup>th</sup> centuries (Halsall 2007:12-14, Geary 2002). However it is important to recognize that each of these perspectives emphasizes a cultural dichotomy between ‘Roman’ and ‘barbarian’, regardless of where one’s sympathies ultimately lie.

Socio-geographical influences are also evident among non-European (i.e. American, Canadian, and Australian) scholars of this period. These scholars tend to be some of the strongest proponents of continuity, and also tend to hold the most ‘constructivist’ and fluid perspectives of ethnic identity (e.g. Walter Goffart, Patrick Amory, Ralph Mathisen, Clifford Ando, and Glen

Bowersock)<sup>11</sup>. This is perhaps not surprising for modern societies less tied to European national traditions, and more historically invested in multiculturalism and ethnic diversity<sup>12</sup>.

Finally, there is also a clear *disciplinary* divide over questions of collapse and continuity.

Archaeologists tend to adopt a more ‘pessimistic’ view of the post-Roman world, perhaps because of the undeniable changes in settlement patterns, trade networks, and overall quality of material goods; on the other hand, historians (particularly those focused on topics of literature or religion) have had an easier time ‘seeing’ continuity in the early medieval barbarian kingdoms’ frequent utilization of the ‘Roman’ past as an ideological tool for political legitimization. While historians and archaeologists will always have different perspectives on the past, there is a danger in too great a divergence, which might further discourage important collaboration and transdisciplinary projects. As Wickham (2009:9) has recently warned: “the more attached historians become to continuity (or to ‘transformation’) rather than to sharp change, the further they diverge from archaeologists.” Keeping in mind the importance of an integrated approach, the following sections adopt an interdisciplinary perspective for addressing the transition from the Late Roman to Early Medieval worlds in the southeastern Alps and northern Adriatic region.

## **2.3. THE LATE ROMAN EMPIRE: PORTENTS OF TRANSFORMATION**

### **2.3.1. Prelude: the SEANAR in the Early Roman Provincial Period (c. 16 BC — AD 235)**

While this chapter focuses primarily on the transition from the Late Roman to Early Medieval worlds, it is necessary to briefly describe the region under consideration here in the preceding

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<sup>11</sup> Even Peter Brown, an Irishman by birth, has done the vast majority of his scholarly work at American universities (Stanford and Princeton).

<sup>12</sup> That my own sympathies lie with this perspective clearly indicates that am I not exempt from such socio-geographical influences!



centuries, in order to provide a broader perspective on the significant changes that occurred in the middle centuries of the 1<sup>st</sup> millennium AD.<sup>13</sup>

In the centuries before Roman conquest (c. 400 – 16 BC), the southeastern Alpine and northern Adriatic region was populated by various Iron Age (i.e. ‘Celtic’ and ‘Illyrian’) communities; archaeological evidence indicates that this region was densely settled during much of this period (see Luthar 2008:25-48, Alföldy 1974:14-38). Roman geographers such as Livy (59 BC – 17 AD) describe this region as comprised of a federation of politically allied tribes known collectively as *regnum Noricum*. This Norican ‘kingdom’ was an important trading partner—primarily known for high quality iron production—and political rival to the Roman Republic during the last several centuries BC.

The simultaneous founding of a Roman colony and nearby Celtic *oppidum* on the northern Adriatic coast at Aquileia in 181 BC stimulated increased contact between these two groups (Alföldy 1974:28). The Roman settlement at Aquileia began as a prosperous emporium, later growing into a full-fledged urban center during the Provincial Period, and would continue to be an important center in the region through the Early Middle Ages (Luthar 2008:39).

Archaeological evidence indicates that the SEANAR (particularly near the Adriatic coast) became increasingly incorporated into a Roman cultural sphere after the middle of the 1<sup>st</sup> century BC (Horvat 1999:219).

Although economically integrated into Mediterranean trade networks, the communities of this region remained politically autonomous until being subdued from 16 – 9 BC by the Roman army under Emperor Octavius Augustus. Cassius Dio’s *Roman History* (written sometime after AD

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<sup>13</sup> Chapter 4 provides a more comprehensive synchronic account of the shift from the pre-Roman to Roman to post-Roman period in a small section of one of the river valleys in the region.

229) is the primary textual source for these dates of conquest, which appear to coincide with the cessation of independent minting of Norican coins (Luthar 2008:49, see also Kos 1986). By the time Noricum became a proper Roman province—no later than during the reign of Claudius (AD 41 – 54)—it had already been a densely populated landscape with a long history of Roman trade and contact. Although most of the region under consideration here lies within the borders of this Roman province, it should be noted that parts of the SEANAR extend into parts of northeastern Italia and western Pannonia.

Over the course of the first several centuries AD, the inhabitants of the SEANAR moved fully within Roman economic and cultural spheres. By the 2<sup>nd</sup> century AD, a number of urban centers had emerged throughout the region along the roads built by the Romans (some certainly evolving from previous Iron Ages settlements). Important Roman towns (and their modern place-names) within the area under investigation here include the following: *Emona* (Ljubljana), *Celeia* (Celje), *Poetovio* (Ptuj), and *Neviodunum* (Drnovo) in what is today Slovenia; *Virunum* (Zollfeld), *Teurnia* (Spittal), *Aguntum* (Lienz), and *Flavia Solva* (Leibniz) in southern Austria; *Savaria* (Szombathely) in western Hungary; *Aquileia*, *Tergeste* (Trieste) and *Forum Iulii* (Cividale) in what is today the Friuli region of northeastern Italy<sup>14</sup> (see Figure 2.1).

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<sup>14</sup> For an in-depth description of the Roman towns, see Luthar 2008:51-60



**Figure 2.1**  
**The SEANAR during the Roman Provincial Period (after Horvat 1999:217)**

Beyond these *municipium* and *civitates* (urban centers), archaeological investigations in the SEANAR have uncovered evidence of a dense network of *vici* (ad-hoc settlements) and *villae* (country estates), as well as hilltop sanctuaries and fortified military outposts (*castra*). The Romans constructed several major roads through this region that connected the economic and political center at Aquileia with neighboring provinces. The largest road (*via Iulia Augusta*) ran northeast from Aquileia through the towns of Emona, Celeia, and Poetovio, and eventually on to towns further north in Roman Noricum<sup>15</sup>. A second major route from Aquileia split at Emona, running southeast past Nevidunum, Siscia (the capital of Roman Pannonia), and onto the Black

<sup>15</sup> This was built upon an ancient trade route of the Amber Trail (Šašel Kos 1999:15)

Sea; this road was known as the ‘river route of the Argonauts’ because it was said to have been taken by the mythical band of Greek heroes to reach the springs of the Ljubljanica River before they were forced to carry their ship across the Alps (Šašel Kos 1999:15).

## **2.3.2. Historical Framework of the Third and Fourth Centuries**

### *2.3.2.1. Third Century Crisis and Diocletian Reforms (c. AD 235 – 305)*

The first two centuries AD—when much of the SEANAR was incorporated into the Roman Empire—was a time of relative peace, prosperity, and expansion across the empire (the *Pax Romana*). However, the empire became increasingly destabilized in the late 2<sup>nd</sup> and early 3<sup>rd</sup> centuries AD, beginning with the Marcomannic Wars and culminating in a fifty-year period that would threaten the unity of the empire. Historical sources indicate that the decades following the assassination of Emperor Alexander Severus in AD 235 were characterized by constant warfare (both ‘civil’ and ‘foreign’), economic stagnation, frequent plagues and famines, and recurrent political instability (Chambers 1966). Increasing pressure from barbarian peoples, as well as a number of Roman usurpers, exacerbated the political and economic chaos of this period, when no less than fifty-one different individuals claimed the title of emperor—virtually all of whom met sudden, violent ends (Drinkwater 2005).

This period of political chaos and economic depression ended when Diocletian, a cavalry commander of the Roman army, was proclaimed emperor by his troops after the deaths of the Emperor Carus and his son Numerian. Diocletian quickly consolidated political power by eliminating his main political rival (Carus’ other son Carinus) at the Battle of the Margus in AD 285. Upon gaining the imperial throne, Diocletian enacted a number of significant reforms to address the recurrent political problems plaguing the empire. Recognizing that the empire had become too large to be ruled by a single individual, he appointed his military commander

Maximian to the rank of *Augustus*, making him co-emperor in name (if not necessarily in practice). Diocletian then appointed two *Caesars* as ‘emperors in waiting’, each reporting directly to the *Augusti*. Diocletian hoped that this four-person executive council (known as the ‘Tetrarchy’) would establish an ordered rule of succession, thereby circumventing the dynastic feuds that were at the root of political instability in previous decades (see Bowman 2005, Demandt 2007:57-75).

However, Diocletian had more ambitious goals than simply reforming the system of imperial succession; he sought an overhaul of the entire administrative and bureaucratic infrastructure (see Williams 1997). He rearranged the borders of imperial provinces, dividing them into smaller, more efficient administrative units. He also separated military and civilian authority in the provinces, establishing two parallel but distinct bureaucracies (Cameron 1993:40). In addition to administrative and political reforms, Diocletian made significant changes to Roman economic and legal policies. In response to the third century economic crisis, he reformed the tax and monetary systems, providing the empire with a stable and more secure budget as well as a new currency (the *solidus*). This period also witnessed the first attempts to systematically codify Roman law, a clear attempt to unify the growing empire under a single uniform system of justice (Mitchell 2007:59).

These reforms had significant impacts on the SEANAR. Up to this time, this region had been divided among the large imperial provinces of Noricum, Italia and Pannonia (see above, Figure 2.1); however each of these provinces became further subdivided under Diocletian’s new system. Noricum was split north/south into two smaller provinces, *Noricum ripense* (north of the Alps, along the Danube) and *Noricum mediterraneum* (south of the Alps to the Adriatic), the latter of which encompasses much of the area under consideration here. Pannonia was also subdivided

into four smaller units: *Pannonia I, II, Valeria* and *Savia* (the last of which includes parts of the study area). Italia was subdivided into several different administrative divisions; of primary interest here is the northeast region, which became part of *Venetia et Histria* (Wilkes 2005).

Diocletian also established a network of imperial residences across the empire, further eroding the importance of the old capital Rome, and the power of the Senate. Aquileia was chosen as one of these new ‘imperial cities’ due to its strategic location at the entrance to Italy. This new imperial status elevated the importance of both the city itself, as well as its adjoining infrastructure (*via Iulia Augusta*), and the SEANAR region more generally in the Later Roman Empire. This region would constitute an important crossroads between the eastern and western halves of the empire, and would witness a number of key events and battles in the 5<sup>th</sup> and 6<sup>th</sup> centuries, including numerous incursions of barbarian armies seeking access to the Italian peninsula (see below, Section 4.3).

Diocletian also significantly altered the political and social ideologies of the empire, particularly in the presentation of the imperial court. This represented the final and most dramatic stage of Rome’s transformation from Republic to Empire. Diocletian introduced more elaborate ceremonialism and ritual in the imperial court; the political ideology of imperial rulership completed its shift from ‘First Citizen’ in the time of Augustus to what has been often described as ‘Oriental Despotism’. Some historians have hypothesized that this new ruling ideology was borrowed from the neighboring Sassanian Persian Empire (Bury 1923:14, Cameron 1993:42). The autocratic character of these later emperors is evident in the prevailing ideology that presented the *Augusti* and *Caesars* as the human embodiments of the gods Jupiter and Hercules, respectively (Mitchell 2007:54).

Yet of all the structural changes made by Diocletian during his reign—political, economic, legal, ideological—none were as significant as his move to accelerate the militarization of the empire. This transformation had begun long before his reign, but Diocletian embraced the idea of a large permanent army more than any previous emperor. Under his guidance, the Roman military significantly expanded, now requiring nearly two-thirds of the entire imperial budget (Mitchell 2007:53). Significantly, over the next several centuries almost every emperor would be drawn (like Diocletian) from the ranks of the military. Of even greater consequence, the military became the primary avenue by which non-Roman peoples were incorporated into the empire, either directly through military service or by being invited to settle on Roman territory in exchange for taxation that was desperately needed to fund the growing military budget (Goffart 2006).

Remarkably, true to his belief in the necessity of orderly succession, Diocletian voluntarily abdicated power in AD 305, quietly retiring to his homeland in Dalmatia. Yet despite his best efforts to create an effective system of imperial succession, the Tetrarchy ultimately proved ineffective, and the empire was once again plunged into bloody civil wars over the next decade.

#### *2.3.2.2. Constantine and the Rise of Christianity (AD 306 – 337)*

The next major figure in the reformation of the Later Roman Empire was Constantine I ('the Great'), who rose through the ranks of the military to the highest levels of imperial power. When the orderly succession of the Tetrarchy disintegrated almost immediately after Diocletian's 'retirement', Constantine—who had been declared emperor by his troops in AD 306—was forced to confront several rival claimants to the throne. After defeating his main rival Maxentius in AD 312 at the famous Battle of Milvian Bridge (later mythologized as the crucial moment in his conversion to Christianity), Constantine held sole control of the Western portion of the

Empire. However it was not until AD 324, when he defeated eastern Augustus Licinius at Chrysopolis, that Constantine gained control over the entire empire (Cameron 1993:52).

Although textual sources do not provide much detail concerning Constantine's secular political and socio-economic policies, most historians believe that he continued many of the reforms set in motion by Diocletian (Cameron 1993:47), largely retaining the new administrative divisions and monetary system established by his predecessor. By establishing his eponymous capital Constantinople in the Bosphorus, Constantine accelerated the eastward shift of the imperial power structure that characterized much of the Later Roman Empire. He legally restricted the movement of *decurions* (military administrators) and *coloni* (tenant farmers), tying much of the population to the land—a move that has often been construed as a historical precursor to medieval feudalism (Anderson 1974). In general, the political, legal, and ideological reforms set in motion by Diocletian and continued by Constantine were aimed at the production of a more regimented, rigid society (Collins 1991:11), which many historians have argued sapped the economic and social strength of the empire, laying the groundwork for its ultimate demise several centuries later.

Although Constantine's religious policies have been often portrayed as diametrically opposed to his 'pagan' predecessor Diocletian, they were in many ways a continuation of the same themes under a slightly different ideological guise. Constantine's dramatic conversion to Christianity was envisioned by later Church historians as an unprecedented break from the religious beliefs and policies of previous emperors, but it is likely that his understanding of the Christian god did not differ greatly from that of other pagan deities such as Apollo or Sol Invictus (Cameron 1993:56), particularly since his father was an adherent to a cult of solar monotheism (Mitchell 2007:261). There are also clear parallels in the relationship between Jupiter and Hercules in



Diocletian's pagan cult and the figures of God the Father and Christ the Son in Constantine's Christianity (ibid:64). Although the names of the gods had changed, the general imperial ideology and elaborate ceremonialism initiated by Diocletian remained intact, and was in many cases enhanced under the first nominally Christian emperor.

### **2.3.3. Settlement and Society of the 4<sup>th</sup> century SEANAR**

#### *2.3.3.1. Transformation of Sacred Landscapes*

Constantine's decision to worship the Christian God naturally encouraged a wave of conversions across the empire; however, this swift transition from paganism to Christianity in the Later Roman Empire was not the complete rupture later portrayed by Christian historians. Although Christianity was a powerful ideological force in many parts of the empire, eventually becoming the state religion, it could not fully escape the pagan framework that had been a central component of Roman society for centuries. Early Christians surely recognized that they could not fully erase these ingrained pagan rituals and sacred places, so they often chose to appropriate them to encourage their new form of worship.

These syncretic processes are evident at the number of archaeological sites in the SEANAR. For example, excavations at the large ecclesiastical site of Kučar in southeastern Slovenia have revealed that one of the smaller podiums in the lower church was made out of a smashed altar dedicated to Jupiter (Dular et al 1995:137); this kind of reuse of pagan idols and inscriptions into Christian churches was a common practice throughout the Early Middle Ages (Schnapp 1997). Similarly, at the nearby upland fortified site near Rifnik, excavations on the 5<sup>th</sup> century church reveal that it was built directly over the site of a pagan temple to Aquonius, a local water divinity (Bolta 1981:42).

Yet the most dramatic example of incorporation of the pre-Christian landscape into early churches is found at site of Hemmaberg in southern Austria. This ecclesiastical complex, the largest in the eastern Alps, was built directly over a well-known pagan sanctuary of the god Iuenna (see Ladstätter 2001). This hill had even been a sacred place during the Iron Age, famous throughout the region for its healing waters. As was common practice, the Romans continued this indigenous ritual tradition, incorporating the ‘Celtic’ deity into their own pantheon. It is therefore significant (but perhaps not surprising) that Hemmaberg continued to be a common pilgrimage site for Christians throughout the Late Roman and Early Medieval periods, as it had been for pagan worshippers centuries before.

It is important to recognize that the transition from paganism to Christianity included not only individual churches and sacred sites, but also likely embodied entire landscapes, as historian Randon Jerris (2002) has illustrated in his study of Christianization in the western Alpine region of Churraetia (in modern Switzerland). Jerris demonstrates how early Christian churches in the Late Roman and Early Medieval periods were strategically placed in areas of astronomical and solar significance—sacred spaces for the indigenous pagan religions of the region. He argues that we must recognize that each of these churches placed on a pagan religious/astronomical marker was just “one in a network of monuments that embraced and thereby Christianized the landscape” (Jerris 2002:98).

This process was also accompanied by an appropriation of the pagan astronomical calendar; important events in the solar calendar would continue to be honored as Christian feast days. Although it is often assumed that Christianity adopted a severe and intolerant approach to pagan practices, Jerris argues that the “very growth and success of Christianity in Churraetia may be related to its syncretic capacity. Ultimately, Christianity succeeded because it acknowledged the

dependency of the people in these agricultural communities on the cycles of the natural world” (Jerris 2002:98). We should consider whether similar processes were also occurring on the eastern side of the Alps as well. Such blurring of pagan and Christian practices problematizes the assumed rupture between the old and new religions, and reminds us that Christianity was at least in part forced to accommodate earlier belief systems, which were inscribed in both people’s minds and on the material world.

#### *2.3.3.2. Prosperity and Militarization*

As outlined above, the SEANAR was fully integrated into the Roman economic and cultural sphere during the 1<sup>st</sup> century AD. After a period of political instability and economic decline during the late 2<sup>nd</sup> and 3<sup>rd</sup> centuries AD, this region again enjoyed another period of prosperity (albeit more limited) during the 4<sup>th</sup> century (Alföldy 1974:205). Greater economic expansion was triggered by a growing sense of security in the region, as well as the new political importance of Aquileia as the seat of an imperial palace.

Despite the instability of the 3<sup>rd</sup> century and the major administrative reforms enacted by Diocletian and Constantine, archaeological evidence has demonstrated that the overall settlement patterns in the SEANAR remained largely intact through the fourth century (Ladstätter 2000b:220). At urban centers in southern Austria (i.e. Virunum, Aguntum, and Flavia Solva), there is both historical and archaeological evidence of renewed building projects and settlement expansion (Alföldy 1974:205). It is interesting to note that robust defensive structures were typically *not* part of these urban renovations, suggesting that pervasive violence was not a major concern in the 4<sup>th</sup> century (Johnson 1983:220, Ladstätter 2000b:221).

Although the towns in the SEANAR remained without extensive defensive systems, the military infrastructure along the major Alpine passes was significantly expanded during this period. Since the southeastern portion of the Alps (known as the Julian Alps) is the most easily passable section of the entire mountain range, it constituted the greatest risk of invasion from hostile forces that sought entrance to the Italian peninsula (see Christie 1991), a lesson painfully learned during the late 2<sup>nd</sup> century Marcomannic Wars. After defeating Roman forces on the Danube, a large Marcomanni army had free reign in the soft underbelly of Noricum, raiding all the way to Aquileia before eventually being defeated (see Alföldy 1974: ch. 9).

Roman military commanders later recognized that once the outer defensive system of the *limes* was breached, hostile forces could move unimpeded throughout the provinces. Their solution in the SEANAR was the creation of the *Claustra Alpium Iuliarum* (CAI), a network of forts and walls along the important passes in the Julian Alps (represented as green lines on Figure 2.1 above). This defensive network consisted of a long stone wall, about 1.8 m thick, punctuated by a series of larger fortified sites and smaller defensive posts located along the main roads to Italy from the east. Due to the difficult mountainous terrain, a continuous barrier wall or well-defined frontier line (similar to those along the Danube) was unnecessary; defensive infrastructure was only important at the passes (Johnson 1983:216). Archaeological and historical evidence suggests that the CAI was built piecemeal beginning in the 3<sup>rd</sup> century, later accelerated under Diocletian's militarization. While there are no contemporary 3<sup>rd</sup> century historical references to the creation of this defensive network, it is mentioned by later Roman authors (Christie 1991:415, Šašel and Petru 1971).

Extensive archaeological research was conducted in this region during the 1970s and 1980s, particularly at the fortified sites of Hrušica (*Ad pirum*) and Ajdovscina (*Castra*), which sit at the

important Birnbaumer Pass (today in western Slovenia), a defensive lynchpin in the protection of the northernmost towns in the Italian peninsula (Johnson 1983:216). These two fortresses formed the backbone of the CAI on the road from Emona to Aquileia (see Vidrih Perko and Trkman 2005). Although they were probably first constructed in the 1<sup>st</sup> century BC, archaeological excavations indicate they were significantly expanded during the late 3<sup>rd</sup> and 4<sup>th</sup> centuries (Šašel and Petru 1971:98; see also Ulbert 1981).

However, by the end of the 4<sup>th</sup> century the system had lost its strategic importance, as Roman military strategy shifted from the maintenance of defensive barrier systems to the use of large, mobile armies (Christie 1991). Yet there is evidence that parts of the CAI remained under imperial administration until at least the 5<sup>th</sup> century (Horvat 1999:231, Alföldy 1974:220), when it would be the site of a number of battles between competing claimants to the throne (see section 2.4.3 below).

## **2.4. THE END OF ROMAN RULE IN THE WEST: THE LONG FIFTH CENTURY**

### **2.4.1. Prelude: Transformation of the Late Roman Empire**

The late 3<sup>rd</sup> and early 4<sup>th</sup> centuries were times of massive change in the Roman Empire. Although by Diocletian's retirement in AD 305 the collapse of the Western Empire and its replacement by barbarian successor kingdoms was still almost two centuries away, many of the reforms and processes that were supposed to solve the problems encountered by the empire in the mid-3<sup>rd</sup> century would ironically sow the seeds of its ultimate demise. The empire had simply grown too large to be effectively governed by a single leader, particularly when extensive military campaigns needed to be conducted on two distant theatres (Collins 1991:25). The growing importance of the Roman military, accelerated by both Diocletian and Constantine, was both a

response to the growing threat of barbarian invasions but also would become the primary means of barbarian integration into the Roman world (Goffart 2006). As the importance of the army grew, it required not only a greater portion of the imperial budget but greater manpower as well, which was often gathered from non-Romanized populations.

Although they certainly continued trends begun by previous emperors, the reforms under Diocletian and Constantine would fundamentally change the nature of the Roman Empire. It was these radical changes in administrative, military, and economic policies that would eventually cause the disintegration of imperial authority in the western half of the empire, and not a loss of Roman ‘civic virtue’, the rise of Christianity, or massive invasions of barbarian peoples.

The period of relative peace and prosperity enjoyed under Diocletian and then Constantine did not last very long. After his death, Constantine’s sons were again plunged into a battle over dynastic succession. In the fourth and fifth centuries AD, the empire would be once again racked by civil strife, constant political turmoil from usurpers, and increasing numbers of incursions from populations beyond the *limes*.

#### **2.4.2. Historical Framework, Part I: the ‘Gothic Problem’ (AD 376 – 382)**

It is critical to recognize that Rome had always traded with, fought against, and culturally defined itself in contrast to its ‘barbarian’ neighbors, from the founding of the Republic through the Later Imperial period; as Ando (2008:42) notes: “the reception and settlement of foreign nations had a long history coeval with the extension of Roman power.” So when tens of thousands of Gothic-speaking peoples are reported to have appeared on the northern bank of the middle Danube River seeking political asylum in AD 376, it probably was not seen as a particularly unusual event. Yet in retrospect, many scholars view this as marking the beginning

of a series of fateful events that would eventually unravel Roman imperial control in the western half of the empire. It is therefore important to provide some detail into this episode.<sup>16</sup>

The fateful decision of then-emperor Valens to allow one of these Gothic tribes (named by Marcellinus as the Tervingi<sup>17</sup>) to cross the Danube and settle within Roman territory as *foederati* was in no way unprecedented. Roman emperors had long made similar arrangements with barbarian tribes, in which the terms were typically land in exchange for taxation and military service. In AD 376, impending war with the Persian Empire to the east most likely compelled Valens to further increase his tax base and military ranks. Yet for unknown reasons, the food supplies promised to the newly federated Goths never arrived. This compelled the angry (and probably starving) Tervingi to join forces with the Gothic tribe across the Danube (the Greuthungi) who had been previously denied entrance into imperial land; the combined Gothic force rebelled against the Roman military forces stationed in the region (see Heather 2006:160-162).

Over the next several years, these Gothic-speaking groups raided the Roman provincial countryside of Dacia, periodically skirmishing with Roman forces; the conflict came to a climax in Thrace (modern Bulgaria) at the Battle of Adrianople in AD 378. An army of perhaps 15,000 Roman soldiers (as estimated by Heather 2006:181), led by the emperor himself, sought to decisively crush this Gothic rebellion. However, in a shocking outcome, the barbarian forces routed the eastern Roman army, killing an estimated two-thirds of their forces, including the emperor himself (Demandt 2007:159). The Gothic forces' subsequent attempts to sack

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<sup>16</sup> The primary source for the events that follow is Ammianus Marcellinus's *Roman History*, Book XXXI

<sup>17</sup> Also sometimes referred to as "Thuringians"

Adrianople and Constantinople proved unsuccessful, but their presence in Thrace continued to hamper communication between the two halves of the empire (Mitchell 2007:84).

Although the Battle at Adrianople was perhaps the most devastating defeat of a Roman force at the hands of barbarians since Germanic chieftain Arminius' (Ger: *Hermann*) victory over three Roman legions under General Varus at the infamous Battle of Teutoburg Forest in AD 9 (see Wells 2003), the Gothic victory was, in the end, more symbolic than anything else. The barbarian population continued to roam freely throughout Thrace, occasionally clashing with smaller Roman garrisons over the next several years, before a peace agreement was finally reached in AD 382. The terms were somewhat of a compromise: the Goths gave up their ambitions for an autonomous kingdom in Thrace, in return were allowed to become free landholders in the Balkans (James 2009:53). Although Roman historians would characterize the treaty as a Gothic surrender, it was probably the most favorable conditions of 'surrender' ever offered a barbarian army (Heather 2006:184). Of perhaps even greater significance, the Roman aura of military invincibility appears to have been shattered, since over the course of the next decades, barbarian armies would become increasingly bold and aggressive in both the western and eastern halves of the empire.

#### **2.4.3. Civil Strife in the SEANAR: the Battle at *Fluvius Frigidus* (AD 383 – 394)**

A return to the political instability of the 3<sup>rd</sup> century compounded this renewed barbarian aggression (and was probably at least in part a consequence of it). Upon the death of Valens, Theodosius took control of the army, making him *de facto* co-Augustus with Gratian in the eastern half of the empire. After the deaths of Gratian in 383 and Valentinian II (ruler in the West) in 392, Theodosius acquired effective control over the entire empire. Yet despite having placed puppet rulers in the other three positions of the Tetrarchy (i.e. his sons Arcadius and



Honorius in the east and west, respectively), Theodosius had to constantly battle usurpers such as Magnus Maximus in Britannia and Eugenius in Italy.

As noted above, the SEANAR was strategically important as the gateway to Italy, so it is not surprising that a number of critical battles in the 4<sup>th</sup> and 5<sup>th</sup> century occurred in this region. For example, the final battle between the usurper Eugenius and Theodosius occurred in AD 394 at the Roman road station of *Fluvius Frigidus* (“Cold River”), today along the Vipava (It: Vipacco) River that on the modern border between Slovenia and Italy (Vidrih Perko and Trkman 2005). Eugenius, with his Frankish general Abrogast (who actually wielded power), decided to center his base of power in this area, probably because he was able to utilize the CAI infrastructure already in place. Theodosius marched his army from Constantinople, broke through these defenses and eventually defeated the usurper at the nearby Roman fortress of *Castra* in September of that year.

Archaeological evidence at the site of Hrušica—such as a burn layer, numerous arrowheads, and the numismatic record—seem in agreement with the written events, although this is not the case at other local fortified sites (Ulbert 1981, Christie 1991:417). It is likely that Theodosius had the CAI dismantled after his victory, having seen how political rivals could use this defensive infrastructure against him. The defeat of Eugenius was also significant from a religious point of view because this marked the official end of paganism in the SEANAR. Eugenius was the last major political figure to support the old Roman gods, and after his defeat many pagan cults lost imperial sponsorship and were increasingly subject to attack from Christians (see Ciglencečki 1999b:25; also Salzman 2010).

Civil unrest and political instability would continue throughout the fifth century, which unquestionably limited the Empire's ability to defend its borders against encroaching barbarian peoples. In fact, both the 'legitimate' and 'illegitimate' claimants to the throne sought to increasingly fill the ranks of their armies with non-Roman warriors. Indeed, in Theodosius's victories over Eugenius and Magnus Maximus, the Gothic regiments sustained so many losses that they rebelled against their commanders and began pillaging up the Adriatic coast under their new leader Alaric (James 2009:54)

#### **2.4.4. Historical Framework, Part II: Collapse of Imperial Authority in Western Empire**

Whether they sought to take advantage of Roman civil strife (Halsall 2007), or were driven into Roman territory in response to some other political threat such as the Huns (Heather 2009), more barbarian groups continued to pour across the *limes* and into Roman territory during the early 5<sup>th</sup> century. There are several excellent recent works on the 5<sup>th</sup> century barbarian 'invasions' (Heather 2006, Mitchell 2007, Halsall 2007), so here only a brief overview is presented to give a sense of the dizzying speed at which the Late Roman Empire, increasingly fragile but still intact in AD 400, lost control over the majority of its territory, and how this would impact the SEANAR.

More Gothic-speaking peoples migrated across the Alps and into Italy under Radagaisus in AD 405; a year later, a group of Alans, Sueves, and Vandals famously crossed the Rhine and moved into Roman Gaul. In AD 410, these barbarian invasions culminated in the first sacking of the city of Rome in 800 years. Yet like the Battle of Adrianople described above, the notorious sack of Rome in AD 410 probably had much greater symbolic than strategic impact, since the power center of the empire had slowly been shifting to the East over the past centuries. Rome was no longer even the most important city in Italy, the imperial court having moved northward to

Ravenna, located in the more defensible spot in the landscape. Even the ‘sacking’ was later noted for its surprising tameness, especially compared to the later Vandal sacking of AD 455.

However, as James (2009:57) notes, later Christian writers may have downplayed the severity of this sacking in order to emphasize Gothic (Arian Christian) piety, particularly in contrast to the many still-pagan Romans. Yet one cannot underestimate the ideological significance of Rome’s fall. Rome still housed the Senate, which retained its symbolic importance even if lacking any real political power. The loss of Rome to the Goths even inspired Augustine of Hippo to write his *City of God* defending Christianity against the charge that it was directly responsible for the impending collapse of the Western Empire.

During this period, a number of other barbarian peoples began to carve out their own territories in the western provinces, technically as *foederati* under the control of the Emperor, but for all practical purposes politically autonomous. This includes the Burgundian kingdom established in Gaul (southeastern France) in AD 411; the Visigothic kingdom in Iberia (Spain) centered near Toulouse (AD 418); and perhaps most importantly Vandal control of North Africa (AD 439), which served as the breadbasket of the empire.

Also during this period, Childeric I established the Merovingian dynasty of the Franks (AD 457), which would become a significant power in the course of the early middle ages. Further afield, Germanic-speaking immigrants from across the North Sea (Angles, Jutes, and Saxons) besieged Roman Britain beginning in the early 5<sup>th</sup> century<sup>18</sup>. By the end of the 5<sup>th</sup> century AD, the political composition of the former Western Empire was radically different than it has been only a century earlier.

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<sup>18</sup> For more on these new barbarian kingdoms see Wolfram 1988 (Goths), James 1988 (Franks), Wood 1994 (Merovingians and Burgundians), Higham 1997 (Anglo-Saxons)

Roman authority in the areas directly north of the Alps along the Danube, the province of *Noricum ripense*, was also quickly collapsing. Thanks to an early 6<sup>th</sup> century hagiography written by an obscure monk named Eugippius, we are provided with a unique glimpse of life in this region during the early 5<sup>th</sup> century. This work, called the *Vita Severini*, chronicles the life of Severinus, a Norican bishop who also appears to have assumed political leadership amidst the collapsing Roman infrastructure (see Lotter 1976). This written source indicates that military garrisons stationed along the Danube no longer received regular pay after AD 400, although Odoacer did not officially disband them until AD 476 (Alföldy 1974). Archaeologically, it is significant that during the 5<sup>th</sup> century, these areas north of the Alps appear to be completely cut-off from the Mediterranean trade routes.

#### **2.4.5. Settlement and Society in the Late Antique SEANAR (late 4<sup>th</sup> – 6<sup>th</sup> centuries)**

##### *2.4.5.1. The Disappearance of Roman Towns (late 4<sup>th</sup> – mid 5<sup>th</sup> c)*

Unfortunately, there are no similar written sources for the southeastern Alps. There is however a great deal of archaeological evidence, which I explore in the following section, to suggest that the SEANAR was also experiencing the same upheaval and insecurity apparent throughout the Western Empire.<sup>19</sup>

As outlined above, the major centers of population during the Roman Provincial period were planned towns (*civitates*), smaller ad hoc settlements (*vici*) and country estates (*villas*), which primarily lay in the lowlands along major roads and waterways. Yet at the end of the 4<sup>th</sup> and early 5<sup>th</sup> century, most of these settlements disappear archaeologically. A number of excavations have revealed evidence of destruction layers in these final phases, perhaps indicating a violent end to some of these urban centers. Although no extensive settlement layers have been

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<sup>19</sup> Similar upheaval also characterized Pannonia Savia to the west (see Sokol 1997)

uncovered in the former Roman towns of the southeastern Alps dated to the second half of the 5<sup>th</sup> century (Ciglenc̆ki 1999a:291), some historical sources hint that urban life may have continued on a more limited basis. For example, Poetovio is mentioned in the so-called “Ravenna Cosmography”, a list of place names compiled some time during the 7<sup>th</sup> century by an anonymous geographer at Ravenna, which might indicate that it may have persisted into the 6<sup>th</sup> century (Luthar 2008:74). Likewise, a bishop from Teurnia is mentioned in the *Vita Severini*, leading to speculation that it might have become the ecclesiastical center during Late Antiquity, perhaps continuing into the 6<sup>th</sup> century (Glaser 1983).

It is also quite significant that unlike in the Italian peninsula, where later wooden structures have been discovered on top of old Roman towns (see Ward-Perkins 1997 and Gelichi 2007), there is no evidence for Late Antique (5<sup>th</sup> and 6<sup>th</sup> century) building episodes in former Roman towns of the SEANAR—only some scattered finds perhaps indicating that small, transient communities may have temporarily settled in parts of these towns (Ciglenc̆ki 1999a). In parts of the southeastern Alps, urban life seems to eventually reappear in these locations only at the very end of the Early Middle Ages (c. 11<sup>th</sup> century). This can be contrasted with the situation at Roman towns further north in the modern Austrian provinces of Styria and Carinthia. In these regions, the early medieval centers of Graz, Spittal, and Lienz were spatially distinct and seemingly unconnected to the former Roman centers (i.e. Flavia Solva, Teurnia, and Aguntum) in these areas (Alföldy 1974). Town life throughout the SEANAR, with perhaps a few exceptions, appears to have virtually disappeared by the end of the 5<sup>th</sup> century; in fact, the entire network of Roman settlements appears to have experienced a catastrophic depopulation.

#### 2.4.5.2. *What happened to the Romanized populations of the SEANAR?*

If the populations of the Roman towns, *vici*, and *villas* disappear from the archaeological record, where exactly do they go? Three potential answers have been proposed to what is perhaps the most challenging question for this period: (1) they died off in massive numbers, (2) they moved to a neighboring region, or (3) they moved to different locations within the landscape.

There is little doubt that the 5<sup>th</sup> century in particular was characterized by violence and instability across the crumbling western empire. Frequent burning and destruction layers found in excavations of former Roman towns throughout the region suggest that many of these settlements *did* come to an abrupt and violent end, which could have been accompanied by a significant loss of life. At Flavia Solva, for example, destruction layers have been dated to the first decade of the fifth century, leading to speculation that that town might have been at least partially destroyed during the Gothic incursions across the Alps and into Italy under Radagaisus (Groh 1996). Such an unpleasant end seems entirely plausible, since the town was positioned along a transportation route probably used by barbarian armies on the way to the Italian peninsula.

Yet it seems unlikely that such a dramatic depopulation of the lowlands can be fully accounted for by massive casualties. Another hypothesis suggests that parts of the population fled to more secure locations in other regions of the empire, perhaps to settlements on the Istrian coast or further down into the Italian peninsula (Luthar 2008). Unfortunately, many Late Antique sites on the northern Adriatic coast lay directly under modern urban centers, so archaeological knowledge in these areas has traditionally been more limited than on upland fortified sites, which have seen little subsequent settlement. Although we know (from Roman historian Priscus) that the Huns sacked Aquileia, the most important Roman center on the northern Adriatic, in AD 452, the

situation at other smaller coastal trading ports has remained somewhat enigmatic. Did these sites largely disappear like other Roman towns further north or did they continue to prosper?

Thankfully, recent archaeological research has begun to illuminate the state of coastal towns during Late Antiquity. For example, excavation at the site of Capris (today Slv: Koper, It: Capodistria) on the northwest coast of Istria indicates a settlement expansion in the early 5<sup>th</sup> century, precisely when refugees would have been arriving from further inland. It is also significant that this site is located in a uniquely defensible position, partially detached from the mainland. Archaeological material indicates continuous settlement through the 9<sup>th</sup> century, as well as the continued presence of imported Mediterranean amphorae, sigillata, and oil lamps until the end of the 7<sup>th</sup> century (Cunja 1996, see also Chapter 3).

Other settlements along the northern Adriatic also appear to have prospered during this chaotic period. At the Roman town of Tergeste (today Trieste in northeastern Italy), recent finds from Late Antiquity confirm a thriving coastal settlement (Degrassi et al 2007:504). A similar situation is also evident at Piranon (today Piran), another coastal site further south on the Istrian peninsula. Excavations have revealed that these coastal sites remained active participants in Mediterranean trade networks through the beginning of the 7<sup>th</sup> century; in other words, long after Roman political control in the region had disappeared (Vidrih Perko 1994:243).

#### *2.4.5.3. Expansion of Upland Fortified Sites*

While some of the Romanized population in the SEANAR surely died off or fled to neighboring regions, many people must have also relocated to other nearby locations in the Alpine landscape, perhaps to areas with greater defensive capabilities during this period of violence and insecurity. Archaeological evidence also appears to bear this out: the most common settlement type during

the 5<sup>th</sup> – 6<sup>th</sup> centuries in the southeastern Alps is the upland fortified site (UFS), several examples of which have already been discussed in relation to the Late Roman defensive infrastructure. While most upland fortified sites in the 2<sup>nd</sup> and 3<sup>rd</sup> centuries were military outposts or refuge sites, a significant expansion of these sites began in the late 4<sup>th</sup> century, when they were transformed into larger, more permanent and multifunctional settlements (Ciglenečki 2008). These sites have great significance for understanding the transition from the Late Roman to Early Medieval worlds in the SEANAR.

Over the past half century, a great deal of archaeological research has been dedicated to investigating such sites in southern Austria, Slovenia, northeast Italy, and northwest Croatia, providing us with a fascinating picture of life and death during this period<sup>20</sup> (for recent overviews in these regions and beyond, see contributions in Steuer et al 2008). The discovery of these sites was significant because it overturned previous widespread hypotheses that the southeastern Alps were almost entirely depopulated when Slavic-speaking populations arrived at the end of the 6<sup>th</sup> century. While Ciglenečki (1987) provides an exhaustive account of upland fortified sites in the eastern Alps, the following section provides a selection of the largest, best-researched and most interesting sites to act as a representative snapshot of the period, and help to address issues of continuity, ethnicity, and chronology.

Upland fortified settlements in the southeastern Alps demonstrate great diversity in size and purpose. As noted above, during the Late Roman period such sites were generally part of a defensive infrastructure (the CAI) that reinforced the major southeastern Alpine passes into Italy. There were also a number of small, temporary refuge sites (Ger: *Fliehburgen*) periodically

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<sup>20</sup> However very few of the site reports or archaeological overviews have been published in English (exceptions include Ciglenečki 1999a, 2000a)

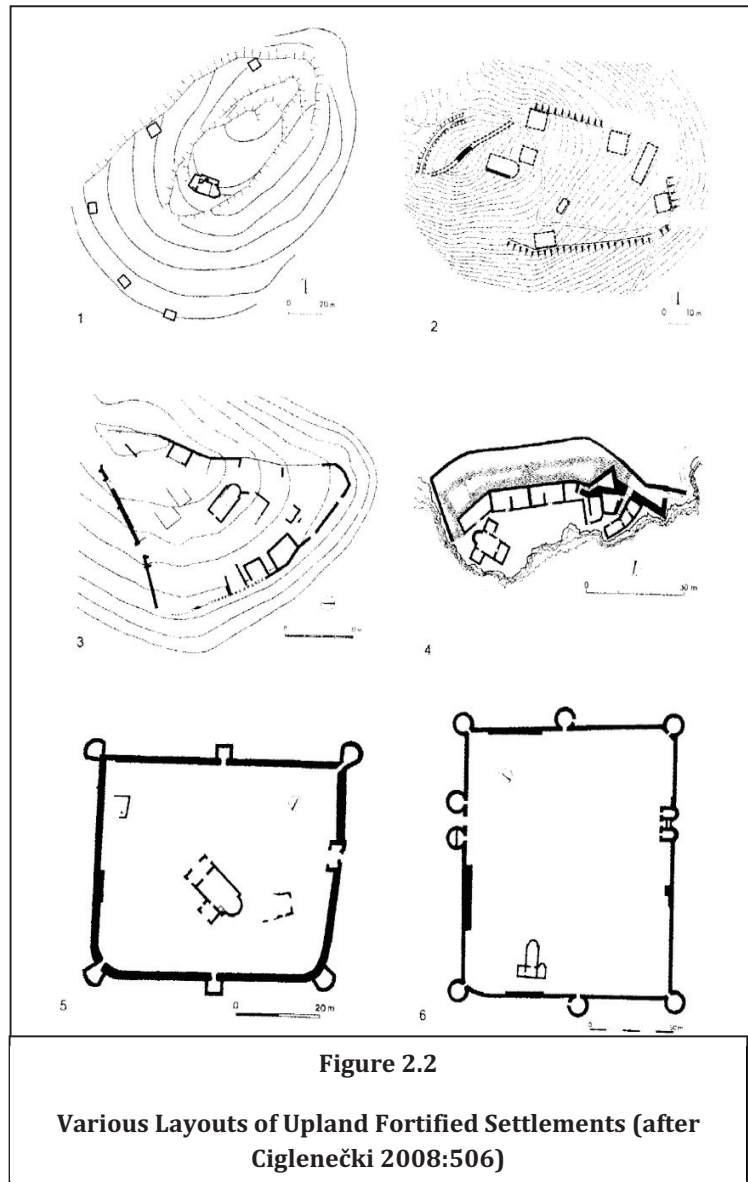


utilized by local populations. However the early 5<sup>th</sup> century witnessed a dramatic increase in the number and size of these settlements as more became permanently occupied. Some of these new long-term settlements, such as Rifnik and Invillino, were expansions of earlier Provincial period outposts. Others were new constructions, often built directly over prehistoric settlements. This reoccupation of locations abandoned for centuries or longer can be accounted for by the strategic defensive location of such sites (useful in any period of instability), or perhaps also to collective cultural memories in the indigenous population (see Halbwachs 1950).

These new, long-term settlements shared a number of common features, which provide important insights into their purpose, as well as the state of the SEANAR during this enigmatic period. One important shared characteristic was their remote and topographically isolated locations, typically removed from the major transportation routes of the Roman period. It seems clear that strategic defensive positioning was a primary focus, with such sites typically using a combination of the natural topography (steep slopes) and stone defensive walls for protection. Frequently, defensive watchtowers built into the side of the walls have been discovered.

A number of common structural features were present within the defensive walls of these small settlements. Most conspicuous was typically a Christian place of worship, ranging in size from small, single-nave chapels to large ecclesiastical complexes (at Kučar and Hemmaberg). These early Christian churches have been without question the most intensively researched and therefore best understood aspects of these fortified sites (Bratož 1989, Sennhauser 2003). They are often considered proxy indicators for the ecclesiastical importance of the particular settlement, with the largest churches believed to have been the seat of early Christian bishops (see Glaser 1997). They also provide insight into the murky relationship between Catholic and Arian Christianity during this period (see below).

Most UFS also contain the remains of a number of residential buildings.<sup>21</sup> The majority of recovered residential buildings have been made of stone, although this may be an effect of archaeological preservation and visibility. Typically, the largest domestic residences have been interpreted as the residence of the political and/or religious elite. It is clear that there must be more (wooden) residences either inside or beyond the defensive walls, but most of these sites have not been subject to systematic landscape-wide surveys.



Other structures common to the

UFS are cisterns, which would collect valuable fresh rainwater, since many upland sites would not be close to available groundwater or streams. Also, limekilns have been found at some site (Kučar and Rifnik), which would have been used to make quicklime necessary for building projects. Many UFS also have associated cemeteries, typically located beyond the defensive walls and some distance from the settlement itself. Such burials provide important insight into

<sup>21</sup> Kučar is an exception, which had led to the interpretation that it may have been exclusively an ecclesiastical complex (see Dular 1995)

the identity of the Late Antique populations and also often provide more precise chronological contexts. However it is not always easy to correlate the burial and settlement episodes.

Overall these UFS provide a picture of small, relatively isolated communities of ‘Romanized’ inhabitants that survived during this prolonged period of political upheaval and economic disintegration. The following chapter provides some more insights on the technological aspects of local pottery production at these sites.

## **2.5. LATE ANTIQUITY (c. AD 476 – 568)**

### **2.5.1. Historical Framework of Late Antiquity in Southern Central Europe**

#### *2.5.1.1. From Italia to Regnum Gothorum*

By the second half of the fifth century, Roman imperial authority over the western portions of the empire had rapidly declined. During this period, the Western Empire (now limited to the Italian peninsula and parts of the Alps, including much of the study region) had been under the control of military strongmen, often of barbarian or ‘mixed’ origin, who generally sought to marry into the Roman aristocracy and place their heirs on the throne as puppet emperors (Heather 2005). The eastern emperors at Constantinople also remained involved in these political machinations, seeking to keep the imperial line of succession intact and free of potential usurpers who might undermine their authority.

In AD 474, Eastern Emperor Leo I placed Julius Nepos (his nephew through marriage) on the throne in the West. Shortly thereafter, Orestes, head of the Roman army (*magister militum*) in Italy exiled Nepos to Dalmatia and placed his own son Romulus on the throne, a move whose legitimacy was of course not recognized by Constantinople. Yet Orestes himself was soon killed

when he refused to grant land to a group of barbarian *foederati* also living in the Italian peninsula. The leader of these federated barbarians, Odoacer, also removed the young Romulus from power in AD 476. The Constantinople-backed western emperor Nepos remained in exile and was eventually assassinated by one of his own guards in AD 480. Odoacer chose not to select another emperor, instead ruling as ‘administrator’ of the western empire, with at least rhetorical deference to the ‘true’ emperor in Constantinople (see James 2009:76-77). Although AD 476 is the year most commonly cited as the end of the Western Empire, it was not viewed with any importance by the important political players during this time.

As Odoacer (now the *de facto* ruler of Italy) acquired more power and influence, he also became a greater threat to the authority of the eastern emperor Zeno. In order to eliminate his political rival, Zeno offered Gothic general Theodoric the Amal (stationed with his army in Thrace) land grants in Italy on the condition of Odoacer’s removal. Significantly, upon his subsequent victory over Odoacer in AD 493, Theodoric established himself as king of the Goths in Italy rather than as Western Emperor. Although he was technically subordinate to the Eastern Emperor, Theodoric’s *Regnum Gothorum* (Gothic Kingdom) remained politically autonomous.

#### 2.5.1.2. *Religious Identities in post-Roman SEANAR: Catholic and Arian Christianity*

It is important here to examine the little understood relationship between Arian and Catholic Christianity. While Catholicism was prevalent among Romanized populations in the Later Empire, most barbarian groups were Arian, which was even seen as a marker of non-Roman military identity (Halsall 2007:469), and to some degree many have been an assertion of their autonomy. As James (2009:224) notes of the Ostrogoths in Italy: “If they converted to Catholicism they would be under the authority of the Catholic bishops and, depending on the circumstances, of the Catholic emperor.” Although it rarely surfaces in written records, an

undercurrent of tension between Catholic and Arian bishops during Gothic rule in Italy is evident through ‘competing’ baptisteries at Ravenna with similar forms but slightly different decorative schemes (Christie 2006:135).

An intriguing example of a similar competition (but also cooperation) between Arian and Catholic Christians seems possible at Hemmaberg, where two adjacent double-naved churches have been interpreted as Catholic (eastern) and Arian (western) (see Bierbrauer 1998, Ladstätter 2000a). While it is difficult to prove this definitively, the following factors make it probable: (1) the western church can be securely dated to the first decades of the 6<sup>th</sup> century, which corresponds to the reign of Theodoric (an ardent Arian); (2) the fact that there are two parallel double-naved churches, each with their own baptistery and oratory chapels; (3) the western church was closed and being used for secular purposes in the second half of the 6<sup>th</sup> century when the Catholic Byzantines would have taken control of the region (see Ladstätter 2000b:225, footnote 50).

### *2.5.1.3. The Byzantine Reconquista (AD 535 – 553)*

Although they had lost virtually all of their political control over the West by the beginning of the 6<sup>th</sup> century, the Eastern Emperors still viewed the Western provinces as rightful parts of their Empire. Therefore when Byzantine Emperor Justinian I assembled a large army to invade these lost provinces in North Africa and Italy, he viewed this as reclaiming Roman lands rather than as an invasion of barbarian sovereign states.

After recapturing North Africa from the Vandals in AD 534, Justinian’s army under the general Belisarius turned its sights on the prize of Italy and Rome. He invaded the following year and made significant early territorial gains. Rome was captured in AD 537, and the Gothic capital

and stronghold at Ravenna fell in AD 541. The early stages of Justinian's *reconquista* were tremendously successful, with much of Italy now back in Eastern Roman hands; the Byzantines then set their sights on recapturing territories north of the Alps held by the Franks. However the Goths under the general Totila regained much of their lost territory from the period AD 542 – 550 (Wolfram 1988:353). Eventually the Byzantine army would recover and crushed the final remnants of the Gothic army at Rome in 553.

Although it is beyond the scope here to examine this struggle for Italy in great depth, the overall outcome of this long and bloody war was ultimately tragic for both sides. According to all contemporary historical accounts, the prolonged struggle between Gothic and Byzantine forces devastated the Italian countryside, and was nothing short of catastrophic for the Italian population, both peasant and aristocrat. The Byzantine historian Procopius, who accompanied Belisarius on his campaigns, also described a series of terrible famines and plagues that further added to the widespread misery and devastation. The Byzantine-Gothic conflict has been described as probably the most destructive war on the Italian peninsula since Hannibal's invasion in the 3<sup>rd</sup> century BC (Moorhead 2005:150).

Ironically, it was this attempted reconquest by the 'Byzantine' Romans that effectively destroyed what remained of the indigenous Roman aristocracy in the Italian peninsula. The Senatorial classes, who had been the backbone of Roman society and culture, either perished during the fighting or fled to Sicily or Constantinople. The Ostrogoths themselves vanished from the historical and archaeological record, their final resistance eliminated by AD 555.

There is also historical irony in the fact that Theodoric, although technically a 'barbarian', had spent time as a young boy in Constantinople, where he gained an appreciation for Roman

culture, law, and government; during his reign as king of Italy, although he resisted Byzantine political authority, he actually sought to *preserve* Roman culture and administration, and was respectful of the old Senatorial classes (Cantor 1993:106). The eventual defeat of the Gothic kingdom by Eastern Roman forces in effect destroyed what was left of the classical Roman heritage on the Italian peninsula. Although the Byzantines continued to exercise power in the region, this long, costly war drained the Eastern Empire of precious resources, ultimately damaging more than strengthening it.

#### *2.5.1.4. Arrival of the Lombards and Polis Norikón*

Perhaps the only winners of this brutal decades-long conflict were the Germanic-speaking Franks and Lombards, who were able to establish influential, stable kingdoms in the power vacuum created by the Gothic Wars. The Franks, who had been initially allied with the Byzantines against Theodoric's Ostrogoths, invaded parts of the eastern Alps around AD 540 (Luthar 2008:79). In an attempt to check the growing power of the Frankish kingdom, the Byzantines granted adjacent lands in the southeastern Alps to the Lombards AD 568 (Moorhead 2005:152). Another Germanic-speaking group (supposedly) from Scandinavia, the Lombards had been residing in Pannonia and under increasing attack from the Huns, so therefore were more than happy to oblige the Byzantines.



**Figure 2.3**  
**Regions in the SEANAR granted to the Lombards by Justinian (after Ciglenc̆ki 1999a:298)**

This land grant, called *Polis Norikón*, included the regions around the former Roman towns of Poetovio and Celeia (see Ciglenc̆ki 1992, Figure 2.3 above). Although Ciglenc̆ki (1999a) suggests that the relative abundance of ‘Lombard’ and lack of ‘Byzantine’ style material culture in this region seems to support the written accounts, one must be careful of such culture-historical approaches to the archaeological record.<sup>22</sup>

The Lombard dukes spread quickly throughout the region, and the Byzantine control over northern Italy was too weak from their extended conflict with the Goths to stop this territorial expansion (see Christie 1995:71-91). The Lombards went on to conquer about half of the Italian peninsula, and the Byzantines were relegated to the Exarchate of Ravenna. The political unity of

<sup>22</sup> Questions of ethnic identity and material culture are further discussed in Chapter 7.



the Italian peninsula was permanently shattered, and the Lombard kingdom would last into the 8<sup>th</sup> century.

### **2.5.2. The Late Antique SEANAR: Three Aspects of Continuity**

The fifth and sixth centuries were unquestionably a period of tremendous upheaval and change in the SEANAR. However recent archaeological evidence seems to indicate that elements of continuity must also be considered. The following sections address the possibility of continuity from the Late Roman to post-Roman period, specifically in regard to settlement patterns, identity, and pagan rituals, illustrating with examples drawn from archaeological sites in the region.

#### *2.5.2.1. Continuity and Lowland Settlements*

Above (section 2.3.4), I suggested that the southeastern Alps experienced a radical shift in settlement patterns during the 5<sup>th</sup> century AD. Archaeologists have long argued that the Romanized populations must have either fled to the Adriatic coast and Italian peninsula or retreated from the lowlands into the more easily defensible hilltop regions during this period of political and social instability. While this does appear to be the general pattern, recent excavations indicate that settlement did not *completely* disappear from the lowlands during the 5<sup>th</sup> and 6<sup>th</sup> centuries, as previously assumed. This assumption of complete depopulation had been based predominantly on the disappearance of urban life from the Roman towns in the region, but it is becoming clear that these towns are not representative of the entire lowland population in the southeastern Alps (Mason 1998a, 1998b).

Several important Late Antique sites near the historic center of the town of Črnomelj have begun to shed light on this issue. These sites sit at the confluence of the Lahinja and Dobljica rivers in

the White Carniola (Slv: Bela krajina) region of southeastern Slovenia (Mason 1998b). The occupation layers appear to date from the late 4<sup>th</sup> through early 7<sup>th</sup> centuries AD, during the exact period when all Romanized populations were thought to have moved from these regions.

Although these settlements are about 100 km from the Adriatic coast, the abundance of Roman fine-ware ceramics in the excavations suggest they must have been connected to Mediterranean trade networks of Koper and other coastal site of the Slovenian Karst region, near the modern border with Italy (Mason 1998b). It seems that trade continued via the waterways on which these settlements were built. However a mortared stone defensive wall about 2 m tall and 1.66 m wide, with two associated watchtowers, also indicates that security was also a concern for this community. A nearby cemetery contains burials with material culture characteristic of a Romanized population (see below). There also appear to have been connections to Kučar, a nearby upland fortified site. Recent excavations have revealed that Kučar was not a typical Late Antique upland settlement: the large sacral complex and absence of domestic structures indicates that this site only functioned as an ecclesiastical center (Dular et al 1995). Given this unusual function, it seems probable that the settlement at Črnomelj were the economic counterpart to the religious complex at Kučar. The Črnomelj sites appear to have been destroyed in the late 6<sup>th</sup> century, and Avar-style arrowheads have been recovered from these last levels (Mason 1998b).

Excavations from several other settlements and cemeteries in the lowlands from the 5<sup>th</sup> through 7<sup>th</sup> centuries AD have begun to indicate that Črnomelj was not unique. Rescue excavations near the town of Mengeš near the Kamniška Bistrica River in central Slovenia uncovered at least six semi-subterranean structures with materials spanning from the 1<sup>st</sup> through 6<sup>th</sup>/7<sup>th</sup> centuries AD (Sagadin 1995). While there is some disturbance at the site, it seems evident that this small

settlement remained occupied well into Late Antiquity. Nearby were located the remains a grave with characteristic 'Avar' burial equipment.

#### *2.5.2.2. Continuity of Roman Identity?*

One of the most intriguing questions is the maintenance of a 'Roman' identity among the population in the SEANAR during the 5<sup>th</sup> and 6<sup>th</sup> centuries (Late Antiquity). As outlined above, the Roman political control over the region rapidly collapsed in the 5<sup>th</sup> century, forcing a significant shift in the settlement patterns that had characterized the region since the 1<sup>st</sup> century AD. The historical narrative also indicates the increasing presence of barbarian groups, often identified by the material culture at particular sites. Although much of this region was clearly cut off from wider trade networks that would have provided standardized Roman fine-ware imports, did this correlate with the loss of Romanized identity? A number of important questions have yet to be rigorously addressed: how did the communities at the UFS see themselves? What was their relationship with Slavic-speaking immigrant populations? How should one understand the connection between material culture and social identity?

Ciglencečki (2000b:123) notes that overall the architecture and inventory of material culture of the UFS during Late Antiquity indicate a relative uniform character with an emphasis on the continuity of Roman culture. A similar situation seems evident in the contemporary lowland settlements, although as outlined above, these settlements are only beginning to be properly identified. Additionally, several recent excavations have produced several fascinating examples of what could be interpreted as attempts to maintain a sense of 'Roman-ness'. At the UFS of Tonovcov grad in western Slovenia, a female grave stratigraphically dated to the end of the 6<sup>th</sup>

century *at earliest*<sup>23</sup> was furnished with a type Keller 1a fibula—a style typical of the 4<sup>th</sup> century (Modrijan n.d., see also Keller 1971:32-35).

Similarly, at the Late Antique cemetery near Črnomelj, which is dated with stratigraphy to the 6<sup>th</sup> century<sup>24</sup>, graves are furnished with metal finds (bronze arm rings, fibulae, pins) that are typical of the 4<sup>th</sup> and 5<sup>th</sup> as well as 6<sup>th</sup> century. Although the settlement itself could not have been established until the early 5<sup>th</sup> century, most metal finds date to the 3<sup>rd</sup> and 4<sup>th</sup> century, with some examples typical of even of the 1<sup>st</sup> century AD or Late Iron Age (Mason 1998b:292)! Yet as noted above, imported ceramics indicate that these sites were *still connected* to Mediterranean trade routes, so there is no reason to suppose that the population did not have knowledge of, or access to, contemporary Late Antique styles of these artifacts. Furthermore, bronze casting waste uncovered during excavation suggests that local craftsmen were indeed making metal dress ornamentation throughout this period (Mason 1998b:294).

So while the ‘heirloom effect’ (cf. Adams 2003) cannot be ruled out as a possible explanation for the presence of such earlier ornamentation, it cannot fully explain the prevalence of styles that were typical of the earlier Roman Provincial period. Is it instead possible that the Late Antique craftsmen at Črnomelj were making ‘anachronistic’ styles perhaps as an attempt to emphasize their Roman identity? Are such styles the material manifestations of nostalgia for earlier centuries when the Roman Empire maintained unequivocal control over the region?<sup>25</sup> If so, an interesting avenue for future research might connect these new discoveries with other studies of

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<sup>23</sup> A TPQ is evident in that this burial is cut into the ashy destruction layer in one of the churches, which has been confidently dated to the mid-6<sup>th</sup> century; Modrijan even suggests that the other grave goods suggest an even later (8<sup>th</sup> century) date for the burial

<sup>24</sup> The graves cut into (and therefore must postdate) a cobbled surface which has been securely dated to phase 3 (late 5<sup>th</sup>/early 6<sup>th</sup> century); see Mason 1998b:292

<sup>25</sup> If indeed such activities were more common than perhaps assumed for this period, it has significant implications for the chronological dating of innumerable sites in the region!

the archaeology of memory and the use of the ‘past in the past’ (see Van Dyke and Alcock 2002, Bradley 2002, Williams 2003, and Hen and Innes 2000).

#### *2.5.2.3. Continuity of Religious Identities: Persistence of Paganism*

When considering the 5<sup>th</sup> and 6<sup>th</sup> centuries, another fascinating trend in recent archaeological research is the persistence of old pagan beliefs within Romanized populations of the SEANAR long after such practices were discouraged or even criminalized by the empire. As noted above, Christianity spread quickly throughout the empire after Constantine’s conversion in AD 313. Although during the reign of Julian (AD 355 – 363), an unsuccessful attempt was made to reestablish the traditional Roman pantheon, most subsequent emperors continued this policy of Christianization. Theodosius I eventually outlawed non-Christian religions around AD 390. Yet powerful elements of Roman society, particularly the aristocracy, resisted the new religion; pagan supporters backed several unsuccessful usurpers such as Eugenius (see above). Yet by the beginning of the fifth century, Christianity was not only the dominant religion of the empire, it was also the only legal one.

However there is increasing archaeological evidence in the SEANAR that traditional Roman pagan practices continued into the fifth and sixth centuries. For example, at the site of St Margarethen in Laventtal, there is evidence for the use of a temple of Mars into the 5<sup>th</sup> century (Ladstätter 2000b), and the temple of Isis Noreia on the Ulrichsberg in southern Austria was not destroyed until the end of the 5<sup>th</sup> century (Alföldy 1974:211). Similarly at Flavia Solva, a large town inhabited into the 5<sup>th</sup> century, there is a conspicuous lack of any characteristically Christian architecture!

Perhaps most interesting is the case of Tinje in eastern Slovenia. Unlike most Late Roman UFS, no evidence for an early Christian church was recovered. This is perhaps not surprising, since Tinje was only a small settlement that would only have had a small wooden chapel. However equally intriguing are remains of what appeared to be a pagan sacrificial stone altar (Ciglencečki 2000a). Settlement at Tinje only began in the 5<sup>th</sup> century, so it would be unusual to find such an object, but the lack of any Christian iconography and the presence of burned animal bones found under the altar makes its identification as pagan quite probable.

Even stranger is the fact that this altar is located on the margin of the settlement, in close proximity to contemporaneous burials that do contain Christian iconography. Is it possible that Christians and non-Christians coexisted at Tinje, or perhaps the people practices some type of syncretic belief system that included animal sacrifice but also Christian symbols in burial contexts? This provides an interesting case study for examining the transformation of the sacred landscape as explored above.

## **2.6. THE EARLY MIDDLE AGES (c. AD 600 – 900)**

### **2.6.1. Historical Framework of Southern Central Europe in the Early Middle Ages**

#### *2.6.1.1. Arrival of the Slavs and Avars*

At some point during the 6<sup>th</sup> century, when the Lombards were establishing their duchies across northern Italy and the eastern Alps, Slavic-speaking communities also began to immigrate into the SEANAR.<sup>26</sup> The geographical origin of these Slavic-speaking peoples is shrouded in

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<sup>26</sup> For overviews of the early medieval Slavs in Central and Eastern Europe, see Wolfram 1995, Curta 2001a, Barford 2001, and Brather 2001; for the archaeology of the early medieval Slavs in the southeastern Alpine region, see Korošec 1979, Mader 1986, Bratož 2000, Curta 2010.

mystery; although linguistic, historical, and archaeological evidence seem to point to a homeland somewhere in Eastern Europe, where exactly remains a highly contentious matter<sup>27</sup> (Barford 2001, Dolukhanov 1996). They first appear in 6<sup>th</sup> century Byzantine sources as two large tribes, the *Sclavini* and *Antes*, which were politically distinct but shared a common language and culture. Procopius' *De Bellis* is the main early source, in which the Byzantine historian mentions that these tribes once lived near the Istra River (in modern Russia near Moscow), although his geographical knowledge is questionable at best (see Barford 2001).

Procopius provides a traditional 'Classical' ethnographic account of the Slavs, describing their form of government, attire, appearance, religious beliefs, and settlement styles (Kobylnski 2005:524). He notes that they lived 'wild and free' and were without political rulers (Fine 1983:26). While it is unwise to assume that this statement suggests that the Slavs lived in some sort of 'classless' society, the archaeological evidence does seem to support the idea of weaker social differentiation in Slavic society than contemporary Roman/Byzantine or Germanic-speaking communities. For example, many early Slavic sites indicate a relatively egalitarian social structure in burial assemblages and house sizes (Gasskowski 2002). Historian and archaeologist Florin Curta suggests that the Slavic political structure could be best described as a "military democracy" (Curta 2001a), where leadership was temporary and based on the individual abilities of military 'great-men', which he distinguishes anthropologically from chiefs or 'big-men' in that the power of the former was not derived from the control of wealth (ibid).

These early Byzantine sources note that Slavic peoples were raiding and attacking Byzantine settlements by the mid-6<sup>th</sup> century. However with the arrival of the Avars, a confederation of

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<sup>27</sup> The search for a 'Slavic homeland' is premised upon the notion of a stable, homogeneous ethno-linguistic identity—an assumption that will be questioned in chapter 7.

nomadic tribes from the central Asian steppe, the geopolitical situation in the Balkans changed dramatically. After destroying the Gepids, the Avars established hegemonic rule across southeastern Europe, from the eastern Carpathians to the eastern Alps (Curta 2010, Pohl 1988). Historical sources suggest that the Slavic groups fell under the domination of the Avars, paying them tribute and supplying them with soldiers. Some historians have argued that the Slavs, a predominantly agricultural and sedentary society, provided a reliable economic/subsistence base for the more mobile, nomadic Avars, and that these groups perhaps maintained a symbiotic, rather than purely exploitative, relationship (Urbánczyk 2005).

Towards the end of the 6<sup>th</sup> century, these combined Avar and Slavic forces are thought to spread into the southeastern Alps, raiding and burning towns and settlements along the way.

Archaeologically during this period, we see the reappearance of numerous lowland sites, first along the Sava, Drava, and Mura Rivers (see contributions in Guštin 2002). This period also marks the destruction of many of the upland fortified sites that had been the main settlements since the late 4<sup>th</sup> century. Sites such as Rifnik, Vranje, Tonovcov grad, Invillino, Hemmaberg, and Kučar all appear to have been (at least temporarily) abandoned during this period; burned destruction layers at many of these sites seem to indicate that settlement came to a violent end.

Archaeologists have been quick to draw connections between the abandonment of UFS and the Avar/Slavic invasions, particularly since Avar-style arrowheads are often found in these final destruction layers. These invasions mark for many scholars the official 'end' of Late Antiquity in the region (Ciglencečki 1999a), as the widespread emergence of Slavic society eliminated any final traces of Classical Roman culture (Luthar 2008:81). The Slavic/Avar migrations most heavily impacted the eastern part of the region, with what is today the western half of Slovenia remaining under Lombard control (Modrijan n.d.).



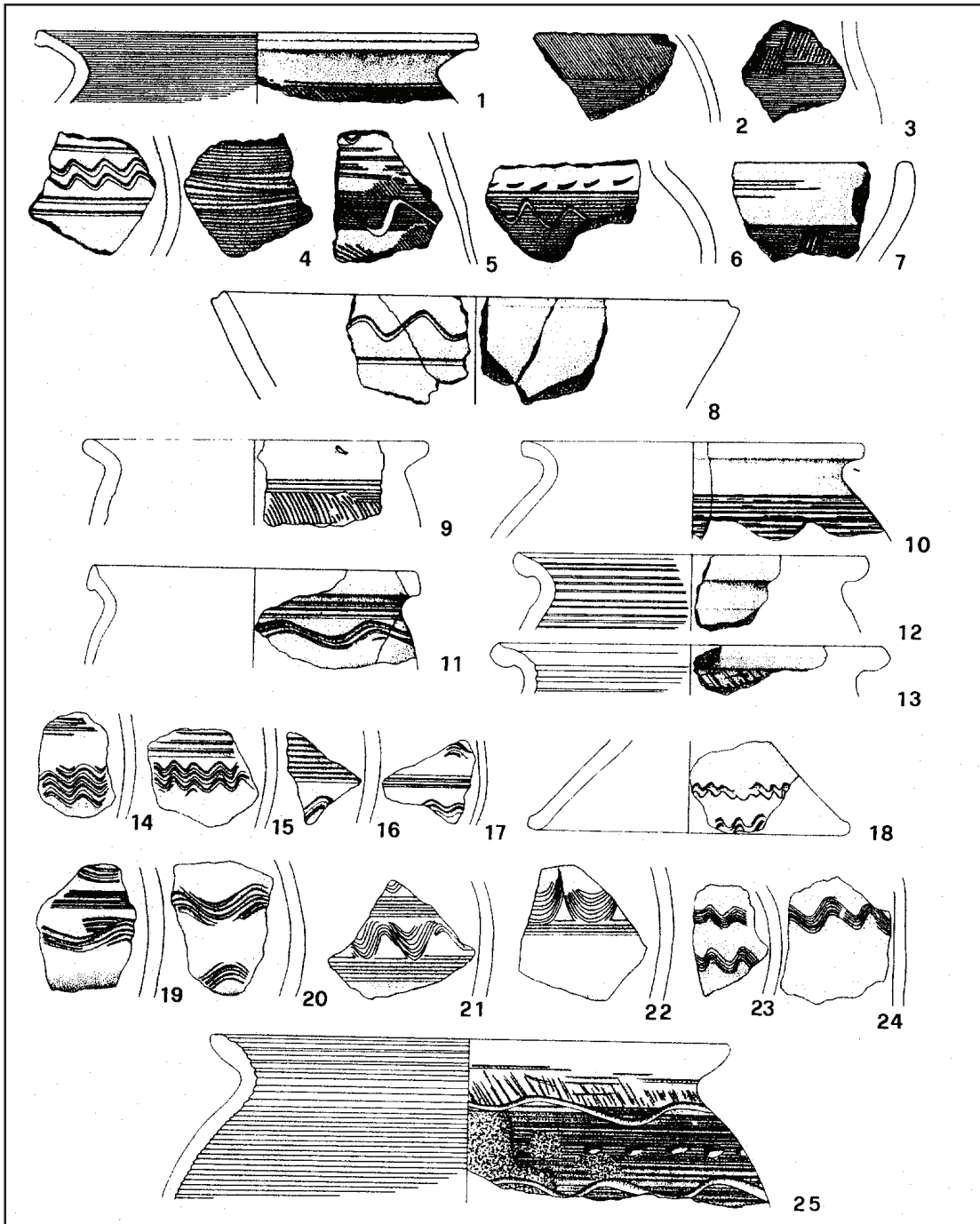


Figure 2.4  
 Typical Early Medieval 'Slavic' Pottery from southern Austria (after Rodriguez 1992:161)

### 2.6.1.2. Early Slavic Polities: Samo and Carantania

As noted above, Slavic-speaking peoples were thought to have migrated into the southeastern Alps under the dominion of the Avars. However in AD 626, when the Avars unsuccessfully attempted to sack Constantinople, Slavic communities seized this moment of weakness to establish an autonomous state in the region. The *Fredegarii Chronicon* (Chronicles of Fredegar), a 6<sup>th</sup> century chronicle from Frankish Gaul, name a Frankish merchant named Samo as the ruler of this emergent Slavic state, the boundaries of which are unclear but probably included much of the eastern Alps as well as areas to the north of the Danube in the Czech Republic and Slovakia. The material evidence also seems to indicate a growing regional identity in this region, which may be correlated with an independent polity under Samo (Stadler 2008:78). After Samo's death in AD 658, this tribal alliance disintegrated but the communities in the southeastern Alps are thought to have maintained their political autonomy; Paulus Diaconus (Paul the Deacon) calls this region Carantania in his *History of the Lombards*, composed in the late 8<sup>th</sup> century (Kahl 2002).

After perhaps a century of political independence, Carantania was forced to request assistance from the neighboring Bavarian duchy in AD 743 in response to a renewed Avar threat. In exchange for Bavarian aid in their fight against the Avars, a Carantanian Duke sent his son as a 'hostage' to the Bavarian court, and converted to Christianity (Leeper et al 1941). The loss of political autonomy was accompanied by an aggressive Christianization from Salzburg, detailed in one of the most important primary source documents of the early medieval eastern Alps, the late 9<sup>th</sup> century *Conversio Bagoariorum et Carantanorum* (see Wolfram 1979, 1995). Whether or not this anecdotal story is accurate, the archaeological evidence indicates that by the beginning

of the 9<sup>th</sup> century, Christian symbols appear in burials throughout the region (see Giesler 1980, Bierbrauer 2004a).

### *2.6.1.3. Tassilo and Charlemagne*

Historical sources indicate that Slavic rebellions against Bavarian rule continued over the next several decades, only finally crushed under the powerful Duke Tassilo III in 772. At that time, a more systematic and rigorous Christianization was initiated with the Carantanian nobility's organization of new churches and monasteries (Karpf 2002). Unlike the Saxons to the north, historical documents downplay any resistance to Christianization and incorporation into the Bavarian, and shortly thereafter, Frankish polities (Kuhar 1959).

Tassilo's growing Bavarian duchy roughly formed a square bounded by the Danube, Enns, and Lech rivers (Riché 1978). Unfortunately for Tassilo, his increasing power was seen as a direct threat to Frankish King Charlemagne, who was concurrently expanding his own political authority in the region. Nominally a Carolingian vassal, but with extensive autonomy, Tassilo was accused of treachery and conspiring with the Avars against Charlemagne (Bowlus 1995). Whether this accusation was accurate or contrived, he lost the support of his followers and was exiled to the monastery of Jumièges. Around the same time, Charlemagne also defeated and annexed the Lombard duchies in northern Italy. At this point the regions of Bavaria, Lombardy, and parts of the northeastern Alps all became incorporated into Charlemagne's empire (Riché 1978). It has been suggested that one of the main reasons that Charlemagne sought to annex the duchy of Bavaria, other than to stem Tassilo's growing power, was that he needed a 'buffer state' from which to launch a military campaign against the Avars (Bowlus 1995).

#### *2.6.1.4. Collapse of Avar Khaganate and Establishment of Carolingian Hegemony*

The SEANAR during the late 8<sup>th</sup> and early 9<sup>th</sup> century was part of the main theatre of the struggle between the Carolingian Empire and Avar khaganate. The Avars maintained a powerful military presence in the eastern Alpine region until they were defeated by Frankish forces under Charlemagne, who directed an extended campaign against them from AD 791 – 805. Carolingian biographer Einhard famously called this “the greatest of all the wars waged by him after the Saxon war” (Riché 1978:108). Their abrupt disappearance from historic documents shortly afterwards has long been a mystery to historians; as Leeper (1941:105) suggested decades ago: “Few disappearances in history are more complete than that of the Avars.” Archaeologically, the disappearance of the Avars is not quite as sudden, with Avar-style burials continuing throughout the 9<sup>th</sup> century (Daim 2003a, 2003b). Yet as a political force, the Avars never recovered from their defeat and submission to Carolingian forces, and their name disappears from the written sources within a generation (Pohl 1998:19).

How is it possible that such a powerful ethno-political entity could completely disappear within such a short timeframe, after having dominated the Carpathian basin for several centuries? Where did the Avars go? This question highlights some of the recurrent problems with traditional understanding of early medieval ethnicity (see Chapter 7). If one assumes that the Avars were a single, relatively homogeneous ‘people’ with a fixed identity, than their disappearance from the historical and, to a lesser degree, material records is puzzling. But some historians have suggested that only a small politico-military elite possessed ‘Avarian identity’, which was tied to the strength of their military and political institutions. After being forced to submit to the Franks and pledge fealty to Charlemagne, it ceased being advantageous to

represent oneself as an Avar (Pohl 1998:19). Therefore, individuals who had previously represented themselves as Avars were assimilated into other populations, such as the Slavs.

After the collapse of the Avars, the Carolingian Empire was able to establish a political hegemony over much of the SEANAR. They politically reorganized this region into an ‘eastern march’ (*Ostmark*) that further served as a buffer zone against political rivals to the east, such as the Magyars and Bulgars. The 9<sup>th</sup> century witnessed the consolidation of political authority and the beginning of Germanic colonization into these regions, establishing the ethnic composition of the SEANAR for the rest of the Middle Ages and beyond (see Bowlus 1995, Luthar 2008:113-177).

## **2.6.2. Settlement and Society in Early Medieval SEANAR: Continuity & Cultural Contact**

### *2.6.2.1. Slavic Settlement in the River Valleys*

In the southeastern Alps, the presence of Slavic-speaking communities is usually indicated by the presence of small rectangular houses and wavy-banded coarse-ware ceramics, which appear to correlate with early medieval Slavic settlement in other parts of Central Europe (see Brather 2004a). These settlements first appear along the river valleys such as the Sava, Drava, and Mura (Guštin 2002). As noted above, it was long thought that the Slavic migration and settlement was in areas that had been completely depopulated during Late Antiquity, but new evidence suggests continuity and contact between the ‘Romanized’ populations of Late Antiquity and the Slavic immigrants (Milavec 2009:252).

### *2.6.2.2. Lowland Cemeteries and Culture Contact*

The issue of continuity between Late Antiquity and the Early Middle Ages can also be addressed from the perspective of the lowland river valleys, but from cemetery rather than settlement

excavations. For example a cemetery with characteristic early Slavic burials (c. 9<sup>th</sup> – 10<sup>th</sup> century) found near the Črnomelj sites discussed is tantalizing evidence for continuing settlement continuity in that region (Mason 1998b, Dular 1985:58).

Further to the northwest of Črnomelj, in what is today central Slovenia, another interesting example of continuity is presented at the cemetery of Kranj (Ger: Krain). Although the accompanying settlement has not been found, the cemetery contains graves that are characteristic of both an indigenous Romanized population as well as early Slavic immigrants. Although it is not clear whether the cemetery was in continual use<sup>28</sup>, it seems evident through the placement of the graves that the locations of the earlier ('Romanized') graves were known and respected by the later ('Slavic') burials (Sagadin 1987:135). Can this cemetery be interpreted as (friendly?) interaction between the autochthonous Romanized population and Slavic immigrants? Are we limiting our understanding of the period by assuming two mutually exclusive identities? Unfortunately the dating has been established only through typologies (the limitations of which we have already seen), so it remains unclear if there is any overlap between the two different grave styles.

Rescue excavations in the Gorenji Mokronog region of southeastern Slovenia have also uncovered an important Late Antique (6<sup>th</sup>/7<sup>th</sup> century) cemetery. Grave goods from twenty burials and the remains of a small wooden structure—interpreted as an early Christian chapel—indicate the presence of a very late Romanized population (Bavec 2003). Yet the ceramic finds were typical of the early Slavic period.<sup>29</sup>

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<sup>28</sup> Judging strictly by stylistic chronologies, there appears to have been about a 200-year gap between the two groups.

<sup>29</sup> Similar situations are also evident at other sites in the southeastern Alps (e.g. Komenda, Ptuj, and Bled-Pristavi).

### *2.6.2.3. Reoccupation of Upland Fortified Sites*

Above we have discussed the issue of settlement continuity and identity between the Late Roman and Late Antique periods in the SEANAR. It is becoming clear that although many of the Roman towns were abandoned, with much of the population fleeing to UFS, some lowland sites also continued during the 5-6<sup>th</sup> centuries AD. There is yet another apparent rupture at most of these Late Antique settlements, in both the uplands and lowlands, at the end of the 6<sup>th</sup> and beginning of the 7<sup>th</sup> centuries AD, which seems to coincide with the arrival of raiding Slavic and Avar groups from the east. We must now address a similar issue of continuity/rupture between Late Antiquity and the Early Middle Ages (8<sup>th</sup>-9<sup>th</sup> centuries).

The beginning of the early middle ages is one of the most enigmatic phases of the SEANAR; any evidence of 7<sup>th</sup> century occupation seems to be ‘missing’ at most sites (Modrijan, pers. comm. 2010). This of course could be an illusion caused by problems of chronology, as virtually all sites in the SEANAR are dated by seriation rather than C-14.

While seemingly all of the Late Antique UFS were abandoned by the end of the 6<sup>th</sup> century, a number of them—Tonovcov grad, Tinje, Zbelovska gora, St. Lambert near Pristava, Ajdna above Potoki—all show evidence of 8<sup>th</sup> and 9<sup>th</sup> century reoccupation. Such reoccupations are characterized by small (Frankish) metal finds and ceramic material (typically of the ‘Slavic’ style), but only rarely new building episodes (Milavec 2009:253). These later settlers might be described as ‘squatters’ who made use of the abandoned but still functional stone structures at such sites. However it is not clear how long many of these UFS were abandoned or whether this ‘abandonment’ (at least at some of these sites) is just an effect of gaps in the chronology.

#### 2.6.2.4. *Mass Migration versus Acculturation: An Alternative View?*

Finally, in a recent article, Florin Curta (2010) has argued that many of the styles of material culture once considered diagnostic of Slavic immigration (such as ‘Prague type’ pottery) actually have ‘indigenous’ precedents in the Late Antique period, and therefore *cannot* be necessarily attributed to Slavic-speaking communities. He also argues that—due to a lack of chronologically diagnostic materials—many of the ‘early Slavic’ settlements cannot be securely dated to before the beginning of the 8<sup>th</sup> century. He goes on to suggest:

Moreover, no indication whatsoever exists of what particular language was in use among the inhabitants of the seventh- and eight-century settlement recently excavated in northern and central Slovenia, as well as in northern Croatia. It is only *assumed* that they spoke Slavic, just as linguists *assume* that the Sclavenes and Antes mentioned by Byzantine sources spoke Common Slavic (Curta 2010:322, emphasis in original).

Curta posits an alternative theory whereby the Slavic language did not enter into the SEANAR through a mass immigration of Slavic-speaking communities in the late 6<sup>th</sup> century (as is generally accepted), but instead through Avar political domination of the region in the second half of the 8<sup>th</sup> century.<sup>30</sup> The recent publication of this article has not yet allowed time for a thorough debate on this provocative hypothesis, but it certainly embodies a new approach to this period that must be fully explored.

Whether or not Curta’s specific hypothesis is correct, his article nevertheless indicates that much of the archaeological interpretation in this region is based upon unproven assumptions and not actual data.<sup>31</sup> It further reveals the limitations of using an exclusively ‘ethnic’ lens to explore aspects of the post-Roman period. Chapter 7 of this dissertation outlines a means of thinking

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<sup>30</sup> Common Slavic is thought to have been the lingua franca of the Avar Empire (see Curta 2010)

<sup>31</sup> This ‘migration’ versus ‘acculturation’ debate is reminiscent of a similar controversy in the transition from Roman Britain to Anglo-Saxon England (see Higham 1997).



about social processes during this period that is not reliant on a culture-history approach derived from the historical narrative.

## **2.7. CONCLUSION**

In summary, was the southeastern Alpine and northern Adriatic region characterized by continuity or change in the transition from the Late Roman period to the Early Middle Ages? The answer, of course, is neither simple nor straightforward. It seems that without question—in terms of the overall quality of life, trade routes, settlement patterns, and sociopolitical structure—the SEANAR *did* experience a momentous shift, particularly in the 5<sup>th</sup> and 6<sup>th</sup> centuries AD. The disappearance of Roman towns and expansion of upland fortified sites certainly attests to this. Yet recent archaeological research has indicated that this shift was not as absolute as once thought, providing ample evidence for elements of continuity in terms of demography, identity, and ceramic technology (Chapter 3 examines the last of these in greater detail). It had long been assumed that the region was almost completely depopulated by the time of the Slavic and Avar migrations in the late 6<sup>th</sup> century AD (a narrative perhaps influenced by Slavic nationalist historiography). We know now that this is a gross exaggeration; while some depopulation is likely, much of the remaining Romanized populations (Ger: *restromanische Bevölkerungsgruppe*) continued to inhabit the region, and recent excavations have demonstrated cultural contact between Romanized and Slavic groups. What should also be evident is that even within this relatively small region, there is a great deal of variation; for example, settlements nearer the coast (i.e. Koper) and farther to the west (Tonovcov grad) experienced much greater continuity and stability than places further inland (i.e. Tinje), an idea that will be addressed in the following chapter.

## CHAPTER 3

### CERAMIC TECHNOLOGY IN THE LATE ANTIQUE AND EARLY MEDIEVAL SOUTHEASTERN ALPS: MACROSCOPIC AND PETROGRAPHIC ANALYSIS

#### **3.1. INTRODUCTION**

Chapter 2 outlined the basic historical and archaeological framework for the southeastern Alpine and northern Adriatic region from the Late Roman through Early Medieval periods, exploring different aspects of continuity and change in the region as Roman political authority rapidly disintegrated and was replaced by numerous barbarian successor states. The focus oscillated back and forth between the regional and local levels, and it also considered how archaeological and textual evidence could be effectively integrated to provide a clearer, more nuanced picture of this important historical transition.

In order to further address these significant issues, this chapter presents the results of macroscopic and microscopic analyses on locally manufactured coarse-ware ceramics taken from several different settlements throughout the region under investigation. This chapter seeks to categorize different ceramic fabric types in order to examine the technological choices made during the manufacturing process (explored further in Chapter 7). Here I address a number of questions at the regional scale, such as: how did ceramic traditions change from the Late Antique to Early Medieval period across the southeastern Alps and northern Adriatic (SEANAR)? Was this change (or lack thereof) uniform across the entire region, or were there sub-regional patterns? Does a change in ceramic technological choices necessarily correlate to new social identities or shifting economic patterns? In what way does the archaeological record support or undermine the traditional historical narrative for this region?

### **3.1.1. Chapter Outline**

This chapter begins with a description of the basic mechanics of ceramic petrography as employed in this research project. It provides a very brief historical overview of ceramic petrographic studies in Anglo-American archaeology, and then turns to some of the previous petrographic research done in the Late Roman and Early Medieval eastern Alpine region. It then outlines the research design and methodology adopted in this project, touching on issues of sampling strategy, qualitative and quantitative methods of analysis, and potential limitations of the dataset.

The next sections provide the geological, historical, and archaeological context for each of the sites included in the petrographic study, and then present the results of the compositional classification. It connects the petrographic results from each individual site to the broader regional context, drawing some tentative conclusions about issues of technological continuity and change. Finally, some suggestions for future research possibilities are made.<sup>32</sup>

## **3.2. CERAMIC PETROGRAPHIC RESEARCH IN ARCHAEOLOGY**

### **3.2.1. What is Ceramic Petrography?**

Pottery is the most prevalent archaeological material at most Late Roman and Early Medieval sites in Central Europe, and ceramic analysis has a long history in the archaeology of this period. Yet the literature on Late Roman and Early Medieval fine-ware and coarse-ware ceramics has been dominated by stylistic analyses. This project adopts a different methodology that investigates the mineralogical composition of coarse-ware pottery with macroscopic and

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<sup>32</sup> Appendix A provides detailed descriptions for each of the petrofabric groups, along with photographs of the 'thick' and thin sections, and Appendix B gives the provenience of each of the ceramic samples utilized in this study.

petrographic analyses. Ceramic petrography is an archaeological method aimed at identifying and describing the fabrics of materials made from clay. Although an exhaustive account of this method is beyond the scope of this chapter (see Mason 2004:5-22, Whitbread 1995:365-396 for excellent summaries), it is important to provide at least a brief methodological synopsis in order to appreciate its utility for examining the questions under consideration here.

#### 3.2.1.1. *Optical Microscopy*

The analysis requires the creation of a ceramic ‘thin section’, whereby a small sample (c. 2 x 3 cm) of a ceramic vessel is ground to approximately 0.03 mm in thickness and mounted on a glass slide. Since most of the coarse-ware pottery in this analysis was relatively low-fired and quite friable, a resin epoxy was impregnated into each sample to hold the fabric together during the grinding process. Some samples were also stained with alizarin red-S, which allows one to distinguish different types of carbonates in the pottery fabric.

The thin section can be observed under a polarizing light (or petrographic) microscope (see Figure 3.1). A petrographic microscope is one in which normal light passes through a lower polarizing lens (called the *polarizer*) that filters the light vibrations along a single (north/south) plane. A second polarizing lens (the *analyzer*) oriented perpendicular to the first (east/west) is placed between the stage and eyepiece. When the second lens is enabled, it absorbs the polarized light that passed through the lower lens, which effectively cancels out all light moving towards the eyepiece. However when a thin section is placed on the rotating stage between the two lenses, the crystalline structure of the translucent ceramic fabric bends the light at particular angles, which gives the inclusions and matrix of the ceramic fabric specific optical properties that provide important information on the composition of the sample.

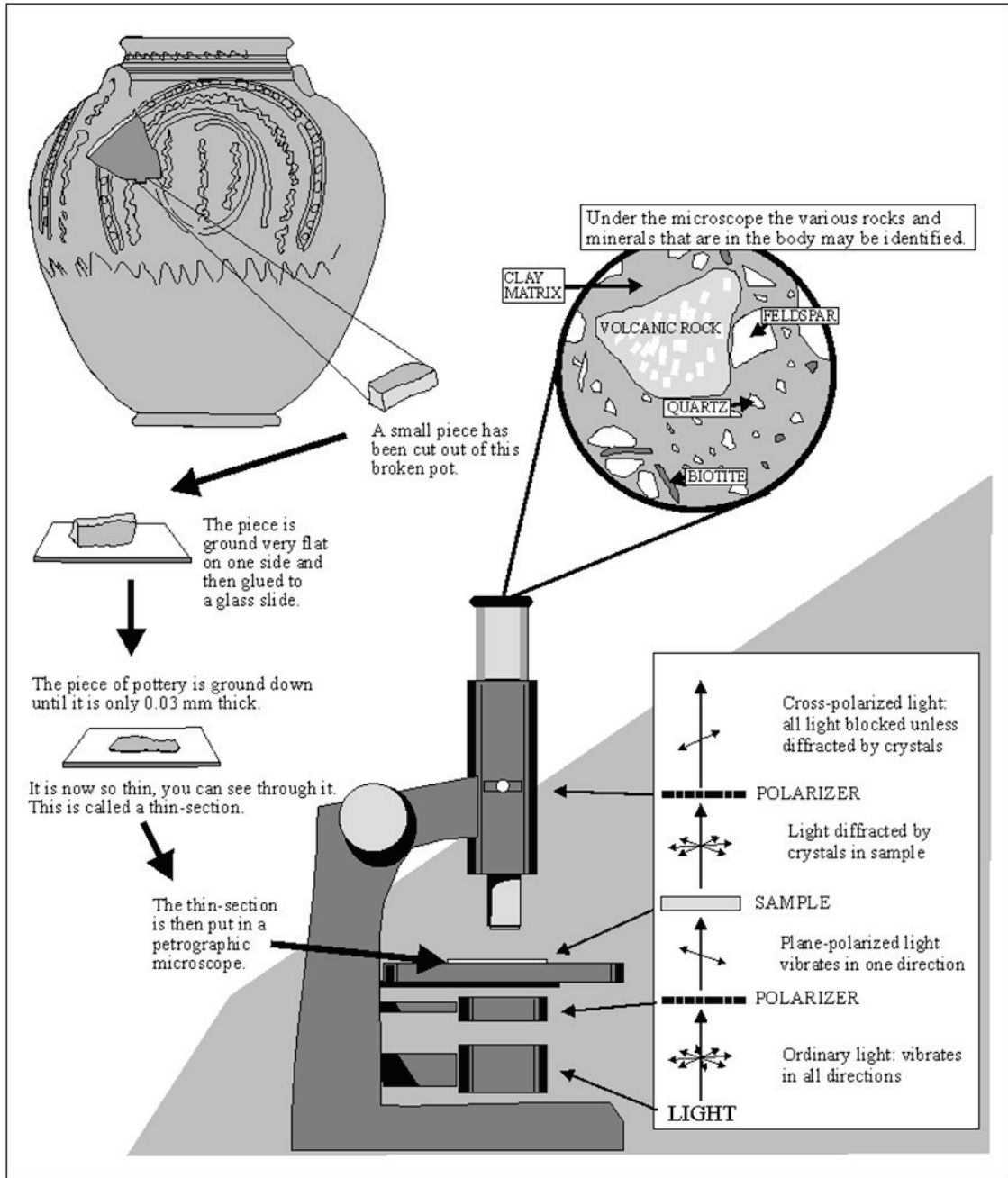
Three major components of the ceramic fabric can be assessed microscopically: the matrix (or groundmass), non-plastic inclusions, and voids. The term *matrix* describes the very fine-grained materials (<30 µm fraction) in which coarser particles are embedded. It is characterized by fracture, color, and birefringence (i.e. anisotropic or optically active). The term *non-plastic inclusion* encompasses all coarser rock, mineral and organic materials present in the matrix, including those both naturally present and artificially added (i.e. temper). Most mineral inclusions can be identified based upon a range of optical properties—shape, color, relief, cleavage, pleochroism, birefringence, extinction, and opacity—under plane light (with only the polarizer enabled) and cross-polarized light (with both polarizer and analyzer enabled).<sup>33</sup> These optical behaviors are the result of the specific atomic and crystallographic structures unique to particular minerals and rocks. After identification, the non-plastic inclusions are then described in terms of their abundance, roundedness, size, orientation, sortedness, or other meaningful properties.<sup>34</sup> Lastly, the term *void* refers to pores in the matrix that once held non-plastic inclusions prior to firing; these can also be described in terms of their abundance and shape. Although the basic principles of ceramic petrographic analysis are universally accepted, it should be noted that a number of different techniques that can be employed for recording and presenting this data, which vary depending on the preference of the analyst.<sup>35</sup>

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<sup>33</sup> Kerr (1977: chapter 10) provides a detailed description of identifying minerals in thin section

<sup>34</sup> For example, carbonates can be distinguished between those with large (sparry) or small (micritic) crystal size, as well as the degree of disintegration into lime mud. Quartz can also be distinguished by cloudiness and type of extinction.

<sup>35</sup> The methodology adopted here most closely follows that of Mason 2004. For example, abundance is qualitatively determined through the use of comparison charts (following Terry and Chillingar 1955) rather than point-counting methods (cf. Stoltman 1989). In the methodology adopted here, the division between 'coarse' and 'fine' quartz falls around 0.5 mm.



**Figure 3.1**  
**Basics of Optical Microscopy (after Mason 2004:22)**

By examining as many of these properties as possible, one can normally determine the identity of the mineral or rock inclusion. Even when specific minerals cannot be precisely identified, optical microscopy generally permits the identification of the mineral class or group. Additionally,

special stains can be added during the creation of the thin section in order to facilitate mineral identification, particularly to feldspars and carbonates. The identification of inclusions can potentially provide valuable information on the provenance of the clay itself, or other technological aspects of the ceramic manufacturing process (temper, firing temperature, etc.), addressed in greater detail at the end of Chapter 7.

#### *3.2.1.2. Point Counting*

Beyond simple identification of the presence or absence of particular minerals, petrography offers a number of other potential quantitative or semi-quantitative methodologies. The methods for examining the size, shape, and sorting of these inclusions are known as granulometrics (Rice 1987:379). A common quantitative methodology is point-counting (see Stoltman 1989, 1991, Fargher 2007). In this method, the researcher (manually or with a computer program) explores the ceramic thin section at fixed, standardized intervals, identifying and recording whatever falls in the crosshairs of the field of view. The tabulation of these inclusions is then considered a statistically representative sample of the entire fabric. While this method may help to provide some quantitative support for assessing the composition of the fabric, scholars in both geology and archaeology have questioned the statistical validity of this technique when applied to ceramic materials and suggest that the qualitative visual comparison charts are equally valid and much faster (Mason, pers. comm. 2011).

#### **3.2.2. Brief History of Ceramic Petrographic Studies**

As is the case with many archaeometric techniques, the methods of thin section petrography were initially developed outside of archaeology. Scottish physicist and geologist William Nicol is credited with pioneering petrographic analysis and inventing the first mechanism for producing plane polarized light—the Nicol prism—patented in 1828 (Peterson 2009:3). During

the 19<sup>th</sup> century, English geologists such as William Henry Fox Talbot and Henry Clifton Sorby advanced the methodological sophistication of petrographic microscopy, recognizing that numerous minerals groups could be identified in thin section more effectively than in hand sample.

However it was not until the late 19<sup>th</sup> century that archaeologists recognized how this method could be applied to the study of ancient ceramic materials. The first application of thin section petrography to archaeological ceramics is generally credited to Anatole Bamps, who used the method to demonstrate that the different colors observed in cross-section in his pottery represented firing temperatures rather than different clay sources (Rice 1987:311). Several other scholars during this period—including German geologist Karl Georg Richard Lepsius (1890) and Scandinavian anthropologist Erland Nordenskiöld (1930)—also used this geological method to address archaeological research questions (Peterson 2009:3).

Despite the early success of these compositional studies, ceramic technological analyses were not widely implemented in American archaeology until the middle of the 20<sup>th</sup> century. It was only through the work of two major figures in American archaeology—Anna O. Shepard and Frederick Matson—that ceramic compositional analysis would become widely accepted as an important complementary method to the study of traditional formal and stylistic attributes of archaeological ceramics. Shepard's seminal volume *Ceramics for the Archaeologist* (first edition, 1956) constituted the first attempt to systematically incorporate ceramic technological analyses, including petrography, into a larger research design for the study of ancient pottery. Through her work at a number of sites in the southwest US and Central America, Shepard convincingly demonstrated how compositional analysis could provide important information on ceramics that could not be otherwise determined by traditional stylistic methods.



Frederick Matson's work in the Old World, primarily in southeastern Europe and southwest Asia, proved to be equally influential in Anglo-American archaeology. Matson first developed the 'ceramic ecology' approach to the study of ancient pottery (see Matson 1965, 1988).

Drawing on the work cultural ecologists such as Julian Steward, ceramic ecology emphasized the importance of studying the environmental context and examining the complex interplay of natural and socio-cultural factors (Tite 2008:17). This perspective remains the most widely utilized approach to pottery analysis<sup>36</sup> in Anglo-American archaeology (see Kolb 1984, 1989, Arnold 1985), although it has been criticized for its "inability to provide little more than a static description of ceramic manufacture and use in which everything is 'adaptive'" (Rice 1996:185).

In recent decades, ceramic petrography has been widely implemented in Old World archaeology, particularly in the Mediterranean region and southwest Asia, since the region's complex geology is particularly well suited to provenance studies. Although there are far too many important scholars to cover here, the work of Peter Day and Ian Whitbread in the Aegean has been of particular import (Whitbread 1995, Day et al 1999). Today, petrography is just one of many useful methods for determining the composition of ceramic fabrics, including macroscopic fabric characterization (Moody et al 2003), X-ray diffraction, as well as an ever-growing suite of physiochemical analyses (optical emission spectrometry, x-ray fluorescence, neutron activation analysis, atomic absorption spectrometry, etc.). Such multifaceted, integrated analyses are tremendously useful as complementary datasets, provided the researcher possesses the time and budget required for their proper implementation (Tite 2008).<sup>37</sup>

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<sup>36</sup> Rice (1996:184) notes that it is still perhaps the *only* comprehensive theoretical perspective that is widely accepted in ceramic studies

<sup>37</sup> For a general overview, see Rice 1987.

### **3.2.3. Previous Petrographic Research in Late Antique/Early Medieval SEANAR**

Ceramic petrography is without question a widely utilized and effective methodology for exploring a range of important archaeological questions. The following section focuses specifically on the application of this methodology in the region and period under consideration in this dissertation. While in comparison to other regions and periods petrography has not been widely implemented in the Late Antique and Early Medieval eastern Alps, there are several important studies that indicate its potential effectiveness as a research tool.

#### *3.2.3.1. Late Antiquity*

Andrea Gastgeb's (1995) petrographic analysis of ceramics at the sites of Hemmaberg and Teurnia in southern Austria represents the only published petrographic study on coarse-ware ceramics from this region in Late Antiquity. Teurnia was a major town in the Roman province of Noricum built during the 1<sup>st</sup> century AD on top of a previous Iron Age settlement (see Chapter 2). This town remained active until its apparent destruction at some point in the 6<sup>th</sup> century. Its mention in the *Vita Severini* suggests that it was one of the later Roman towns in the region to be abandoned (Glaser 1983). Gastgeb analyzed 96 ceramic coarse-ware samples from both the Roman Provincial period (2<sup>nd</sup> century AD) and Late Antique period (5<sup>th</sup>/6<sup>th</sup> century AD) from this site. Her results demonstrated that these ceramics can be divided into two mineralogical groups, which largely reflect these two different periods; in other words, there was a great deal of similarity within each period, but a clear distinction in technological traditions between them (Gastgeb 1995:246).

Gastgeb also analyzed 83 ceramic samples from Hemmaberg, an important nearby Late Antique settlement and ecclesiastical complex, which was contemporaneous with the later phases of Teurnia. Her results indicated two distinct fabric types, one of which had clear correlation to the

material from Teurnia. The other fabric had large carbonate inclusions interpreted as temper, which Gastgeb associated with the early Slavic populations (Gastgeb 1995:248).

Other petrographic work in the Late Roman southeastern Alpine region has been conducted on mortar samples in order to examine the provenience of building materials from Hemmaberg (Ladstätter and Sauer 1998) and some fine Roman imports such as African Red Slip (Ladstätter 2000).

### *3.2.3.2. Early Middle Ages*

Although no petrographic studies have been published on early medieval ceramics from the southeastern Alps, such research has been conducted in the Danube valley to the north, where the petrographic analysis of 178 early medieval ceramic sherds from the site of Thunau am Kamp in Lower Austria was undertaken by Rudolf Dell'Mour (2001). By analyzing the mineralogical composition of this ceramic sample, he was able to distinguish between local and imported fabric types at this settlement.

Hajnalka Herold (2002, 2007, 2008) has also conducted a number of important mineralogical studies of early medieval ceramics from Lower Austria, western Hungary, and Bulgaria. In one of her more recent investigations (2009), she attempted to use a combination of stylistic and fabric (macroscopic and microscopic) characteristics to investigate the relationship of material culture to social identity. Herold selected ceramic samples from three different early medieval sites in Leitha river valley in Lower Austria. One of these sites (Frohsdorf) was identified through artifactual assemblages (metal finds) as an 'Avar' cemetery dating to the late 7<sup>th</sup> and 8<sup>th</sup> centuries, while the other two nearby early medieval cemeteries (Pitten and Erlach) were identified as non-Avar (i.e. Slavic). Fifty ceramic samples, four spindle whorls, and three clay

samples were divided into two major groups: one rich in iron, the other dominated by carbonates (limestone), each of which were then further divided into five subcategories based on the relative proportions of the minerals (Herold 2009:119).

Herold compared the (largely intact) ceramic vessels from these three burial contexts in terms of (1) decoration, (2) morphological variation (vessel shape and rim profiles), (3) method of formation (hand built or wheel thrown), and (4) fabric type (which is a combination of initial clay source and subsequent manufacturing techniques). She found that while ceramic samples from each of the three sites had unique compositional characteristics, it was vessel form that most clearly divided the Avar from non-Avar context (ibid:127).

### **3.3. RESEARCH DESIGN AND METHODOLOGY**

#### **3.3.1. Why Petrography?**

Thin section petrography is only one of a number of different analyses that can be potentially useful for examining ceramic assemblages. This section briefly explains why thin section petrography was utilized in this study over other methodologies (i.e. stylistic, formal, other archaeometric techniques). As noted above, stylistic and formal analyses have dominated ceramic approaches to the Late Roman and Early Medieval periods in the SEANAR. While such analyses have indeed provided a wealth of important information, they also have several significant limitations. One particular complication is the stylistic uniformity of Late Roman and Early Medieval coarse-ware pottery, which has made precise categorization and chronology building difficult (see Rodriguez 1992, 1997, Ladstätter 2003). Local coarse-wares (i.e. cooking pottery) have generally been of less interest to archaeologists than fine-ware imports (i.e.

amphorae, oil lamps, or African Red Slip ware), perhaps because the former are generally considered less useful for building chronologically precise typologies. Unfortunately, many published monographs only deal with the coarse-ware material in cursory fashion, focusing most of their attention on the Mediterranean imports. In fact, there is only one published article in the last several decades that focuses primarily on the coarse-ware ceramic material from the SEANAR (Rodriguez 1992). Yet there is much to be gained from studying coarse-ware ceramic material, such as addressing issues of ceramic technology at the local level. The best method for investigating technological issues for these largely unglazed and often undecorated materials is ceramic compositional analysis.

Of the many different techniques that archaeologists have at their disposal today for investigating ceramic composition, ceramic petrography is the most appropriate method for the dataset under scrutiny here. There are three basic types of clay-fired ceramic: earthenware (fired at 700 – 1200° C), stoneware (fired at 1200 – 1300° C), and porcelain (fired over 1300° C). All the coarse-ware ceramics in this study are earthenwares. Petrography is most effective on this type of low-fired ceramic (Rice 1987:382), because minerals are often destroyed at higher firing temperatures, producing more homogeneous fabric pastes, which can only be distinguished through physiochemical methods.

Since petrography does not require the use of expensive laboratory equipment (other than access to the petrographic microscope itself), a large number of samples can be analyzed at a relatively low cost; for these reasons, petrography is generally regarded as the most cost-effective technique for studying ceramic composition and micromorphology (Whitbread 1995:366).

Although it does require the ‘destruction’ of a small part of the ceramic body, it is generally less obtrusive (and cheaper) than other chemical analyses (ibid). While physiochemical analyses

provide greater quantitative precision regarding ceramic composition, in this study they would only have been necessary if petrographic analysis failed to produce meaningful compositional groups.<sup>38</sup>

### 3.3.2. Research Questions and Site Selection

One of the major questions for the Late and post-Roman SEANAR concerns issues of ‘change’ versus ‘continuity’. As explored in the previous chapter, the debate over whether the end of Roman authority in the West should be characterized as ‘collapse’ or ‘transformation’ has been raging for the better part of a century, and shows little signs of resolution. Although understanding the nature of the transition from the Late Antique to Early Medieval worlds is undoubtedly an important topic to address, one must first identify a specific region and *type* of continuity to investigate. With the hope of providing a small contribution to this debate, this chapter examines such issues in the context of ceramic technology in the SEANAR. Although this is an admittedly preliminary effort, it does constitute the first attempt in the SEANAR at a regional comparison during this critical period of history in southern central Europe.

In order to address changes in ceramic technology in the region of the southeastern Alps and northern Adriatic, sites were selected based on the following criteria: (1) evidence of occupation during *both* Late Antiquity (4<sup>th</sup> – 7<sup>th</sup> centuries AD) *and* the Early Middle Ages (8<sup>th</sup> – 9<sup>th</sup> centuries AD); (2) excavations conducted with modern, scientific methodologies and the subsequent publication of the results; (3) physical access to the material granted to the author. The first criterion was particularly important due to the type of analysis conducted; since mineralogical composition of local ceramics would potentially be affected by natural variations in the underlying geological bedrock (the parent material for clay), it was critical to be able to *control*

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<sup>38</sup> Such analyses, which tend to be expensive, may be pursued in future research.

*for spatial variation*. In other words, any attempt to compare ceramics from different periods at sites with differing underlying geology would inevitably encounter the problem of determining whether differences in the ceramic mineralogy were the result of differences in ceramic production or the use of different clay sources. Therefore in order to make a meaningful comparison, two different temporal components at a single geographic location were necessary to address these issues.

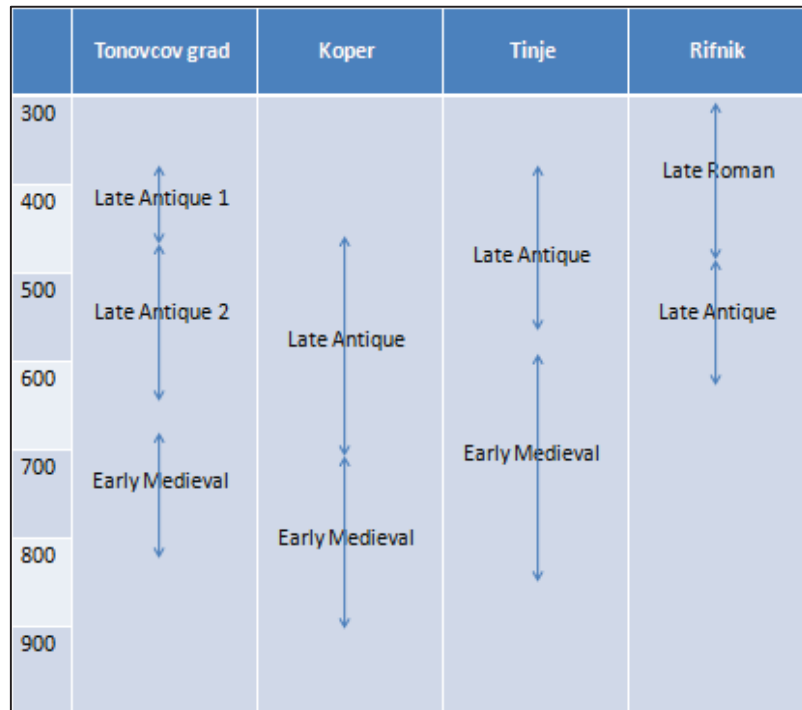
The need for sites that met the second and third criteria is perhaps obvious, since it is critical to be able to know the proper context of this material in order to make confident conclusions.

Although the Late Roman and Early Medieval periods have been studied in Slovenia for many decades, one still encounters the typical problems of haphazard and unsystematic excavations, unpublished material, missing excavation reports, etc.

Three sites that met the above criteria were selected for inclusion in this study: (1) Tonovcov grad in western Slovenia near the Italian border, (2) Koper on the northwestern coast of the Istrian peninsula and (3) Tinje in eastern Slovenia near the border with Croatia (see Figure 3.3). A fourth site—the Late Roman upland fortified settlement of Rifnik—was also included in the study, although an early medieval phase has yet to be confidently identified at this site (Bausovec, pers. comm. 2010). However Rifnik is a major, well-studied Late Roman/Late Antique hilltop fort in close proximity to Tinje, so it was included as a potentially interesting point of comparison.

The timeline below compares the different phases at each site. It is important to note that the terms ‘Late Antiquity’ and ‘Early Middle Ages’ do not exactly overlap; such periodizations have been independently established at each site. In the case of Tonovcov grad and Tinje, this was

based on the temporary abandonment of settlement, at Rifnik and Koper, arbitrary chronological divisions was made, despite continuous settlement.

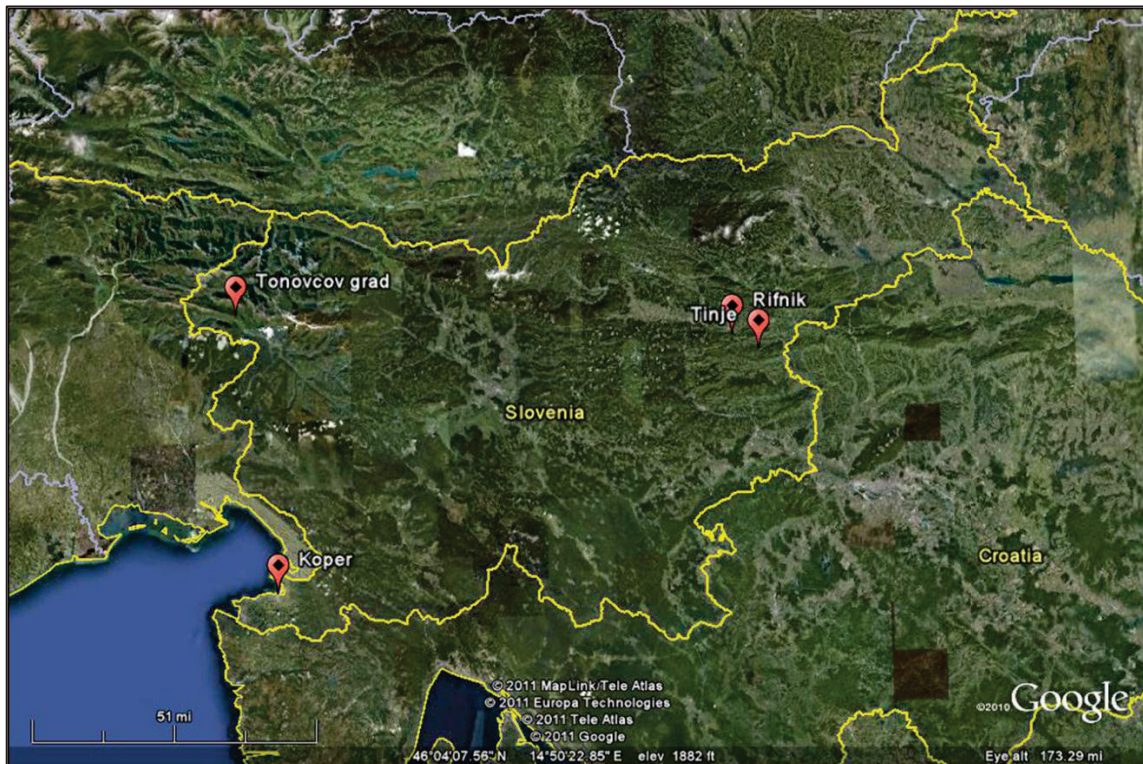


**Figure 3.2**  
**Comparison of phases from the various sites selected for analyses**

The geographical distribution of these four sites provides the potential for important comparisons that can shed light on the different socio-historical processes unfolding during the transition from Late Antiquity to the Early Middle Ages in this region. As explored further below, each of these sites experienced a very different ‘historical’ situation. Tonovcov grad was a small military outpost that became a full-scale upland fortified settlement during the 5<sup>th</sup> century, and is thought to have been situated far enough west to avoid the major Slavic and Avar raids that characterized the late 6<sup>th</sup> and early 7<sup>th</sup> century further east. Koper was a coastal settlement during Late Antiquity that expanded during the Early Middle Ages, and is one of the only known sites in the region to have been continuously occupied throughout this entire transition. Tinje was a small, atypical upland fortified settlement that would have been directly impacted by the



aforementioned migrations from the north and east. Therefore this topic provides an interesting case study to see whether the ceramic material supports or undermines the established historical narrative for this period.



**Figure 3.3**  
Sites selected for ceramic compositional analyses in this study  
(© 2011 Google)

### 3.3.3. Sampling Strategy

The research goal of this study was to examine changes in local ceramic technological production through the analysis of coarse-ware ceramics from settlement contexts. Therefore imported fine-ware ceramics as well as ceramics from burial contexts were purposefully excluded from this dataset. This does not mean to imply that ceramics from burial assemblages could not potentially be locally produced, but it was simply a matter of narrowing down a specific dataset.

Obviously, ceramic petrography can only be conducted on a small subset of the entire coarse-ware ceramic assemblages at any site. It was therefore critical to take every precaution to make sure that the samples chosen for analysis were representative of the entire assemblage, at least to the extent that this was possible. Since this project utilized data from previous excavations, the results in this study are to some degree dependent on the reliability and methodological rigor of these excavations. While this is a necessary caveat for any study using material from previous excavations, it must be noted that there was some variability concerning the quality of the data from these different sites. For example, the analysis of the ceramic material at Tonovcov grad is currently ongoing, and I have worked closely with the archaeologists responsible for this dataset.

The excavations of Koper and Tinje occurred in the 1980s, and although I have been in dialogue with the archaeologists who worked at these sites, the entire ceramic assemblages have not been as thoroughly analyzed as at Tonovcov grad, and there were no previous comprehensive macroscopic analyses of the coarse-ware ceramics. Therefore, in order to verify proper sample representation, I conducted my own (impromptu) fabric analyses during visits to the museums where this material is housed. In most cases, I was allowed to take any samples that I wanted; although most colleagues preferred that I take undecorated samples.<sup>39</sup> While not ideal, these were the parameters of the research, and they must be acknowledged.

#### **3.3.4. Laboratory Methodology**

After collecting all the relevant samples, the ceramics were sent out to a geology laboratory to make the thin sections. The remaining ceramic sherds not ground into thin sections were utilized as ‘thick sections’ for the macroscopic analysis. I then conducted both macroscopic and

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<sup>39</sup> As I soon realized, one of the advantages of studying ceramics from settlement rather than burial contexts is that far less material is of museum quality, so curators are more likely to acquiesce to a destructive analysis such as petrography!

microscopic/petrographic analyses on all of the thin sections. The primary means by which the petrographic groups were categorized was *qualitative*: identifying and describing the presence, abundance, and character of the different minerals in the samples. Comparative charts were used to estimate inclusion abundance, sortedness, and roundedness (in Mason 2011, based on Terry and Chilingar 1955). Although some archaeologists have employed point-counting to determine abundance (cf. Stoltman 1989), the statistical validity of this time consuming<sup>40</sup> methodology for archaeological ceramics is questionable at best.

For each of the ceramic samples, I first describe the groundmass (matrix); I then identify the presence, abundance, and characteristics of each of the non-plastic inclusions. It is important to note that I distinguish the carbonate inclusions based on several different relevant characteristics: angularity, crystal size (micritic = very small crystals, sparry = large crystals), and the degree to which they are disintegrating into lime mud (see Folk 1980:157 – 178).

In some cases, ceramic groups were quite distinct mineralogically; in others there was a fair amount of heterogeneity within each group. The researcher is forced to make a qualitative, somewhat subjective decision regarding which factors should take priority in the creation of these groups. The goal is to identify those differences among groups that are thought to be archaeologically meaningful; that is, they reflect different technological choices made in the manufacturing process.

### **3.4. RESULTS AND INTERPRETATION**

The following extended section provides the historical and archaeological context of each of the four specific sites under investigation, followed by the presentation of the results of the

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<sup>40</sup> At least without the aid of a computer program

macroscopic and petrographic analyses, and finally a general interpretation of these results at each site. First, however, a brief overview of the geology of the region is necessary for understanding the significance of the ceramic mineralogy.

### **3.4.1. Geology of SEANAR**

Before examining the historical and archaeological contexts of the sites under investigation, a brief outline of the geology of the region is necessary for understanding the petrography of ceramics in this study. The SEANAR has a relatively complex geology for a small region (see Figure 3.4). The northern end of this region includes the easternmost part of the Periadriatic Lineament, which is also called the Smrekovec Fault. The central and southern sections of this region also display a distinctly Dinaridic affinity (Mioč 2003:4).

Each of the sites examined below lie in a different geological section of the region. The site of Tonovcov grad is located in the Sava Zone, on the border of the Sava Nappe and Julian-Savinja Nappe. This area is characterized by allochthonous mixed lithologies derived from the Southern Alps, Eastern Alps, and Dinarides, and has thus has a mixed ‘triple junction’ signature (Mioč 2003:15). The sites of Tinje and Rifnik are situated in the Postorogenic Alpine sequences, specifically in the Oligocene-Neogene sediments of the Pannonian basin. Finally, the site of Rifnik is part of the Adriaticum region of the Adriatic-Dinaridic Carbonate platform.

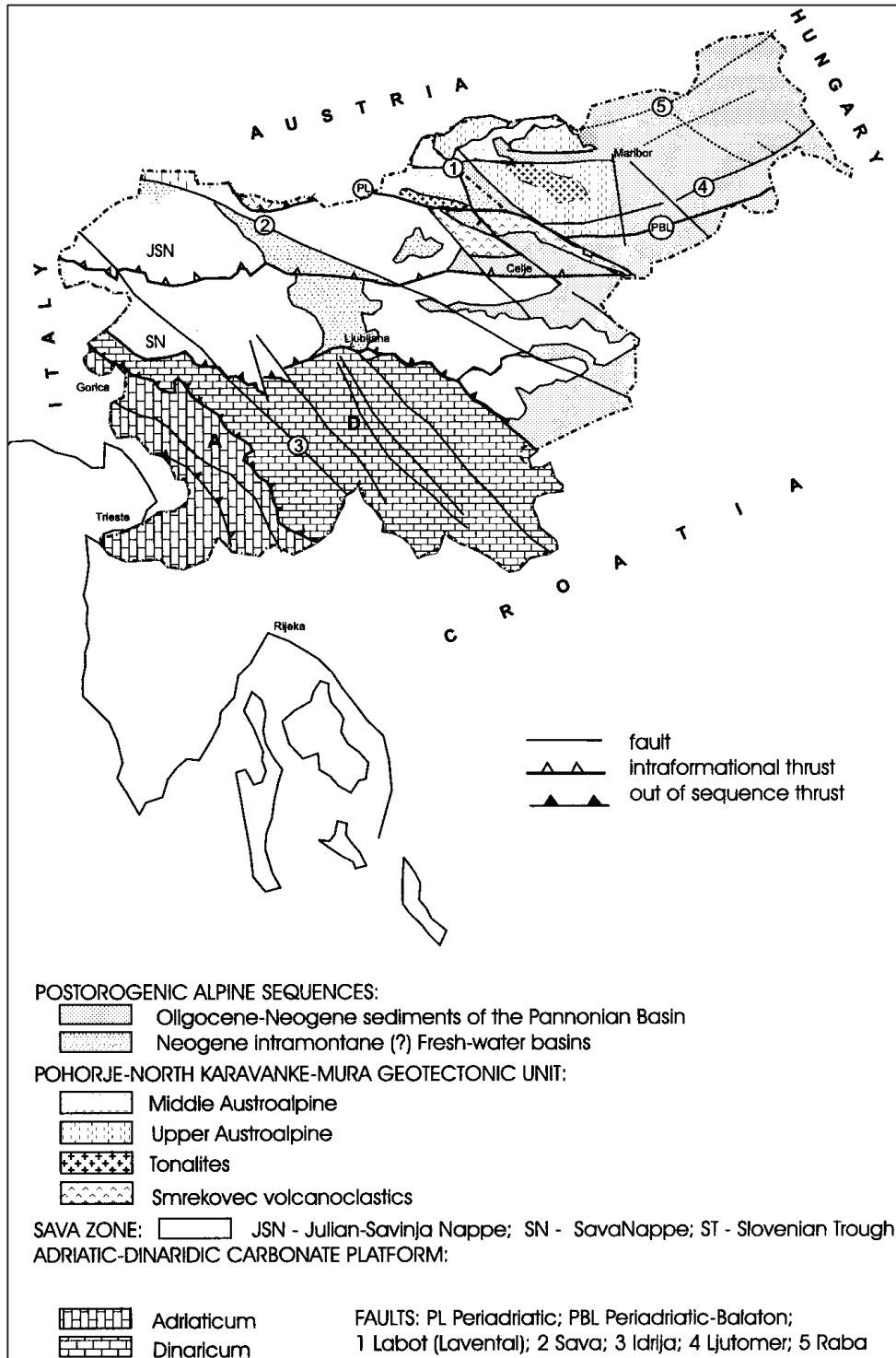


Figure 3.4:  
 Geological Map of Slovenia (after Mioč 2003:5)

### 3.4.2. Tonovcov Grad near Kobarid

In the western section of Slovenia close to the Italian border lies the hilltop settlement of Tonovcov grad, near the modern town of Kobarid (It: Caporetto). The settlement is located on a well-protected hill that

overlooks the Soča (It: Isonzo) River (on the small protruding hill in the center of Figure 3.5). Due to this exceptional strategic position, this small, steep hill had been settled throughout much of prehistory, from as early as the Mesolithic (Modrijan



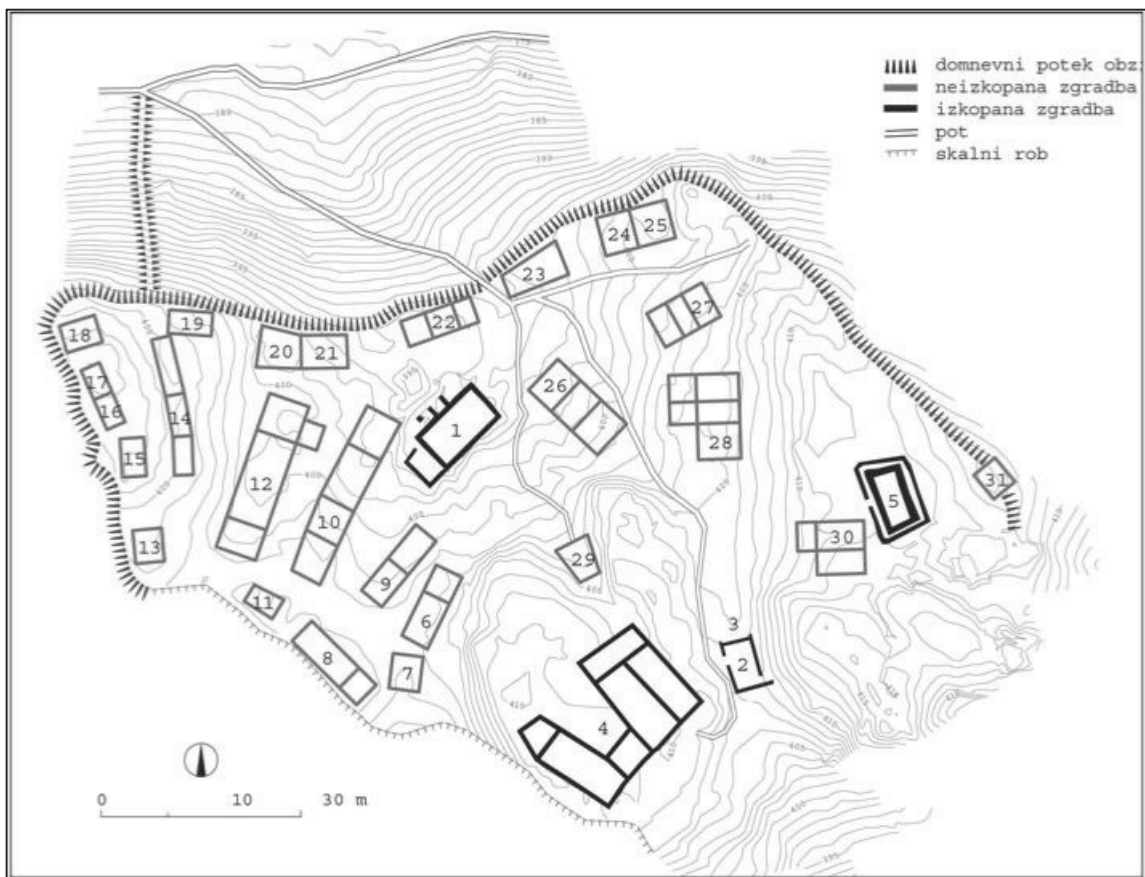
**Figure 3.5**  
Aerial Photo of Tonovcov grad ([http://iza.zrc-sazu.si/En/Raz\\_TG.html](http://iza.zrc-sazu.si/En/Raz_TG.html))  
Permission courtesy of the Institute of Archaeology in Ljubljana

n.d.). Archaeological investigations began in 1993, with the most recent project running from 2002 – 2005 (see Ciglencečki, Modrijan, and Milavec 2011). Here I address only the settlement occupations from the Late Roman through Early Middle Ages (c. AD 400 – 900).

#### 3.4.2.1. Late Antique 1 (Late Roman) phase, c. AD 375 – 450

During the Late Roman phase, which runs from the end of the 4<sup>th</sup> century to the middle of the 5<sup>th</sup> century, this site functioned as a settlement and military outpost that protected the rear of the *Claustra Alpium Iuliarum*, a defensive network believed to have been built during the reign of Constantine (Šašel and Petru 1971). This series of walled defenses and military outposts stretched across much of this section of the southeastern Alps; it was likely constructed for the defense of the northern Adriatic trading ports (and the Italian peninsula) during the frequent

episodes of instability that characterized much of the Later Roman Empire (see Chapter 2). The hilltop fortification at Tonovcov grad was also in close proximity to a major Roman road that linked the major settlement *Forum Iulii* (today the town of Cividale/Čedad) to settlements in the Koroška (Eng: Carinthia, Ger: Kärnten) region to the north and east. Although the architectural remains from this period are not well preserved, these layers are rich in imported ceramics primarily of African origin. These transport amphorae and African Red Slip Wares are probably connected to the organized state supply of the military during this period (Modrijan 2010).



**Figure 3.6**  
 Site Map of Tonovcov grad (after [http://iza.zrc-sazu.si/En/Raz\\_TG.html](http://iza.zrc-sazu.si/En/Raz_TG.html))  
 Permission Courtesy of the Institute of Archaeology in Ljubljana

#### 3.4.2.2. Late Antique 2 phase, c. AD 475 – 625

The next phase (Late Antiquity) has been dated from the late 5<sup>th</sup> century through the beginning of the 7<sup>th</sup> century AD. During this period, the site function evolved from a small military outpost to a full-scale, multifunctional settlement; this period saw the construction of a defensive wall, additional residential structures, a water cistern, and three small parallel churches with narthexes (see Figure 3.6). As Roman political and military authority eroded in the 6<sup>th</sup> century throughout the southeastern Alps, the populations in nearby valleys probably felt greater need for protection, and fled from the lowlands to the more defensible hilltops. By this period the Roman military was no longer maintaining the CAI, but the location of this site made it a desirable location during this period of political instability and frequent conflict.

After the collapse of Roman imperial authority in the Western half of the empire in the late 5<sup>th</sup> century, this region of the Alps was incorporated into the new Ostrogothic kingdom established under Theodoric. However it was soon reincorporated into the Eastern Roman (Byzantine) Empire during the so-called Gothic Wars of the mid-6<sup>th</sup> century (see Chapter 2). A *spatheion* jar and Byzantine coin with the image of the Emperor Justinian found near the altar of the central church indicate that the last renovations of the churches occurred during this period. It is also important to note that the presence of imported finewares (African Red Slip and amphorae) suggest that Tonovcov grad was still receiving imported Roman products to at least the beginning of the 7<sup>th</sup> century, and therefore must have still been connected to Mediterranean trade routes during this period of Late Antiquity (Modrijan 2007).





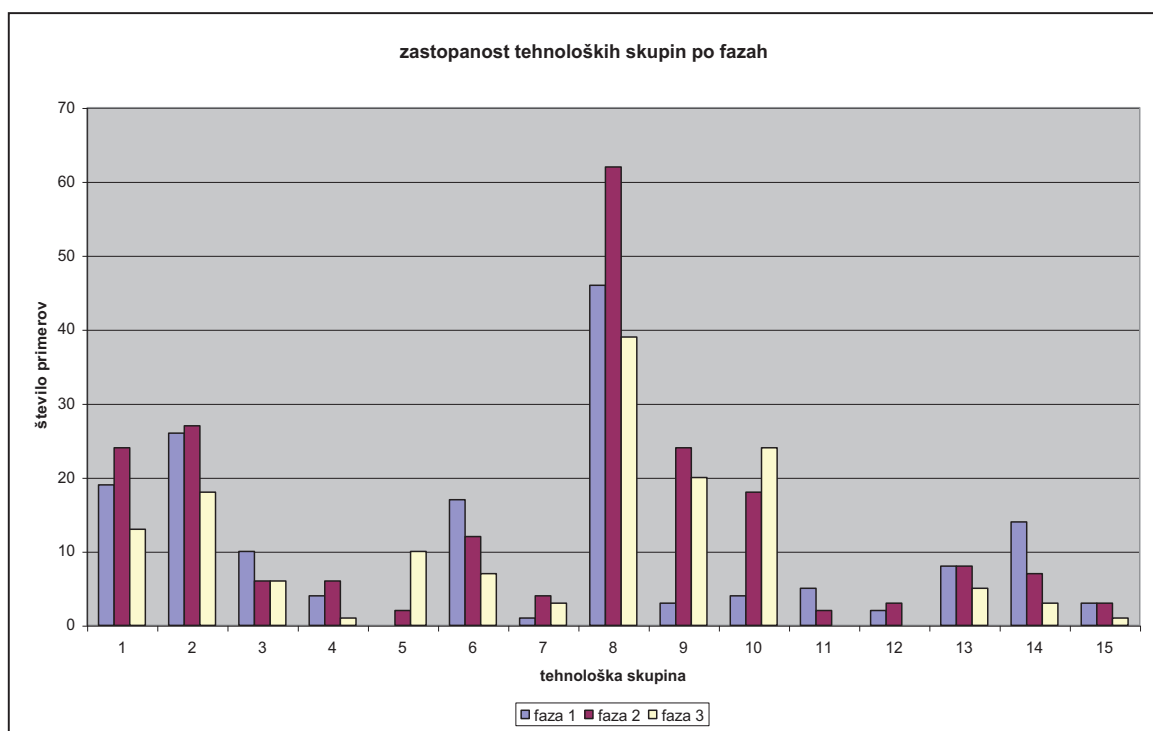
**Figure 3.7**  
**Photos of Tonovcov grad ruins (Photos by author, summer 2009)**

#### *3.4.2.3. Early Medieval phase, c. AD 675 – 800*

Excavations have indicated that many of the Late Antique buildings were demolished and abandoned at some point in the early 7<sup>th</sup> century. Byzantine control over this region was broken with the advancing power of the Lombards during this period. While the abandonment of the Late Antique settlement may be connected to the spread of Lombard authority, no ‘Lombard’ ceramics have been discovered at the site. The site is believed to have been completely abandoned for some time before being partially reoccupied in the 8<sup>th</sup> and 9<sup>th</sup> centuries. During this early medieval occupation layer, there is no evidence of long-distance trade and all ceramic production appears to be local coarse-wares with styles similar to contemporary sites in central Slovenia and Friuli. These coarse-wares are notoriously difficult to date, so the chronology of these final phases has been approximated through the few small metal finds in these layers, such as Carolingian and Avar belt fittings.

#### 3.4.2.4. Ceramic material

The analysis was conducted on ceramics primarily from Building 1, which contained stratigraphic layers dating to each of the three primary occupation phases outlined above. Samples were chosen for petrographic analysis based upon macroscopic fabric categories identified by Z. Modrijan (2008:81-94), in order to ensure a representative sample of the wider coarse-ware ceramic assemblage at the site.



**Figure 3.8**  
**Relative Proportions of Macroscopic Fabric Groups by Phase (after Modrijan 2008:90)**

The macroscopic analysis distinguished fifteen fabric types, none of which was restricted to a single occupational phase at the site; rather, each of the macroscopic fabric groups included ceramics from to least two—and often all three—of the phases, although often in markedly different proportions. In the histogram below (from Modrijan 2008:90), the three phases (*faza*) correspond to the Late Antique 1 (referred to above as ‘Late Roman’), Late Antique 2, and Early

Middle Ages. The Late Roman phase was dominated by Groups 1, 2, 6, and 8; Late Antique 2 by Groups 1, 2, 8, and 9; Early Middle Ages by Groups 8, 9, 10.

Since the transition from Late Antiquity to the Early Middle Ages was the primary focus of this petrographic analysis, a minimum of two ceramic sherds were chosen from those macroscopic fabric groups most prevalent during the 2<sup>nd</sup> and 3<sup>rd</sup> phases at the site. This included fabric groups 5 and 10, which had the greatest proportion of Early Medieval ceramics, as well as fabric groups 2, 8, 9, and 13, which were predominantly from the Late Antique 2 phase. Fabric groups 3 and 6, comprising of ceramics primarily from the Late Antique 1 phase, were also included in the analysis as a point of comparison. In total, 23 ceramic samples were subject to mineralogical investigation.

The results of petrographic analysis on the twenty-three samples reveal that most of the coarseware ceramics contained the same basic mineralogical components: quartz, calcium carbonates, micas, and (very occasional) feldspars. This is unsurprising given the regional geology and presumed local manufacture of this pottery. Four distinct mineralogical groups (A – D) were identified based on the presence/absence, proportion, and character of these different minerals. The following table summarizes these groups, and a full description of each petrographic group is provided in Appendix A.

<b>Fabric Group</b>	<b># Samples</b>	<b>Quartz %</b>	<b>Carbonate %</b>	<b>Mica %</b>
TG – A	3	0 – < 1 %	20 – 25 %	0 – 1 %
TG – B	4	2 – 5 %	0 – 5 %	0 – 2 %
TG – C	2	8 %	20 %	< 1 – 1 %
TG – D <sup>41</sup>	14	2 – 6 %	15 – 30 %	1 – 3 %

**Table 3.1**  
**Fabric Groups from Tonovcov grad**

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<sup>41</sup> Group TG – D has been further divided into three subgroups based on the color of the paste, which is indicative of differential temperatures and atmospheric conditions during the firing process (see also Chapter 7 for discussion of technological choices and Appendix A for detailed fabric descriptions).

The petrographic analysis confirms the basic conclusion of the macroscopic analysis: there existed a high degree of continuity in ceramic technological traditions throughout the phases under consideration. Petrographic groups TG – D and TG – B, which constituted 78% of the samples, included a roughly equal number of ceramics from different chronological phases, strongly suggesting continuity in ceramic technology from Late Antiquity to the Early Middle Ages. Some degree of discontinuity is perhaps indicated by group TG – A, which only contained ceramics from Late Antiquity, and TG – C, which only contained ceramics from the Early Middle Ages, although the relatively small sample size should be noted. The table below divides the samples by mineralogical group and chronology; the Roman numerals indicate the macroscopic fabric group of each sample.

<b>Fabric Group</b>	<b>Late Antique 1</b>	<b>Late Antique 1/2</b>	<b>Late Antique 2</b>	<b>Early Medieval</b>
TG – A	TG – 14 (XIII)	TG – 18 (XIII)	TG – 15 (XIII)	
TG – B		TG – 21 (VI) TG – 16 (IX)		TG – 11 (IX) TG – 17 (X)
TG – C				TG – 12 (X) TG – 13 (X)
TG – D1	TG – 23 (II)	TG – 1 (II)	TG – 2 (II)	
TG – D2	TG – 7 (VI) TG – 19 (VIII)		TG – 9 (VIII) TG – 8 (VIII)	TG – 20 (V) TG – 10 (IX)
TG – D3		TG – 22 (III)	TG – 6 (VI) TG – 3 (III) <sup>42</sup> TG – 4 (III)	TG – 5 (V)

**Table 3.2:**  
**Fabric Groups from Tonovcov grad by period**

This table also indicates similarities and differences when comparing the macroscopic and microscopic groupings. In some cases (e.g. Groups II and XIII), the macroscopic categories also proved to be mineralogically distinct groups; in others, groups that were distinguished macroscopically (e.g. Groups V and VIII) proved to be mineralogically indistinguishable. Moreover, in several cases (e.g. Group III and X) ceramics that were grouped together

<sup>42</sup> TG – 3 is slightly different than others in this group.

macroscopically proved to be of different mineralogical composition. This should not be regarded as a criticism of either methodology, but highlights the importance of using an integrated approach to exploring mineralogical composition of pottery. While macroscopic analysis is the most cost-efficient and inexpensive way to examine the composition of a large volume of ceramic samples, petrographic analyses are also necessary for identifying mineralogical differences not apparent in hand sample.

### **3.4.3. Tinje nad Loko pri Žusmu (Tinje over Loka near Žusmu)**

The site of Tinje is located on the eastern end of Slovenia, near the Croatian border in the municipality of Šentjur. The site was discovered on the side of a steep hill about 400 m above sea level. Excavations were undertaken from 1980-81, and again in 1991, revealing evidence of both Late Antique and Early Medieval settlement (see Ciglencečki 2000).

#### *3.4.3.1. Late Antique phase, c. AD 375 – 575*

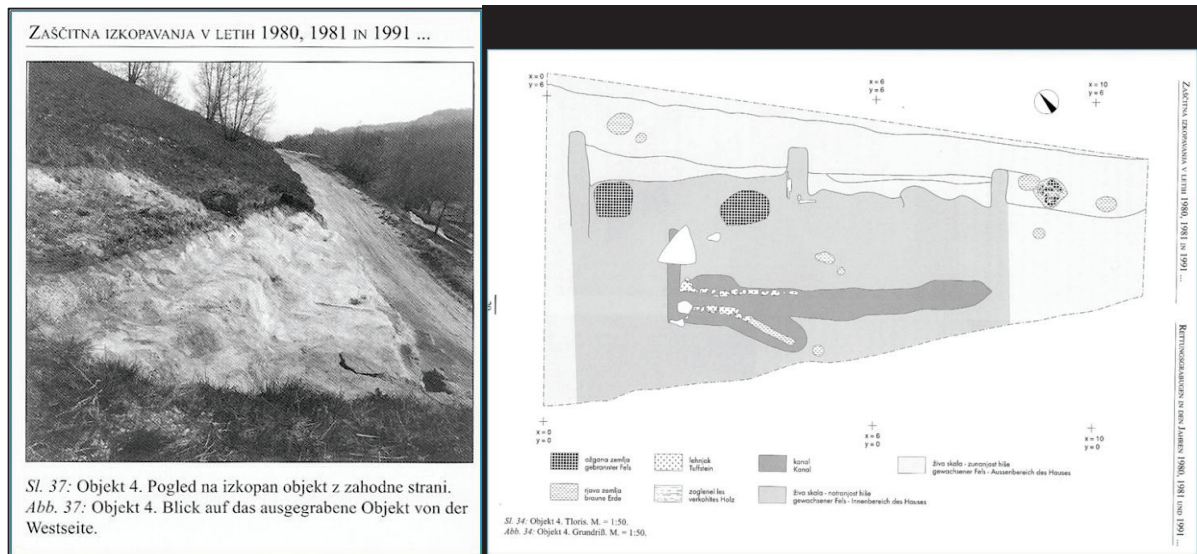
The primary occupation at Tinje was from the late 4<sup>th</sup> through late 6<sup>th</sup> centuries AD, which consisted of five building structures, several burials, and a stone altar. Although Tinje could be described as a hilltop settlement, it differs quite significantly from most other hilltop fortified settlements in the southeastern Alps (including Rifnik and Tonovcov grad). There was no evidence of other structures apart from the small houses (no church, cistern, defensive wall).

Unlike most of upland settlements, which are situated on the flat tops of steep hills, the houses at Tinje were cut directly into the side of the steep slope. They may have been defended by a ditch and wooden palisade. Due to this unusual location, there was not any evidence of earlier prehistoric settlement at Tinje.

All five houses appear to have been built during the Late Antique phase, with Buildings 5 and 7 most likely at the later end. There was a noticeable difference in the size and quality among the buildings: Buildings 2 and 4 were both larger and built with greater precision than Buildings 5, 6, and 7. Building 4 was the largest structure at the site. It was internally divided into several rooms, and it also appears to have enjoyed the most climatically desirable location at the site (Ciglenečki 2000:148). This was also the only place where Lombard style pottery was found at the site. This has led to the interpretation that a Lombard family may have lived at this site. The dating of this house does appear to correlate with the Lombard migrations from Pannonia into Italy. Interestingly, this large house appears to have been abandoned and burned in the late 6<sup>th</sup> century, around the same time that many hilltop forts were abandoned and/or destroyed. Such destruction layers are often attributed to the incursion of Slavic and Avar populations, who are described in historical sources as raiding this region (Ciglenečki 1987).



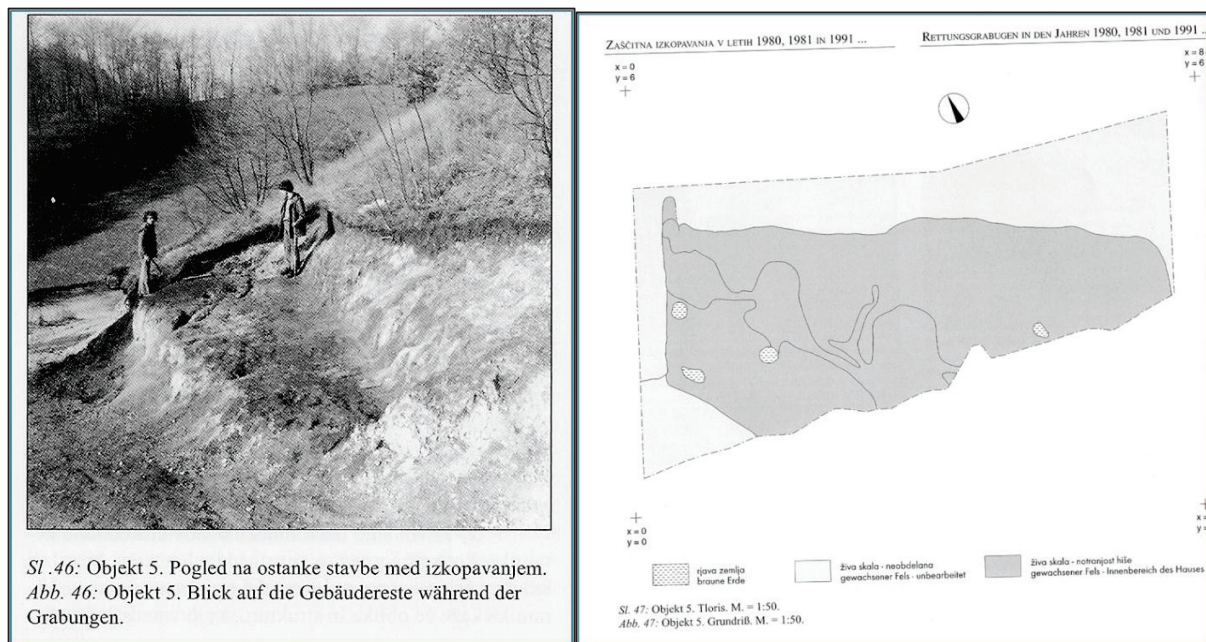
**Figure 3.9**  
**Site Map of Tinje (after Ciglenečki 2000:48)**



**Figure 3.10**  
**Plan View and Picture of Building 4 (after Ciglenc̃ki 2000:48)**

#### 3.4.3.2. Early medieval phase, c. AD 575 – 850

It is difficult to establish both the beginning and ending dates for the early medieval occupation of this site, in part due to the lack of diagnostic artifacts. It is not clear whether the site was completely abandoned after the destruction of the ‘Lombard’ houses in the late 6<sup>th</sup> century, or if the other smaller houses were continuously occupied. The identity of the inhabitants also remains enigmatic; possibilities include Romanized peoples, Lombards, Slavs, and Avars. The early medieval occupation is demonstrated by the presence of so-called Slavic type pottery, primarily in Buildings 5 and 7. The larger buildings (2 and 4) were not reoccupied after the burning episode. In comparing the early medieval coarse-ware pottery with other, more confidently dated sites in the region, it appears that this occupation lasted into the 9<sup>th</sup> century.



**Figure 3.11**  
**Plan View and Picture of Building 5 (after Ciglencčki 2000:33, 34)**

### 3.4.3.3. Ceramic material

Tinje presents an interesting opportunity for comparison with the larger, more typical hilltop settlements in the southeastern Alps. As noted above, it remains unclear whether there was a break in occupation between the late 6<sup>th</sup> and middle of the 7<sup>th</sup> century, but the duration of occupation of the residences can be more confidently assessed. In order to compare ceramic technological traditions between Late Antique and Early Medieval phases, ceramic samples were taken from Buildings 4 and 5. Building 4 was the largest residence, occupied *only* during the Late Antique phase (late 4<sup>th</sup> – late 6<sup>th</sup> centuries). The samples taken for analysis from this building were not Lombard pottery, but rather the other typical Late Antique coarse-ware. Building 5 was selected as a comparison because it produced material primarily of early medieval (Slavic) character. Although it is difficult to state exactly when it was constructed, it appears to have been at the transition from the Late Antique to Early Medieval



periods, and occupied through the latter of these phases. Although it is possible that these two buildings were simultaneously occupied for some period, their most intensive occupations are quite divergent. The ceramics from each of these contexts then should provide some context for thinking about the transition from one period to the next.

Sixteen ceramic samples from Tinje were subjected to petrographic analysis, ten from Building 5 and six from Building 4. They can be grouped into three (or perhaps four) different mineralogical groups.

<b>Group</b>	<b># Samples</b>	<b>Quartz %</b>	<b>Carbonate %</b>	<b>Carbonate character</b>	<b>Mica %</b>
TI – A	3	10 – 15 %	0 %	n/a	2 – 6 %
TI – B	4	10 – 15 %	5 – 10 %	Micritic/rounded	<1 – 2 %
TI – C1	5	5 – 6 %	10 – 15 %	Sparry/angular	1 – 2 %
TI – C2	4	6 – 8 %	15 – 30 %	Sparry/angular	2 – 4 %

**Table 3.3**  
**Fabric Groups from Tinje**

Unlike at Tonovcov grad, these mineralogical groups divided quite nearly between the different archaeological contexts. All of the ceramics from House 4 are characterized as type TI – C1, while the ceramics from House 5 are divided among TI – A, TI – B, and TI – C2. What this seems to suggest is a distinct technological division between Houses 4 and 5 at this site, which roughly correlate to the period of Late Antiquity and the Early Middle Ages, respectively. Moreover, as is evident below, is that the ceramic material from House 4 (but not House 5) appears to have correlates with some of the material from the nearby Late Roman/Late Antique fortified site of Rifnik.

Fabric Group	Late Antique (House 4)	Early Medieval (House 5)
TI – A		TI – 5 TI – 6 TI – 7
TI – B		TI – 1 TI – 2 TI – 3 TI – 16
TI – C1	TI – 8 TI – 9 TI – 10 TI – 11 TI – 13	
TI – C2	TI – 12 <sup>43</sup>	TI – 4 TI – 14 TI – 15

**Table 3.4**  
**Fabric Groups from Tinje by period**

#### 3.4.4. Rifnik

The archaeological hilltop fort of Rifnik is located at the eastern end of Slovenia, just south of the modern town of Šentjur, only about a dozen kilometers northwest of Tinje. Located on an easily defensible location overlooking an adjacent valley, there is evidence of settlement occupation deep into prehistory (primarily in the Neolithic and Hallstatt/La Tène Iron Age). Rifnik is one of the largest and best studied<sup>44</sup> upland fortified settlements in eastern Slovenia, with periodic excavations occurring since the 1940s; the most recent excavations are currently ongoing.

##### 3.4.4.1. Roman Provincial phase

The Romans maintained a presence at this location as early as the 1<sup>st</sup> century AD (Provincial period) but the settlement was most intensively occupied during the 3<sup>rd</sup> and 4<sup>th</sup> centuries AD.

<sup>43</sup> TI – 12 appears to be from the base of a pot, which may account for an usually high % of inclusions

<sup>44</sup> To date, the most comprehensive publication on the site is Bolta 1981; a new monograph is currently being written (Bausovac, pers. comm. 2011).

There were a number of houses, at least one with a hypocaust, as well as a pagan temple, dedicated to the local water deity Aquonius (see Šašel Kos 1999).

#### *3.4.4.2. Late Antique phase*

The site was expanded in Late Antiquity (late 5<sup>th</sup> – 6<sup>th</sup> century), during which time an early Christian sacral complex was built directly over the pagan temple, as well as additional stonewalled residential structures, a cistern, and a defensive wall with rectangular towers. This seems to be a similar expansion to that at Tonovcov grad, which was probably caused by similar demographic processes: the movement of Romanized populations from the local towns and villages into the hilltops. Another similarity is the presence of Roman imported wares during this period, such as amphorae and spatheia from North Africa and the Western Mediterranean. The persistence of trade contacts with the wider region is somewhat more surprising at Rifnik, since this area is more remote and inaccessible than the western part of modern Slovenia (Bausovac 2010).

An associated Late Antique necropolis was also discovered outside the fortified walls of the site, producing over one hundred burials. Based on the grave goods, this cemetery must have been active until at least the late 6<sup>th</sup> century. The graves contain a wide variety of cultural influences: while the graves appear to primarily represent a Late Romanized population, there are also influences from the Gepids and Samaritans in grave orientation and artifacts (Bolta 1981). There was apparently also a Lombard presence on the site, identified by their characteristic pottery and some grave goods. This supports the historical record that identifies this as a region (Polis Norikón), which Justinian gave to the Lombards in exchange for protection from the Franks (see chapter 4, Ciglencecki 1992:10).



**Figure 3.12**  
**Site Map of Rifnik (after Bolta 1981)**

#### 3.4.4.3. *Early Medieval?*

Layers of ash in the church and associated structures suggest that the settlement may have been destroyed by fire at some point in the late 6<sup>th</sup> or early 7<sup>th</sup> century. From the current evidence, there does not appear to be an early medieval occupation of this site.

#### 3.4.4.4. *Ceramic material*

Eleven ceramic samples from Rifnik were chosen for petrographic analysis. While no comprehensive macroscopic fabric analysis has been conducted, I attempted to collect a representative sample of the typical ceramic types with the help of the supervising archaeologist. Since there are very few sealed contexts at this site, dating is somewhat problematic, but most of the ceramics came from features that seem to correspond to the Late Antique period.

The ceramics could be categorized into three main fabric groups (see Table 3.5). One ceramic sample (RF – 4) was unlike the other ten samples, with very low, coarse quartz inclusions.

<b>Fabric Group</b>	<b># Samples</b>	<b>Quartz %</b>	<b>Carbonate %</b>	<b>Carbonate character</b>	<b>Mica %</b>
RF – A	4	5 – 6 %	20 – 30 %	Sparry/mixed	1 – 3 %
RF – B	2	6 – 9 %	10 – 15 %	Sparry/rounded	1 %
RF – C	4	3 – 4 %	20 %	Sparry/mixed	1 – 2 %

**Table 3.5**  
**Fabric Groups from Rifnik**

Due to the problems with dating contexts, the ceramics at Rifnik do not provide a perspective on the change in ceramic technology over time. However they are a useful comparison to nearby Tinje, which does have material from both the Late Antique and Early Medieval periods. When comparing the ceramic evidence at the two sites, similar mineralogical compositions are evident between the RF – A group and the TI – C group, the latter of which was most common to Late Antiquity. Significantly, the two other groups restricted to the very end of Late Antiquity and

into the Early Middle Ages (TI – A and TI – B) have no parallels to any of the material from Rifnik.

### 3.4.5. Koper

Another important Late Antique and Early Medieval site in this region was discovered under the modern city of Koper (It: Capodistria), a port city on the Adriatic, located on the Istrian peninsula (see Figure 3.15). This settlement provides a very different situation than those encountered further inland in the southeastern Alps. Settlement seems to begin in the 5<sup>th</sup> century AD,



Figure 3.13  
Aerial Photo of Koper (© 2011 Google)

precisely during the period when growing political instability was causing many of the Late Roman towns further inland to be deserted. It is generally thought that much of the population from the Roman towns in Noricum mediterraneum and Savia (Pannonia I) fled west and south to Italy and the Adriatic coast. The archaeological record at Koper seems to support this hypothesis.



**Figure 3.14**  
**City Plan of Modern Koper; black dot indicates site location (after Cunja 1996)**

#### *3.4.5.1. Late Antique phase*

The settlement at Koper is generally divided into two broad phases: Late Roman/Early Byzantine (5<sup>th</sup> – 7<sup>th</sup>/8<sup>th</sup> century AD) and Early Medieval (7<sup>th</sup>/8<sup>th</sup> – 9<sup>th</sup> century AD). It is important to note that unlike the vast majority of inland settlement in the southeastern Alps, Koper is believed to have been continuously settled during this entire period (5<sup>th</sup> – 9<sup>th</sup> centuries). The division between Late Antique and Early Medieval settlement is based upon two different building phases, which have revealed quite distinct ceramic assemblages (Cunja 1996). The Late Antique contexts demonstrate a high frequency of Roman fine-wares imported from northern Africa (Tunisia) and the Eastern Mediterranean (African sigillata, oil lamps, Late Roman cylindrical amphorae), indicating the integrity of trade along the Adriatic coast. Like Tonovcov grad, Koper

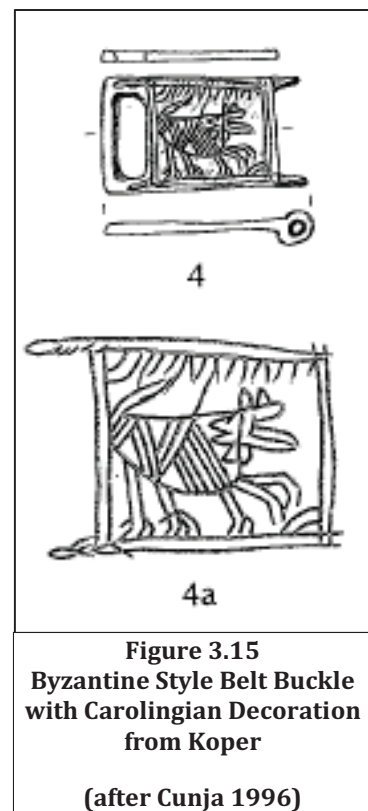
was probably incorporated into the Byzantine world during the course of the Gothic Wars in the 6<sup>th</sup> century.

#### 3.4.5.2. *Early Medieval*

The Early Medieval period witnessed a significant expansion in the settlement at Koper.

However this period also experienced a significant drop in the presence of these imported Roman ceramics, suggesting a disruption in trade that might be correlated with Arab expansion in northern Africa and the Eastern Mediterranean (see Pirenne 1937, Hodges and Whitehouse 1983). It should be noted that unlike most other sites, the boundaries between Late Antique and Early Medieval should be quite blurry.

By the close of the 8<sup>th</sup> century, this region of Istria was integrated into the expanding Frankish (Carolingian) Empire. One can observe after this period a blending of Frankish and Byzantine styles in artifacts, such as a belt buckle that combined a typical Byzantine form but with a characteristically Frankish decorative motif (see Figure 3.17).







**Figure 3.16**  
Photos and Site Map of Koper showing building phases: green = Late Antique, yellow = Early Medieval  
(after Cunja 1996)

### 3.4.5.3. Ceramic material

Ceramic samples were collected from the Koper site from both the Late Antique and Early Medieval phases. As noted above, these were correlated with different construction episodes at the site, and phases were generally identified by the presence of Roman imported wares. In the above site plan, the green parts indicate Late Antique and the yellow parts Early Medieval construction phases. Ceramic material was collected from several different stratigraphical contexts throughout the site and representative samples based on a macroscopic fabric analysis were selected for thin-sectioning. Twenty-three samples (12 from Late Antique and 11 from Early Medieval contexts) were subject to petrographic analysis. These samples were divided into three different mineralogical groups.

<b>Group</b>	<b># Samples</b>	<b>Quartz %</b>	<b>Carbonate %</b>	<b>Carbonate character</b>	<b>Mica %</b>
KP – A	19	1 – 5 %	20 – 25 %	Sparry	0 – 2 %
KP – B	2	10 %	0 %	n/a	2 %
KP – C	2	10 %	20 %	Sparry	1 %

**Table 3.6**  
**Fabric Groups from Koper**

Of all of the sites included in the petrographic analysis, Koper had the most homogenous coarse-ware ceramics. Although the ceramics from KP – A can be subdivided into several small groups based on fabric color, even these smaller groups show a mixture of ceramics from Late Antique and Early Medieval contexts. Interestingly, both ceramic samples from KP – B were Early Medieval and both from KP – C were Late Antique. While this is perhaps too small a sample size to provide conclusive results, it is interesting that these two fabric types were temporally specific. However the general trend for the coarse-ware ceramics at Koper is unquestionably one of continuity and homogeneity during these two periods.

<b>Fabric Group</b>	<b>Late Antique</b>	<b>Early Medieval</b>
KP – A1	KP – 2 KP – 12 KP – 8	KP – 21 KP – 16
KP – A2	KP – 5 KP – 6 KP – 10 KP – 9 KP – 3	KP – 13 KP – 15 KP – 18 KP – 20
KP – A3	KP – 7 KP – 4	KP – 14 KP – 17 KP – 23
KP – B		KP – 19 KP – 22
KP – C	KP – 1 KP – 11	

**Table 3.7**  
**Fabric Groups from Koper by period**

### **3.5. SUMMARY AND CONCLUSION: CERAMIC TRADITIONS IN THE S.E.A.N.A.R.**

The results of this study provide some interesting data regarding issues of continuity and change in the Late Antique and Early Medieval SEANAR, in the context of ceramic traditions. This final section considers the broader, regional implications of the results from each individual site; in other words, what can ceramic technology reveal about the nature of scope of this significant socio-political transition?

In broadest scope, the results from this study largely support certain aspects of the extant historical narrative for the region. For example, as outlined in Chapter 2, the textual record suggests that there was a greater degree of settlement and socio-political continuity nearer the coastal regions during Late Antiquity. The archaeological excavations at Koper (see Cunja 1996) further indicate that indeed this settlement on the northern Adriatic coast was continuously occupied from the 5<sup>th</sup> until at least the 9<sup>th</sup> century AD. Although building episodes have been used to roughly distinguish between these two phases, one would expect a fairly high degree of

continuity among ceramic technological traditions from Late Antiquity into the Early Middle Ages. It is therefore unsurprising that the largest mineralogical group of ceramics (KP – A) is evenly distributed between the two phases. Although the smaller two groups are restricted to one period, it is unwise to make any sweeping conclusions since they are only represented by two samples each. However they nevertheless seem to indicate that some ceramic technological traditions may distinguish earlier and later phases at the site. Further research is needed to examine this question in greater detail with a larger sample size.

At Tonovcov grad, archaeological excavation also suggests a high degree of continuity among the different occupation phases, which was further suggested in previous macroscopic ceramic analyses (Modrijan 2008). The results of this analysis show that the most common mineralogical group (TG – D) is evident in all three phases under investigation. However it is also clear that the suite of different ceramic traditions did change considerably from Late Antiquity to the Early Middle Ages. For example, TG – C was present only in the early medieval phases, while TG – A and TG – D1 were only present in the Late Antique phases. As with the material from Koper, some ceramic traditions appear to have changed during this socio-political transition, while others remained fairly continuous.

The situation at the site of Tinje in eastern Slovenia is noticeably distinct from both Tonovcov grad and Koper; here we see the greatest discrepancy in ceramic technological traditions. Two of the three petrographic groups identified in House 5 (the more recent context, primarily occupied during the Early Middle Ages) had *no* correlates to the material from Late Antique House 4 (TI – A, TI – B). All the ceramics from House 4 were mineralogically homogeneous; the one anomaly (TI – 12) was from part of a base rather than a body sherd (as with all other samples), which might explain why it had higher proportions of inclusions. It is debatable whether TI – C1 and TI

– C2 can be considered mineralogically distinct, but fabric colors also distinguish the two groups. Despite small sample size ( $n = 16$ ), the results from the analysis strongly indicate very little, if any, similarity between the ceramic materials from each of these two houses. This again adheres to historical expectations, since the eastern end of the southeastern Alps was the region most disrupted by migrations from the east during the transition from Late Antiquity to the Early Middle Ages (see Chapter 2). When one further compares this material to the ceramics from the nearby Late Antique hill-fort of Rifnik, there is much greater similarity to the material from House 4, which makes sense, since these two settlements would have been contemporaneously occupied. Significantly, there are no correlates to TI – A or TI – B in the material examined from Rifnik.

In summary, there does appear to have been greater continuity in ceramic traditions in the southern and western section of the region under investigation, although the ceramic samples at both Koper and Tonovcov grad did exhibit elements of technological change between Late Antiquity and the Early Middle Ages. However, the break between these two periods was certainly the most dramatic at Tinje, the easternmost of the sites examined. Here we see an almost entirely different set of ceramic technological practices emerge at the same site over a very short period. Does this give credence to the idea that migrating Avar and Slavic groups affected a dramatic socio-political shift in this section of the southeastern Alps? This scenario cannot be discounted, although Chapter 7 will further explore this question of migrating ethnic groups in the context of the ceramic evidence.

Furthermore, what does it mean that the ceramic evidence appears to largely support, rather than undermine, the textual record? Does this reinforce the misguided notion the archaeology of historical eras offers nothing more than ‘an expensive way of figuring out what we already

know’? Archaeologists, often painfully aware of this criticism (see Deetz 1991:1), find understandable comfort in the numerous cases where the material evidence has undermined—or at least revealed the shortcomings of—written records. Yet we should not shy away from situations where the opposite appears to be true. The sketchiness of textual evidence during Late Antiquity and the Early Middle Ages is universally recognized, so the material remains can, if nothing else, serve as another significant line of evidence for establishing the reliability of the broad historical narrative. Moreover, the material evidence has provided a much richer and more detailed account of this question of change and continuity; the results of ceramic petrography have provided a wealth of new information that will prove useful to both historians and archaeologists in the future.

Keeping this last point in mind, it is helpful to consider the prospects for future research on this topic, which will surely be able to shed additional light on many of these questions. Of particular interest will be collecting contemporary clay samples from each of these sites as a ‘baseline’ comparison with the ceramic materials. This will provide greater information about provenance, as well as tempering techniques, that cannot be confidently determined by the current dataset. Further sites might also be added to a ceramic compositional database, in order to determine whether the sites considered here are representative of the entire region. Finally, additional categories of material culture (such as dress ornamentation) could also be analyzed as a point of comparison with the coarse-ware ceramics. The author plans to conduct further research in the upcoming field seasons.

In conclusion, ceramic petrography has provided many important insights into question of continuity and change from Late Antiquity to the Early Middle Ages in the SEANAR. In this chapter, we have been primarily concerned with developing a compositional fabric typology that

can distinguish among ceramics that otherwise would appear quite stylistically similar.

Traditionally, archaeologists in this region have focused primarily on the ceramic fine-wares to investigate questions of continuity and identity, their more obvious stylistic (decorative) variation seeming to lend itself to such kinds of analyses. However, this study strongly indicates that the coarse-ware ceramic material should not be so quickly overlooked. While their relative formal and decorative homogeneity would appear to frustrate attempts at detailed chronology, compositional variation—the results of choices made by the potter, which are themselves ‘stylistic’—has also proven to be a useful tool for examining aspects of social and political change. The relationship between identity, technological choices, and ceramic composition is explored in much greater detail in Chapter 7.

The following chapter continues with the theme of change and continuity in the southeastern Alps explored by Chapters 2 and 3. Chapter 4 shifts scales, from the regional to the local, by presenting the results of a comprehensive landscape reconstruction along a small section of a river valley in southeastern Austria, directly to the north of the sites examined in this chapter. A landscape approach serves as a useful complement to the site-based perspective gained from the ceramic compositional analyses, as it allows the archaeologist to examine patterns and social processes beyond individual sites, and consider issues of land-use, agriculture, and settlement patterns. It is to these questions that I now turn.

## CHAPTER 4

### RECONSTRUCTING PAST HUMAN LANDSCAPES ALONG THE MIDDLE MURA RIVER VALLEY

#### 4.1. INTRODUCTION

This chapter continues the examination of continuity and change in the southeastern Alpine region, which has been extensively investigated in the previous two chapters. Chapter 2 provided a broad overview of the region from the Late Roman through Early Middle Ages, drawing on a wide range of historical and archaeological research. Chapter 3 then presented the results of original ceramic petrographic research on a number of sites throughout the region, in order to investigate aspects of technological change and continuity in this important socio-historical transition. Each of these two chapters has provided a broad, regional perspective on these issues. This chapter explores similar questions from a different perspective, narrowing the geographical scope in order to provide a broader temporal framework; questions of continuity and change are considered at the local scale, in terms of land-use, settlement, and other human activities beyond individual sites. It examines the long-term evolution of human landscapes through the integration of archaeological, geochemical, and historical lines of evidence in a small area (~4 km<sup>2</sup>) of the eastern Alpine region.

Sections along the Middle Mura River Valley in the southeastern corner of the Austrian province of Styria (Ger: *Steiermark*) were selected as a representative sample of the wider region. Most of the project area was focused in and around the modern town of Wildon, Austria, at the confluence of the Mura and Kainach rivers (see Figures 4.1 and 4.2). Previous archaeological research revealed traces of continuous occupation dating back to the Late Neolithic, making it



one of the longest archaeological sequences in the region. This is therefore an excellent location in which to consider the long term changes in the landscapes of the southeastern Alps.

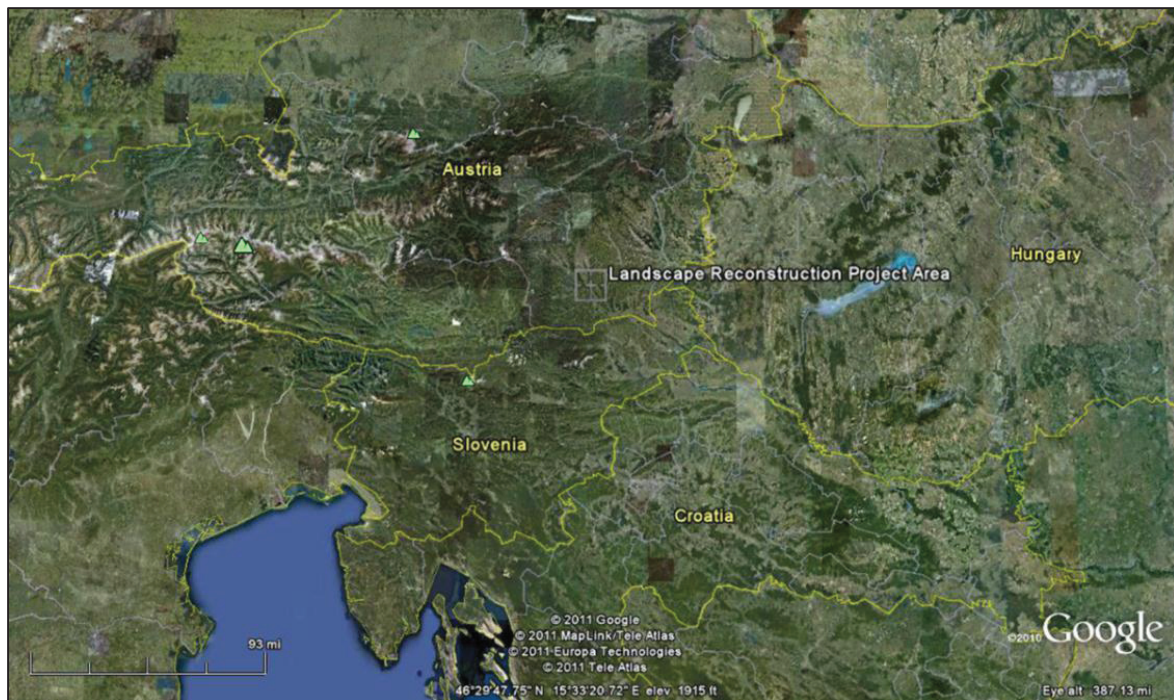
#### **4.1.1. Chapter Outline**

The chapter begins with a review of the many different elements that have been included in this comprehensive account of past landscapes, from the underlying geology, pedology, and hydrology, to the traces of human settlement and activity evidenced by surface artifacts, soil phosphate levels, and targeted test excavations, as well as historical, cartographic, toponymic, and other aspects of archival research. The following section then presents the results of field seasons in 2009 and 2010, and traces the evolution of human landscapes in this region from earliest prehistory through the early modern period with the aid of ArcGIS; particular emphasis is placed on the transition from the Late Roman to Early Medieval period. The final section then outlines some general interpretations in terms of long term settlement, land-use, and other human activities beyond individual sites in the landscape. The overall goal of this chapter is to provide a deeper temporal context in which to understand the specific transition from the Late Roman to Early Medieval transition in the eastern Alps, as well as to consider long-term patterns in the development of human landscapes.

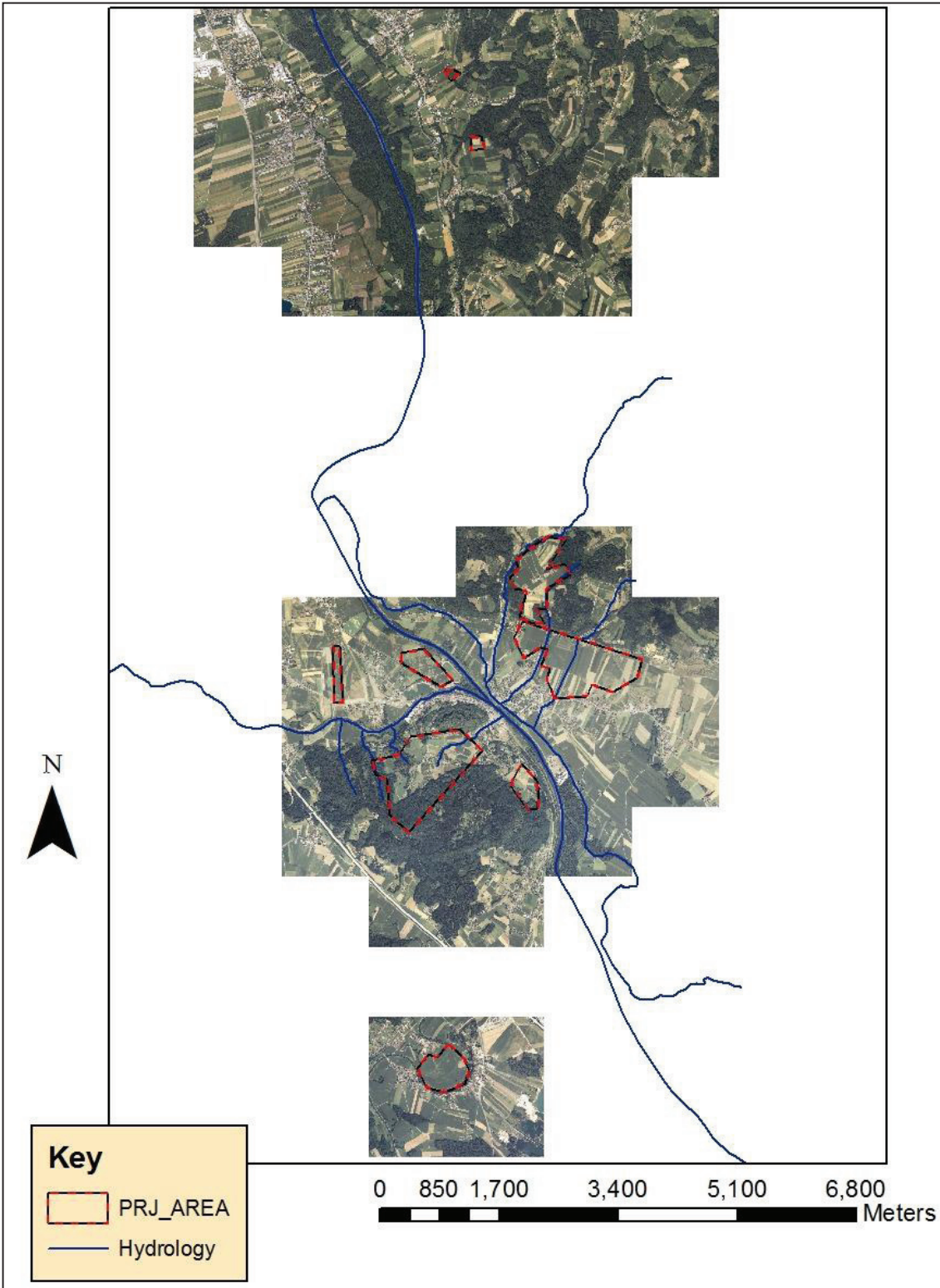
#### **4.2. ELEMENTS OF LANDSCAPE ALONG THE MIDDLE MURA**

In this section, I outline the different components of the landscape reconstruction within this small project area along the middle Mura river valley. I seek a balance between ‘natural’ and ‘cultural’ landscapes, with the goal of ultimately transcending this distinction. In order to achieve this goal, one must carefully examine each of these multifaceted components of the ‘landscape’ and the ways in which they interact. The methodology outlined here is inspired by a number of

different approaches to landscape archaeology, including Christopher Taylor's 'total archaeology' (1974), Tina Thurston's study of cultural landscapes in southern Scandinavia (2001:ch 7), and the Historic Landscape Characterization developed in Britain (Clark et al 2004, Rippon 2007), all of which seek to integrate hydrological, geological, ecological, archaeological, textual, toponymic, and architectural data in order to explore the multifaceted and complex aspects of landscape. These layers have all been added into GIS computer software (ArcMap), which allows for their visual representation, as well as additional possibilities for understanding their spatial relationships.



**Figure 4.1**  
**Location of Project Area in Broader Region (© 2011 Google)**



**Figure 4.2**  
**Project Boundaries and Hydrology along the Middle Mura River**  
 Image generated by author

#### **4.2.1. Hydrology**

The primary hydrological feature within this small project area is the Mura River (Ger: *Mur*), a tributary of the Danube that flows from the High Tauern region of the Alps into the Drava River in Croatia. The section of this river under consideration here (the middle Mura or *Mittelmur*) flows north to south through the middle of the Austrian province of Styria roughly from the capital city of Graz to the city of Leibniz. The focus of this project is the region along the middle Mura roughly equidistant from these two cities, near the town of Wildon. This small town lies directly at the confluence of the Mura and another smaller river, the Kainach, that flows in from the west. Another minor river (the Sulm) is located within the project boundaries to the south, near the village of Göttlting. There are also a number of smaller streams that run throughout the project area (see Figure 4.2).

Examining the hydrology of the project area is significant for several reasons. First, archaeologists have long recognized that access to nearby freshwater is a critical factor for human settlement, particularly those that do not utilize wells as a source of drinking water. Therefore it is common to find prehistoric activity areas on or near freshwater sources, a pattern that is also evident in this project area. When considering the hydrological situation in a region, it is also critical to determine whether the watersheds have been altered by modern activities such as canalization or other drainage projects. An investigation of historic maps can often provide some answers (see section 4.2.7.2).

#### **4.2.2. Topography and Soils**

Topographically, the region of southern Styria is in the foothills of the eastern Alps. The project area consists mainly of low, rolling hills. The primary soil types in the project area—according to the FAO World Reference Base for Soil Resources—are Eutric Cambisols. A Cambisol is a

soil with a beginning of soil formation, evident from structure formation and mostly brownish discoloration, increasing clay percentage, and/or carbonate removal (IUSS Working Group 2007:74). These kinds of soils are ideal for agricultural land (which is precisely what they are used for here). Eutric indicates having a base saturation of 50% or more, between 20 cm and 100 cm from the soils surface.<sup>45</sup> This soil is full of loose limestone. Some parts of the project area also contain Calcic Cambisols, Dystric Fluvisols (often resulting from fluvial action), and/or Stagno-Gleyic Luvisols (typical of forested areas). This heterogeneity in soil types reflects the varied land-use of the project area, which is divided among human settlement, agricultural land, pasture, and mixed deciduous forest.

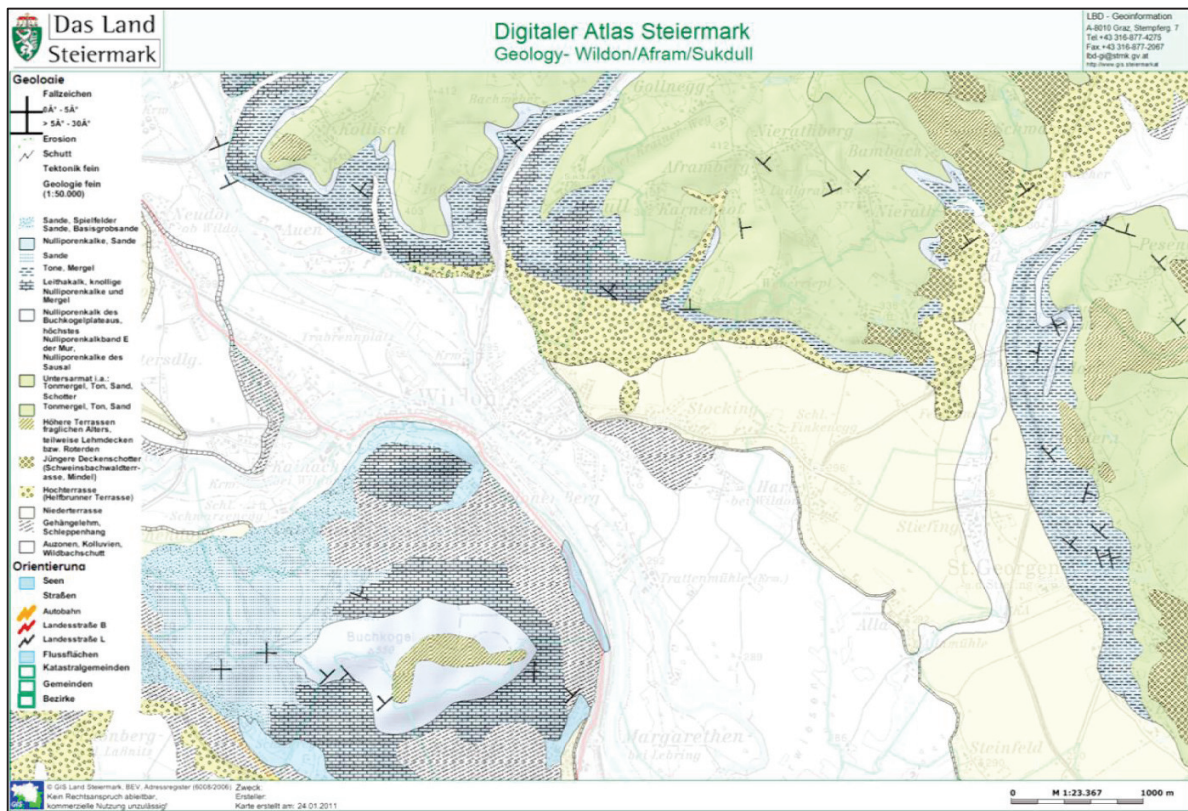


Figure 4.3  
Geological Map of Wildon Region (adapted from [www.gis.steiermark.at](http://www.gis.steiermark.at))

<sup>45</sup> See [http://www.fao.org/DOCREP/003/Y1899E/y1899e17.htm#P1\\_0](http://www.fao.org/DOCREP/003/Y1899E/y1899e17.htm#P1_0)

### **4.2.3. Previous Research and Known Archaeological Sites**

The Austrian province of Styria has not received as much archaeological attention over the years as neighboring provinces such as Lower Austria, Carinthia, Salzburg, or even northern Slovenia. The reasons for this are both historical and political, and do not need to be explored here.

Nevertheless, a number of important archaeological excavations within this project area over the past century indicate its significance in both the distant prehistoric and more recent historical past (for a complete survey of research history in the Wildon region, see Kramer 1989).

During archaeology's antiquarian phase in the early 19<sup>th</sup> century, a number of excavations were undertaken in the Wildon region. The results of some of these amateur excavations remain enigmatic, while others produced a variety of impressive prehistoric artifacts, such as Early Urnfield swords, sickles, and stone axe heads (Kramer 1989:13-16). The first systematic excavations were conducted from 1924 – 1925, under the direction of Walter Šmid, on the large, gently sloping hill known as the Buchkogel, southwest of the modern town. He uncovered evidence of three houses dating to the Late Neolithic/Copper Age (late 5<sup>th</sup> – 3<sup>rd</sup> millennium BC) and the Early Iron Age/Urnfield period (10<sup>th</sup> – 8<sup>th</sup> century BC), the former period believed to constitute the first farming communities in the region (see Šmid 1927).

The next extensive excavations did not occur until 1985, when a Late Urnfield and Early Hallstatt period (c. 8<sup>th</sup> century BC) cemetery was discovered directly to the east of the Wildoner Berg, the smaller, but more steeply graded hill directly west of modern town, overlooking the confluence of the Mura and Kainach. Over the next two years, 36 cremation burials were excavated over an 80 square meter area, producing armbands, fibulae, rings, and glass beads, as well as the ceramic urns themselves (Kramer 1996). Additional parts of this large cemetery were recovered during rescue excavations in 2003, and again in 2005 – 2007, with over 240 cremation

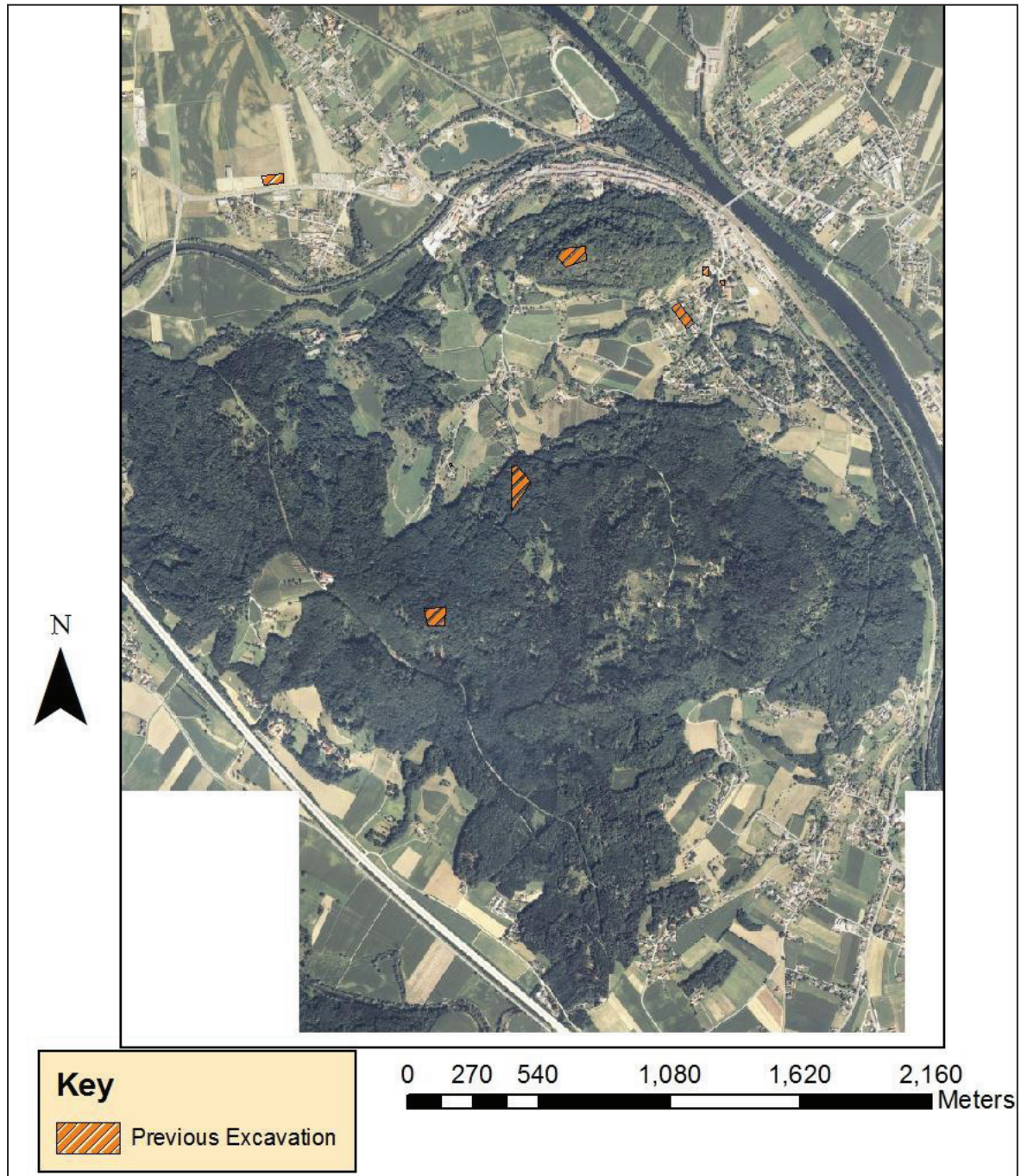
burials identified north of the Kainach River. The impressive size of this Late Urnfield/Early Hallstatt graveyard indicates that this small valley was perhaps one of the mostly densely settled regions of the southeastern Alps during this important transitional period (see Gutjahr and Tiefengraber 2011).

Around the same time as the first cemetery excavations in the project area, a long-term archaeological project was established to investigate the settlement history of the Wildoner Berg itself, on which were the ruins of a medieval castle and Roman *castrum* (today known as the *Wildoner Schlossberg*). Archaeological investigations conducted from 1986 – 1994 revealed traces of occupation during almost every period from the Late Neolithic through the 18<sup>th</sup> century AD, making it one of the longest virtually uninterrupted archaeological sequences in all of Austria (Kramer 1989:27-36).

Other recent rescue excavations from 2006 – 2007 were conducted in Rasental, the valley between the Wildoner Berg and Buchkogel. This project recovered settlement and burial contexts contemporaneous with the larger nearby Late Urnfield/Early Hallstatt cemetery described above, as well as parts of an early medieval settlement (Gutjahr 2007). A previously unknown urn style from the early Hallstatt period (the *Leitinger Urn*) was also recently discovered by a local resident (Gutjahr 2008).

There has also been some archaeological research in the other parts of the project area. Previous stray finds have indicated that the fields in Fernitz contained both prehistoric and early medieval materials (Gutjahr 2002). Early medieval material was also excavated near the fields in Enzelsdorf (Gutjahr 2003). Some other stray finds, such as an early medieval earring and fibulae,

were recovered in the early 20<sup>th</sup> century from fields in Afram (Modrijan 1963). In the other parts of the project area (Sukdull, Götting), no archaeological work has even been conducted.



**Figure 4.4**  
**Locations of previous excavation in the Wildon Region**  
Image generated by author



It is clear that the region along the middle Mura is one of the more archaeologically significant areas in this part of the southeastern Alps. Yet no systematic survey of this region has ever been attempted; while numerous sites have been identified and studied, there is little understanding of the wider landscapes. This project therefore sought to fill a lacuna in the research by going beyond individual sites and exploring the wider landscape.

#### **4.2.4. Pedestrian Field Survey**

Several complementary survey methodologies were simultaneously employed in order to help reconstruct landscapes along the middle Mura. The first was pedestrian surface collection ('field-walking'), an efficient and widely used method that has been a key part of archaeological survey for decades (see Banning 2002, Fish and Kowalewski 1990, Schiffer et al 1978, Francovich and Patterson 2000). During the summers of 2009 and 2010, the author led teams of American and Austrian students in conducting these surveys across ploughed fields within the project area, where high surface visibility made this technique effective; that is, in fields where visibility was greater than 20%. Fortunately, most of the agricultural land in this region is sown with either corn (maize) or pumpkin, both of which provide high visibility well into the summer months. Since this project sought to provide high-resolution survey data within a densely settled, highly anthropomorphic landscape, relatively tight 10 m transect spacing was adopted. The sampling strategy employed by this survey project aimed at full-coverage of all fields where surface collection was possible—in total, covering about 2.0 km<sup>2</sup> (see Richards 2008 for a review of different survey strategies in archaeology).

Field walkers were instructed to collect all surface artifacts, with the exception of obviously recent materials (i.e. rubber, metal tractor parts, plastic, etc.). While these 'modern' materials are

potentially quite interesting for a comprehensive landscape reconstruction, they were excluded from this particular survey for pragmatic reasons; given the time and financial constraints of a dissertation project, it was simply impractical to collect, wash, and store all of this material. Therefore, the material collected was limited to prehistoric and earlier 'historic' periods.

In order to ensure high quality spatial resolution, the material collected from each transect was separately bagged; particularly long transects were additionally subdivided. Additionally, locations of elevated artifact density identified during survey were recorded and separately bagged. In the laboratory, artifacts were washed, counted, weighed, and labeled. Potentially diagnostic artifacts were grouped into basic typologies and entered into a GIS database for further spatial analyses, the results of which are presented below.

#### **4.2.5. Soil Sampling and Phosphate Analysis**

Pedestrian surface collection is an important aspect to any comprehensive landscape reconstruction. However it has several limitations, the most important of which is an inability to assess the archaeological importance of areas where a lack of surface visibility makes this methodology impractical. Although ploughed agricultural fields characterized much of the project area, there was also a large portion where surface collection could not be conducted during any time of the year. In order to address these problematic areas, another method was necessary. While shovel test pits (STPs) are often employed in this situation, they were determined to be too labor intensive and intrusive for this project. Soil sampling constituted a more efficient and effective alternative; although a number of different types of soil analysis are potentially informative for a landscape reconstruction, this project focused on the qualitative analysis of soil phosphates.

#### *4.2.5.1. Soil Phosphates in Archaeological Research*

Swedish agronomist Olaf Arrhenius was the first to recognize the significance of soil phosphate as an indicator of past human activity while doing regional agricultural soil survey in the 1930s (e.g. Arrhenius 1934). In his enormous project for the Swedish Sugar Corporation, Arrhenius collected 500,000 soil samples from nearly all the agricultural land in Scania (southern Sweden). His results indicated a general background level for phosphate of 1 – 25 parts per million (ppm) in most agricultural soils, but also showed large discontinuous areas of much higher phosphate levels of 200 – 900 ppm or more (Thurston 2001:186). These elevated areas turned out to be caused by past human activities, such as refuse deposition and settlement, occurring over the course of many centuries.

Arrhenius' method was quickly adopted by archaeological researchers in Germany (see Lorch 1940, Grundlach 1961), but was slow to be taken up in the Anglophone world; it was only with the advent of a more scientifically-oriented, processual archaeology in the 1960s, as well as the subsequent development of a rapid field test, that soil phosphate analysis became more popular in American archaeology (for some early archaeological applications of soil phosphates in the Americas, see Dauncey 1952, Dietz 1957, Cruxent 1962). Although still far from being part of the standard suite of archaeological prospection tools, soil phosphate analysis has been used with great success in a number of different geographical and environmental contexts (Sinclair and Petré 2002, Taylor 2000, Thurston 2001). Although soil phosphate testing is most frequently used to identify site boundaries and activity areas during or just prior to excavation, it has also been implemented as a method of prospection and landscape reconstruction (see Provan 1971,

Keeley 1981, Crowther 1997, Thurston 2007, Rypkema et al 2007); this latter strategy was adopted in this project.

#### *4.2.5.2. Mechanics of Soil Phosphates*

Soil phosphate analysis works by identifying elevated levels of phosphate ions in soils, which can be a useful indicator of past human activities, as first observed by Arrhenius (for a recent overview of phosphates in archaeology, see Holiday and Gartner 2007). Archaeologically significant activities such as agriculture, settlement, ritual, and daily refuse deposition can all cause markedly elevated levels of phosphates in soils. Although phosphate is not the only archaeologically significant chemical compound found in soils, it is particularly useful because the ions become quickly fixed and remain generally immobile at most soil pH levels. While modern agricultural practices such as fertilization can increase phosphate levels in the soil, they generally do so uniformly across broad areas, thereby keeping archaeologically significant areas higher than the background noise. A major advantage of soil survey is that it can be conducted in both plowed fields and other areas (meadows, forests) where poor visibility makes surface collection ineffective. Since much of the project area was not seasonally plowed, this technique proved extremely useful for examining past human activity beyond agricultural fields.

#### *4.2.5.3. Field and Laboratory Methodology*

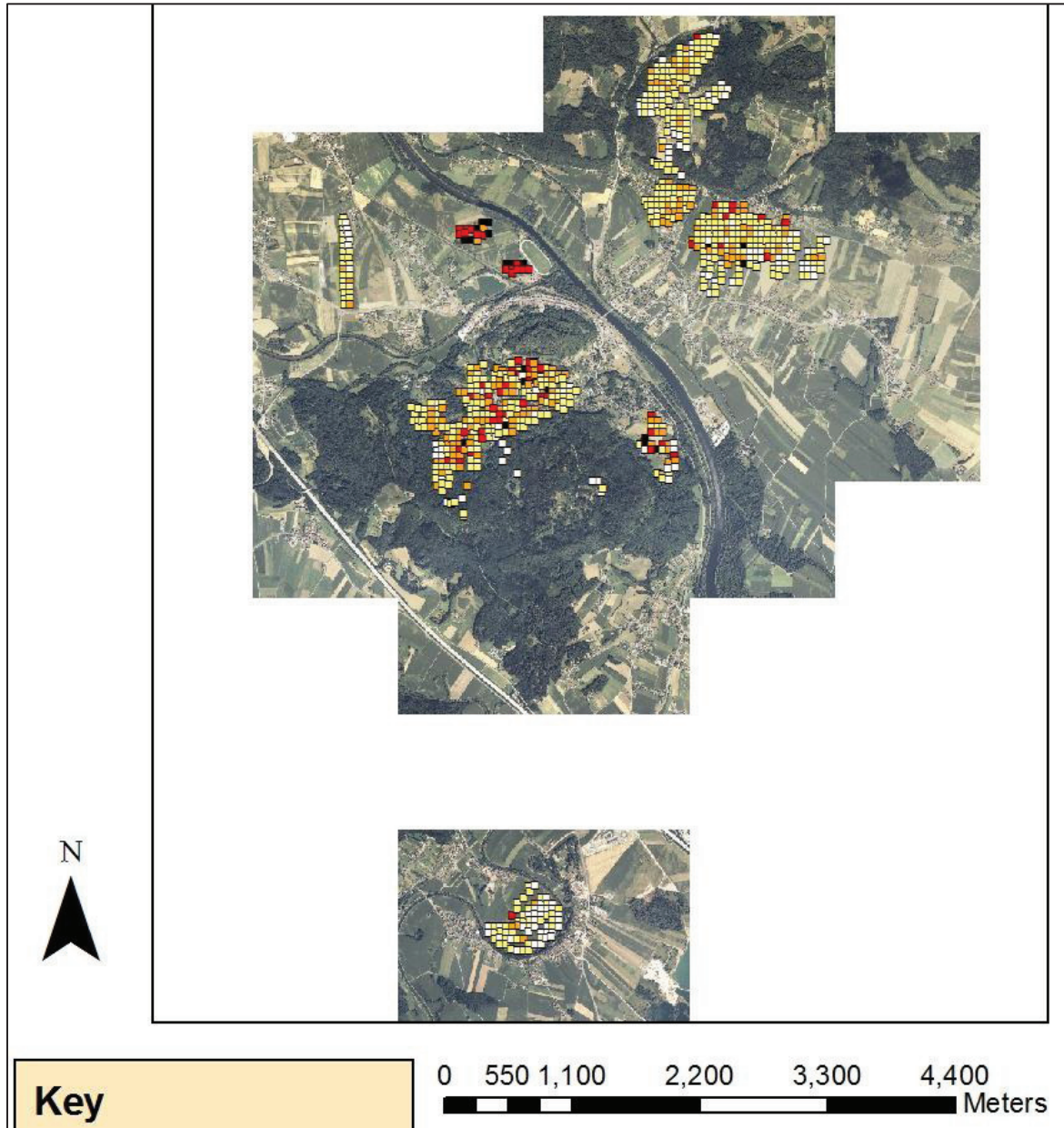
In order to explore phosphate data on a landscape scale, soil cores were taken on a 50 m grid using small (1/4" tip) augers and a mobile GPS device. Soil samples were taken across the entire project area, in areas where surface collection was not possible as well as ploughed fields. About 900 soil samples were taken, covering an area between 2.5 – 3.0 km. Soil samples were separately bagged and labeled at 10 cm intervals, most soil cores in this project going 60 – 90 cm deep.

In order to identify areas of elevated phosphate against natural background levels, this project employed a type of qualitative analysis that was a modified version of the ‘spot test’ first developed by geographer Robert Eidt (1973). In a field laboratory, 1 – 2 g of soil from each 10 cm sample was placed on filter paper and subjected to a fast and relatively weak acid digestion reaction: first a solution of distilled water [H<sub>2</sub>O], 6 molar hydrochloric acid [HCl], and Ammonium molybdate tetrahydrate [(NH<sub>4</sub>)<sub>6</sub>Mo<sub>7</sub>O<sub>24</sub> · 4H<sub>2</sub>O] was placed on each soil sample, followed by a solution of distilled water [H<sub>2</sub>O] and ascorbic acid [C<sub>6</sub>H<sub>8</sub>O<sub>6</sub>]. This causes a blue spot with lines radiating outwards through the reaction of soil phosphate with molybdenum blue. After several minutes, the tests were then placed in a salt stop-bath, which halts the reaction and removes the soil from the filter paper. The resulting blue spots were then assessed on a qualitative scale from one to five, based on their size and intensity (one = lowest phosphate, five = highest phosphate). This method measures the soluble and weakly absorbed forms of phosphate in the soil in the “available P pool” (for a description of the soil phosphate cycle, see Holliday and Gartner 2007).

Up to twenty samples can be tested simultaneously, permitting a high volume of tests to be conducted in a short period. Since this relatively simple and inexpensive method of phosphate analysis allows the archaeologist to conduct thousands of tests in the field without the need for highly specialized equipment or expensive laboratory costs.

There are several strengths and limitations of the ‘spot test’ method. Since it only provides qualitative results, it does not have the same level of detail as other quantitative methodologies (such as inductively coupled plasma mass spectrometry). However, its simplicity and portability make it ideal for projects that require instant results; it is certainly the most efficient way to employ phosphate analysis as a prospection method on an inter-site, landscape scale. Results

from the thousands of spot tests were then entered into a GIS database for further analysis and potential comparison with the surface collection dataset.<sup>46</sup> Figure 4.5 provides the results from the phosphate analysis, based upon the highest phosphate level at each point along a 50 m grid.



**Figure 4.5**  
**Soil phosphate levels in the project area; key: white = 1, yellow = 2, orange = 3, red = 4, black = 5**  
**Image generated by author**

<sup>46</sup> Complete results from the phosphate testing are listed in Appendix F, along with the recipes and directions for the methodology used here.

#### 4.2.6. Test Excavations

While phosphate as a prospection method has been successfully employed around the world, like pedestrian surface collection, it has several limitations. Perhaps the most significant is a lack of temporal definition for phosphate depositing episodes; in other words, it is not always clear which period produced elevated phosphate levels in soils. Also, natural or anthropogenic post-depositional processes that significantly move soils can also limit its effectiveness. Both of these issues must be considered when testing in areas that have a long history of continuous intensive settlement, such as in the middle Mura valley, which today is a combination of urban, suburban, and rural settlement densities. Such problems can often be addressed through the identification of diagnostic artifacts from surface collection or further subsurface investigation.

Towards this end, the equivalent of about a dozen 1 x 1 m hand-excavated test excavations were also conducted in areas of elevated phosphate or surface artifact levels, in order to determine the correlation between surface artifacts, soil phosphate levels, and subsurface materials. These units were placed in areas of elevated surface artifact density and/or high soil phosphate, with the hope of finding *in situ* features that could be correlated with the phosphate depositing episodes. After the plough zone was removed (where present), the units were excavated in 5 to 10 cm levels and were brought down to at least 20 – 30 cm in sterile subsoil. All the excavated soil was put through 1/4" mesh screen. Photographs and drawing were taken of the stratigraphy and relevant features in the units, and all notes were kept for reference.<sup>47</sup>

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<sup>47</sup> Notes from the excavation of Test Units have been tabulated in Appendix E.



**Figure 4.6**  
**Example of Soil Stratigraphy in Ploughed Field (ECK TU1; photo by author)**

#### **4.2.7. Historical Archival Research**

Historical records, cartographic sources, and toponymic (place name) studies are also important elements of past landscape reconstruction, particularly for proto-historic and historical periods.

This section explains the utility of these methods, but the results from historical research are incorporated into the diachronic evolution of the landscape outlined below in section 4.3.

##### *4.2.7.1. Toponymy and Place Name Data*

Although place name studies are another useful dataset for reconstructing past landscapes, they should not be regarded as unequivocal evidence of ethno-linguistic settlement patterns or interaction. The naming of topographic features or villages reflects single historical events and



cannot always be directly correlated with later demographic changes. This is particularly important to recognize in this region of southern central Europe, which did not have the same easily identifiable waves of settlement such as one can observe, for example, in Britain. Place name evidence is also unfortunately tied to the legacy of ethno-nationalism and National Socialism (see Chapter 8), which has left many contemporary scholars wary of its application. Nevertheless, the study of place and topographical names is another important line of evidence that can potentially provide important information about the past of a region. The etymologies of the names of local villages, rivers, etc. are outlined in the appropriate chronological sections below. Additionally, some of the older versions of these names appeared on the historical maps, discussed in the following section.

#### *4.2.7.2. Historical Cartography*

Cartographic sources are also useful for examining past settlement and land-use patterns. Other than their obvious utility in identifying the names and locations of early villages and roads, cadastral maps also show changes in property and field boundaries that often can be proxy evidence for settlement histories. For example, long and thin field boundaries (such as those in Afram) probably indicate initial land use in the high medieval period, while the irregularly shaped field systems in Rasental seem to suggest much earlier agricultural activities. The first and most useful cadastral maps in this region were produced during the 1820s under the direction of Habsburg Emperor Franz I. Some examples of these historical maps are provided below.



Figure 4.7  
From *Blaeu Atlas* (1630s - 1660s)

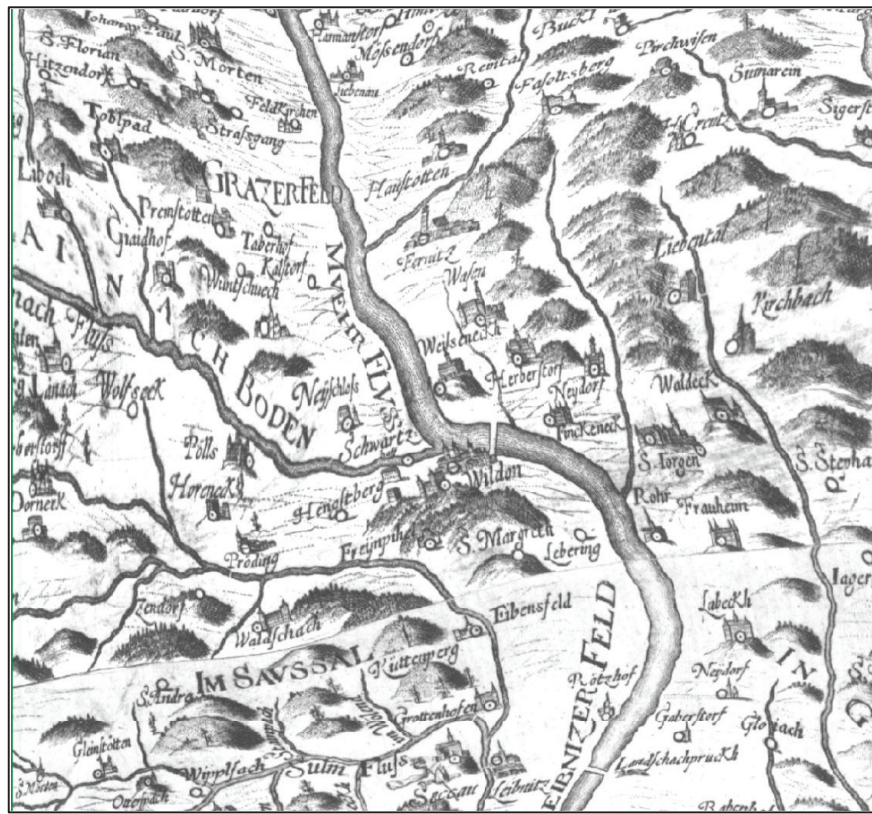


Figure 4.8  
From *Vischer Karte* (1678) (adapted from [www.gis.steiermark.at](http://www.gis.steiermark.at))

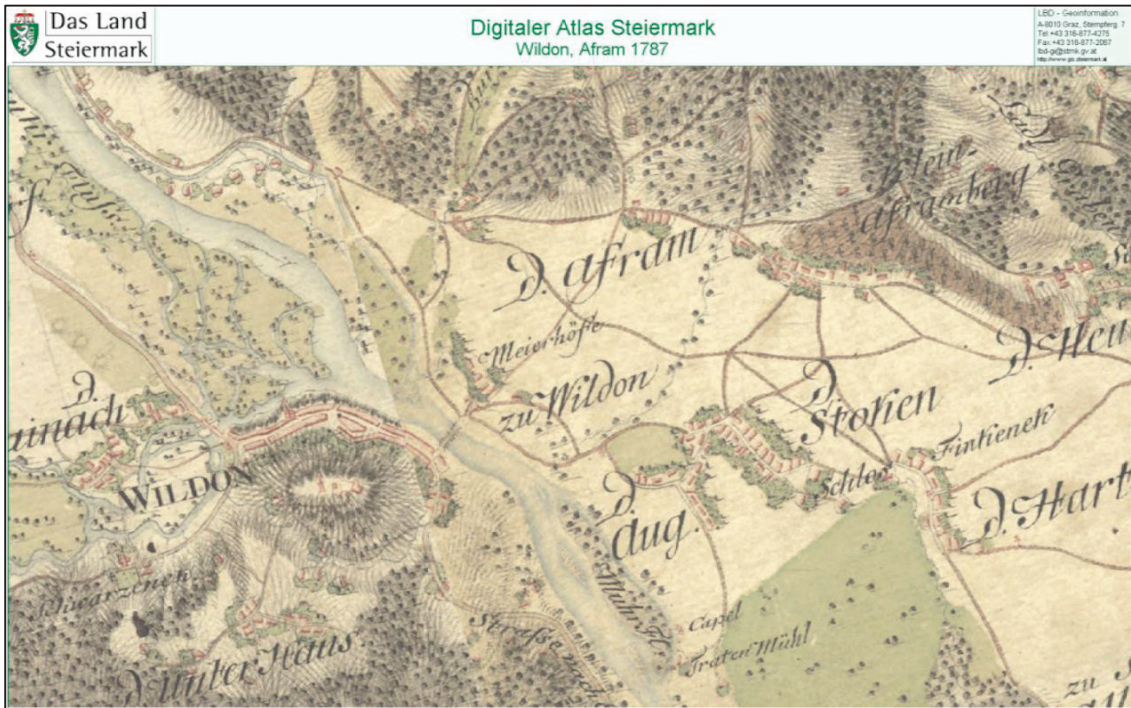


Figure 4.9  
 From *Josephinische Landesaufnahme* Map (1787) (adapted from [www.gis.steiermark.at](http://www.gis.steiermark.at))



Figure 4.10  
 From *Franziszeicher Kataster der Gemeinde Unterhaus* (1823)

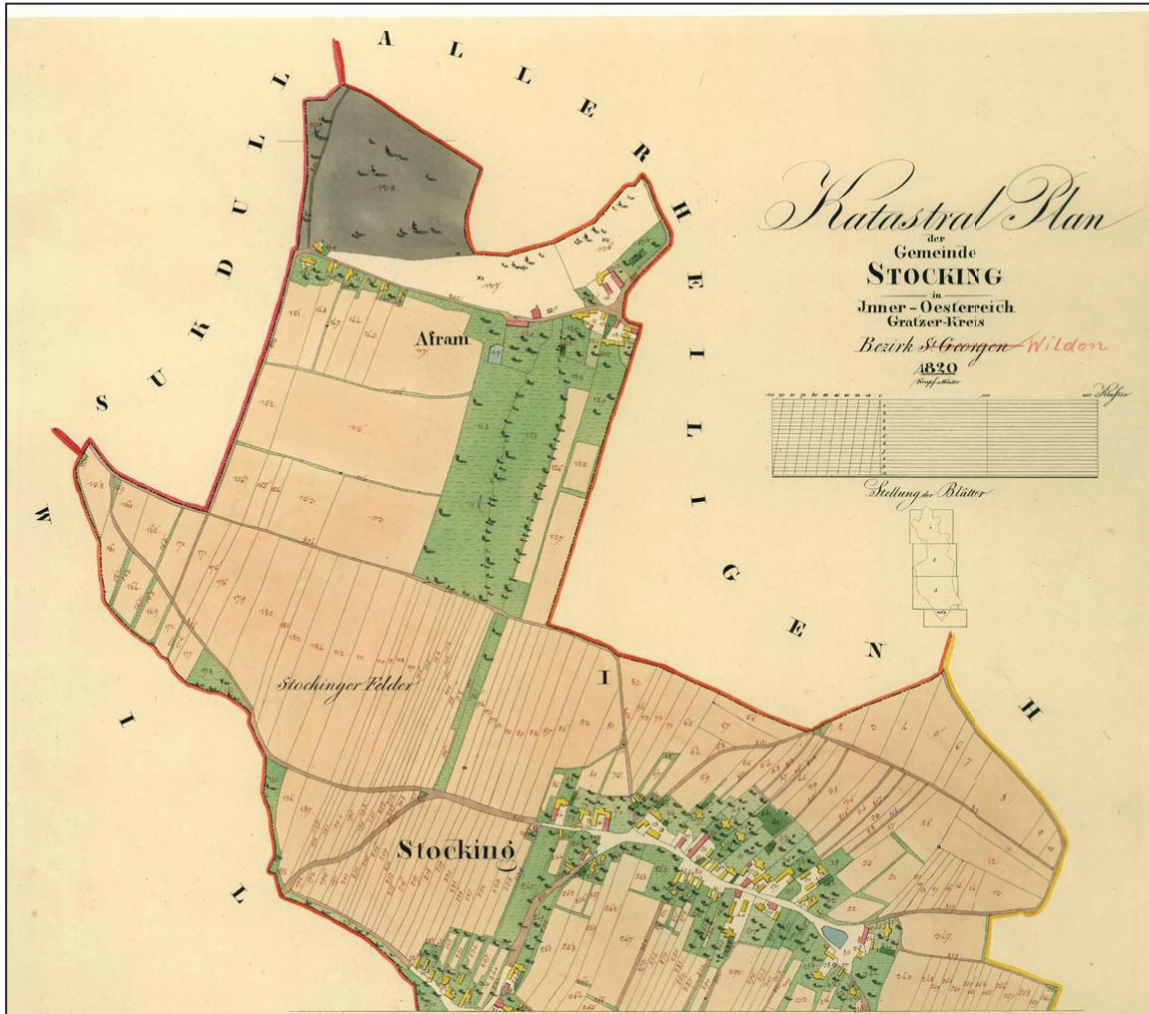


Figure 4.11  
From *Franzische Kataster der Gemeinde Stocking* (1823)

### **4.3. RESULTS AND INTERPRETATION**

#### **4.3.1. General Results of Pedestrian Surveys**

Intensive surface collection over more than 2.0 km<sup>2</sup> of plowed fields produced a large quantity of archaeological material, predominantly consisting of small, heavily weathered ceramic sherds.

Most of these ceramics were non-diagnostic body sherds and could therefore only be assessed by their macroscopic fabric composition. While this might seem to limit the possibilities for interpretation, the work of Jennifer Moody (see Moody et al 2003) in the eastern Mediterranean has demonstrated how identifying ceramic fabrics can be a useful tool for archaeological landscape reconstruction.

As expected, the ceramic material demonstrated a wide variety of fabric colors and textures, but during fieldwork and initial laboratory analysis they were grouped into two major categories: (1) low-fired, moderately to highly porous fabrics, frequently with large (primarily carbonate) inclusions and (2) higher-fired, less porous fabrics with smaller or entirely without macroscopically visible inclusions. Based on current knowledge of ceramic fabric types in this area, these types can be cautiously classified into two broad categories: the former as *prehistoric* (predominately from the Late Bronze Age [1000-800 B.C.E.], Iron Age [800-100 B.C.E.], or Early Medieval [700-1100 C.E.] periods) and the latter as *historic* (primarily from the Medieval [1100-1500 C.E.] and Early Modern [1500-1800 C.E.], and also Roman Provincial period [16 B.C.E - 400 C.E.]).

Using these broad categories, it is estimated that approximately 80% (n=5056) of the ceramic material recovered from the surface collection was ‘historic’ and 20% (n=1316) was ‘prehistoric’. It is important to note that these artifacts exhibited significantly different spatial distributions over the landscape. Archaeologists have long recognized that spatial distributions of

surface artifacts across a landscape are impacted by multiple factors. The work of T.J. Wilkinson (1982, 1989, 1990) at tell sites across southwest Asia is particularly important in this regard. He has argued that long-term practices of manuring produce areas of low density surface ceramics that form concentric rings around large settlements. Based on historical, ethnographic, and archaeological research, Wilkinson demonstrated how early societies across the Old World would compost their domestic refuse into ‘night soils’ and spread them in zones adjacent to the settlements. More recently, Bintliff and Howard (1999) have attempted to develop a methodology, which they term ‘Residual Analysis’, which attempts to distinguish between surface artifacts connected to residential and nonresidential activities.

What does the distribution of surface artifacts suggest about land-use in this project area? In most surveyed fields, there was a nearly constant low level ‘background noise’ of historic ceramic material (see Figure 4.12), likely an effect of the common practice of including broken ceramic materials in the mixture used for manuring. Yet the boundaries between areas with low and high densities of historic ceramic material were still relatively sharp, indicating that such farming practices do not account for the entire distribution of historic ceramics. It is argued that the areas with the highest concentration of historic surface artifacts may represent the remains of abandoned farmsteads, which, based upon those surface ceramics that can be chronologically placed based on rim style or decoration, date to the High and Late Middle Ages (13<sup>th</sup> – 15<sup>th</sup> centuries), with significant expansion during the Early Modern period (16<sup>th</sup> – 17<sup>th</sup> centuries).

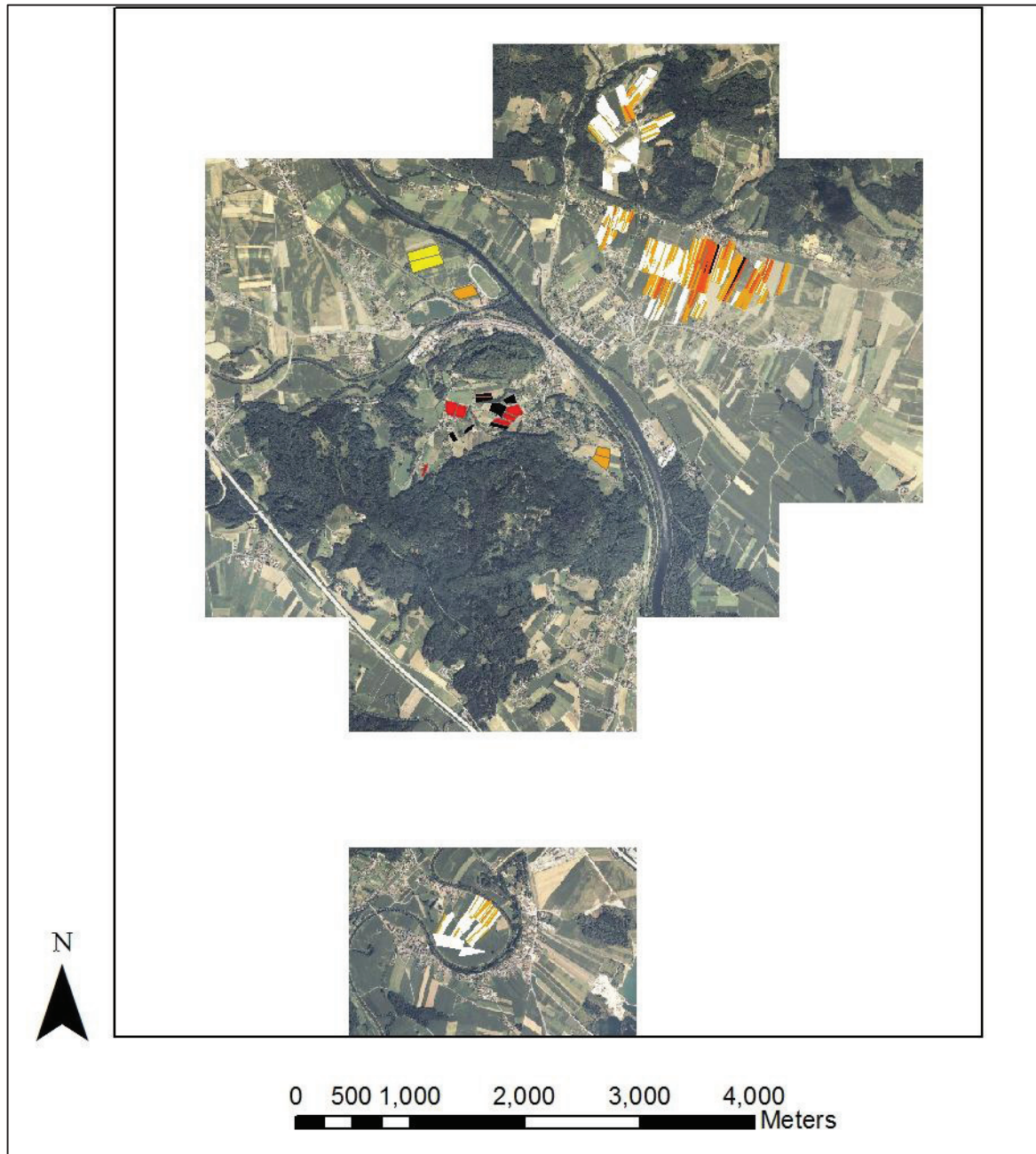
The boundaries between high and low concentrations of the prehistoric ceramic material from the surface survey were much more dramatic. For example, one small (roughly 5 x 5 m) area in Afram produced several kilograms of prehistoric ceramic material, with only a few other sherds being discovered in the surrounding fields. The presence of this small ‘site’ also proves that

many generations of seasonal plowing did not significantly disperse the prehistoric ceramic material, as might be otherwise assumed. Similar high density areas were uncovered at several other locations in the project area (see Figure 4.13). In general, the surface surveys reveal that the highest densities for both historic and prehistoric material were in Rasental, the valley situated between the Wildoner Schlossberg and the Buchkogel. There were also several areas of high historic density in Afram, Sukdull, and Göttling, as well as high density of prehistoric material in Fernitz.

Results from the surface surveys also correlate well with the place-name evidence. As described below, the place-name with the most ancient etymology in the project area is Wildon, which is believed to be of ‘Celtic’ or even pre-Celtic origin (see below); therefore, it is not surprising that the highest densities of prehistoric (Iron Age) material is near this village. Other locations of high density surface material dating to the Late Middle Ages and Early Modern period also appear around place-names that date to these particular periods.

It should be noted that for the vast majority of ceramic sherds collected in the survey, which were without significant decoration or other diagnostic features, precise temporal identification was often not possible. However, a significant portion of the collected ceramic material *could* be diagnostically identified and chronologically placed (if only tentatively) by decoration, rim style, or unique fabric type. By using comparative site reports from this region of Austria, along with the help of local professional archaeologists, I was able to create a basic ceramic rim typology that provided some chronological precision, which is essential for understanding the development of the landscape. Based on the results of the surveys, historical archival research, and past archaeological research, the following section outlines a basic evolution of the

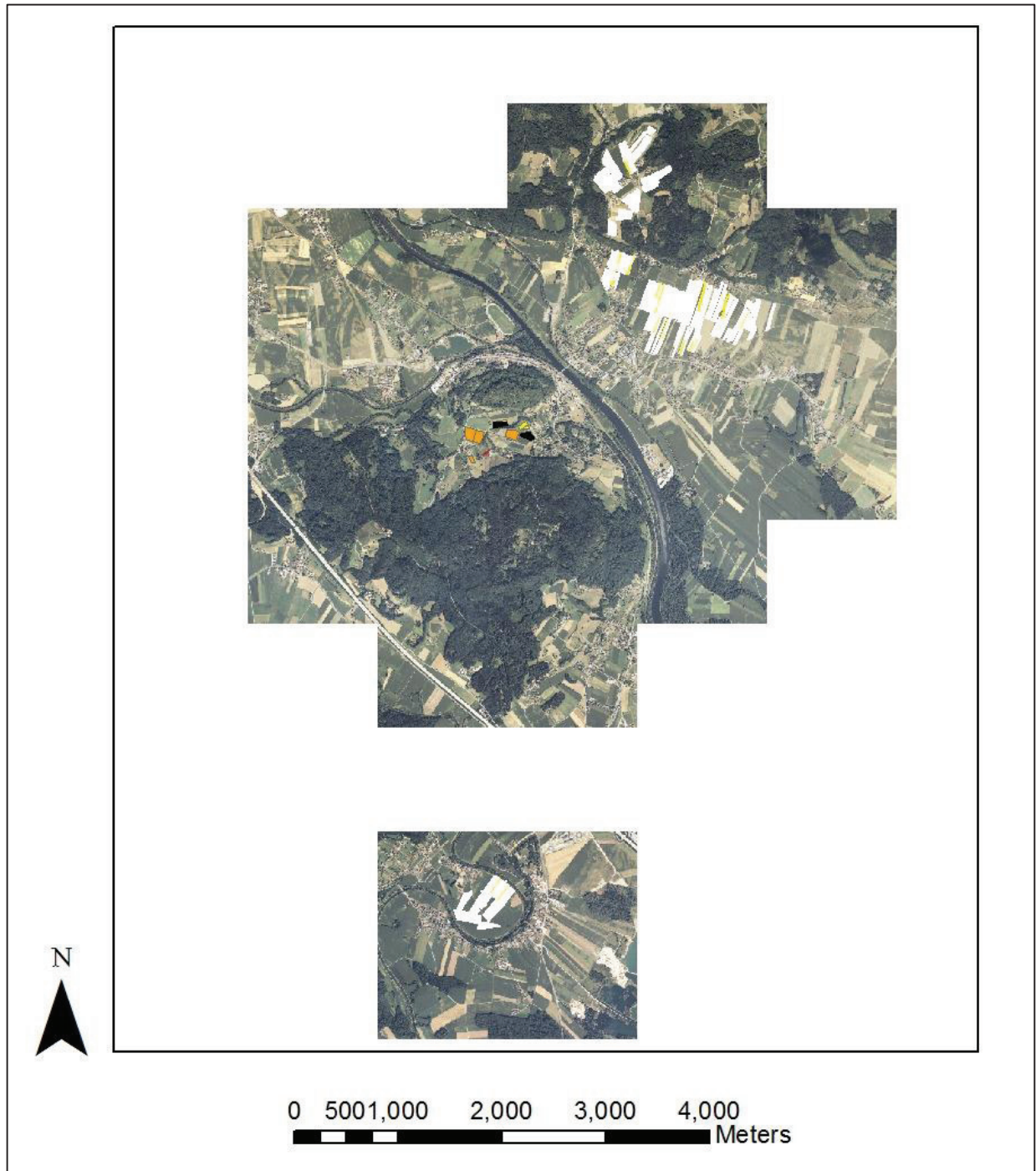
prehistoric and historic landscapes along the middle Mura from the Late Bronze Age through 19<sup>th</sup> century C.E.<sup>48</sup>.



**Figure 4.12**  
**Historic Ceramics collected in Surveys (darker color indicates higher density)**  
**Image generated by author**

<sup>48</sup> Appendices IV and V provide a more exhaustive listing of the ceramic rim typology.





**Figure 4.13**  
**Prehistoric Ceramics collected in Surveys (darker color indicates higher density)**  
**Image generated by author**

### 4.3.2. Evolution of Human Landscapes from Prehistory through the Early Modern Period

The following section examines the evolution of human landscapes from prehistory through the early modern period through a combination of archaeological, geochemical, and historical data. The results from the landscape surveys outlined above are integrated with other significant lines of evidence, including past archaeological work, historical documents, maps, and place-names. This is presented in chronological fashion, using traditional archaeological and historical periodizations, despite the inherent problems in this static and often arbitrary framework (for a critique, see Chapter 10). There is a great deal of evidence from some of these periods, while others remain mysterious. Nonetheless, the purpose of this section is to provide a detailed account of human activities in this small region of the southeastern Alps.

#### 4.3.2.1. Late Neolithic/Copper Age (c. 3900 – 2300 BC)

As noted above, the earliest known finds from the middle Mura region date to the Late Neolithic-Copper Age transition. The material excavated from a Copper Age settlement on the Buchkogel under the direction of Walter Šmid in the early 20<sup>th</sup> century is consistent with the ‘Lasinja culture’, common throughout the southeastern Alpine region and northern Balkans (see Obereder 1989). Beyond this single



**Figure 4.14**  
**Copper Age Flint Axe (photo by author)**

excavation, there had been no evidence of Copper Age settlement in the project area. The only artifact recovered from this project that could be confidently assigned to this period was a small flint axe found in Fernitz (see Figure 4.19); some other non-diagnostic flint debitage was

recovered from Rasental, which may also date to this period. Yet overall, very little lithic material was recovered from the surface collection.

#### *4.3.2.2. Late Bronze Age (1300 – 800 BC) and Early Iron Age (800 – 400 BC)*

There is no conclusive evidence for Early or Middle Bronze Age occupation in this small region, so the next significant phase is the Late Bronze Age and Early Iron Age transition. The material in this region belongs to the Urnfield and Hallstatt styles, found throughout Central Europe. Past archaeological research in the region has demonstrated a large increase in settlement and human activity during this period, particularly from c. 1000 – 700 BC (see contributions in Gutjahr and Tiefengraber 2011). This period has yielded the most abundant prehistoric material from archaeological investigations, as indicated by the large urn graveyard at the foot of the Wildoner Berg that dates to this period.

The results from the survey seem to support the notion of an expansion in human settlement and activity during this period. Although there were no diagnostic metal finds from this period, much of the prehistoric ceramic recovered from the field surveys and test excavations correlates with LBA/EIA ceramics from previous excavations (see Figure 4.15). There are several areas in Rasental and Afram that had very dense surface clusters of this material. It seems highly probable that this was the most densely settled pre-Roman period.



**Figure 4.15**  
**Late Bronze and Early Iron Age Ceramics (photos by author)**

#### 4.3.2.3. Later (Latène) Iron Age (c. 450 – 16 BC)

It is during the Later Iron Age that historical sources first provide some documentation for this region; these sources come from Roman geographers and historians such as Livy (59 BC – AD 17), who describes this region as being a loose confederation of tribes known as the Kingdom of Noricum. This Celtic polity was a trading partner and military rival of the Roman republic in the last two centuries BC; by 16 BC the Roman Empire had conquered this region and it eventually became the Roman province of Noricum (see Alföldy 1974, Chapter 2 this dissertation).

Results from this project's surveys and past excavations indicate that this area was not as densely settled during the later phases of the Iron Age as it has been during the Late Urnfield – Early Hallstatt transition. The characteristic type of ceramic fabric for this period is black graphite-ware, of which there was some, but not very much,

recovered during the surface collection (see Figure 4.16).

'Celtic' Iron Age settlement is also attested by some toponyms in the project area, particularly the rivers. The Mura, for example, is first mentioned in historical sources as the *Muora* in AD 890, but linguists suggest that it is perhaps of Celtic or even pre-Celtic origin, meaning 'standing water' or 'swamp' (Hüttenbach 2004:144). Another river in the project area, the Sulm, is first



**Figure 4.16**  
**Graphite La Tène Rim Fragments (photo by author)**

mentioned as *ad Sulpam* in AD 860, and almost certainly derives from the Celtic word *Solva*, meaning ‘swelling’ or ‘flowing’ (ibid:146).

#### 4.3.2.4. Roman Provincial Period (c. 16 BC – AD 400)

During the Roman Provincial period (c. 16 BC – AD 400), the political and economic center of the middle Mura region was the Roman city of Flavia Solva (today outside the city of Leibnitz, 10 km south of the project area), which acquired its name from both the nearby Sulm river and the Roman dynasty (the Flavians) that were in power when the town officially became a *municipium*. A number of Roman *villae* have been excavated along areas of the middle Mura.

Directly within the project area, 1980s excavations on the Wildoner Berg produced a fair quantity of Roman material, suggesting the presence of a Roman

*castrum*. The most important find from this period was a cut-stone, probably dating from the early 2<sup>nd</sup> century AD, with a burial inscription

for “C. Sempronius Summinus” his wife “Musa” and son “Primus” (Kramer 1989:34). Although it is not wholly clear in the archaeological record, this small Roman settlement was probably abandoned sometime during the 5<sup>th</sup> century AD, as imperial military and political control over the region rapidly eroded (see Chapter 2). The only evidence of occupation during the later phases of the Roman period were the remains of a child’s grave, dated to the 4<sup>th</sup> or 5<sup>th</sup> century



AD, discovered during the excavations of the Urnfield cemetery next to the elementary school (Gutjahr 2011, pers. comm., see Figure 4.17).

There was surprisingly little diagnostic Roman material recovered from the surface collections. Several characteristic Roman ceramic fragments were found in fields outside of Afram, but nothing from the otherwise heavily settled Rasental valley. It is possible that some undecorated and non-diagnostic sherds of Roman-era pottery have been grouped in the more general 'historic' category, but typical Roman ceramic fabrics are fairly identifiable (for example, see Jeschek 2000).



**Figure 4.18**  
**Some typical Roman period ceramic decorations (photos by author)**

#### *4.3.2.5. Late Antiquity/Migration Period (c. AD 400 – 700)*

The four centuries after the collapse of Roman authority are shrouded in mystery, as there are almost no historical or archaeologically recognizable traces of human activity in this region of Austria (Roth 1989). Throughout the southeastern Alps, this period is only identified by the presence of particular styles of metal dress ornamentation or weaponry, none of which have been discovered in the project area, or all of Styria for that matter (Gutjahr, pers. comm. 2008)!

It seems unlikely that this region, which appears to have been continuously occupied since at least fourth millennium BC, would have been completely depopulated from the late 5<sup>th</sup> through early 7<sup>th</sup> centuries AD; yet there is currently no means of dating other types of material culture (i.e. ceramics) to this period. One could assume that portions of the Romanized population did continue to inhabit this region, although without any of the material comforts enjoyed during the Provincial phase. Historical records suggest that this region may have been included in the ‘official’ boundaries of the Ostrogothic and Lombard polities of the 5<sup>th</sup> – 6<sup>th</sup> centuries, although no typical ‘Gothic’ or ‘Lombard’ material culture has been found along the middle Mura.

#### *4.3.2.6. Early Medieval/Slavic Period (c. AD 700 – 1100)*

The next major chapter in the historical narrative of the southeastern Alps is the migration of Slavic-speaking communities beginning in the late 6<sup>th</sup> and early 7<sup>th</sup> centuries AD, which generally proceeded along the valleys of the Drava, Sava, and Mura rivers (Milavec 2009). This migration is generally identified by the presence of so-called ‘Slavic’ wavy-banded coarse-ware pottery, which is found throughout the Mura river valley.

This style of pottery was found during the Wildoner Berg excavations, although not in great abundance (H. Ecker-Eckhofen, pers. comm. 2009). More recent rescue excavations in Rasental have uncovered an early medieval settlement with post-molds and ceramic material (Gutjahr 2008); other early medieval ceramics were excavated from several pits in Enzelsdorf, but with no corresponding structural evidence (Gutjahr et al 2003). Finally, a number of early medieval stray finds, such as an earring and fibulae, were found by a farmer in Afram in the beginning of the 20<sup>th</sup> century (Modrijan 1963).



Historical texts also give us some clue as to the important events of this period. This region may also have been a part of the early Slavic state of Carantania, which established political autonomy from the Avar khaganate in the mid-7<sup>th</sup> century, before being subsumed within the growing Frankish state under Charlemagne (Bowlus 1995). In the 9<sup>th</sup> and 10<sup>th</sup> centuries, the region served as a *march*<sup>49</sup> (borderland) between the Carolingian/Ottonian Empire and rival polities to the east, such the Avars and Magyars (Baltl 2004).

The first direct historical accounts of the project area in the post-Roman period only appear in the late 9<sup>th</sup> century, with the mention of “Hengistfeldon” in the *Annales Fuldenses*, an early medieval chronicle recorded in the Fulda monastery in the modern region of Hesse, Germany, generally believed to have been contemporary with the events it was describing. The *Annales* detail an important meeting between Arnulf of Carinthia, Carolingian King of East Francia, and the Slavic Duke Brazlavo of Sissek in AD 892 (see Bowlus 1995:224-228). Although the location of this “Hengistfeldon” is controversial, many historians believe that it was on the Wildoner Schlossberg (see Kramer 1992:50 and Schaffler 1978). If this was in fact the location of this important meeting, it suggests that already by the 9<sup>th</sup> century this area was an important center of the eastern Carolingian empire. “Hengistburg” is later named as the main castle on the middle Mura in 970. During this same year, the Emperor Otto I officially established the March of Styria as a buffer zone against the Magyar invasions (Bowlus 1995).

The surface collection from this survey did recover some material that appears to be of early medieval origin. Some of the ceramics were decorated with the characteristic ‘wavy bands’, while others were undecorated but were composed of a ceramic fabric that correlated with the previously recovered material from Rasental. This material came from Rasental, Fernitz, and a

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<sup>49</sup> Hence the German name *Steiermark*

few from Afram. This material appears to be more abundant than either the Late Iron Age or Roman period.



**Figure 4.19**  
**Some Early Medieval ceramics (photos by author)**

#### *4.3.2.7. High and Later Medieval Periods (c. AD 1100 – 1500)*

In 1180, the March of Styria was elevated to a duchy by Emperor Frederick Barbarossa. It was under the control of the House of Babenberg—and then Habsburg—as part of the German Holy Roman Empire. It is also during this period that there is the first written evidence of many of the village names in the region. Place names in the area reveal a mixture of Germanic and Slavic etymologies (Hüttenbach 2004, Zahn 1893), which seems to reinforce the idea that this region was ethnically and linguistically mixed during the Early and High Middle Ages. However it is difficult to determine how early the colonization of German-speaking communities occurred in this region based solely on toponymic evidence.

The place name Afram is derived from the Old German name ‘Aberhram’, which was probably the name of one of the first landowners in the area, settling sometime before the 12<sup>th</sup> century (Hüttenbach 2004:163). Names ending in ‘-ing’ (Göttling, Stocking) are also Germanic, often

thought to date to periods of Bavarian colonization, which first occurred in the 8<sup>th</sup> century, but with subsequent waves during much later (13<sup>th</sup> – 15<sup>th</sup>) centuries.

Slavic names include Sukdull, first mentioned in 1318 as *Zuchtal*, and likely derived from the early Slavic words for ‘dry’ (*such*) and ‘valley’ (*dol*) (ibid:154). Fernitz and Lang are also probably of Slavic origin, the former first mentioned in 1209 under the name *Vorenze*, and the latter in 1140 as *Lunka* (ibid:154). As perhaps the oldest settlement in the region, the etymological origins of Wildon are less certain; it is only first mentioned in 1184 as *Wildonia* (Zahn 1893:32) with some experts suggesting either Slavic or perhaps pre-Slavic origins (Hausner 1989).

The surface collection suggests that the project experienced a great expansion in settlement and human activity during the High and Late Medieval periods, which may correlate with the immigration of Bavarian populations from the northwest. Although it is difficult to differentiate the ceramic fabric types in the High Medieval through Early Modern periods, rim type can provide greater chronological control. Rim styles that were characteristic for the High and Late Medieval periods were uncovered from fields around every village in the survey area (see map)<sup>50</sup>. In the mid-13<sup>th</sup> century is the first documentary evidence for the parish church (St. Mary Magdalene).

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<sup>50</sup> See Appendices C and D for a comprehensive ceramic typology for the historic materials collected in the survey.



**Figure 4.20**  
**Examples of Late Medieval Rim Styles (photos by author)**

#### 4.3.2.8. Early Modern Period (c. AD 1500 – 1700)

During the early modern period, Styria remained under the control of the Habsburg monarchy. During the late 14<sup>th</sup> through early 17<sup>th</sup> centuries, it became part of what is known as ‘Inner Austria’, along with neighboring duchies of Carinthia and Carniola, the Windic March, the County of Gorizia, and the city of Trieste. The city of Graz, north of the project area, was made the capital and the seat of the duke’s residence.

The results of the surface collection indicate a further expansion in land use and settlement during this period. The pottery becomes more varied, with numerous different styles of rims, bases, handles, decorations, etc. (see Figure 4.22), and a number of other metal finds also were documented in both survey and excavation (see Figures 4.21, 4.23, 4.24).



**Figure 4.21**  
**Examples of Metal Surface Finds: 1869 Hungarian Krajczar (Ger: Kreuzer) on left; button with grape motif on right (photos by author)**



**Figure 4.22**  
**Examples of Early Modern Rim Styles (photos by author)**



**Figure 4.23**  
**Historic Iron Knife from TU GLUD 1, Level 3 (photo by author)**



**Figure 4.24**  
**Historic Iron Fork (?) from TU ECK 1a, Level 4 (photo by author)**

### **4.3.3. Long-term Landscape Patterns**

#### *4.3.3.1. Correlation of Prehistoric and Historic Surface Densities*

The previous section has attempted to provide a comprehensive account of changes in human settlement and activity in this small section of the Mura river valley, primarily through the

integration of archaeological, historical, and toponymic evidence, from this research project and previous archaeological research. The results from the surveys have generated important archaeological information that augments our understanding of a number of prehistoric and historical periods. By adopting a landscape perspective, this project provided a more comprehensive understanding of the nature of the human landscape during each of these periods. A number of new 'sites' and artifact concentrations revealed a pattern of human activity unaccounted by previous excavations in the region.

However, a landscape perspective can also provide broader diachronic approach that considers the long-term development of human landscapes, rather than focusing only on specific periods. By investigating the overall evolution of landscapes, one can also profitably utilize the non-diagnostic ceramic material, which cannot be precisely correlated to a single culture-historical period. Here, the emphasis is on general long-term diachronic patterning. In the following section, spatial patterns and relationships are examined with the aid of ArcMap®.

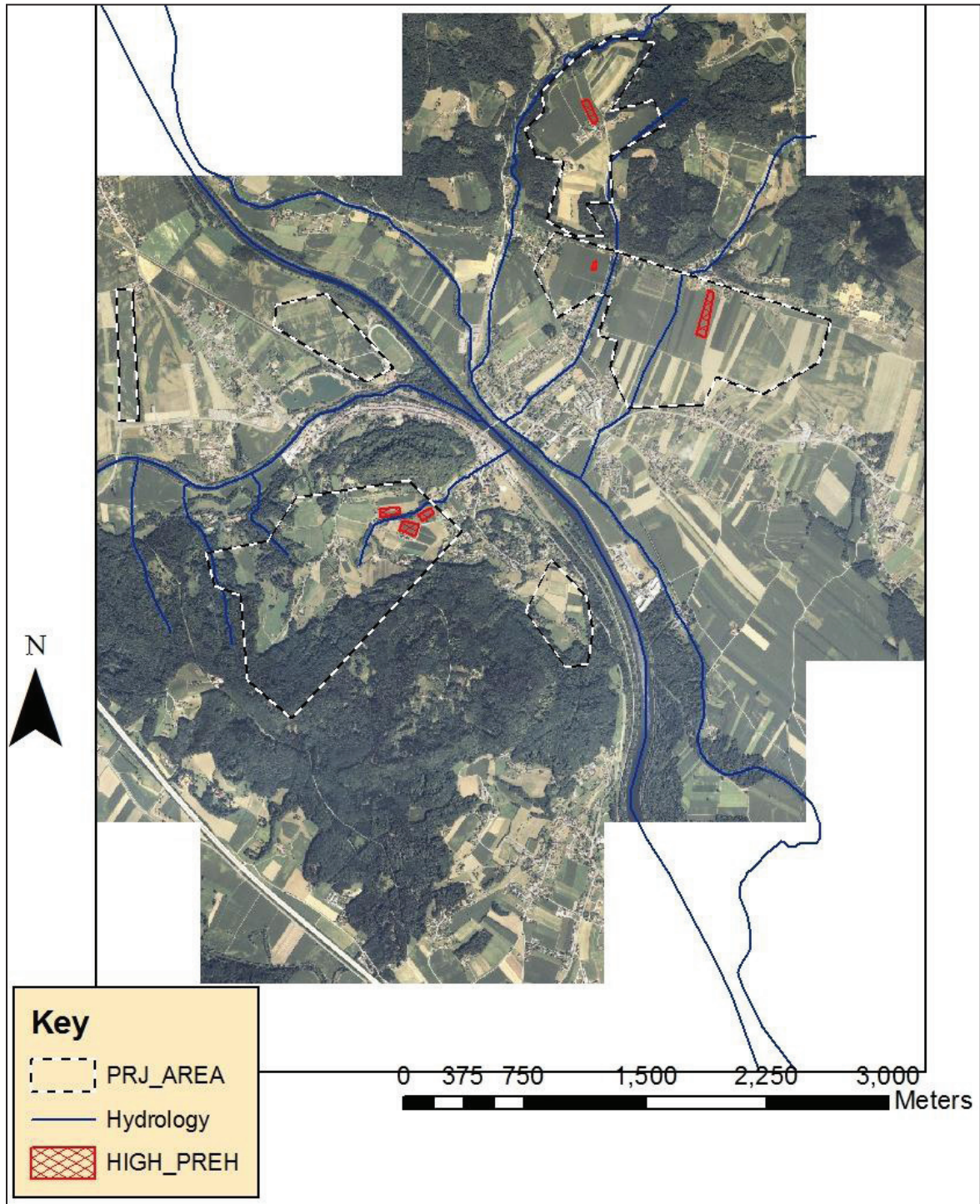
When plotting the distribution of prehistoric material across the landscape, an interesting correlation emerges with the hydrology of the region: areas of elevated prehistoric activity are characterized by a proximity to freshwater sources. Figure 4.25 illustrates this patterning within the middle sections of the surveys, but it also holds true for areas to the north. The strong spatial relationship between prehistoric material and rivers and streams is perhaps not surprising, given that access to nearby freshwater sources is often an important consideration for prehistoric settlement. Nevertheless, since the survey was non-biased in terms of sampling in areas both near to and far from freshwater sources, it provides further empirical support for this general pattern of early human settlement. As noted above, the prehistoric surface material exhibited rather sharp spatial boundaries, suggesting that this material represents areas of settlement and



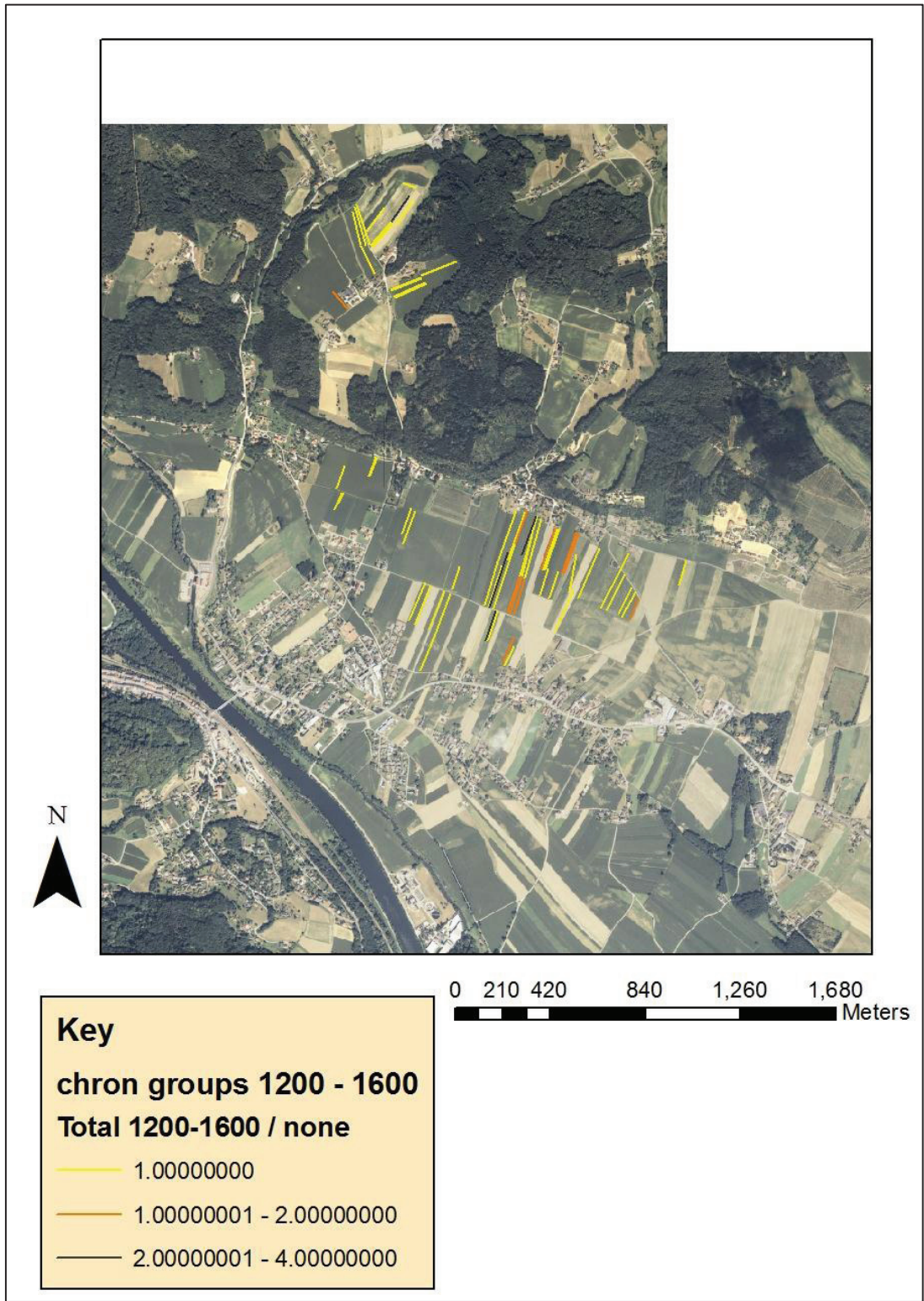
domestic activity. The extremely low density of prehistoric ceramic material throughout much of the survey area suggests that these Iron Age communities did not use broken ceramic material for agricultural practices such as manuring, as is the case during Late Medieval and Early Modern periods.

The historic material exhibited three ‘types’ of spatial distribution (see Figure 4.12 above). First, a low density ‘background noise’ of historic ceramic materials was observed across the project area; as observed above, this was interpreted (following Wilkinson 1989) as the result of the use of this material in agricultural practices such as manuring. Second, some more spatially restricted areas exhibited significantly higher concentrations of surface ceramics, which is interpreted as the result of more intensive and longer term agricultural practices. Finally, there were several more small areas containing very high ceramic material, which are interpreted as traces of abandoned farmsteads. Based on the diagnostic rim types, these small settlements first appear during the High and Late Middle Ages, with expansions in the Early Modern period. Figures 4.26 and 4.27 illustrate the distribution of identifiable ceramics from each of these periods.

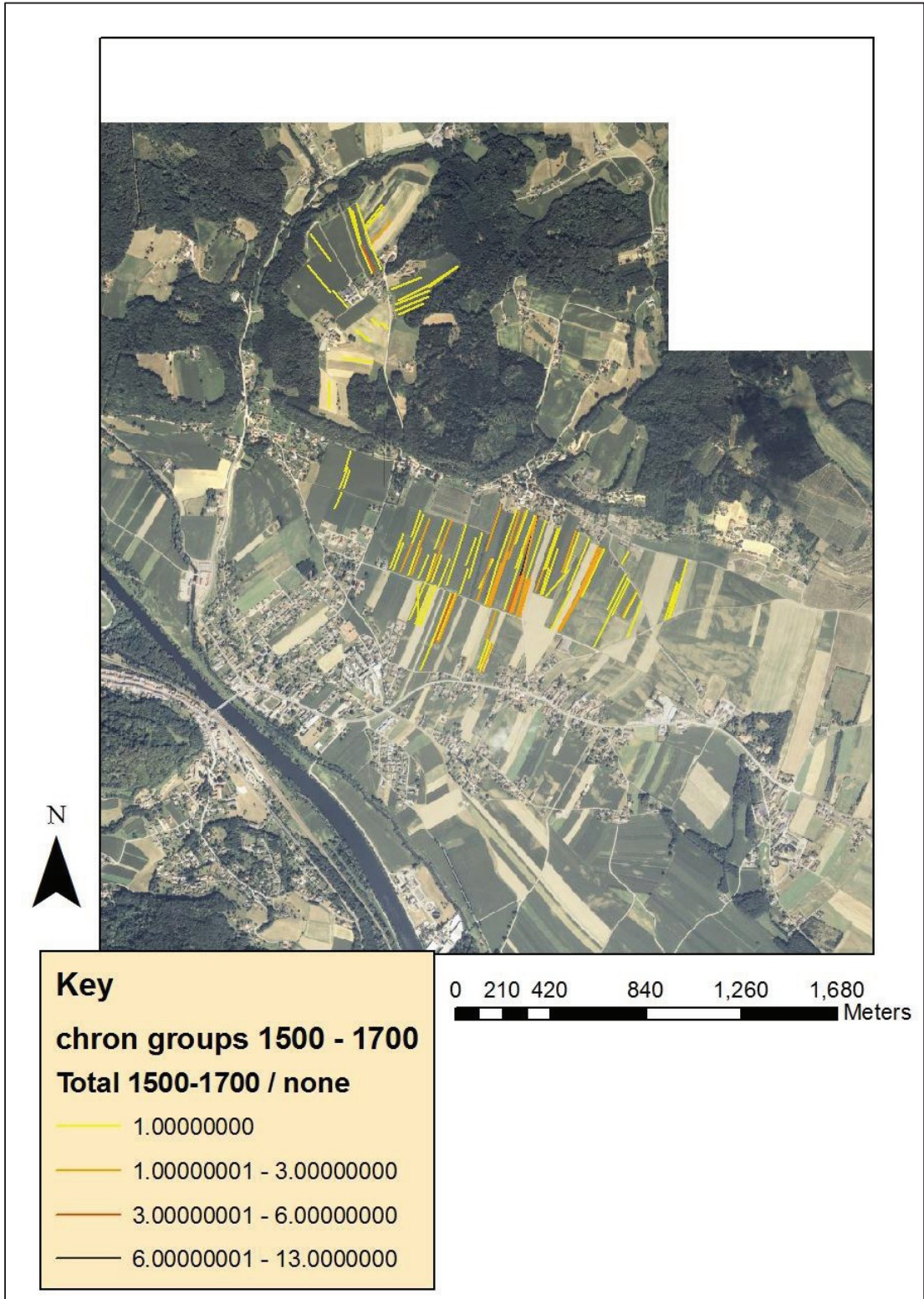
When these elevated areas of historic material were overlaid on the prehistoric surface distributions, another significant pattern emerged. As Figure 4.28 reveals, areas with the greatest amount of prehistoric material also yielded similarly high historic material. The historic densities were generally more expansive, but it is significant that these two distributions were so strongly correlated. This suggests a high degree of long-term continuity between phases of prehistoric and historic settlement and land-use in the broader landscape. Perhaps these areas were the most favorable locations in the landscape for human activity, so from the Early Iron Age through High Middle Ages, communities continued to live and work in roughly the same places.



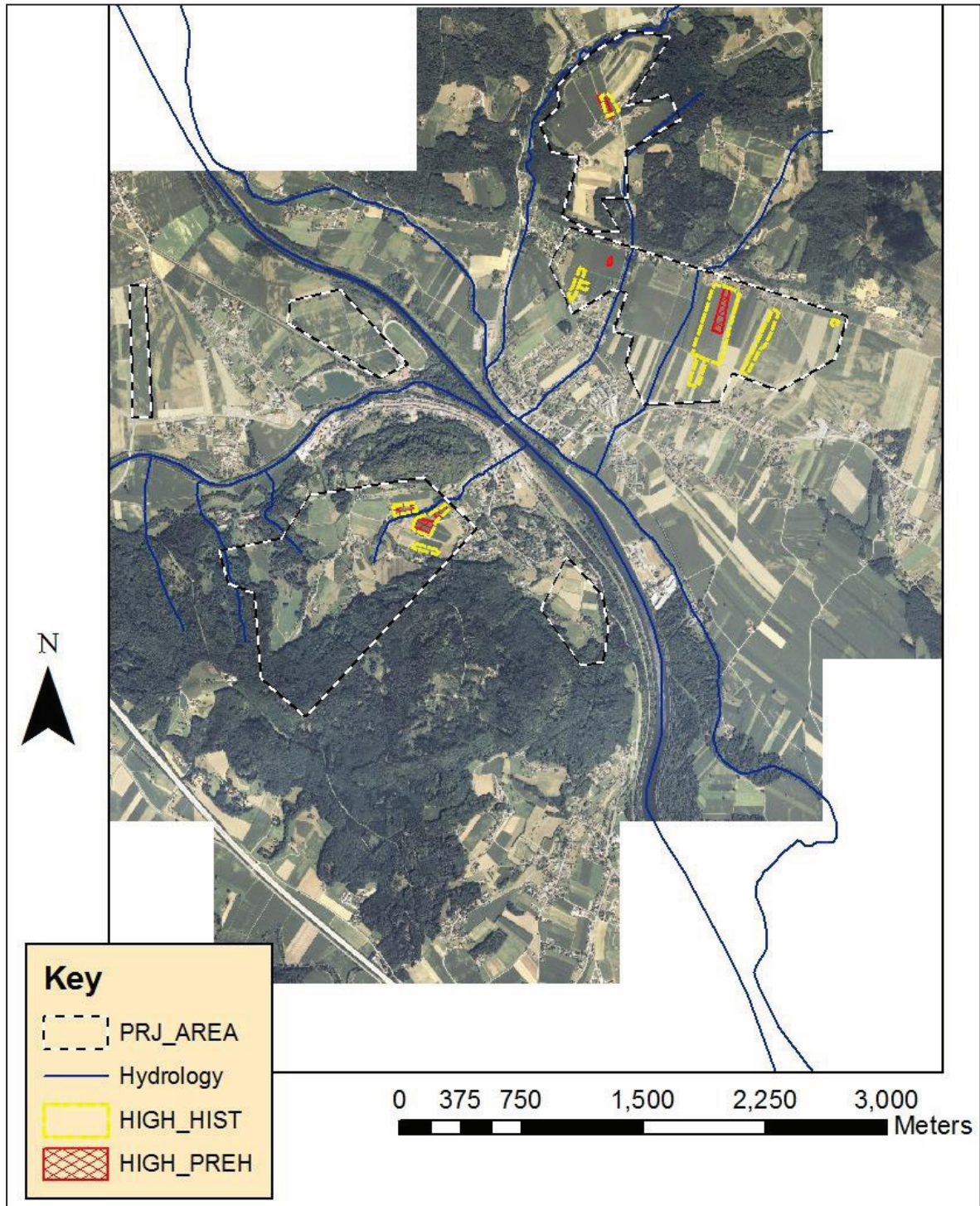
**Figure 4.25**  
**Spatial Correlation of High Prehistoric Surface Density to Freshwater Sources**  
 Image generated by author



**Figure 4.26**  
**Transects with High and Late Medieval Diagnostic Ceramics in Afram, Stocking, and Sukdull**  
 Image generated by author



**Figure 4.27**  
**Transects with Early Modern Diagnostic Ceramics in Afram, Stocking, and Sukdull**  
 Image generated by author



**Figure 4.28**  
**Spatial Correlation of High Historic and High Prehistoric Surface Density**  
 Image generated by author

#### 4.3.3.2. *Correlation of Surface Artifacts and Soil Phosphate Levels*

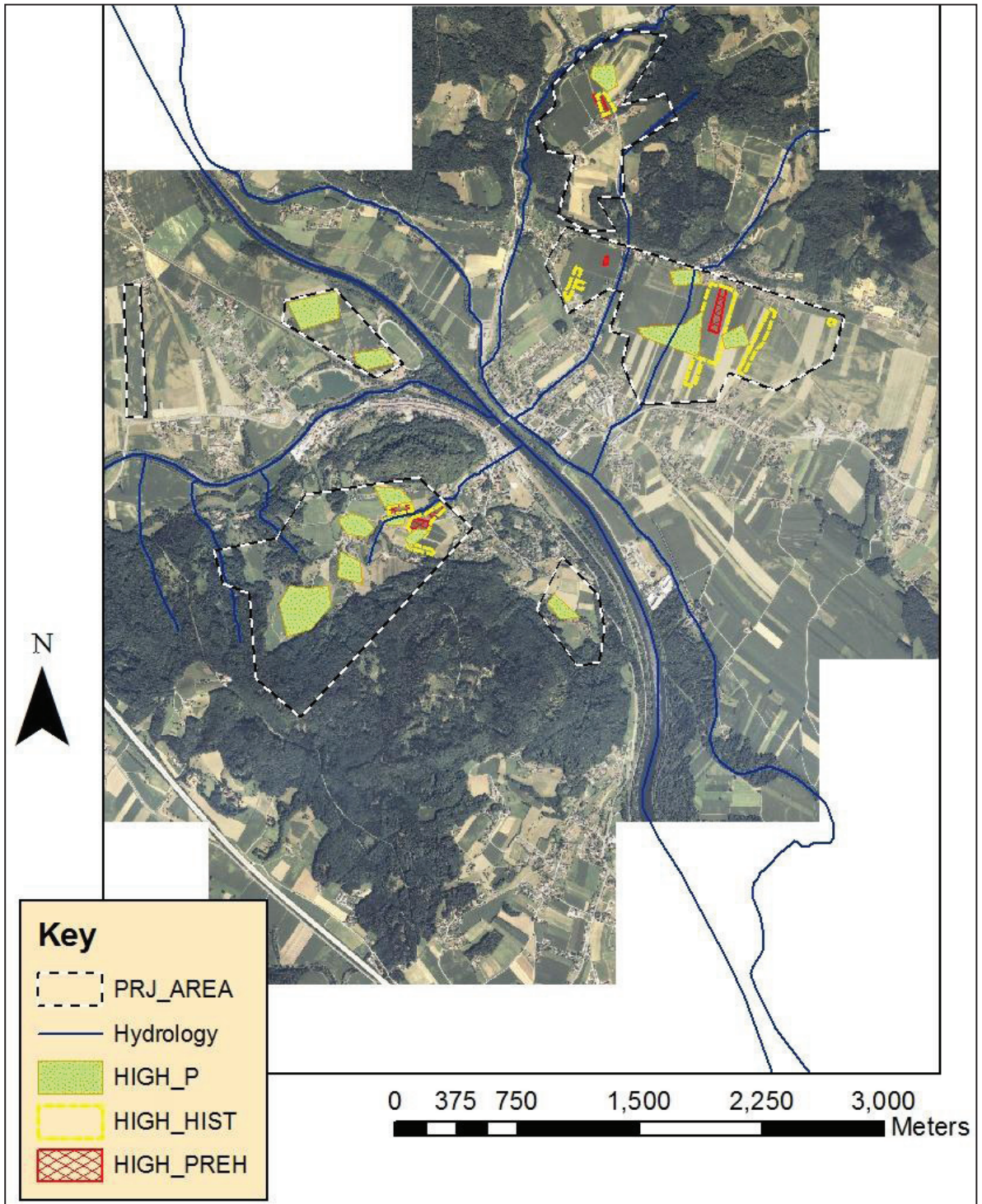
Finally, it is necessary to examine the relationship of surface artifacts with soil phosphate levels in order to further explore issues of human activity and land-use. As observed above, spatial distributions of ceramic materials can be indicative of different kinds of past human activity, such as domestic activities, manuring, or trash deposition. Broken ceramic materials could also serve other useful purposes, such as filling in postholes or low-lying areas around the home (Thurston, pers. comm. 2011).

As described above (section 4.2.5), soil phosphates have been used by archaeologists for decades to explore certain types of past human activity. Organic materials have a particular strong phosphate signature, so activities such as manuring, the deposition of animal bones, or burials can also greatly influence soil phosphate levels. A number of previous studies have examined the correlation of surface scatters with soil chemical levels, including phosphates. Studies by Wilkinson (1988), Bull et al (2001), and James (1999) have all demonstrated that soil phosphates strongly correlate to surface artifact densities, particularly in manuring contexts. Therefore phosphate surveys have been useful at identifying prehistoric field systems, areas of food waste middens, and locating unmarked cemeteries. Other kinds of activities, such as the production of ceramics, lithics, or metals, do not necessarily have much of an impact on phosphate levels.

When the artifact densities are combined with the results from the soil phosphate survey, some very interesting patterns emerge. The areas exhibiting the high soil phosphate levels did *not* directly overlay those areas with the highest density of surface artifacts. Rather, as evident in Figures 4.29 and 4.30, elevated levels of soil phosphate appear directly *adjacent* to high artifact concentrations. What does this intriguing pattern indicate? Such elevated phosphate levels could reflect field systems, which is further supported by the fact that they surrounded the highest

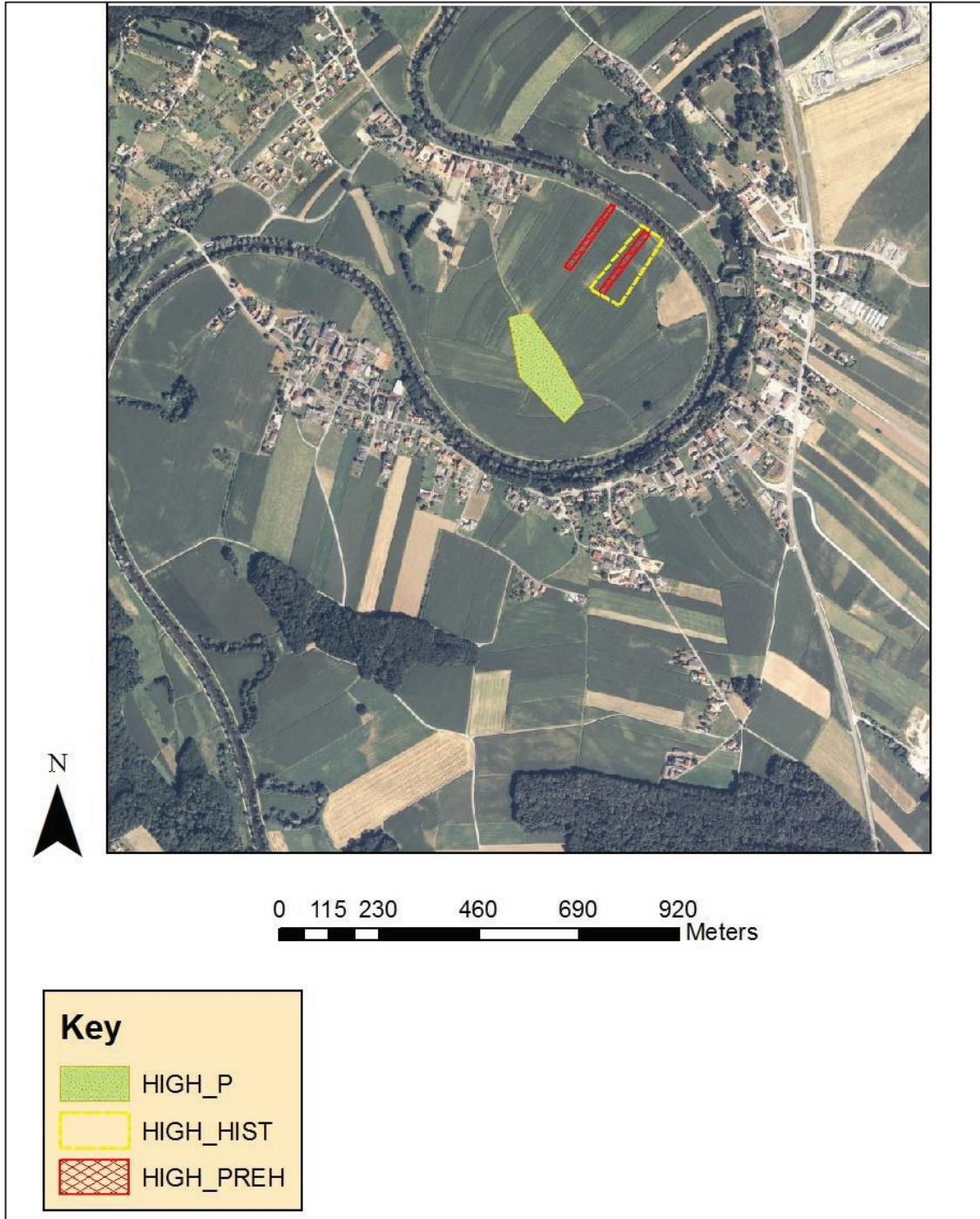
levels of surface materials (interpreted as abandoned farmsteads) and also strongly correlate with the low density ceramic distributions interpreted as the result of manuring. The combination of continuous low density ceramic material and elevated phosphate levels make the presence of past field systems quite likely. It is also possible that some of these areas of high phosphate might also indicate places where food waste was deposited over long periods. In any case, this dataset provide an additional important line of evidence for considering past human activities and land-use at the landscape scale.

It must also be noted that some of the high soil phosphate readings appear to have been the result of anomalous geological processes or modern disturbances rather than ancient human activities. For example, the areas tested north of the *Schlossberg* and west of the river indicated very high phosphate levels (all 4s and 5s). Subsequent surface collection produced almost no material culture, which at first appeared curious. However later archival research revealed that these areas were actually directly *under* the Mura River before canalization in the 18<sup>th</sup> century. The recurrent accumulation of alluvial deposits must be responsible for the extremely high P levels in the soil. In other cases, elevated soil phosphate levels were later revealed to be in locations with significant modern disturbances.



**Figure 4.29**  
**Spatial Relationship of High Phosphate Areas with High Surface Densities**  
 Image generated by author





**Figure 4.30**  
**Correlation of Prehistoric Ceramics, Historic Ceramics, and High Phosphates at Götting**  
 Image generated by author

#### *4.3.3.3. Correlation of Material from Test Units*

As mentioned in the methodology section above, one of the other potential limitations of soil phosphate analysis is that it often cannot provide chronological precision without corroborating surface or subsurface data. That is, one cannot always identify the particular period associated with a high soil phosphate reading; indeed it may be the result of activities stretching along several periods. One way to address this shortcoming is with targeted test units at locations of elevated phosphate. Towards this end, approximate a dozen 1 x 1 meter targeted test units were placed in areas of elevated soil phosphate levels or artifact scatters to further investigate the correlation of surface material, subsurface material, and soil chemistry (see Figure 4.31).

The material from the test excavations provided further evidence of long-term settlement and land-use patterns in the project area. Test units placed near points of elevated soil phosphates typically produced a mix of historic and prehistoric materials, although unfortunately no major features were uncovered. In most cases, the soil horizons with elevated phosphate levels correlated with either Late Medieval/Early Modern material culture—such as ceramics and animal bone in test units KNOP1, KNOP2, LEIT1—or more recent building materials (nails, coal, metal frags, glass, brick, etc.) such as in test unit INN1, and even a mysterious historic iron knife at test unit GLUD1 (see Figure 4.23).<sup>51</sup> This further indicates that high phosphate levels were either correlated with field systems or trash deposition.

Occasionally, prehistoric material was found in high phosphate layers, such as in test unit HOL1 in Afram. The stratigraphy of these test units also generally supported the hypothesis that historic

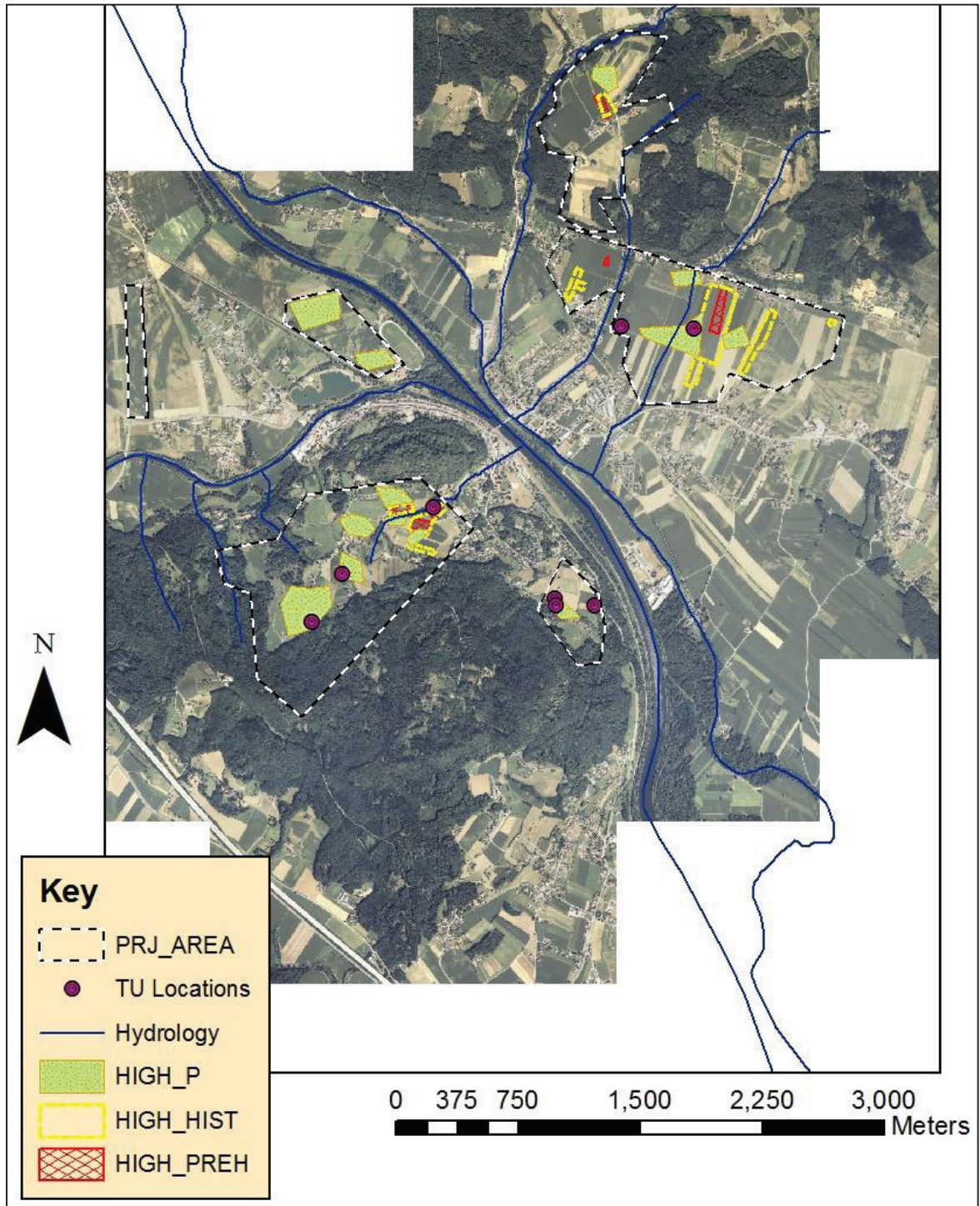
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<sup>51</sup> Why this iron knife, found 20 cm below the ploughzone, seemed to correlate with high phosphate levels is uncertain and may be merely coincidental.

settlement directly overlay a 'prehistoric' predecessor; in several cases, Early Modern material culture was found in strata directly above Early Iron Age material.

It is important to note that high densities of surface material did not *necessarily* correlate with significant subsurface archaeological material. For example, a test unit was placed in a field in Rasental with a particularly high concentration of surface material (both historic and prehistoric); however no significant quantity of material was uncovered in the 3 m<sup>2</sup> excavation (test unit ECK1), although it did produce an unusual subsurface feature containing what appears to be a historic iron fork (see Figure 4.24).

In sum, the test units produced some important evidence for understanding long-term patterns of settlement and land-use by connecting surface concentrations, subsurface material, and soil phosphate levels. One possible avenue for future research would be to open up much larger excavation areas in places of high surface material or soil phosphate levels; a single-context horizontal excavation would have a much high probability of identifying actual prehistoric structures, cemeteries, or production areas. Naturally, such a costly and time consuming project was outside the scope of this dissertation; however the information gathered in the landscape survey has provided useful evidence for where such large-scale excavations would likely be most effective.



**Figure 4.31**  
**Soil Phosphate and Artifact Levels with Locations of Test Units**  
 Image generated by author

#### **4.4. CONCLUSION: CHANGE AND CONTINUITY IN BROADER CONTEXT**

This chapter has provided a broader temporal context for understanding the shift from the Late Roman Empire to the Early Middle Ages in the eastern Alps. Through the integration of multiple lines of evidence (archaeological, geochemical, historical), the past landscapes along the middle Mura begin to emerge. This region was heavily settled during the Late Bronze and Early Iron Ages; perhaps the most common prehistoric sites are those dating to approximately 1200 – 800 BC. There is less diagnostically La Tène material culture, although it is possible that similar Early Iron Age ceramic styles continued to be used into this period. During the Roman period, there are a number of well-known sites in the general region (particularly the town of Flavia Solva several kilometers to the south), but there was a surprisingly lack of diagnostically Roman material recovered in the pedestrian surveys. Early medieval material is also sparse, but definitely present. Intensive settlement only appears to return in the High and Late Medieval periods, to which the vast majority of the collected ceramic materials belong.

It should be mentioned that there are several problems that limit the efficacy of this type of analysis. Unfortunately, the only diagnostic material culture used to identify Late Antique (5<sup>th</sup> – 7<sup>th</sup> century AD) occupations are small metal finds; since none of these have been discovered in Styria, this period remains quite enigmatic. It is highly improbable that this region was entirely depopulated for several hundred years, but at this point archaeologists have no means of studying this population. Hopefully, future excavation will be able to identify certain types of ceramics that were used during this period of Styrian proto-history.

## CHAPTER 5

### A BRIEF HISTORY OF HUMANS AND NONHUMANS IN ANTHROPOLOGICAL AND ARCHAEOLOGICAL THOUGHT

#### **5.1. INTRODUCTION**

Part One of this dissertation examined the Late Roman – Early Medieval transition in the southeastern Alps and northern Adriatic region, specifically focusing on issues of social identity, material culture, and technology. Part Two expands the theoretical purview by investigating the relationship among human identity and material culture. This chapter provides a brief historical outline of the different ways in which cultural and archaeological anthropologists have conceptualized this complex and ambiguous relationship. Chapter 6 then builds upon this framework, outlining a new theoretical perspective that combines approaches of materiality, relationality, and complexity. Finally, in Chapter 7 this new perspective is applied to the study of social identity and technological choice in the Late Roman and Early Medieval periods.

##### **5.1.1. Materiality in Archaeology**

A new and peculiar vocabulary has risen to prominence in Anglo-American archaeology over the past decade. Terms like ‘materiality’ (Meskell 2005, Tilley 2004), ‘thing theory’ (Hodder 2006), ‘entanglement’ (Martindale 2009, Hodder 2011), ‘object biography’ (Holtorf 2002, Gosden and Marshall 1999), ‘symmetry’ (Witmore 2007, Olsen 2010), ‘non-human’ or ‘object agency’ (Gosden 2005, Knappett and Malafouris 2008), ‘post-humanocentric’ (Normark 2006), ‘relational ontology’ (Herva 2009, Hutson 2010), ‘brain-artifact interface’ (Malafouris 2010), and ‘distributed cognition’ (Sutton 2008)—just to name a few—have become an inescapable part of our discipline’s 21<sup>st</sup> century lexicon. Although, at first glance, these various terms may not appear to have much in common, they are all manifestations of a growing fascination among

archaeologists and socio-cultural anthropologists concerning the relationship between humans and material things<sup>52</sup>.

These novel approaches reveal a growing dissatisfaction with the dominant theoretical paradigms of late 20<sup>th</sup> century social science research, which are often accused of focusing exclusively on the realm of the ideational and immaterial, thereby overlooking the importance of ‘things’ in everyday life (see for example Miller 1987:217, Schiffer 1999:2, Olsen 2003, Latour 2005:73, Webmoor and Witmore 2008). However, as Bjornar Olsen (2010:22) reminds us: “Saying that material culture has been ignored in the social and human sciences is utterly unfair to one discipline that has stubbornly continued to engage with things: archaeology.”

Yet archaeology’s distinction as *the* discipline of things did not prevent it from embracing the anti-material epistemologies that dominated late 20<sup>th</sup> century Anglo-American social theory. Now that the intellectual winds appear to be shifting towards the *material* and *corporeal*, a number of important questions about our discipline’s place in this ‘return to things’ must be broached. For example: are these new ‘materiality approaches’ simply efforts to dress up traditional archaeological practices with trendy humanities jargon, in some vain attempt to ‘prove’ archaeology’s theoretical relevance? Do discussions of ‘material agency’ ultimately end up generating more heat than light, or do they actually provide meaningful intellectual insights? What distinguishes materiality approaches from the many other ways that archaeologists think about and deal with ‘things’? Moreover, if archaeology is the study of things *par excellence*, why are we the ones adopting frameworks and vocabulary from *other* disciplines, such as socio-cultural anthropology, sociology, cognitive science and even philosophy?

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<sup>52</sup> For specifically socio-cultural approaches to human/nonhuman relations, see Miller 2005, Henare, Holbraad, and Wastell 2007, Gell 1998, Tietmeyer et al. 2010

In order to properly address such questions, it is necessary place contemporary ‘materiality studies’ in a proper historical and disciplinary context. Towards this goal, the following chapter provides a brief overview of the multifaceted ways in which modern (primarily Anglo-American) archaeology and anthropology have sought to conceptualize and explain the relationship between human beings and their material world, beginning with the mid-19<sup>th</sup> century professionalization of anthropology and archaeology and proceeding up through the present day. It then identifies and investigates some of the intellectual origins of contemporary materiality perspectives, which – as we will see – can largely be traced to the 1980s.

Of course, this chapter does not claim to be an *exhaustive* account of the innumerable means by which anthropologists (archaeological and cultural) have sought to understand the incredibly complex relationship between ‘subjects’ and ‘objects’. Such an objective—in many ways the core of any archaeological endeavor—would prove impossible in the limited space allowed here. I nevertheless attempt to trace some of the major paradigmatic shifts over the past 150 years, with the aim of better appreciating the significance—and assessing the analytical potential—of the materiality perspectives that have emerged over the past quarter century in these disciplines. This chapter furthermore provides an important historical context for the articulation of my own theoretical approach provided in the following chapter. However, before starting on this whirlwind tour of modern archaeological thought, we should first situate such developments within the broader academic *Zeitgeist*.

### **5.1.2. Materiality in Philosophy and the Humanities**

It goes without saying that interest in the relationship of humans and ‘things’ has not been limited to archaeology (or even social science). Rather, this topic—in a very broad sense—has long been a central concern of Western philosophy. Technology and material culture—as well as



‘things’ more generally—have played a key role in the thought of such seminal European philosophers as Hegel, Marx, Bergson, Merleau-Ponty, Heidegger, Benjamin, Sartre, Foucault, Serres, and Deleuze. More recently, a number of contemporary philosophers have taken such perspectives to their logical limits, articulating the theoretical basis for a radical and ambitious ‘object oriented’ philosophy (sometimes also known as ‘Speculative Realism’); the ambitious goal of this intellectual undertaking is nothing less than a complete overhaul of Kant’s epistemology, which has served as the starting point for virtually all subsequent Western philosophical inquiries (see Harman 2010, Brassier 2009, Meillassoux 2008).

At the same time, a renewed theoretical interest in ‘things’ is increasingly evident in the humanities during the past decade (see Brown 2001, 2003, Knapp and Pence 2003, Yates 2006, Robertson 2008, Bennett and Joyce 2010), influenced by techno-feminist (Haraway 1988, Wajcman 2004) and post/humanist (Hayles 1999, Pepperell 2003) approaches in addition to the philosophical giants listed above. This movement—sometimes referred to as the ‘materialist turn’—has influenced humanities scholars in modern languages, comparative literature, history, art, media studies, medieval and Renaissance studies, political philosophy, and beyond.

Although these philosophical and literary movements are only of tangential interest here, they demonstrate that emerging materiality perspectives in anthropology mirror a broader intellectual shift in the first decade of this millennium, which has moved away from the immaterial, ethereal, linguistic, and textual, towards the thing-ly, earthly, sensuous, and corporeal. The reasons behind – and potential consequences of – this fascinating transdisciplinary theoretical shift are beyond the scope of this chapter, but this movement is unquestionably one in which both ethnographers and archaeologists must continue to have an important voice.

## **5.2. 'PRIMITIVE' TECHNOLOGY IN EARLY ANTHROPOLOGY (c. 1860 – 1920)**

### **5.2.1. Nineteenth Century Evolutionism**

Most histories of anthropology trace the origins of the discipline to the second half of the 19<sup>th</sup> century, when archaeology and ethnology were closely aligned within a colonialist and evolutionary framework<sup>53</sup>. This germinal stage of scientific anthropology has been termed the 'Museum Phase' (Sturtevant 1969) and the period of 'Imperial synthesis' (Trigger 1989). It was during this time that European anthropologists and archaeologists—taking advantage of the political hegemony exerted by the West over much of the globe—were first able to systematically collect, catalogue, and display ethnographic and prehistoric artifacts from Africa, Asia, and the New World. These curational activities were in many ways a continuation of earlier European traditions such as the Renaissance-era 'cabinet of curiosities', in which various 'natural' and 'artificial' exotica were collected and displayed for a curious public (see Stocking 1985). By the late 19<sup>th</sup> century, efforts to preserve and record indigenous material culture were also driven by the recognition that such traditional ways of life were rapidly disappearing and needed to be systematically documented for posterity (Bell and Geismar 2009:9).

It was within this historical context that early anthropologists considered the role of material culture in human societies. Not surprisingly, at a time when Europeans' technological prowess was viewed as clear evidence of their cultural (and often biological) superiority over non-Western peoples, material culture<sup>54</sup> (i.e. technology) was considered a primary indicator of social evolutionary progress. For example, Lewis Henry Morgan's three stages of social development

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<sup>53</sup> See also Chapter 9

<sup>54</sup> Although note that this is a somewhat anachronistic use of the term; the phrase 'material culture' did not first appear in anthropology until the interwar period (Hicks 2010:30).

(savagery, barbarism, and civilization) were largely established by the degree of ‘technological’ advancement, with agriculture and metallurgy marking the transition from savagery to barbarism, and writing from barbarism to civilization (see Morgan 1877). Morgan’s social taxonomy proved tremendously influential, even inspiring Marx’s famous socio-economic evolutionary framework. A unilinear evolutionary perspective premised upon technological development was also adopted in archaeological research, most famously exemplified in J.J.A. Worsaae’s (1849) chrono-technological division of European prehistory into Stone, Bronze, and Iron Ages.

Furthermore, aristocratic intellectuals such as John Lubbock (1872) sought to highlight the parallels between archaeological remains and the technology of so-called ‘modern savages’. The character and functioning of prehistoric societies could therefore be illuminated by contemporary ethnographic evidence of indigenous peoples deemed as evolutionary equivalents. For example, the social, political, and religious systems of Australian aboriginal groups were thought to faithfully mirror those of Paleolithic peoples (Trigger 1989:146). Therefore, during this period the discovery of material culture was important for identifying the evolutionary progress of a past culture or ‘civilization’, but was rarely thought to provide novel insights into the functioning of human societies (since the stages of evolutionary development had already been identified). Similarly, little need was seen for extensive ethnographic fieldwork, since the technological progress of a society—which was of primary interest—could be just as effectively determined by studying ethnographic collections in museums.

### **5.2.2. Rise of Functionalist Anthropology**

In the early 20<sup>th</sup> century, the discipline of socio-cultural anthropology underwent a tremendous change, as Victorian ‘armchair’ anthropology was gradually replaced by extended ethnographic

fieldwork—through the new method of participant-observation—as the primary means of studying indigenous societies. The strict evolutionary (and often racially loaded) approaches of the previous generation were eschewed in favor of historical particularism and cultural relativism. The four major figures responsible for this paradigmatic disciplinary shift were Franz Boas, Alfred Radcliffe-Brown, Bronisław Malinowski, and Marcel Mauss (see Eriksen and Nielsen 2001). These ‘founding fathers’ and their students distanced themselves from the evolutionary conceptualization of technology that dominated 19<sup>th</sup> century ethnological research by emphasizing the importance of the *context* in which such objects were used, and the *meanings* imparted to them by their makers. In North America, this became a key element of Boas’ ‘historical method’, which deliberately rejected sweeping theoretical generalizations in favor of understanding and assessing each particular culture (including their technology) on its own terms (Ridinger 2008).

Malinowski’s work in Melanesia (1922) provided another innovative perspective on the role of material culture in human societies. His famous study of the ‘Kula Ring’ among the Trobriand Islanders highlighted the complex ways in which material culture mediated social relationships. By carefully detailing how white shell armbands and red shell disc necklaces functioned as an essential component in building long distance networks of exchange and inter-tribal support, Malinowski was perhaps the first to illuminate the intimate connections between the ‘social’ and ‘material’ domains. However, while Malinowski emphasized the connection between ‘things’ and society, he still saw them as ontologically distinct realms; in other words, material culture was important only in terms of the information it could provide about social structure and cultural processes, which were considered the *real* topics of social science inquiry, a perspective that can be attributed to the influence of sociologist Emile Durkheim (Hicks 2010:36). Drawing

on Marx, Malinowski warned that placing too much emphasis on the artifacts themselves—that is, attempting to study them outside their proper social and cultural context—ultimately led to ‘fetishism’, an attack clearly directed against the previous generation of museum-oriented evolutionary anthropologists. As Olsen (2010:23) remarks:

In this context, where the social (and soon the political and ethical) increasingly became flagged as a categorical imperative within the social and human sciences, to study “just things” became a task in need of justification. It became a source of embarrassment, a reactionary heritage of mindless antiquarianism surviving in dusty museum spaces—leaving, in short, little honor to the discipline of things.

This marked the beginning of a new and tremendously influential perspective in anthropological theory. While recognizing that this is something of an oversimplification, it is not unfair to suggest that over the next fifty years anthropology’s focus—following broader trends in social theory—would be increasingly on the *immaterial* and *ideational*: topics such as symbolism, identity, ritual, religion/myth, power, language, and narrative (see Ortner 1984). Although ‘things’ were not wholly ignored in ethnographic research, they were increasingly seen as merely symbolic representations of deeper and more significant social/cultural structures. As Danny Miller (1994:415) has acutely observed:

For a long time anthropologists have assumed that a pristine level of ‘social relations’ furnishes the authentic foundation for what they are supposed to be studying...whatever cultural domain was being investigated was ultimately treated as symbolic of underlying social relations. The meanings of artefacts were always seen to lie in their positioning within such symbolic systems.

Ironically, the emergence of the term ‘material culture’—which increasingly replaced the term ‘technology’ in anthropological literature after the 1930s—would mark the beginning of a gradual *dematerialization* of socio-cultural anthropology, which subordinated artifact and object analyses to sociological investigation (Hicks 2010:38). It is perhaps not surprising that this shift in theoretical orientation would open a disciplinary schism with archaeology, which retained an

interest in studying material culture. The following sections primarily examine archaeological approaches to the study of material culture; although many of these approaches were influenced by socio-cultural anthropology, the two disciplines would lose much of the intellectual unity they enjoyed during the late 19<sup>th</sup> century evolutionary paradigm.

### **5.3. THINKING ABOUT THINGS IN 20<sup>TH</sup> C. ANGLO-AMERICAN ARCHAEOLOGY**

#### **5.3.1. Culture History**

As with their counterparts in cultural anthropology, there was a growing dissatisfaction in early 20<sup>th</sup> century archaeology with the evolutionary approaches that had previously dominated the field. By the 1920s, most archaeologists had moved away from viewing technology as a mere proxy for evolutionary progress; rather, material culture became increasingly interpreted as a passive reflection of the shared ideational norms of past groups—their ‘traditions’ or ‘way of doing’ (e.g. Childe 1925, 1929). This new perspective, the ‘culture-history’ approach, argued that artifact styles were a reflection of shared ‘tastes’ of a particular group. Archaeologists believed such cultural traditions—at least among small-scale and rural peasant communities—to be conservative by nature and therefore resistant to change. Patterns in the material record were identified as ‘archaeological cultures’, generally thought to straightforwardly reflect the ethnic boundaries of past groups (e.g. Kossinna 1911). A normative conception of ‘culture’—emphasizing the internal homogeneity and external boundedness of socio-ethnic groups—was also a key aspect of this approach (Trigger 1989:161). Following developments in anthropology, culture became increasingly conceptualized as a ‘superorganic’ realm of autonomous change (Kroeber 1917).

These two basic tenets, the ethnic ‘purity’ of past social groups and their unproblematic identification in the material record, allowed archaeologists to claim the ability to trace the origins, movements, and interactions of ‘peoples’ deep into prehistory. Although it was recognized quite early on that archaeological assemblages were neither as uniform nor homogeneous as one might expect from bounded cultural groups (see Tallgren 1937), most culture historians nevertheless insisted that the archaeological record could be used to extend ‘historical’ knowledge to periods predating the advent of written records. This framework proved particularly useful in the growing European nationalist fervor of the early 20<sup>th</sup> century, which sought to trace the origins and highlight the glorious achievements of the ancestors of modern nation-states (see Diaz-Andreu and Champion 1996, Trigger 1984). A similar approach was adopted in North America to investigate the different ‘cultural groups’ of prehistoric Amer-Indians (e.g. Kidder 1924).

### **5.3.2. Early Processual Archaeology**

Anglo-American archaeology slowly moved away from the culture-history approach in the 1940s and 1950s with the introduction of functionalist (Taylor 1948, Clark 1957) and ecological (Willey and Phillips 1958) perspectives. In Central Europe, many of the overt racial and ethnic interpretations of ‘archaeological cultures’ were abandoned after the Second World War (Veit 1989), but the theoretical framework of continental (Germanic) archaeology moved in a very different direction (see Härke 2000).

The early 1960s marked an important (although perhaps exaggerated) paradigm shift, as a group of young and ambitious archaeologists in North America and Britain aggressively pursued a variety of novel approaches to archaeological theory and practice. This school, which came to be known as the ‘New’ (or processual) archaeology, drew heavily from socio-cultural anthropology,

particularly culture ecology (Steward 1955), neo-evolutionism (White 1943), and structural functionalism (Radcliffe-Brown 1950), along with aspects of General Systems Theory (Bertalanffy 1952). In the United States, this polemical charge was led by Lewis Binford, who sought to make archaeology a more ‘scientific’ pursuit by moving it away from the discipline of history and towards an evolutionary and materialist anthropological framework.

The New Archaeologists held a very different understanding of both social groups and their relation to the material record than their culture historical predecessors. They rejected the idea that culture was a passive reflection of unconscious shared social traditions, arguing that culture was something that was actively *participated in* (Binford 1965). Due to the influence of neo-evolutionary thought, the New Archaeologists would ultimately view culture as a tool for adaptation and survival in a Darwinian sense; it was—as Binford (1962:218) famously noted, following Steward—“the extra-somatic means of adaptation for the human organism.”

As one might expect, processual approaches required a very different interpretation of the role played by ‘things’ in human society. Whereas culture historians generally understood artifact patterning to reflect the presence and movement of different ‘ethnic’ or cultural groups in the past, processual archaeologists pointed out that such variation could also be the result of functional and/or adaptive differences, as illustrated in the debates between Binford and French archaeologist Francois Bordes over the interpretation of Middle Paleolithic sites (see Wargo 2009). Despite these differences, processual archaeology—like the culture historians—considered material culture to be reflective of a more significant ‘immaterial’ realm of culture.

Another significant innovation of the New Archaeology was the development of ethno-archaeology, in which archaeologists used ethnographic observations of contemporary small-



scale communities to draw analogies and test hypotheses regarding the patterns in the material record (e.g. Binford 1965, Kramer 1979). Since an evolutionary perspective generally emphasizes the unity rather than diversity of the human species, comparisons of human behavior across large spans of time and space were considered appropriate and informative<sup>55</sup>.

On the other side of the Atlantic, David Clarke was concurrently developing his own critique of the culture historical framework, influenced by the New Geography at Cambridge and systems theory. Clarke viewed material culture as one of several ‘subsystems’ of human society, which were interrelated but nevertheless distinct. Like his North American counterparts, he emphasized the importance of material culture for adapting to environmental parameters. However Clarke did not believe that archaeology should be a part of either history *or* anthropology, arguing that it is “a discipline in its own right, providing a framework within which the entities and processes of archaeology...have a validity of their own in reference to the archaeological frame and despite their generation by—and partial correlation with—former social and historic entities” (Clarke 1978:12). Clarke was particularly effective in demonstrating the folly of directly correlating patterns in the material record (i.e. ‘archaeological cultures’) with past social or ethnic groups.

### **5.3.3. The Interpretation of ‘Style’**

As the processual movement developed from the dogmatic and polemic evolutionism of the 1960s to a more nuanced and inclusive perspective in the 1970s and 1980s, there was greater interest in studying aspects of human society beyond ecological adaptation. Such new avenues of research were perhaps best embodied in the debates over the concept of ‘style’ during this period (for overviews, see Conkey 2006, Cunningham 2003, Boast 1997). Although Binford (1965)

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<sup>55</sup> Note the similarity of this perspective (although devoid of the blatant cultural chauvinism) with 19<sup>th</sup> century evolutionary anthropology

acknowledged that material culture could encode non-adaptive (i.e. stylistic) aspects of human behavior, he relegated it to a status of ‘secondary functional variation’ that was decidedly subservient to the adaptive utility of material technology. Although Binford considered both style and function to be significant, they existed for him in completely different realms.

James Sackett (1977, 1982) diverged from Binford by developing the idea that style could potentially reside in *any* formal variation; in other words, something that could be considered functional in one context might be stylistic in another. Sackett’s theory of style focused on ‘isochrestic’ variation: the particular choice made by an artisan out of a range of possibilities towards the same functional purpose. Sackett distinguished the ‘active voice’ of an artifact, which connotes function, from the ‘passive voice’, which connotes style (1977:370). Style was by definition non-utilitarian and could signal group identity; however Sackett’s argument that stylistic communication existed at an unconscious—and therefore passive—level was a return to a culture-history perspective.

Around the same time, Martin Wobst also challenged the absolute division between style and function, although from a different theoretical angle. Influenced by systems theory, Wobst (1977:321) defined style as “that part of the formal variability in material culture that can be related to the participation of artifacts in processes of information exchange”. In this way, style could therefore actually serve a *kind* of function—by transmitting messages in a material form. Like language, style was a medium by which humans communicated. Polly Wiessner’s subsequent ethnoarchaeological research on San projectile points (1983) provided empirical support for Wobst’s concept of style as communication. Wiessner emphasized that style could be actively used in the disruption, alteration, and creation of social groups. She also sought to

distinguish between styles that transmitted messages about personal and social/group identities, which she termed 'assertive style' and 'emblemic style', respectively.

#### **5.3.4. Post-processual Approaches**

##### *5.3.4.1. Contextual Archaeology and 'Reading the Past'*

Although in many ways Wobst, Sackett, and Wiessner remained within the processual tradition, their investigations of the relationship between material culture and social identity through the concept of 'style' would lay the groundwork for Ian Hodder's contextual archaeology. Although much of his early work on spatial archaeology was in the processualist tradition of David Clarke (see Hodder 1976), Hodder would later break with these systems and evolutionary approaches, articulating a new way to think about the past.

Like a good processual archaeologist, the young Hodder wanted to incorporate ethnographic observations to help him understand the relationship between humans and material culture. However, his ethnoarchaeological research in West Africa actually encouraged him to abandon such strict processualist ideas. Hodder agreed with Wiessner's assertion that material culture could be an active element in the construction of social identity, rather than just a passive reflection of individual and/or social traditions. But he also recognized that the relationship between ethnic boundaries and the patterning of material culture was neither simple nor straightforward (Hodder 1977, 1982b). His examination of multiple types of artifact distributions illustrated the limitations of traditional archaeological interpretation of spatial data; for example, one could not *necessarily* correlate similarities in material culture patterns with a high degree of social interaction. On the contrary, a multiplicity of intra- and inter-group variables and social processes (age, gender, ethnicity, etc.) determined how artifacts were distributed. Indeed, as

Malinowski had shown decades earlier, material culture played a key role in mediating these social relationships.

Inspired by these ethnoarchaeological insights, Hodder first sought to utilize structural approaches in conceptualizing the role of material culture in past societies. He drew on Lévi-Strauss (1963), the father of structural anthropology, who had argued that human behavior and beliefs were regulated by deep cognitive structures, therefore making different aspects of human society intimately connected and relational. For Lévi-Strauss, the task of the anthropologist was to identify the underlying and hidden ‘rules’ that governed human action, through the principle of binary opposition (Ortner 1984:135).

Bringing these insights to the study of archaeology, Hodder sought to demonstrate how material culture played an active role in the construction of prehistoric social identities as well. Following the structuralist perspective, his ‘contextual archaeology’ asserted that the meanings of artifacts could only be understood within their internal cultural logic. The “general and widely found principles” of a prehistoric society could be “combined to provide a structure which runs through the whole of the material culture patterning, through all types of archaeological evidence” (Hodder 1982a:228). Hodder applied this approach to the spatial archaeology of Late Neolithic Orkney (1982b) and later to Neolithic Europe more generally (1990), where his emphasis on the division between ‘domus’ and ‘agrios’ reflects his interest in binary thinking. Although Hodder acknowledged the limitations of the structuralist approach (such as a failure to develop a rigorous theory of practice), he nevertheless maintained that “the analysis of structure has a potential which has not been exhausted in archaeology” (1982a:9).

#### 5.3.4.2. *Post-structuralism: Material Culture as 'Text'*

It is important to recognize that early post-processual critiques of the New Archaeology drew on a wide and heterogeneous range of theoretical inspirations, from structural Marxism to post-structuralism and practice theory. As outlined above, many of Hodder's early studies were heavily reliant on structural and symbolic approaches, but his work was equally inspired by the work of *post-structuralist* (Ricoeur, Barthes, Foucault) and practice (Bourdieu, Giddens) thinkers, who broadly rejected Lévi-Strauss' insights on human cognition and society. This can lead to some confusion when tracing disciplinary histories; although structuralism pre-dated the post-structuralist critique by nearly sixty years in their original disciplines of linguistics and philosophy, these two intellectual movements had a nearly simultaneous impact on archaeological theory in the 1980s (see Olsen 2006).

The first wave of archaeologists heavily influenced by post-structuralism (i.e. Chris Tilley, Michael Shanks, and Tim Yates) rejected Hodder's assertion that artifacts could only be understood 'contextually'<sup>56</sup>. They asked: how is it possible to draw epistemological boundaries, and thereby close off a particular 'context'? Who decides what context is 'appropriate'? Can there only be one 'correct' reading of these artifacts? Such questions led many of these early post-processualists to a position of strong relativism. Although archaeologists had long recognized that their knowledge of the past would always be partial, this was generally considered a consequence of the limited nature of material evidence, rather than the denial of a single, objective past (Jones 1997:107). Professional archaeologists had long argued that while a single indisputable interpretation was not always possible, certainly some are more legitimate than others! Yet some post-structuralists seemed to question the very existence of a single, 'real'

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<sup>56</sup> For an overview of early post-structuralist archaeology, see contributions in Bapty and Yates 1990

past, and therefore the objective superiority of *any* interpretation of material culture. They instead embraced a polysemous, multi-vocal, and (to their critics) dangerously relativist understanding of both material culture and the past (e.g. Shanks and Tilley 1987). However one must recognize that this seemingly self-contradictory position was in many ways the logical conclusion of post-modern and post-structuralist approaches, where the concept of ‘meaning’ became wholly detached from the artifact itself, and was relocated in the subject alone.

During this early period of post-processual archaeology, linguistic and textual metaphors for studying material culture abounded: emphases on *reading* material culture, the past, and matter (cf. Hodder 1986, Tilley 1990, Berger 1992), material culture as *text* (Hodder 1989, Tilley 1991), the *narrative* aspects of material culture (Hodder 1993), the archaeologist as *storyteller* (Shanks and Tilley 1987), and so on. This was clearly a consequence of the incorporation of structuralist and post-structuralist perspectives in archaeology, which were imported from literary theory. The analogy of ‘reading’ the cultural meanings supposedly encoded in artifacts proved important for understanding the role of things in cultural transmission and communication, but largely ignored other non-discursive aspects of human life, such as technology, materiality, and practice. Despite many differences, both structural/symbolic and post-structural approaches seemed to agree that “ideas are more important than things” (cf. Leach 1977:166-168). Yet it would become increasingly clear that both the linguistic and textual metaphors for material culture are ultimately limited—as Hodder (1986, 1989) would later recognize—for a variety of reasons explored below (see also Preucel and Bauer 2001:86).

The interpretive and post-structuralist perspectives in British archaeology were not the only approaches to understanding and interpreting the material record in the early 1980s; other perspectives were being articulated, primarily in France and the United States, which did not

place as much emphasis on the linguistic and textual metaphors. These approaches instead focused on the interface of social and technological systems in past and present societies. The next section examines this parallel development that would also help lay the groundwork for the reemergence of a materiality perspective.

### **5.3.5. Technological Style**

Based out of M.I.T., C.S. Smith (1970), Dorothy Hosler (1995), and Heather Lechtman (1984) situated their approach to ‘technological style’ at the interface of archaeology and materials science, and explored how “the cultural meaning and use of artifacts are bound to the ways in which material properties and production processes are structured” (Thomas 2007:206). Lechtman’s work on Andean metallurgy is exemplary of this perspective; using complex metallurgical techniques, traditional Andean artisans were able to reproduce the colors and quality of metallic gold and silver without having to incorporate very much of the actual precious metals into their designs. Traditional explanations for this unique technology suggested that it might have been useful for creating more prestige goods using less of the rare metals, or that these alloys made casting easier and the objects more durable.

While Lechtman does not fully reject such explanations (although she notes that gold plating would have been a simpler way to save on precious materials), she seeks to understand this technique in regard to “attitudes of artisans towards the materials they used and attitudes of a culture area toward the nature of the technological events themselves” (Lechtman 1984:30). By examining other types of Andean craft production, such as their unique style of weaving, as well as ethno-historic documents that provide clues about their ideology, Lechtman convincingly argues that metallurgy and textile production were both examples of ‘technological essence’. She argues that the idea that the visually apprehended aspect of an object should reveal its inner

structure was a central part of Andean society and ideology and was “related to the fundamental Andean concepts of the divine animation of all material things” (ibid:33). It is interesting to note that despite very different approaches, Lechtman’s conclusions are strikingly similar to Hodder’s contextual approach, in that different aspects of social systems each reflect a unitary underlying logic.

On the other side of the Atlantic, the French anthropological tradition of ‘*techniques et culture*’ placed a similar emphasis on the interconnection of technological choices and social identities. French anthropologists such as Mauss, Godelier, and Leroi-Gourhan maintained a strong interest in technology and material culture throughout the 20<sup>th</sup> century, unlike many of their Anglo-American counterparts. Expanding Malinowski’s study of the Kula Ring, Mauss sought to unify the social, embodied, and material realms through his ‘total social phenomena’ approach. He suggested that when man creates and transforms, he is at the same time creating and transforming himself (Martinon-Torres 2002:30).

The more recent work of Tim Cresswell, Pierre Lemonnier, and Bruno Latour placed the complex relationship among social identities, material culture, and embodied practice at center stage in their anthropological analyses. Perhaps the key insight of this perspective is that ‘techniques’ (broadly construed) mediate the reciprocal relationships between ‘things’ and ‘society’. As Lemonnier (1993:3) notes: “techniques are first and foremost social productions.” Crossing over between sociological, anthropological, and archaeological analyses, the French school has exerted a tremendous influence on archaeological approaches to technology in the 1990s, particularly through the idea of the *chaîne opératoire* (see Edmunds 1990, van der Leeuw 1993, Schlanger 1994, Stark 1998, Dobres and Hoffman 1999). This ‘chain of operations’ approach emphasizes that formal and decorative variations are not the only important aspects for



interpreting material culture, but that each step of the production sequence could also be interpreted as an expression of cultural choice and agency<sup>57</sup>. Such technological choices emphasized the importance of study the social context of the *physical properties* of material culture, not just its symbolic aspects. This was a key development in moving towards a post-textual interpretation of the role of material culture in human social systems.

It is perhaps important to recognize here the influence of another French anthropologist and philosopher—Pierre Bourdieu—even though he is not generally associated with the ‘technological choices’ school of French anthropology. Bourdieu’s approach, known as ‘practice theory’, sought to navigate between the structuralist and phenomenological traditions in French philosophy by reworking Mauss’ concept of the *habitus*. Bourdieu’s work (see especially 1977, 1984) has been of almost unmatched popularity in archaeology over the past quarter-century, and a range of post-processual thinkers has adopted aspects of his theory of practice. It is discussed in further detail in the following chapter.

#### **5.4. COMPONENTS OF A CONTEMPORARY MATERIALITY PERSPECTIVE**

Throughout the 20<sup>th</sup> century, Anglo-American archaeologists pursued a variety of different avenues for studying the role of material culture, from normative to adaptive, interpretive and textual to technological. However in their sister discipline of cultural anthropology, ‘material culture’ continued to maintain a marginalized place in theory and practice. This began to change in the 1980s, when interest in technology and material culture reemerged in cultural

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<sup>57</sup> It should also be noted that Michael Schiffer (2004) independently developed a similar approach to technology within his behavioral archaeology, focusing on performance characteristics and technical choices.

anthropology after decades of being decidedly – as Pfaffenberger (1992:491) notes – “out of fashion.”

Why and how did this occur? To be sure, no one single figure or even ‘school’ can take full credit for this renewed interest in ‘things’ during the 1980s; a number of independent but dovetailing theoretical frameworks over the past thirty years have combined to create a vibrant and ever-growing sub-discipline within anthropology that takes very seriously the role of ‘things’ in human the constitution of human society. I identify below six distinct (although overlapping) intellectual movements responsible for this ‘return to things’: (1) the interdisciplinary field of ‘material culture studies’, (2) renewed interest in anthropological and sociological approaches to technology, (3) an engagement with the semiotic theory of Charles Sanders Peirce, (4) a recognition of the ‘social lives of things’ within economic anthropology, (5) ethnographic studies of animism and human/object entanglements in non-Western societies, and (6) growing evidence in cognitive science that undermines the ontological divisions among mind, body, and world. Below I briefly outline the contribution each of these intellectual movements has made to 21<sup>st</sup> century materiality perspectives.

#### **5.4.1. Material Culture Studies**

It is possible to identify two distinct intellectual movements—one on each side of the Atlantic—that were concerned with ‘material culture studies’ during the late 1970s and early 1980s. The American tradition developed from the interface of folklore studies, historical archaeology, and ‘modern’ material culture studies. It can be traced to the work of Henry Glassie (1975), James Deetz (1977), and William Rathje (1979). The ideas developed by these scholars laid the intellectual foundation for contemporary anthropologically informed historical archaeology, as

well as archaeologies of the ‘contemporary past’ (see Buchli and Lucas 2001, Harrison and Schofield 2009).

The British tradition of material culture studies emerged from an intellectual synthesis of prehistoric archaeology and social anthropology. Many of the early post-processual archaeologists, such as Hodder and Tilley, also conducted important research on contemporary material culture in both Western and non-Western contexts. At the same time, their colleagues in social anthropology, like Mike Rowlands and Danny Miller, were interested in archaeological approaches and received training as prehistorians. Here I focus on the latter of these figures who—perhaps more than any other scholar—was responsible for the development of the interdisciplinary field of ‘material culture studies’.

As a student at Cambridge in the early 1980s, Miller studied both archaeology and cultural anthropology, and was influenced by Hodder’s interest in the connections between prehistory and ethnoarchaeology. Miller would focus exclusively on contemporary societies, conducting important research in both Western and non-Western contexts. His enormous oeuvre over the past thirty years has brilliantly demonstrated the central (if often hidden) role played by ‘things’ in the construction of contemporary society. Miller was one of the first to argue that material culture is not merely an expression or reflection of an *a priori* socio-cultural system, but is rather the means by which this system literally becomes materialized. Although heavily influenced by both Hegel and Marx, Miller rejected the notion that material culture passively reflects the dominant social order, as advocated by structural Marxists at the time. His focus on strategic consumption<sup>58</sup> rather than production, allowed Miller to invert the traditional Marxian emphasis

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<sup>58</sup> Although not covered here, the rise of consumption studies also played an important role in refocusing anthropology towards material culture (see Douglas and Isherwood 1979, McCracken 1988, 2005 and Miller 1995).

on hegemony and structure. Miller instead adopted elements of Bourdieu's practice theory, recognizing the potential of the *habitus* to serve as a conceptual link between the socialization of individuals and the material world (see Miller 1987).

Under the intellectual direction of Miller and Tilley—whose approach gradually moved away from post-modern hyper-textualism (1990, 1991) to the embodied phenomenology of Merleau-Ponty (1994, 2004)—material culture studies developed into vibrant subfield of anthropology over the past twenty years. Moreover, true to Miller's initial vision (1996:2), this field has truly sparked an interdisciplinary dialogue, including scholars of anthropology, archaeology, sociology, architecture, design studies, art history, and many other disciplines. While there is not enough space here to fully examine the many important figures and ideas in this approach, it is sufficient to note that the past thirty years have seen the publication of numerous edited volumes, the founding of a flagship journal<sup>59</sup>, and the innovative work of innumerable scholars – many of whom reside today in the Department of Anthropology at University College London, including Chris Pinney, Victor Buchli, Martin Holbraad, Susan Küchler, Mike Rowlands, and Barbara Bender.

#### **5.4.2. Technology and Society**

Alongside this renewed interest in 'material culture studies' has been a growing interest in anthropological and sociological approaches to technology. Within cultural anthropology, the research of Pfaffenberger (1988, 1992), Lansing (1991, 1993), and Ingold (2000a) has demonstrated the intimate relationship of 'social' and 'technological' systems in the functioning of human societies. This research has been influenced by the French anthropological tradition of

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For a recent review of consumption studies in archaeology, see Mullins (2011), and for a thoughtful critique of the concept, see Graeber (2011).

<sup>59</sup> The *Journal of Material Culture* was launched in 1996 by Miller and Tilley

*technologie*, as well as archaeological approaches to technology. Although it has not coalesced into a coherent subfield (like material culture studies), recent decades have witnessed a growing interest in exploring the intersection of the social/cultural and technological (Schiffer 2001, Eglash 2006, Vannini 2009).

Anthropologists and ethnographers interested in technology have also developed a productive dialogue with other social scientists interested in the intersection of material culture and social systems, particularly the sociological subfield of Science, Technology, and Society (STS). STS emerged from the Sociology of Scientific Knowledge (SSK), an approach developed in the 1970s by figures such as Thomas Kuhn, Paul Feyerabend, and David Bloor that questioned the way historians and philosophers of science traditionally thought about technological development and scientific knowledge production. They denied that scientific knowledge should be considered distinct from other forms of knowledge (religious, political, legal, etc.), insisting instead that it should be studied in the same way that an anthropologist would study the mythology of an indigenous society; in other words, not in terms of truth or falsity, but rather how and why it operates in that particular society (Latour 1993). Likewise, for practitioners of STS, technological development should not be conceptualized as existing ‘in a vacuum’; one must consider the social, cultural, political, economic, or other factors at work<sup>60</sup>. Materials and technology are molded by the intersection of natural and social factors (Law 2010:175).

There are a number of distinct schools of thought within STS, including the social construction of technology (Bijker, Hughes, and Pinch 1987), the social shaping of technology (MacKenzie and Wajcman 1985), and actor-network theory (Latour 2005). However it has been the latter of these approaches—developed by French anthropologists Bruno Latour and Michel Callon, along

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<sup>60</sup> This insight is perhaps nothing novel for anthropologists, but constituted an innovative and controversial

with British sociologist John Law—which has proven particularly influential among archaeologists (see especially Boast 1997, Olsen 2003, 2007, Dolwick 2008, 2009, Normark 2006, Witmore 2007, Shanks 2007, Webmoore and Witmore 2008, Walsh 2008). Its rise within sociology over the past several decades in many ways parallels the materiality perspectives outlined here. The emphasis on relationality, material agency, and the importance of ‘things’ in human social relations is strikingly similar to the insights of anthropologists such as Miller, Ingold, and Gell, although these two movements developed largely independently of one another, having only come into greater dialogue in the past decade (Graves-Brown 2000, Knappett and Malafouris 2008, Vannini 2009).

#### **5.4.3. Material Semiotics**

One of the most insightful definitions of actor-network theory has been “a disparate family of *material-semiotic* tools, sensibilities and methods of analysis that treat everything in the social and natural worlds as a continuously generated effect of the webs of relations within which they are located” (Law 2009, emphasis added). This provides an appropriate segue to another important development in late 20<sup>th</sup> century anthropology that has meaningfully contributed to a materiality approach: the semiotic system of Charles Sanders Peirce (1998).

Semiotics—defined broadly as the ‘theory of signs’—was arguably one of the most significant philosophical developments of the past century. It was first articulated in the early 20<sup>th</sup> century by Swiss linguist Ferdinand de Saussure as a theory of language. Saussure believed the sign to be the fundamental unit of linguistic analysis because it linked a *concept* and a *sound pattern*—defined as the signified and signifier, respectively—which are both ideas independent of any external object (Preucel 2006:28). From this, Saussure would distinguish between *langue*, the

underlying symbolic rules of language, and *parole*, individual speech acts that are based on those basic structures.

One of Saussure's greatest advocates was the French anthropologist Lévi-Strauss, who proposed that anthropology turn towards Saussurian linguistics as a model for understanding human culture. Lévi-Strauss believed that the basic dichotomy between underlying structures and individual behavior was not only true for language, but for cultural systems and human cognition more generally. His approach developed into structural anthropology, which for a time exerted broad influence in both socio-cultural anthropology and archaeology. A semiotic approach was also an important influence in the development of symbolic anthropology, which viewed culture as a system of meaning transmitted by symbols (e.g. Geertz 1973).

However, we have already noted how linguistic analogies for the interpretation of artifacts encounter a number of conceptual pitfalls. While one might argue that both language and material culture are similarly systems of meaning, they also have important differences. For example, while the relationship between concept and language is an arbitrary one (for example, the concept of 'female sibling' can be equally rendered as 'sister', 'soeur' or 'schwester'), this is not necessarily true with material culture. This obvious limitation has led some archaeologists to reject the utility of linguistics and semiotics for interpreting artifacts.

There is however another model of semiotics that holds much greater promise for the interpretation of material culture in both ethnographic and archaeological research; this is the semiotics developed by American philosopher Charles Sanders Peirce. Although a contemporary of Saussure, Peirce's work was not nearly as popular during his lifetime. Peirce viewed semiotics not only as a linguistic theory, but also the basis of a whole new philosophical framework. The

most fundamental difference between his semiotics and that of Saussure is that while the latter viewed the sign relationship as essentially binary (between signified and signifier), Peirce argued that it was actually a triadic relationship among sign, object, and interpretant. Instead of the binary signified/signifier relationship in Saussure's semiology, Peirce developed a series of triadic relationships between the signifying element, object, and interpretant.

Peirce's approach to semiotics is quite nuanced and complex, so a complete account is not provided here (see Atkin 2010, Preucel 2006). However, the importance of his system for the materiality perspective is that it provides a greater flexibility than Saussure's framework for the objects themselves. For example, we have seen that one limitation of a symbolic approach is that it views objects as *passive* vehicles for cultural or social meanings. However in a Peircean semiotic, symbols are only one possible kind of sign, and the relationship among the object, signifying element and interpretant is complex.

A number of cultural anthropologists at the University of Chicago in the early 1980s recognized the analytical potential of Peirce's semiotics for studying the relationship between culture and materials (Singer 1978, Parmentier 1987, Mertz and Parmentier 1985). Alfred Gell utilized this approach in his seminal book *Art and Agency* (1998), which has become one of the most widely influential materiality perspectives in archaeology (see Gosden 2005, Meskell 2005). Gell argues that one can ascribe agency to artwork, since it produces particular effects in humans, making us feel happy, angry, sad, fearful, etc. He adopts Peirce's threefold semiotics, where the object can extend and amplify the agency of the artist. Likewise, Webb Keane has developed a processual semiotic approach, arguing that agency cannot be limited to biologically discrete individuals, but



any object involved in formal ceremonial contexts, such as heirlooms, disembodied ancestors, or lineage houses<sup>61</sup>.

#### **5.4.4. Social Lives of Things**

The important role played by objects in gift exchange was the basis of a seminal volume edited by Arjun Appadurai (1986a) on the ‘social lives of things’. In the introductory chapter, Appadurai argues that economic anthropology is based upon a fundamental distinction between gift and commodity exchange. For many anthropologists, following Marx, a commodity is a product intended principally for exchange, which can only arise within an industrial, capitalist system. Since Marxian thought emphasizes production, a commodity was defined by how it was produced; in other words, a product became and remained a commodity upon its particular context of production. Commodities were also linked to monetary exchange, which was depersonalized, alienating, and exploitative; this notion that human labor was turned into a commodity for sale constituted a fundamental part of Marx’s critique of capitalism.

On the other hand, gift exchange—following Mauss’ groundbreaking work—was thought to characterize preindustrial, non-Western, and non-capitalist societies. This type of exchange was marked by sociality, reciprocity, and spontaneity; in other words, it was “fundamentally contrastive and mutually exclusive” to commodity exchange (Appadurai 1986b:11). Appadurai argues that this is an untenable dichotomy, which is premised upon a romanticized view of indigenous societies and an absolute distinction between capitalist and non-capitalist societies. He notes that both capitalist and non-capitalist societies have each of these two types of exchange; he therefore argues for a broader, more inclusive definition of a commodity based

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<sup>61</sup> Some archaeologists have also recently taken up Peirce’s approach (see Preucel and Bauer 2001, Preucel 2006, Watts 2008) but its potential has surely not been fully realized.

upon the context of *exchange* rather than production. The importance of this argument for a materiality perspective comes in his recognition that ‘things’ pass through phases of ‘commodification’ and ‘identification’ and therefore can be argued to have ‘social lives’. In order to understand the specific historical and cultural context of products:

[W]e have to follow the things themselves, for their meanings are inscribed in their forms, their uses, their trajectories. It is only through the analysis of these trajectories that we can interpret the human transactions and calculations that enliven things. Thus even though from a *theoretical* point of view human actors encode things with significance, from a *methodological* point of view it is the things-in-motion that illuminate their human and social context. (1986:5)

Although theoretically, Appadurai remains within the standard anthropological position that material objects are only important insofar as they are representation of human meaning, he proposes an innovative methodological position that accords some ‘social’ qualities to things—a position that is reiterated throughout many of the contributions to this volume (see especially Kopytoff 1986).

#### **5.4.5. Ethnographic Approaches to Relationality and Animism**

Another concurrent development, influenced by semiotics and the social lives of things, was an expansion of Malinowski and Mauss’ work in Melanesia that focused on the mediating role played by objects in human relations. The unique relationship between people and ‘things’ in this region has been fertile ground for ethnographic research on human-object entanglement since the early 1980s (Thomas 1991, Munn 1986, Strathern 1988). Marilyn Strathern’s work on gender, gift exchange, and personhood in Melanesia has made a particularly important contribution to materiality studies. Building upon Malinowski, Strathern has argued that people, like things, are composed of relations that they in turn engender (Bell and Geismar 2009:18). Her ethnographic research has carefully traced how people and things co-create one another. Her concept of the

‘partible person’ illustrates the ways in which humans are divisible into things that circulate among specific exchange trajectories (Hoskins 2006:76). Strathern’s work was largely influential on Gell’s subsequent arguments about the ‘distributed mind’ (see above). Other ethnographers, such as Mackenzie (1991) and Battaglia (1990), have further demonstrated the importance of ‘things’ in this region. Nancy Munn (1986) also draws upon Peirce’s semiotic approach outlined above to trace the ‘object biography’ of Gawa canoes.

Studies of animism have also contributed to the growing anthropological dialogue on the agency of ‘things’. Ethnographers have long documented situations in which objects were seen as active members of a society. Yet for many years such beliefs were regarded by anthropologists as superstitious ignorance or misunderstanding of the true nature of objects. However in recent years both ethnographers and archaeologists have begun to take the notion of animism more seriously, noting its similarity to relational ontologies and materiality approaches.<sup>62</sup> Similarly, Latour (2010) has sought to establish a symmetrical understanding between Western scientific ‘facts’ and non-Western ‘fetishistic’ beliefs, which he has termed ‘factishes’. These fascinating anti-colonial perspectives seek to demonstrate that the distance between Western and indigenous knowledge is not all that great after all.

#### **5.4.6. Cognitive Science**

A final important influence on contemporary materiality approaches in archaeology that I mention briefly here comes from work in cognitive science and the philosophy of mind.

Traditional cognitive science placed a division between the ‘mind’ and ‘body’ and ‘external world’, where the ‘brain’—operating as a CPU—processes the stimuli from the latter. Although

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<sup>62</sup> See for example contributions in recent issues of the *Journal of Archaeological Method and Theory* (15(4), 2008) and the *Cambridge Archaeological Journal* (19(3), 2009).

there is much feedback between these two domains, they remain essentially distinct. This is often termed ‘Cartesian cognitive science’ because of its reliance on this old dualism of Western philosophy (Rowlands 2010).

However many have begun to view the mind as a ‘leaky organ’ (Clark 1997), which is not limited to the brain, but comingles with the body and world. This approach is often termed ‘distributed cognition’ or the ‘extended mind’ hypothesis (Clark and Chalmers 1998). This perspective suggests that elements outside the brain play an indispensable role in cognitive functions. This has also been termed the ‘4e’ approach, in its insistence that cognitive processes are embodied, embedded, enacted, and extended. This perspective has found support in various disciplines beyond neuroscience, including situated robotics, developmental psychology, and philosophy.

Archaeologists have also recently latched on to such theories, perhaps because of the emphasis placed on material culture in the workings of the mind. A number of archaeologists—including Colin Renfrew, Lambros Malafouris, Carl Knappett, and Chris Gosden—have illustrated the potential of distributed cognition for archaeological research, particularly deep cognitive evolution of the human species. For example, it has been argued that a distributed cognition model might explain the notorious ‘gap’ between anatomical and behavioral modernity<sup>63</sup>. In other words, it was the human manipulation of material culture (e.g. tool use) rather than a purely ‘biological’ development that spurred the first recognizably ‘human’ behavior (use of symbols, religious beliefs, etc.). This new perspective also promises to help bridge the problematic division between ‘biological’ and ‘cultural’ evolution (see also Ingold 2004).

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<sup>63</sup> See especially contributions from a recent volume of the *Philosophical Transactions of the Royal Society B: Biological Sciences*, edited by Renfrew, Frith, and Malafouris (2008, vol. 363).

## **5.5. CONCLUSION: WHERE ARE WE NOW?**

This chapter has provided a broad historical framework for thinking about the origins of materiality approaches in anthropology and archaeology. This has not been a simple task, since multiple different disciplines, perspectives, and paradigms all interpenetrate. Each of the components of a contemporary materiality perspective merits an entire chapter of their own, but unfortunately could only be cursorily covered here; the interested reader is referred to the bibliography for further exploration of these topics.

Hopefully at the very least this chapter has demonstrated that many of these seemingly disparate anthropological approaches have striking similarities: semiotic theory, science and technology studies, ethnographies of animism, cognitive science research, and the diverse material culture studies all suggest that we need to reconsider the role of ‘things’ in the constitution of society, and perhaps even question the absolute division between humans and objects that has been a cornerstone of Western philosophy for centuries. The following chapter builds upon these approaches, articulating the elements of a ‘monstrous’ approach to archaeological interpretation that will help us rethink questions of social identity and material culture in the Late Roman and Early Medieval periods.

## CHAPTER 6

### MATERIALITY, RELATIONALITY, COMPLEXITY: TOWARDS A MONSTROUS ARCHAEOLOGY

*The monster is a harbinger of category crisis...its refusal to participate in the classificatory 'order of things' is true of monsters generally: they are disturbing hybrids whose externally incoherent bodies resist attempts to include them in any systematic structuration. And so the monster is dangerous, a form suspended between forms that threatens to smash distinctions.*

- J.J. Cohen<sup>64</sup>

#### **6.1. INTRODUCTION**

Our discussion in the previous chapter concerning the rise of 'materiality' approaches in 21<sup>st</sup> century archaeology and anthropology has clearly demonstrated that this movement crosscuts traditional disciplinary boundaries and eludes simple categorization. Archaeologists, ethnographers, sociologists, geographers, cognitive scientists, philosophers, and scholars from a range of other disciplines have all made meaningful contributions to this perspective (see contributions in Hicks and Beaudry 2010). Some of these research programs have been mutually influential, while others have developed in relative isolation. While this diversity of perspectives is a clear source of theoretical strength, it also creates potential confusion about *what* exactly a materiality perspective entails.

It is therefore necessary to sketch the basic principles of my own theoretical framework, which draws on a number of the materiality perspectives outlined in the previous chapter. Here I adopt a *bricolage* approach, incorporating concepts from a wide range of theoretical frameworks across multiple fields; the goal of this chapter is to identify and synthesize these disparate elements. I

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<sup>64</sup> "Monster Culture: Seven Theses" (1996:6)

begin by carefully summarizing the most important and innovative insights of materiality approaches, tracing that which distinguishes them from other archaeological explanations for the role of material culture in human society. The following section then identifies and explains the three basic elements central to my theoretical framework. The third section highlights the analytical value of this approach by investigating how it might address the recurrent problem of social action (structure versus agency) in archaeological thought. The final section then expands upon the question of social action by developing a new relational social ontology that might serve to replace the problematic concepts of ‘culture’ and ‘society’ in social science discourse.

### **6.1.1. Why Materiality?**

The previous chapter has outlined how and why ‘materiality’ approaches have risen to prominence in archaeology and anthropology over the past several decades, and what they might have to contribute to archaeological thought in the next decades. Since this movement is so complex and multifaceted, it is necessary here to review the most significant theoretical insights of these approaches.

To be sure, material culture has always constituted a (if not *the*) central concern of archaeological analysis, from its 19<sup>th</sup> century disciplinary origins up to the present day. Although material culture has not always been a primary concern of socio-cultural anthropology, ‘things’ have nevertheless played—and continue to play—an important role in many ethnographic studies. Why then have advocates of a materiality perspective claimed so fervently that ‘things’ were largely forgotten in these disciplines? What do they have to offer 21<sup>st</sup> century archaeological thought?

Here one must recognize a subtle but significant distinction between traditional studies of material culture and ‘materiality’ approaches. Although ‘things’ remained an object of interest in mid- to late-20<sup>th</sup> century archaeology, their intellectual significance was generally relegated to the realm of the *epiphenomenal*. As observed in the previous chapter, material objects were thought to reflect or embody cultural/social meanings, which were generated at some ‘deeper’ non-material level; this ‘deeper level’ has been variously conceptualized as ‘race’ or ‘ethnicity’ (Kossinna 1911), ‘superorganic’ culture (Kroeber 1917), language and cognition (Lévi-Strauss 1963), cultural symbols (Geertz 1973, Douglas 1966), evolutionary adaptation (Steward 1955), or social identity (Barth 1969).

Despite the vast theoretical differences among these different approaches, material objects were ultimately seen in all of them as *passive* vehicles for human agency<sup>65</sup>. The importance of ‘things’ was limited to the cultural and symbolic/semiotic representations endowed in them by humans. The fundamental insight of the materiality perspective is a theoretical reversal of this ‘anthropocentric’ approach. Despite their different approaches, Danny Miller (1994), Tim Ingold (1997), and Bruno Latour (2005) have all recognized that there is no ‘social’, ‘cultural’, or ‘mental’ realm that *pre-exists* the ‘material’ world; in other words, “culture only exists through a process of intensive co-becoming, a continual back and forth between subjects and objects embedded and invested in each other’s existence” (Rose 2011:116).

In my view, this is what distinguishes a materiality perspective from other intellectual efforts to connect the *social* (i.e. culture) and *material* (i.e. nature). It is not enough to say that the two realms are meaningfully connected; they must be viewed as ontologically co-dependent. As

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<sup>65</sup> Although Hodder emphasized the ‘active’ role of material culture in human society, this ‘activeness’ was located in the ‘culture’ rather than the ‘material’!



explored below, this does not deprive humans of agency or lapse into a simplistic technological determinism. Rather, the goal of a materiality perspective—whether in archaeology, sociology, ethnography, or elsewhere—is to trace the webs (or networks) of relations in which humans and nonhumans are enmeshed.

## **6.2. ELEMENTS OF A MONSTROUS ARCHAEOLOGY**

It is upon this basic insight that I frame my own theoretical perspective, which I describe (with tongue planted firmly in cheek) as a *monstrous* approach to archaeology. This playful term takes the fundamental principles of the aforementioned ‘materiality’ perspectives quite seriously, by blurring those ontological boundaries that have long constituted the cornerstone of traditional ‘humanist’ social theory (see Law 2010). As Cohen’s epigraph at the beginning of the chapter intimates, my evocation of ‘monstrosity’ constitutes a stark, perhaps even disconcerting, reminder of the category crisis now faced by the ‘human’ sciences. The cherished divisions between subject and object, nature and culture, and humans and nonhumans that have underwritten social science since its very beginnings are no longer tenable. Simply put, the notion that humans are entirely self-contained entities whose faculties are logically independent of their surroundings is a conceit of the modernist perspective (Thomas 2008:304). Only after recognizing that such *a priori* divisions of the world are problematic can we begin to rethink the place of human beings in a more sophisticated, relational fashion; in other words, as only one member of what is in reality “a small company of actors” (Boast 1997). In order to explain how we might begin this process, I outline here the three central elements of a monstrous archaeology: materiality, relationality, and complexity.

### 6.2.1. Materiality

The opening section of this chapter has introduced the significance of a materiality perspective, but I want to be very precise as to what this entails. A true materiality perspective proposes—building upon much of the research described in the previous chapter—that ‘things’ are a fundamental and necessary component in the construction of human society, agency, and identity. Of course, archaeologists have suggested as much for many years. However, what has been lost in much of the post-processual linguistic and textual approaches to ‘things’ is the importance of studying the *physical properties* of the materials themselves (Jones 2004). As Tim Ingold (2000b, 2007) has argued, archaeological research on material culture often focuses entirely on issues of meaning and form, but not on the material *itself*, noting that “culture is conceived to hover over the material world but not to permeate it...culture wraps itself around the universe of material things, shaping and transforming their outward surfaces without ever penetrating their interiority” (2000b:53). When anthropologists and archaeologists focus exclusively on the notions of human meaning and cultural inscription, it is easy to overlook aspects of materiality, practice, and other important non-discursive elements of human life. As Ann Brower Stahl (2002:831) remarks: “A focus on meaning—logocentrically conceived—privileges the cultural construction of objects over the role of objects in constituting culture.”

Latour (1991) provides an admittedly simple, but nevertheless illustrative parable of the weighted hotel key. Let’s imagine there is a hotel manager who desires that her guests return their keys to the front desk before they exit the building, which prevents the unnecessary loss of expensive keys<sup>66</sup>. How might she go about exerting her agency/power over the customers? The manager might choose to employ a linguistic (or discursive) strategy by *asking* the customers at

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<sup>66</sup> Ironically, our ever-advancing technology has made this example somewhat dated, so please forgive my antiquated example.

check-in to leave their keys at the front desk when they go out. However, customers could easily forget or simply ignore this request. The manager might then decide to combine linguistic and materials elements by placing a sign on the door (*PLEASE LEAVE YOUR KEYS AT FRONT DESK!*), to serve as a visual reminder. This ‘textual’ strategy might work for the forgetful customer, but not the willfully disobedient (or illiterate) one. She might therefore find it more effective to *displace* this inscription with a heavy metal weight, which becomes annoying to carry in a pocket or handbag. This final strategy is decidedly non-discursive, but must be quite effective, as many small boutique hotels still utilize this method.

Note that while this clearly does not *determine* the actions of the customers, it unquestionably influences them; the manager is able to exert power or agency over their behavior through the materiality—that is the physical properties—of the key weight itself. However, she could not have done that without allying herself with both the object itself and its innovator. As Latour (1991:104) notes: “the force with which a speaker makes a statement is never enough, in the beginning, to predict the path that the statement will follow. This path depends on what successive listeners do with the statement.” The order obeyed with the help of the key weight is not the same as the initial order; it has been translated.

### **6.2.2. Relationality**

The second principle addressed here—relationality—requires a brief digression into the topic of social ontology. Ontology is the branch of philosophy that seeks to understand the nature of existence and the way things relate to each other in the most general metaphysical sense (Hofweber 2004). Most ontological systems of the Western philosophical tradition have been based on the idea that the universe is composed of one (or a multiplicity) of *substances*: elements, monads, atoms, etc. Such substances are deemed to be the most fundamental parts of

reality and the relationships among these substances are understood as reciprocal exchanges of information among essentially self-contained entities or organisms<sup>67</sup> (Slife 2004:158). In this traditional substantivist perspective: “The world is composed of individuals. All individuals have non-relational properties and all relations *supervene* on the non-relational properties of the relata” (Teller 1989:213, emphasis mine).

Although substantivist ontology has long dominated Western philosophy, an alternative metaphysical framework has also existed at least since the Greek pre-Socratic philosopher Heraclitus, who first raised the following possibility: what if existence is grounded not in substances or essences, but in change, dynamism, and the relationality *among* substances? What if the traditional ontological priority between substances and interaction was inverted; i.e. where relationality *is* the basis of reality itself (Del Lucchese 2009:181)? In this anantropous metaphysics, substances only possess ontological reality in their relationships among other substances, where being is replaced by becoming, ontology is replaced by *ontogenesis* (Simondon 2009). This ontology of relationality can be detected in the work of Latour, Miller, Ingold, C.S. Peirce, and others who have sought to overturn Cartesian dualisms of subject and object.

However, the notion that relations are a fundamental property of existence is more than just a philosophical thought experiment. Empirical support for a relational ontology has come from such diverse fields as: (1) quantum mechanics, where the existence of non-local, unmediated interaction among subatomic particles has been recognized for decades (Kuhlmann 2009); (2) cognitive science, where evidence of the ‘distributed cognition’ and ‘extended mind’ models has gained increasing support (as discussed in Chapter 5), and (3) ecology and evolutionary biology,

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<sup>67</sup> Slife (2004) contrasts this “weak” version of relationality with the “strong” one examined below

in which the concept of co-evolution illustrates that Darwinian fitness is inexorably tied to relations among organisms (Thompson 2005).

Relationality is also important because it serves as a ‘counterbalance’ to the principle of materiality. For example, recent critiques of materiality studies in archaeology have claimed that too much emphasis has been placed on the durability and permanence of ‘things’, and not enough on concepts of decay, immateriality, and absence (see Rose 2011, Hodder 2011, Fowles 2009). There is some validity in this criticism, but a relational materiality perspective focuses not only on the materials themselves, but also on the relationship between materiality and immateriality (cf. Buchli 2007:192). In other words, it is not the material substances alone but their entanglement in webs of relations that give meaning and agency. To contrast ‘stable’ and ‘material’ objects with ‘dynamic’ and ‘intangible’ subjects is to reinstate a false Cartesian dualism. In a relational ontology, everything is process—subjects and objects alike.

### **6.2.3. Complexity**

My third principle builds upon the second, as it is concerned with the *nature* of relations among the various agents. This principle of complexity is inspired by an emerging interdisciplinary perspective, variously termed ‘Chaos Theory’, ‘Non-linear Science’, ‘Dynamical Systems Theory’, and ‘Complex Adaptive Systems’. The development of nonlinear approaches—first outlined by a group of scholars in the mid-1980s at the Santa Fe Institute—has been called one of the most significant advancements in late 20<sup>th</sup> century science (see Prigogine and Stengers 1984). Researchers from economics, ecology, biology, physics, and archaeology collaborated to develop an approach to systems “composed of adaptive agents whose interactions result in complex non-linear dynamics, the results of which are emergent system phenomena” (Brownlee 2007:1). This field seeks to counter the assumptions of linear determinism, which continue to be

the prevailing model of scientific inquiry in many social science fields (McGlade 1999:148).

Complex adaptive systems are neither predictable nor entirely random; they are rather balanced between order and anarchy—situated, as is often remarked, at the ‘edge of chaos’. It is precisely this delicate balance that provides them the unique qualities of adaptation and self-organization (Heylighen 2009:2).

Although complexity theory has become increasingly popular in archaeology (see van der Leeuw and McGlade 1997, McGlade 1999, Roux 2003, Beekman and Baden 2005, Garnsey and McGlade 2006, Bentley and Maschner 2008), it is rarely connected to the ‘materiality’ approaches examined in the previous chapter. I find this curious, since these approaches are not only theoretically compatible, but significantly reinforce each other’s analytical efficacy. I would argue that complexity is an excellent tool for developing a materiality perspective on larger scales of analysis.

McGlade and Garnsey (2006:3) neatly summarize the four main principles of complexity. The first is ‘non-determinism’, which means that it is not possible to predict the behavior of complex systems, even if we know the function of all their constituents. The second is ‘limited functional decomposability’, meaning that it is difficult if not impossible to study these complex systems by breaking them down into component parts. The third is the ‘distributed nature of information and representation’; in other words, not all the functions of a complex system can be localized. Finally, the fourth property is one of ‘emergence’ and ‘self-organization’, which means that complex systems are more than the sum of their parts, and also have the innate ability for self-ordering and replication (see also Heylighen 2009).

It is argued here that human social systems demonstrate all the qualities of complex adaptive systems; therefore this is an appropriate framework with which to analyze concepts of ‘culture’ and ‘society’. In section 6.4 below, I combine complexity theory with the materiality and relationality perspectives outline above to fashion a relational social ontology that can transcend the inherent problems with traditional conceptions of society and culture.

### **6.3. ADDRESSING ACTION IN SOCIAL SCIENCE RESEARCH**

Now that the basic framework my approach has been outlined, the question remains: what are the theoretical advantages of a ‘monstrous’ perspective? What meaningful intellectual contributions does it have to offer social scientists? The next section of this chapter is dedicated to exploring these questions, through an investigation of the key issue of *action* in social science research. The following section examines the roots of the ‘paradox’ between structure and agency that has long concerned archaeologists, and illustrates how the approach outlined above—drawing on the insights of materiality studies—provides a new way to address this critical issue in archaeological theory.

#### **6.3.1. Society and the Structure/Agency Paradox**

The nature of social action, from where it derives and how it affects change in society, has long been a primary concern of the human sciences. Contemporary social science has long recognized that human beings are not fully autonomous or purely ‘rational’ actors and that human behavior cannot be simply reduced to the unadulterated desires of a ‘free will’. Social action, at least to some extent, appears *patterned* by some external force that operates on a preconscious or supra-individual level. In fact, one could argue that it was this insight that led Marx, Max Weber, and

Durkheim to first articulate the need for a theoretical framework at the level of the ‘social’, analytically distinct from explanatory theories already developed for the individual (psychology) or natural world (physics, geology, etc.). Although other previous frameworks—derived from theology, Enlightenment philosophy, and racial science—had also attempted to explain the patterning of human behavior, Durkheim (1964 [orig. 1893]) was the first to employ the architectural metaphor of *structure* to describe this phenomenon.

#### 6.3.1.1. *The Action Hierarchy*

Today, a myriad of different concepts are invoked to explain why human behavior is so obviously patterned yet variable over time and space: culture, society, tradition, custom, class, faction, genetics, environment, gender, ethnicity, and so on. Observing and explaining this social patterning has been a long-standing aim of the human sciences: Marxists place primary emphasis on class relations and modes of production (see Bloch 1983), behavioral and cultural ecologists focus on evolutionary adaptations to the environment (see Winterhalder and Smith 2000), structural anthropologists emphasize the importance of symbols and underlying cultural ‘grammar’ (see Lévi-Strauss 1963), and so on (see Chapter 5). Many of these perspectives—which can be grouped together under the term *methodological holism*—have been imported, at one point or another, into archaeological interpretation. Processualist archaeology, with its emphasis on systems theory and ecological adaptation, has traditionally placed a great deal of emphasis on various ‘structural’ constraints; therefore many New Archaeologists chose to examine the past at the level of the ‘system’ rather than the individual. Although the role of individual agents was occasionally recognized (Robb 2010:494), agency was limited to ‘Great Men and Women’ who exerted disproportional influence on their societies (e.g. Flannery 1999).



While the concept of structure (in all its various avatars) has undoubtedly been a powerful explanatory tool in social science research, many have warned that it risks collapsing into a highly restrictive determinism, what Mexican philosopher Manuel De Landa (2010:3) terms ‘macro-reductionism’. By ultimately emphasizing the importance of stability and cohesion in human groups, structuralist explanations have often been unable to account for social conflict and change. Many social scientists have argued that an overemphasis on structure ultimately portrays people as “culturally determined dupes mechanistically obeying normative rules or structures” (Jones 1997:117).

As a counterbalance to structural constraints, many scholars have argued that individuals also possess an *agency* that bestows upon them a certain degree of freedom and choice in their behavior. Although agency has been defined in many different ways, it is normally conceptualized as a “socially-mediated capacity for action” (see Ahearn 2001), grounded in intentionality, purpose, or choice. In most theoretical frameworks, agency is distinguished from other kinds of action in the following manner: the human actor possesses *agency* by initiating a sequence of events with acts of mind or will or intention. This is in contrast to the non-reflexive *behavior* of other living organisms—which is driven by innate or conditioned reflexes and instincts (Fuchs 2007)—and the mere *happenings* of the inanimate material world, which are explained by the physical laws of the universe (see Gell 1998:16). One might conceptualize this as an ‘action hierarchy’ (see Table 6.1).

In contrast to structural explanations, agency approaches tend to examine social action from a bottom-up perspective. The sociological perspective that grants the most autonomy to individual agents termed *methodological individualism*. This perspective suggests that all theories of social action must ultimately reside at the level of the (human) individual; although social and cultural

institutions exist, they are not granted any agentive autonomy. In other words, the whole is decidedly *not* more than the sum of its parts. Such a position underlies aspects of human behavioral ecology, such as optimal foraging theory. James Bell (1994) has also been a vocal proponent of this position in archaeology. Despite his argument that collective actions should be viewed as ultimately the products of the decisions and actions of individuals, Bell holds a rather pessimistic view for archaeology to recover and interpret such individual motives (Dornan 2002:311-312).

Category	Principle Actor	Action derived from...
Agency	Human being	Intentionality/choice
Behavior	Nonhuman life	Instinct
Happenings	Inanimate materials	Physical laws

**Table 6.1 Action Hierarchy**

Although methodological individualism has been widely adopted in some approaches to microeconomics and political science (i.e. rational choice theory), it never gained much traction in anthropology or archaeology. Nevertheless, the need to incorporate human agency in our interpretations of the past was voiced by post-processual archaeologists beginning in the late 1980s, who viewed the New Archaeology as overly deterministic and structural (cf. Hodder 1986, Johnson 1989, Dobres and Robb 2000, Barrett 2001). Over the last several decades, agency approaches have reached near paradigmatic status, even if there has been little consensus on how to operationalize this perspective (Dobres and Robb 2005, Gardner 2004).

### 6.3.1.2. Problems with Agency

Despite its recent popularity in archaeology, there are a number of analytical problems with ‘human agency’ as it is traditionally formulated. First, the complexity of the human psyche makes viewing action as a direct consequence of intentionality extremely problematic (Breslau 2000:295, see also Searle 1983, Setiya 2010). Simply put, psychologists and philosophers have long recognized that a direct causal relationship between intention (what I *want* to do) and action (what I *actually* do) is simplistic and naïve. Archaeologists should also be aware of an additional complication in their interpretations: “An object’s intended functions can be examined from the material traces of use...but the *intentionality* of the effects of such uses *cannot be directly known* from the objects themselves” (David 2004:67, emphasis mine).

Secondly, agency as traditionally formulated in social theory is deeply entangled with concepts such as ‘the individual’, personhood, and a psychologically unified ‘self’ (Frank 2006), whose universality has become increasingly problematized in recent years. Some anthropologists have argued that conceptualizing agency as the sole possession of an individual is a culturally and historically specific construction of the modern West, and may not necessarily extend to other times and places (Strathern 1988, Knapp and van Dommelen 2008). Moreover, the very existence of the ‘Cartesian subject’ as a locus of action and intention has come under intense assault from a number of intellectual arenas, from postmodern philosophy (Foucault 1972, Deleuze and Guattari 1987) to cognitive science (see Chapter 5), from Deep Ecology to feminist studies (Žižek 1999:1).

Finally, even if we set these first two philosophical/psychological uncertainties aside, it is still questionable whether one can analytically distinguish agentive and structural action in practice. In other words, how do we identify when individuals are acting *in accordance with* or *in*

*opposition to* their social structures? This continues to be an underlying problem in Marxian and feminist thought, where agency is often equated with resistance to the dominant ideology, whether capitalist or patriarchal (Seymour 2006, Dornan 2002); as Beekman (2005:53) observes, is not *accommodation* also a type of agency? Furthermore, when “social structure and agency become antagonistic principles of constraint and freedom, respectively” (Breslau 2000:296), finding examples of agency (ethnographically or archaeologically) often ends up looking like an intellectual Easter egg hunt (Frank 2006:283). On the other hand, if we define agency more broadly as a “fundamental quality of human existence” (Dobres and Robb 2005:160) then it becomes so ubiquitous, it could be located anywhere and everywhere, severely limiting its explanatory potential<sup>68</sup>. While most contemporary theories of social action fall somewhere between pure structural determinism and dogmatic political individualism (the latter position usually limited to certain strands of theology or free-market conservatism<sup>69</sup>), the relative emphasis placed on either agency or structure continues to be a contentious issue (see also Brettell 2002).

It is argued here that the fundamental problem with the structure/agent paradox is the way social theory has traditionally framed the question of action—as a single, linear spectrum between the poles of individual and structural ‘power’. As Dan Hicks (2010:78) notes: “Agency only emerges as a problem to be solved in we hold on to a particular model of society in which...the question of locating human actions that generate, and are shaped by, social structure is significant.” In other words, traditional social theory has not been able to transcend the structure/agency dualism, simply because “it is a precondition of the field of inquiry from within which a resolution is sought” (Smart 1982:137). Therefore, if we accept that “the dualisms of subject-

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<sup>68</sup> Hence Dobres and Robb’s (2000, 2005) assertion that there is no archaeology OF agency.

<sup>69</sup> As in Margaret Thatcher’s famous quip to *Women’s Own* magazine in 1987: “there is no such thing as society”

object and action-structure are constituent and necessary features of the epistemological configuration within which the human sciences are located” (ibid:140), than we are left with a stark choice: either admit that the micro/macro dichotomy is an irresolvable problem or find another ontological framework for conceptualizing social action (Latour 1993).

### 6.3.2. Practice Theories

Over the past twenty-five years, the most insightful attempt to transcend this recurrent scalar problem of action in the social sciences has been ‘practice theory’, an innovative theoretical framework inspired primarily by the work of Pierre Bourdieu and Anthony Giddens<sup>70</sup>. Practice theories have been widely employed over the past several decades by archaeologists concerned with investigating social action (see above, also Gardner 2008). They attempt to overcome the scalar problems of social action by viewing structure and agency as inseparable and coterminous. Bourdieu and Giddens each posit a dialectical relationship in which daily practice (both discursive and non-discursive) is conceptualized as both the *medium* and *outcome* of structure; in other words, individual agents are both constrained *and* enabled by social structures. Giddens (1984) articulates this dialectical movement through his concept of *structuration*, while Bourdieu (1977, 1984) has developed a set of concepts such as *field*, *doxa*, and *habitus*. The latter term has been the mostly widely adopted aspect of Bourdieu’s work in archaeology, but is often haphazardly applied without a full understanding of its role in his larger framework. The term—borrowed from Mauss (1936)—describes a system of durable and transposable dispositions through which we perceive, judge, and act in the world. However, as Charles Orser (2004:129) notes, an incomplete application of Bourdieu’s work robs it of any theoretical substance, and

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<sup>70</sup> It is important to note that Giddens and Bourdieu formulated their theoretical frameworks largely independently of one another and rarely cite each other’s work. Although there are significant differences between their two approaches (and those of Sahlins 1981, de Certeau 1984, Foucault 1978, etc.), the high degree of overlap in their major arguments permits them to be handled together for my purposes here.

turns the *habitus* into a mere caricature of itself, where it becomes simply a synonym for ‘activity’ or ‘socialization’.

Despite their broad popularity, practice theories have been critiqued on a number of levels both within and beyond archaeology. Some have argued that while Bourdieu pays rhetorical ‘lip service’ to the importance of individual practice, the agent in his system is actually powerless to transform social structures. His insistence that structural inequalities are largely beyond the grasp of the *habitus* (Bourdieu 1977:94) and that the interests of the *habitus* are largely defined by social structures (ibid:76) echoes Marxian notions of false consciousness. So while the *habitus* does confer a certain degree of freedom on individuals, they can only act within the constraints established by broader cultural norms. As Bohman argues:

The fact that such dispositions still leave room for agents to be better or worse at achieving their strategic goals does not alter the fact that they take their own identity and the definition of the situation as limits within which to act...cultural constraints on agency turn out, because they *constitute the very identity of social agents*, to be stronger than those imposed through regulative norms or sanctions. (1999:134, emphasis mine)

One might therefore argue that although Bourdieu’s articulation of a practice theory appears to provide a solution to the agency problem in social theory, his indebtedness to structural Marxism limits the successful application of his approach. Archaeologists have also criticized Bourdieu for holding an overly simplistic view of pre-modern societies, and have even questioned the relevance of his theoretical framework for studying the distant past (A.T. Smith 2001).

Giddens has been similarly critiqued for his assumption that people in pre-modern societies were somehow ‘less powerful’ than in modern settings (Dornan 2002:308). Another perceived drawback of Giddens’ approach is an overreliance on extensive terminology and imprecise text and diagrams, without providing any actual examples or case studies to illustrate and support his

conceptual models. Turner (1986:975) argues that: “his theory is rather overconcerned with its own architecture in an ongoing effort to complete the great conceptual edifice by adding still another set of distinctions and definitions.”

There is some validity to these critiques of practice theory (of which I have only outlined a few); yet this does not diminish the potential analytical value of these approaches. As detailed in Chapter 5, Bourdieu’s practice theory has played an important role in the development of materiality perspectives in anthropology, and its basic tenets are largely compatible with my own approach. Their recognition that structures simultaneously constrain and enable action, and the emphasis on embodied, non-discursive daily activities are incredibly useful concepts for social scientists. Yet in order to preserve their utility for archaeology, three problematic aspects of practice theory must be addressed and corrected.

First, their attempts to articulate a dialectical relationship between structure and agency are still grounded in an underlying dualist scalar conception of action (Fuchs 2007). That is to say, their emphasis on the dialectical *movement* of social action assumes that structure and agent still exist at different ontological levels. Latour (2005:169) raises this important point: “if you discover some happy medium between two non-existing positions, what makes you so sure that this third position has not even less claim to existence?” This is where a materiality and relationality perspective can be useful. What if we retain the significant insights of practice theory without assuming that social action must be limited to humans, either individually or collectively? As Barry Smart recognized almost three decades ago: “if one abandons Giddens’ specific beginning, namely an assumption of human agency, or a concern to ‘recover the subject’, then much of what he states *makes problematic the status of human agency* and authorizes analysis of its construction or production” (1982:136, emphasis mine).

This first issue is directed related to the second: neither Bourdieu nor Giddens places enough emphasis on the role of ‘things’ (see Barrett and Fewster 2000). While defenders of Bourdieu would likely point to his early ethnographic work on the Kabyle houses of Algeria (Bourdieu 1979), and those of Giddens to his recognition of the material aspects of ‘resources’, neither practice theory nor structuration adequately address the key role of ‘things’ in the constitution of society. While Bourdieu and Giddens focus much of their attention on transcending the structure – agency dichotomy, I argue that their retention of a similar problematic division between humans and nonhumans causes them to overlook the critical role played by materiality. They retain the same sociological/cultural framework that has pervaded the ‘social’ sciences since Durkheim<sup>71</sup>.

The third issue with practice theories is their inability to explain change: if individuals constantly reproduce structures in their daily practice, how are they able to escape them? As noted above, Bourdieu has been particularly criticized on this issue, as his *habitus* too often ends up as equivalent to false consciousness, where individuals become powerless to act outside their socio-cultural structural constraints. It is argued here that the potential for *change* can be injected into practice theories by adopting the monstrous perspective outlined above. For example, an emphasis on *complexity* emphasizes that very small, seemingly insignificant inputs have the potential to result in large consequences. It suggests that socio-cultural ‘systems’ do not always tend towards stasis and equilibrium, but always contain an element of ‘structured disorder’; this opens up the possibility for the system to move to a different state. Finally, we might consider the Deleuzian concept of difference/repetition, which argues that repetitive behaviors always contain an element of novelty and *creativity* (difference). In other words:

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<sup>71</sup> Although it should be noted that Miller (1987) has brilliantly demonstrated how Bourdieu’s approach can be fruitfully adapted to a materiality perspective.



To repeat is to behave in a certain manner, but in relation to something unique or singular which has no equal or equivalent. And perhaps this repetition at the level of external conduct echoes, for its own part, a more secret vibration which animates it, a more profound, internal repetition within the singular (Deleuze 1994:1).

### 6.3.3. Action in a Relational Perspective

#### 6.3.3.1. Two Meanings of 'the Social'

As detailed above, traditional approaches to action and structure in social theory have been premised upon specific ontological divisions of social reality. Human behavior is thought to derive from *either* the human individual (agent) or various 'structural' entities. Ever since Durkheim, who argued that social facts are *sui generis* ('of their own kind'), the 'social' has been conceptualized as some substance that could be used to *explain* other aspects of society (Latour 2005:67). In contemporary sociology, a major research focus has been on describing the 'social construction' of various human institutions such as religion, law, economics, technology, politics, and even science (see Berger and Luckmann 1966); likewise, anthropologists have often identified the 'cultural construction' of numerous beliefs and behaviors (see Ortner and Whitehead 1981, Caplan 1987, Antlöv and Ngo 2000). The characteristics of these institutions or behaviors are supposedly explained by social/cultural aggregates that 'hide' behind them (for a critique, see Hacking 1999). But where exactly *is* this 'social'<sup>72</sup> or 'culture'? Is it some *a priori* or pre-existing immaterial realm that magically influences human behaviors?

Latour (2005) has identified part of the problem as an ambiguous application of the term 'social'; it refers to *both* the micro-level of face-to-face interactions as well as the macro-level comprised of society, culture, and other human institutions. Practice theories insist that every day, habitual, routine activities both create, and are created by structures. But one could equally argue that

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<sup>72</sup> See Albertsen and Diken (2001) for an extended exploration of 'the social' in contemporary social theory.

local, daily, recurrent face-to-face interactions by their ephemeral nature *do not* spread well in time and space! How do they become the more permanent social connections we locate at the macro-level? In other words, how are power, inequality, and domination perpetuated and made durable and permanent? Although archaeologists have long recognized that material culture plays a key role here, in most social theories ‘things’ remain in the background as silent observers and passive receivers of human action. They seem to contribute nothing themselves.

However if one adopts an explicitly relational rather than substantivist view of reality, it becomes impossible to make any such *a priori* ontological distinctions without first examining the web of relations in which *all* ‘substances’ (human and non-human) are enmeshed. Yet these webs of relations are not all identical; they, like their components, are *heterogeneous*. From this alternative perspective, ‘the social’ is not a substance but “an *association* between entities which are in no way recognizable as being social in the ordinary manner, except during the brief moment they are reshuffled together” (Latour 2005:65, emphasis mine). In other words, ‘the social’ is not the glue that holds human groups together, but *that which is glued together* by many other types of connectors, which are in themselves largely non-social (Latour 2005:5).

In a relational social ontology, such as actor-network theory, everything is treated “as a continuously generated effect of the webs of relations within which they are located. It assumes that nothing has reality or form outside the enactment of those relations” (Law 2009:141).

Therefore scalar concepts (micro and macro, big and small, local and global, agent and structure) as well as ontological or epistemological distinctions (subject and object, truth and falsehood, human and nonhuman) cannot be employed as explanatory resources, since they are the *consequences* of relational interaction. As Breslau (2000:299) notes: “what gives an object its properties...[and] its ontological status is a set of relations with other entities.” Likewise ‘social

totalities' such as culture, society, class, and ethnicity do not reflect inherent, stable, underlying essences or substances; they are the *consequences*, not causes, of the constant assembling of heterogeneous actors (Law 2009).

### 6.3.1.2. *Social Action in a Monstrous Archaeology*

Now that we have shifted from a substantivist to a relational social ontology, the scalar paradox of social action can be properly addressed. Like anything else in a relational ontology, action is best understood as a wholly relational property embedded in heterogeneous collectives; as Steve Fuller (1994) has argued, agency is never generated *ex nihilo* ('from nothing'), but always exists *in medias res* ('in between'). Latour further suggests that action "is not a coherent, controlled, well-rounded, and clean-edged affair. By definition, action is dislocated. Action is borrowed, distributed, suggested, influenced, dominated, betrayed, *translated*" (Latour 2005:46). Agency is therefore not a substance or quality that is possessed by individuals; it must always be treated as an *effect* and not a *cause* of collective action (Latour 1986:264).

This relational understanding of agency forces us to rethink the 'action hierarchy' outlined above, which has been the (implicit) basis upon which previous theories of social action have been developed. We can no longer regard action as something that resides within individuals. Rather, 'agents' (or perhaps better is the less anthropocentric term *actants*) are not *necessarily* the knowledgeable, conscious causes of a sequence of events (i.e. a human being), but rather "the moving target of a vast array of entities swarming towards it" (Latour 2005:46). An actant is what is *made to act* by others; it is "always a network of elements that it does not fully recognize or know" (Law 2009:147). Simply put, actants are not specified for what they *are*, but rather what they *do* (Cerulo 2009:534).

With this new, relational definition of social action, the long held ontological division between humans and nonhumans (i.e. material things, companion species, and perhaps even ‘ideas’) begins to dissolve. The traditional social theories examined above, including practice theories, always create two distinct ontological realms of social action: a ‘social’ realm (populated only by humans) where all action ultimately resides, and an ‘object’ realm, comprised of nonhumans, which acts only as a backdrop or receiver of human action. This asymmetrical construction has led social theorists (even archaeologists) to ignore the key role that nonhumans play in creating and maintaining societies. Archaeology should not be content with studying humans-among-themselves and things-in-themselves separately, but must instead trace the messy, nonlinear, and rhizomatic connections among humans and nonhumans (see also Ingold 1997).

#### *6.3.1.3. Material Agency*

The notion of ‘material agency’ has generated a wide range of criticism within and beyond archaeology. How can one seriously suggest that the non-human organic or inorganic world possesses agency, a concept normally restricted to knowledgeable, reflexive individuals? Aren’t such claims just a form of pathetic fallacy or an implicit endorsement of technological determinism? Many have voiced concerns that any such possibility would endanger the notion of human rights and diminish individual moral culpability<sup>73</sup> (Fuller 1994). Others see great danger in removing the long-standing ontological division between human beings and the external object world (see Pels 1996, Collins and Yearley 1992, Vandenberghe 2002). A final, perhaps predictable, critique comes from Marxists, who view this emphasis on objects and networks as symptomatic of the ‘new spirit’ of capitalism, and the ultimate expression of commodity fetishism (e.g. Boltanski and Chiapello 2005).

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<sup>73</sup> For example, would such a perspective hold the guns and not the gunmen responsible for the Columbine tragedy? (see Strauss 2007)

However, it should be clear that any discussion of ‘material agency’ must be understood within the relational social ontology outlined above. Since action is a wholly relational property, not a substance, nonhumans cannot *possess* agency any more than human can (*contra* Pauketat and Alt 2005, Gosden 2005). Suggesting that objects *make* people do things simply reverses the causal arrow reject above, and is therefore just as *asymmetrical* as the conceit that people can act independently of things<sup>74</sup>. As Latour has emphatically stated: “ANT is not, I repeat not, the establishment of some absurd ‘symmetry between humans and non-humans’. To be symmetric, for us, simply means *not* to impose a priori some spurious *asymmetry* among human intentional action and a material world of causal relations” (2005:76, emphasis in original). We must instead acknowledge that “there might exist many metaphysical shades between full causality and sheer inexistence...things might authorize, allow, afford, encourage, permit, suggest, influence, block, render possible, forbid, and so on” (Latour 2005:72).

## **6.4. BEYOND CULTURE AND SOCIETY**

### **6.4.1. Re-entangling Things**

Thus far, we have established that a relational social ontology breaks down barriers between humans and nonhumans and offers a very different perspective on the question of social action. In summary, it has been argued that (1) just as people make things, so do things—in a very literal and profound sense—make people; (2) linguistic and textual metaphors for material culture are useful but ultimately limited—the non-discursive and physical qualities of ‘things’ are often just as significant; (3) ‘agency’ is not a property of particular individuals or ‘things’, but rather

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<sup>74</sup> Pfaffenberger (1988) draws an analogous distinction between ‘technological somnambulism’ (i.e. technology is ultimately subservient to human control) and ‘technological determinism’ (i.e. human society is ultimately subservient to technological advancement) in his discussion of approaches to the anthropology of technology.

circulates among a heterogeneous collective of humans and nonhumans; and (4) no immaterial ‘social’ or ‘cultural’ realm pre-exists the complex and multifaceted inter-action among humans and the material world.

However, if this new approach rejects the existence of ‘social’ totalities such as society or culture, how does one account for the *patterning* of human behavior so evident in the ethnographic and archaeological records? How does this occur if there are no intangible cultural forces shaping behavior ‘behind the scenes’, so to speak? This is where the concept of *complexity* becomes critical. As outlined above, one of the most important characteristics of complex adaptive systems is their ability to demonstrate *emergent properties*; that is, properties of the whole that are not reducible to individual parts (see Goldspink and Kay 2004). Such complex systems were first identified in physics, chemistry, biology, and ecology. For example, as atoms arrange themselves into elements, those elements have properties not reducible to the atoms themselves; likewise, neurons and other cells assemble to form a complex system known as the human brain, which also demonstrates amazing emergent properties. The question then becomes: is a similar process evident at scale of human groups?

While I do not suggest that chemical elements, human brains, and human societies are wholly equivalent, one *can* observe similar complex, ‘chaotic’, and emergent processes occurring at each of these different levels. Although a number of other scholars have incorporated concepts from complexity theory to explain the properties of human groups (see Luhmann 1995, Archer 2000, Trospen 2005), they continue to rely on the ontological division between humans and ‘things’ rejected above. For example, while Margaret Archer recognizes the potential for complexity theory in studying human societies, she unnecessarily (in my view) differentiates three separate *types* of emergence—cultural (semiotic), structural (material), and human—as if

these can be meaningfully distinguished! She does acknowledge that these three categories can occur together, but I would go farther by suggesting that emergent ‘cultural’ characteristics occur *only* when all three categories enter into dynamic relations. In the following section, I demonstrate how this monstrous approach can provide an alternative way of conceptualizing human groups from the traditional ‘culture concept’.

#### **6.4.2. Material-Semiotic Machines vs. Social Totalities**

The concept of ‘culture’ has been a central tenet of anthropological thought for almost a century. Yet in recent decades this conceptual cornerstone of social theory has been subjected to a devastating theoretical critique (see especially Clifford 1988, Fox 1991, Gupta and Ferguson 1992, Friedman 1994, Appadurai 1996, Fox and King 2002). Despite a widespread dissatisfaction with the ‘culture’ concept, anthropologists have struggled to find an adequate theoretical replacement for this invisible, external, homogenizing social totality (see Brumann 1999). I argue here that through a combination of *relational ontology*, which breaks down ontological divisions between humans and nonhumans, and *complexity theory*, which provides a rigorous framework that can describe the interactions of these heterogeneous components, a potential alternative emerges.

Drawing on the work of Deleuze and Guattari (1987), Donna Haraway (1988), and Law (2009), I introduce the concept of *material-semiotic machines*<sup>75</sup> (hereafter, MSM), defined here as entanglements of (1) humans, (2) nonhuman life, (3) ‘inanimate’ things (material culture/technology), and (4) immaterial/semiotic concepts, all of which continuously enter into

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<sup>75</sup> In addition to the authors just cited, my MSM have much in common with De Landa’s “assemblages” (which are also inspired by Deleuze). However since assemblage already has a very specific meaning in archaeology (and a less specific but equally concept-laden meaning in anthropology...see Marcus and Saka 2006), I seek to avoid any confusion with the categories I draw here.

complex, non-linear relationships, and thereby display emergent properties that are not reducible to any of the individual parts. I believe that this could provide a conceptual replacement for traditional notions of ‘culture’ and ‘society’ in social theory. In order to demonstrate the advantages of MSM, below I highlight the major differences between these two concepts.

#### *6.4.2.1. Closed vs. Open Systems*

In recent anthropological literature, one of the most frequently cited problems with the culture concept is its tendency to totalize and homogenize; in other words, that it represents “a process of ordering, not of disruption” (Clifford 1988:235). When culture is conceptualized as a stabilizing, homogenizing force, it fails to explain how culture *change* occurs; in short, cultures are often thought of as ‘closed systems’.

In contrast, material-semiotic machines, as complex adaptive systems, are necessarily *open* systems. This means that their heterogeneous component parts are engaged in both *relations of interiority* and *relations of exteriority* (De Landa 2010:3-4); in other words, they enter into dynamic, non-linear relationships with one another (interiority), but also with elements from other MSMs (exteriority). It is the relations of interiority that give the MSM their emergent properties, but the relations of exteriority allow each component part a certain degree of autonomy, giving it the potential to become ‘detached’ from one MSM and ‘plugged into’ another. This avoids the trap of ‘macro-reductionism’, whereby the behaviors of component parts (actants) are wholly determined by the structure. Since they are multi-scalar and palimpsested, each MSM is in continual dynamic relations with multiple other MSM.



#### 6.4.2.2. *Substance vs. Process*

One of the most common critiques of culture is that it has been reified by anthropologists as “some kind of object, thing, or substance, whether physical or metaphysical” (Appadurai 1996:12). Social totalities such as culture or ethnicity are paradoxically assumed to remain ‘the same’ while their component parts constantly change over time and vary over space (Normark 2006). MSM are not substances but rather *processes*—a constantly changing, adapting, dynamic myriad of interdependent heterogeneous elements. They are by their very nature unstable, volatile, and constantly exist “on the edge of chaos” (Bentley and Maschner 2007). However this does not mean that they are disordered or anarchic; in complexity theory, order emerges from chaos. An MSM “seems structural, an object with the materiality and stability of the classic metaphors of structure, but the intent in its aesthetic uses is precisely to undermine such ideas of structure” (Marcus and Saka 2006:102).

The dynamic quality of the MSM stems from the tension between two distinct forces: *centripetal* forces that seek to homogenize their component parts and draw distinct boundaries, and *centrifugal* forces that constantly threaten to pull them apart. Such centripetal forces are a consequence of the properties of *self-organization* (autopoiesis) and *self-replication* characteristic of all complex adaptive systems (Heylighen 2009:6). Since MSM are continuously engaged with other MSM, the centripetal forces in one can act as the centrifugal forces in another.

<b><u>Culture</u></b>	<b><u>Material-Semiotic Machines</u></b>
• Humans only	• Humans and nonhumans
• Substantive	• Processual
• Structural	• Chaotic
• Stabilizing	• Dynamic
• Transcendent	• Immanent
• Closed system	• Open system
• Singular	• Multi-scalar (palimpsested)
• Ahistorical	• Historical
• Hierarchical	• Rhizomatic
• Quiddity (Categorical)	• Haecceity (Unique)

**Figure 6.1**  
**Comparison of Traditional Culture Framework and 'Monstrous' Approach**

## **6.5. CONCLUSION**

This section has outlined the principle elements of a new theoretical framework that combines materiality, relationality, and complexity perspectives. It builds upon much of the recent innovative work in anthropology, sociology, and philosophy in order to rethink some of the basic concepts in social theory. This chapter is admittedly quite theoretical and operates at a high level of abstraction. Therefore the following chapter will demonstrate how this new perspective can be operationalized within a concrete historical/archaeological case study—the investigation of social identities in the Late Roman and Early Middle Ages.

## CHAPTER 7

### **BEYOND ETHNICITY: SOCIAL IDENTITY, MATERIAL CULTURE, AND TECHNOLOGICAL CHOICES IN THE POST-ROMAN SEANAR**

#### **7.1. INTRODUCTION**

The previous chapter outlined a new approach to understanding the relationship among social action, human identity, and material culture. This chapter seeks to evaluate the utility of this new perspective by addressing one of the most complex yet important topics in Late Roman and Early Medieval archaeological research: the nature of ‘barbarian’ identity and its connection to the archaeological record.

As explored in Chapter 2, no historical or archaeological discussion of the transition from the Roman to Medieval worlds can afford to ignore the role played by non-Roman ethno-linguistic groups. The various barbarian peoples of the mid-1<sup>st</sup> millennium AD—Goths, Alans, Vandals, Huns, Slavs, Saxons, Avars, Franks, Lombards, Gepids, and so on—have been an source of endless controversy for scholars of this period, and have long captivated the imaginations of the wider public. Although the historical and archaeological records appear replete with information about these peoples, the nature of such groups nevertheless remains enigmatic. Who were these barbarians? Where did they come from? How did they see themselves? What was their relationship with the Roman Empire? Such questions continue to frustrate and fascinate scholars on both sides of the Atlantic.

#### **7.1.1. Chapter Outline**

The first two sections of this chapter provide a brief historiographical overview of these debates, exploring the various ways by which historians and archaeologists have conceptualized Europe’s ‘barbarians’ over the past century. The first part specifically addresses how scholars have dealt

with accounts of these non-Roman communities in the *historical* record. The second part traces a parallel debate, examining how archaeologists have attempted to identify and explore aspects of barbarian identity in the *material* record.

After reviewing the different contemporary archaeological approaches to barbarian social identity, a new framework is presented in light of the ‘monstrous’ perspective outlined in the previous chapter. Such an approach seeks to transcend the inherent sociological, historiographical, and archaeological limitations with traditional conceptions of barbarian identity. Rather than assuming that material culture is an epiphenomenal reflection of a ‘cultural’ or ‘ethnic’ reality, this chapter adopts a perspective in which *embodied practice* is seen to mediate the co-construction of ‘things’ and ‘people’. The final section of this chapter then uses the data generated from ceramic composition analyses (presented in Chapter 3) to explore how archaeologists might address questions of technological choice in the post-Roman eastern Alps and northern Adriatic without being unnecessarily burdened by the ‘tyranny’ of the historical record (*sensu* Champion 1990). A *chaîne opératoire* approach is adopted as middle range research, connecting questions of social identity with empirical datasets from the material record.

## **7.2. BARBARIAN IDENTITY AND THE HISTORICAL RECORD**

Late Classical written sources describe non-Roman peoples from northern Europe and Central Asia as organized into a number of distinct and coherent social groups distinguishable by language, dress, customs, grooming, fighting style, or any number of other cultural attributes and/or behaviors. Of course, such Late Antique and Early Medieval sources did not use the term ‘ethnicity’, which only arose in its current meaning after the 1950s (Cohen 1978). Instead, terms such as *gens* (pl. *gentes*), *natio*, and *populi* were used to identify such communities in the pre-

modern world (see Bartlett 2001, Goetz, Jarnut, and Pohl 2003). These ‘barbarian’ tribes appeared to these ancient and medieval authors as natural, homogeneous, unchanging social entities, bound by ties of kinship and blood, and sharing a common biological and historical origin (see Pohl 1991).

European historians of the 18<sup>th</sup> and 19<sup>th</sup> centuries—the first to systematically study these groups in the textual and archaeological sources—adopted a similarly essentialist perspective on barbarian ethnicity. Since the concept of ‘race’ served as the dominant paradigm in Euro-American anthropology during this period (see Stocking 1968, Gould 1996), it was through this particular ideological prism that early historians and archaeologists understood the nature Late Roman and Early Medieval barbarian groups.<sup>76</sup> The supposed racial superiority of ‘Germanic’ peoples in Antiquity and the Middle Ages would later constitute a central tenet of German patriotic antiquarianism (*Vaterländische Altertumskunde*), a perspective that would dominate German historical and archaeological scholarship through the first half of the 20<sup>th</sup> century (see Wiwjorra 1996, this dissertation Chapter 8).

### **7.2.1. From Race to Ethnicity: the Ethnogenesis Model**

However, after the horrific events of the Second World War demonstrated the tragic consequences of racial science, many social scientists sought new ways to investigate human physical and cultural diversity. Anthropologists recognized that humans could not be scientifically divided into discrete, ahistorical, and biologically homogeneous groups called ‘races’ (Montagu 1942). The term ‘ethnicity’ would eventually appear as a potential replacement for the concept of race; while the latter divided people along lines of immutable morphological

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<sup>76</sup> It is generally acknowledged that the concept of ‘race’—at least as understood by 19<sup>th</sup> century scientists—did not exist in the early medieval world, although there is some debate over whether it should be considered solely a construct of modernity (see Lampert 2004, Heng 2011)

or genotypic differences, the former placed emphasis on the *perception* of such difference as the result of specific historical, social, and political processes. This constituted a shift from an ‘etic’ to ‘emic’ concept of social identity (Moerman 1965). Subsequent ethnographic research—particularly Barth’s (1969) seminal volume—revealed that the ethnic differences were often emphasized along political or social boundaries, demonstrating the importance of the ‘Other’ in the construction of group identity.

The move away from racial essentialism and towards the socio-political ‘construction’ of ethnic identity in the social sciences significantly impacted the study of Late Roman and Early Medieval barbarian groups. During the 1950s, a number of German, Soviet, and Anglophone historians began to question the traditional conception of barbarian tribes as timeless and biologically homogeneous ‘races’ (see Murray 2002). The subsequent publication of German historian Reinhard Wenskus’ magnum opus *Stammesbildung und Verfassung: Das Werden der Frühmittelalterlichen Gentes* (1961) marked a major turning point in the study of Late Roman and early medieval ethnicity.

In this dense scholarly treatise, Wenskus forwarded the radical proposition that Germanic tribes described in Late Roman and Early Medieval written sources were not large, genetically related communities who had migrated *en masse* from the north, but were rather heterogeneous conglomerates that had formed around a relatively small core of political/military leaders.

Wenskus argued that as small ‘Germanic’ warrior bands migrated from their northern homelands to the Roman *limes*, they were joined by individuals from any number of different ethno-cultural communities looking to share in the rewards of their military success. Although these ‘recruits’ would have come from diverse ethno-linguistic and cultural backgrounds, their adoption of the identity of the ‘warrior elite’ provided the *appearance* of ethnic homogeneity to Classical and

medieval writers. In other words: “not entire peoples but small successful clans, the bearers of prestigious traditions, emigrated and became the founders of new *gentes*” (Wolfram 1988:39).

For Wenskus, Germanic peoples were to be “no longer regarded as homogeneous ethnic units, but as constantly changing institutions focused in a ‘kernel of tradition’ (*Traditionskern*) and held together by political leadership and the consciousness of a common origin and tradition” (Goetz 2003:39). Therefore, social identity<sup>77</sup> constituted an individual *choice*—not a biological or cultural given—for the vast majority of these barbarians.

It would take several decades for Wenskus’ innovative ideas on barbarian identity to become well established among Anglophone medievalists. This eventually occurred by way of the translated<sup>78</sup> work of his intellectual heirs Herwig Wolfram (1988, 1997) and Walter Pohl (1988, 1991) at the University of Vienna, along with their American counterpart Patrick Geary (1983, 1988, 2002). These three scholars fused Wenskus’ political understanding of barbarian social identity to contemporary anthropological formulae such as instrumentalist ethnicity (Gellner 1983) and Bourdieu’s practice theory (1977), forming the basis of the so-called ‘ethnogenesis’ model of barbarian identity.

The ethnogenesis model attempts to make a decisive break with lingering racial aspects in Wenskus’ work by emphasizing the situational and malleable qualities of ethnic identity.

Through a careful reading of the textual sources, ‘ethnogenesis’ historians have argued that barbarian groups were (actively or passively) *invented* rather than *a priori* social categories. For example, Geary—following anthropologists Sidney Mintz and Eric Wolf (1950)—argued that

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<sup>77</sup> In his book, Wenskus only rarely uses the term *ethnische* (ethnic), instead opting for *Stämme* (tribes)

<sup>78</sup> Indeed, despite its importance for early medieval historians, Wenskus’ work has never been translated into English

ethnicity must be “*for something*”; in regard to early medieval barbarians, it was “a function of the circumstances which related most specifically to the paramount interest of a lordship” (Geary 1983:25). In other words, Geary argues that in the political chaos following the collapse of the Roman Empire, many people sought to adopt the ‘ethnic’ identities of these Germanic military elites as a means to establish security and stability. As Pohl (1991:67) notes, ethnicity became “an opportunity to reinforce loyalties and facilitate integration.”

Geary supports this hypothesis by pointing out that: “one finds a contradiction between the articulated criteria by which peoples were to be differentiated, and the circumstances in which these differentiations actually took place” (Geary 1983:24). That is to say, while characteristics of customs, law, language, dress, and origin were often *listed* by contemporary textual sources as what constituted a ‘people’, careful scrutiny of the textual sources reveals that ethnic labels such as ‘Frank’, ‘Goth’ or ‘Burgundian’ most often appear in distinctly *political* situations, suggesting that ethnic identities were directly tied to politics.

### **7.2.2. Critique of Wenskus and Ethnogenesis**

Wenskus’ new perspective was rightly hailed as a breakthrough in early medieval social history and a welcome retreat from the racial ideologies that haunted postwar Germany. Likewise, over the past several decades, the ethnogenesis model has reached near-paradigmatic status in Late Roman and Early Medieval history and archaeology (see Golden 1992, Hedeager 1993, Hummer 1998, Daim 2003a, Curta 2001, 2005, Hopperbrouwers 2006, Garipzanov et al. 2008). However, the work of Wenskus and his students has recently come under sharp criticism, particularly from



a group of scholars from University of Toronto (i.e. Walter Goffart, Alexander C. Murray, and Andrew Gillett)<sup>79</sup>.

Much of this critique has been directed at a central assumption of the ethnogenesis model: that the ‘warrior elite’—around which these barbarian tribes had formed—had actually preserved ‘authentic’ cultural knowledge from their Germanic homelands. Wenskus referred to these elites as *Traditionsträger* (‘carriers of traditions’) and argued that their identity—passed on through oral tradition—*did* ultimately derive from an authentic Germanic ‘Iron Age’ heritage. This has led some historians to accuse the ethnogenesis model of harboring an implicit Eurocentrism. For example, Gillett (2006:247) has remarked that “the Ethnogenesis model in fact reinforces very old conceptions of European history: the fundamental processes which shape and characterize early Europe are seen as indigenous, arising from its own deepest pre-history.” Murray has similarly argued that Wenskus’ ideas actually *preserve* aspects of the racialized, romantic *germanische Altertumskunde* that they supposedly rejected, particularly “the creative, dynamic role of the German *Urheimat* [homeland] in shaping Europe’s destiny” (Murray 2002:68, see also Goffart 2002).

The historical debate over the interpretation of Jordanes’ *Getica* (‘History of the Goths’) provides a good example of the differences between the Vienna and Toronto schools. This 6<sup>th</sup> century document was authored by an Eastern Roman aristocrat who claimed Gothic ancestry.<sup>80</sup> In one of its most famous (and controversial) passages, Jordanes traces the origins of the Gothic people to the island of *Scandza*, generally understood to be Scandinavia. Wolfram, in his seminal

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<sup>79</sup> The subsequent debates have often been characterized as a clash between the ‘Vienna’ and ‘Toronto’ Schools

<sup>80</sup> However, as Jordanes notes, his account was largely based upon another text (Cassiodorus’ now lost *Gothic History*)

‘historical ethnography’ of the Goths, accepts Jordanes’ origin story “not as a hard fact but as motif of a saga” (1988:37). In other words, although most individuals identifying as ‘Gothic’ in the 6<sup>th</sup> century were probably *not* of Scandinavian origin, Wolfram believes that Jordanes’ account was nevertheless grounded in real historical events. According to Wolfram, Jordanes’ account was derived from the authentic ‘cultural memories’ passed on by the warrior elite’s ‘nuclei of tradition’ over many generations.

However, Goffart (2006) has called this historical analysis into question, arguing that Wolfram ignores the socio-political context of the *Getica*. Goffart points out that although Jordanes *calls* himself a Goth, the tone of his account clearly indicates partisan support for the Byzantines in their war against the Ostrogothic Kingdom in Italy (see Chapter 2). For Goffart, the *Getica* is best understood as a clever piece of Byzantine propaganda, meant for an Eastern Roman audience supporting the end of Gothic rule in Italy, and was certainly *not* intended “to be a storehouse of authentic Gothic antiquities or to fill a Gothic audience with pride in its past” (Goffart 2006:70).

Goffart and his students from the ‘Toronto School’ generally express much greater skepticism concerning the role of ethnic identity in the Late Roman and Early Medieval worlds, and are therefore much less inclined to view historical sources as reliable depictions of barbarian identity. Gillett (2006:250) has cautioned against conflating Classical ethnography—from which many barbarian origin stories derive—with a northern European ‘ethnic discourse’. Goffart (2006) has also dismissed the antiquity and authenticity of ‘Germanic’ tribes that appear in the Late Roman sources, arguing that such groups had been settled near the Roman border for generations, and were not—as is often asserted—new arrivals that has been recently forced from their ancestral homelands.

American historian Patrick Amory (1997) has also contributed another important study in this vein, which rejects the stereotypical socio-ethnic division between ‘Romans’ and ‘barbarians’ as depicted in the Classical sources. He argues that this false cultural dichotomy perpetuates a misguided view that divides the Late Antique world into two distinct, competing civilizations. Through a detailed prosopographical investigation, Amory reveals how espousing a ‘Gothic’ identity was far less significant for the political elite of Ostrogothic Italy than regional, professional, and institutional loyalties (1997:14). His study raises important questions concerning the importance of ethnic identity among the populations of the post-Roman west.

### **7.2.3. Summary**

To sum up, one might identify three different contemporary perspectives on the nature of ethnicity in the Late Roman and Early Medieval worlds. The first is the notion of ethnic groups as homogeneous, primordial, and bounded peoples, tied together by territory, biology, and/or cultural traditions. While this reflects the portrayal of such groups in the historical sources, few contemporary historians espouse such an essentialist perspective of barbarian identity.

Nevertheless, although such views have been largely marginalized in academia, they continue to inform many ‘popular’ portrayals of Late Antique and Early Medieval Europe—in movies, television, video games, and popular fiction, as well as (more dangerously) modern nationalist political movements across the continent (see Geary 2002, section 7.3.1.1. below).

The second perspective—perhaps the most widely espoused by academic historians today—argues that most barbarian tribes were ‘imagined communities’ (Anderson 1983), in the sense that their members did not necessarily share a common genetic or historical origin. However this ‘ethnogenesis’ perspective still asserts that the ‘core’ of these ethnic groups—the political or military elite—did maintain a deep historical and cultural continuity, which could be traced back

to an ancestral homeland, whether in northern Europe or Central Asia. A final perspective argues that those ethnic groups described in the historical sources were in fact the relatively recent product of the socio-political situation along Roman *limes*, and did not have any actual connection with ancient ‘Germanic’ cultural traditions. It implies that those non-Roman peoples had lived long enough in this area to lose any social memory of living elsewhere (Goffart 2006:7).

### **7.3. BARBARIAN IDENTITY IN THE ARCHAEOLOGICAL RECORD**

Thus far, we have focused on how historians of Late Antiquity and the Early Middle Ages have understood concepts of ethnic identity, but a parallel debate concerning whether *archaeological* data can provide meaningful evidence of barbarian social identity must also be addressed. Of course, for much of its existence, early medieval archaeology has operated as a ‘handmaiden’ to history (Austin 1990); in other words, the value of archaeological data has long been seen as contingent upon its ability to address *historical* research questions. The relationship between post-Roman historians and archaeologists has been often fraught with tension, with each side accusing the other of indiscriminately cherry-picking data to fit pre-determined interpretations, rather than appreciating the complexity of the source material (e.g. Champion 1990, Halsall 2003).

Keeping this relationship in mind, in this section I review three approaches to examining ethnic identity in the Late Antique and early medieval archaeological record, and then present a new model based on the relational social ontology outlined in Chapter 6. The spread of Slavic-

speaking communities in the early medieval southeastern Alps serves as a historical backdrop for discussing archaeological approaches to ethnic identity in the material record (see Chapter 2).

### **7.3.1. Pots and Peoples: the Culture History Approach**

Early medieval archaeology developed in the 19<sup>th</sup> century as an extension of the field of history (Gerrard 2003); so when the culture-history paradigm arose in early 20<sup>th</sup> century Europe, it provided a powerful new framework with which to conceptualize the relationship between early medieval peoples and archaeological remains. This approach was most famously articulated in the work of German archaeologist Gustav Kossinna and Australian archaeologist V.G. Childe, each of whom asserted that archaeological assemblages can be correlated quite straightforwardly with the movement of past ‘peoples’—a term that could possess cultural, ethnic, and/or racial undertones (see Trigger 1989, Jones 1997, this dissertation Chapter 5). This model proved particularly attractive for early medieval archaeologists, since textual sources were thought to conveniently identify these ‘archaeological cultures’. It is perhaps unsurprising that as the culture history approach was slowly abandoned among Anglo-American (and eventually European) prehistorians, it continued to maintain a powerful conceptual hold over their colleagues working in the Classical and Medieval periods.

Even today, the assumption of a direct and unproblematic connection between archaeological cultures and past ethnic groups implicitly undergirds many interpretations of Late Roman and Early Medieval material culture. Archaeological assemblages—particularly artifacts considered ‘ethnically sensitive’ (i.e. dress ornamentation, weapons, jewelry)—are still frequently connected to the barbarian tribes described in textual sources. The ‘arrow maps’ of the Migration Period (Ger: *Völkerwanderungszeit*), which still fill the pages of most historical and archaeological publications, reflect this understanding of the nature of barbarian groups (see Goffart 1988). This

perspective not only implies that archaeological styles passively reflect particular group identities, but that these groups themselves are homogeneous, holistic, and bounded social entities.

### *7.3.1.1 The Role of Nationalism*

The legacy of European nationalism also helps to explain why the culture history perspective has continued to maintain a powerful grip on early medieval archaeology. The origins of modern nationalism in Europe can be traced to the 18<sup>th</sup> century, with the Romantic writings of Herder and Rousseau, who argued that each European ethno-linguistic community embodied a unique spirit (Hobsbawm 1990). Perhaps more than any other period, the origins of contemporary European ethnic identities have been located in the centuries following the collapse of Roman authority in the West; that is, precisely the period under consideration here. Many modern European peoples still regard ‘barbarian’ groups from this time (Franks, Bavarians, Lombards, Slavs, Anglo-Saxons, Goths, etc.) as their ancestors. Therefore, tracing the origins and movement of these ‘archaeological cultures’ has been more than just an exercise in intellectual curiosity, but is frequently construed as a matter of national pride and—even more significantly—used to provide ‘empirical evidence’ to support political land claims in disputed border regions (see Chapter 8). This argument of ‘primary acquisition’ sought to establish territorial legitimacy based on the argument that ‘my ancestors were here *first*’ (see Geary 2002). Since the eastern Alpine and northern Adriatic region has long been, and continues to be, at the crossroads of numerous ethno-linguistic zones, it is not surprising that the early medieval period

has played a critical role in legitimizing ethno-nationalist agendas in the region (see Slapšak 1993, Kahl 2000, Melik 2000, Geary 2008, Štih 2010, Barbiera 2010)<sup>81</sup>.

### 7.3.2. The Agnostic Approach: Sebastian Brather

Although largely purged of the overtly racial and/or nationalist connotations of the past, many Late Roman and early medieval archaeologists in Central Europe still (implicitly) adopt a culture-history approach when it comes to the relationship between ethnic identity and material culture.<sup>82</sup> However this approach has been stridently criticized by a number of archaeologists in recent decades. Perhaps the most well-known critic of the Kossinnean legacy of culture-history in Central European early medieval archaeology is Sebastian Brather. In numerous publications (see Brather 1996, 2001, 2002, 2004b), Brather has insisted that no one-to-one correlation can be made linking particular styles of artifacts with ‘tribes’ named in historical sources. Drawing on the same ‘instrumentalist’ constructions of ethnicity (i.e. Barth 1969, Gellner 1983, Bourdieu 1977) as the ethnogenesis historians described above, Brather argues that ethnic symbols are entirely arbitrary and situational—a purely ‘emic’ category. While he maintains that archaeological materials are potentially useful for investigating political, cultural, or social differences *within* particular societies, he rejects their utility in identifying the conscious distinctions made *among* adjacent groups (Brather 2002:157).

Brather adopts an essentially ‘agnostic’ view regarding ethnic identity in the material record.

While he does not question the importance of social identities for early medieval peoples *per se*, he believes that any attempt to locate them archaeologically is destined to fail, and runs the

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<sup>81</sup> Chapter 8 provides an in-depth investigation of the role of ethno-nationalist and imperialist politics in early medieval archaeology in the southeastern Alps.

<sup>82</sup> Although archaeology is not generally tinged with the same overt ethno-nationalism today as in the past, one can still detect preferences based upon each nation’s conception of its past. For example, it does not seem coincidental that early medieval ‘Slavic’ archaeology is much better studied in Slovenia than in adjacent Austrian areas.

additional risk of lending itself to manipulation by contemporary nationalist agendas. Drawing on British archaeologist David Clarke's (1978:264) 'polythetic' model of culture, Brather emphasizes that 'archaeological cultures' are arbitrary classifications that help make sense of our data, but must not be assumed to represent actual social identities in the past (Brather 1996:179). Since ethnographic research clearly demonstrates that human identity is a complex, multifaceted, and fluid phenomenon—of which ethnicity is only a single component—Brather asserts that any attempt to 'decode' this in the material record is ultimately a futile endeavor:

So on the one hand, nearly any part of material culture *could* have demonstrated 'ethnic identity'. And on the other, it is possible that no *material* sign was important; *habitus* and people's actions could have been the only relevant way that an *ethnos* differentiated itself from its neighbors. Semiotics shows that every sign is arbitrary. Therefore there can be no general approach to these signs (Brather 2002:172, emphasis in original).

#### 7.3.2.1. Brather and Early Medieval Slavic Archaeology

Brather brings such an agnostic perspective on ethnicity to the study of early medieval Slavs in East Central Europe (see Brather 2001, 2004a). He observes that although broad similarities in the material culture of early medieval period in this region *do* exist, there is also tremendous regional variation that complicates the simple identification of so-called 'Slavic' material. Elements considered diagnostic of Slavic settlement in one region are often entirely absent in another; in other words, the various cultural groups throughout East Central Europe all categorized as 'Slavic' actually demonstrate a remarkable *heterogeneity* in their material assemblages (see Figure 7.1).

After a careful examination of various ceramic styles, settlement layout, hill-forts, and grave goods across East Central Europe, Brather (2004a:326) concludes: "it becomes clear that different elements of material culture are spread very unevenly in time and space. The different



attributes have no direct connection with each other. Homogeneous groups (of invaders) cannot be reconstructed on this basis.”

cultural group	ceramics	burials	hillforts	house building	tribes
Prag-Korčak	undecorated, high and lean	urn graves	–	square-shaped <i>Grubenhäuser</i>	? [substrat]
Sukow-Szeligi	undecorated, flat and belly	unseparated cremations	–	block constructions at ground level	? [substrat]
Feldberg-Gotańcz	combed ornament and comb stamp, decorated rim	unseparated cremations	large hillforts on top of a hill	block constructions at ground level	Wilzi
Tornow-Gostyń	rippled decoration, biconical	urn graves on mounds?	small circular fortifications in the lowland	block constructions at ground level	Milzeni and Lusizi
Leipzig	Danube tradition, combed ornament, wheel-turned	?	dry wall	square-shaped <i>Grubenhäuser</i> and block constructions at ground level	Sorbs

**Figure 7.1**  
**Regional Summary of Slavic Material Culture across East-Central Europe (after Brather 2004a:326)**

While Brather focuses on early medieval ‘Slavic’ material between the Elbe and Oder Rivers in Germany, many of his arguments also hold true for ‘Slavic’ settlements in the eastern Alpine region. For example, the characteristic ‘corner oven’ found in virtually all ‘Slavic’ sunken-feature buildings (Ger: *Grubenhäuser*) in Germany is conspicuously absent from similar structures in the southeastern Alps (I.M. Hrovatin, pers. comm. 2011). Likewise, the wavy-banded coarse-ware pottery long thought to be the product of Slavic craftsmanship in the early middle ages actually first appears at the end of the 4<sup>th</sup> century (almost two centuries before the Slavic migrations) and may in fact be more closely connected to Gothic political hegemony in the region (Rodriguez 1997).

Despite the empirical evidence that highlights the limitations of correlating material culture with past ethnic groups, Brather's controversial views on early medieval ethnicity have been attacked on a variety of grounds. Responding to his work, fellow German archaeologist Volker Bierbrauer (2004b) affirms that ethnic identity can *indeed* be examined in the early medieval material record, if only through a detailed and contextual approach. Bierbrauer (2004b:71) criticizes Brather for his categorical dismissal of the *possibility* of investigating ethnic identity in archaeology. Although Bierbrauer admits that correlations between artifacts and past groups are neither straightforward nor uniform, he insists nonetheless that they can be addressed under the appropriate circumstances, presenting several case studies from early medieval Central Europe to support his arguments.

Twenty-five years Brather's senior, Bierbrauer is perhaps representative of an earlier generation of German archaeology, which tends to favor inductive over deductive approaches. By endorsing what is essentially an 'accumulationist' perspective of archaeological interpretation, Bierbrauer seems to maintain that *any* aspect of the past is *potentially* knowable, as long as archaeologists are able to gather a sufficient amount of information. In his view, assuming ethnic identities to be *a priori* unrecoverable in the material record is a defeatist attitude, and inappropriately prioritizes social theory over archaeological data.

### **7.3.3. Practice and Ethnicity**

Brather's position on ethnicity has also been attacked—from a very different perspective—by Romanian-American archaeologist Florin Curta (2001a, 2007, 2011). Curta critiques Brather's use of Bourdieu's *habitus* (cf. Brather's quote above, on p. 249) to argue *against* the possibility of studying ethnicity in the material record. Drawing from the work of American anthropologist G. Carter Bentley (1987), Curta seeks to demonstrate how ethnic identities are intimately linked

to the *habitus*. Similar uses of practice theory to study ethnicity in the material record have been recently embraced by a number of archaeologists (see Jones 1997, Sindbæk 1999, Frankel 2000, Gardner 2002). These approaches have sought to mediate between the essentialist (primordial) and constructivist (instrumentalist) approaches to ethnicity outlined above by emphasizing the centrality of material culture in the reproduction of everyday practices (see also Orser 2004).

While Curta does not endorse a direct stylistic correlation of material culture to ethnic identities, neither does he believe ethnicity to be completely inaccessible to archaeologists, since the “very process of ethnic formation is coextensive with and shaped by the manipulation of material culture” (Curta 2007:168). Drawing on Polly Wiessner’s (1983) concept of ‘emblemic style’ and Ian Hodder’s contextual approach (see Chapter 5), Curta (2007:170) asserts that material culture “is not a passive reflection of ethnicity, but an active element in its negotiation” and emphasizes the importance of examining the material traces of habituated, routine activities of daily life (which he describes with the Husserlian term *Alltagsleben*). He essentially embraces the post-processual ‘textual metaphor’ for the interpretation of material culture:

The ‘textual model’ implies that the archaeological record is part of a symbolic system and largely encodes ideas or general social behavior. This actually means that material culture is a ‘text’ to be ‘read’. Archaeologists are therefore supposed to identify and study contexts in order to interpret meaning. It is particularly in this light that an archaeology of ethnicity becomes possible (Curta 2007:179-180).

Curta’s basic argument is that if people use material culture to negotiate ethnic boundaries—as demonstrated in numerous ethnographic studies—then archaeologists should (at least potentially) be able to examine such processes in the material record. Furthermore, if ethnic identities are ‘naturalized’ through the continuous repetition of daily practices (i.e. through the *habitus*), then the material traces of such activities should also be archaeologically detectable. There is much of value in Curta’s perspective, including his emphasis on practice and the active nature of material

culture, and he should be commended for bringing theoretically sophisticated arguments to a subfield where they are often lacking.

There are however a number of problems with Curta's framework (best outlined in Curta 2007). For example, there is little discussion of how such a practice approach to ethnicity might be operationalized in the material record; the few brief examples he provides are rather unconvincing (and too often rely on textual evidence). Although he rightly points out that Hodder's ethnoarchaeology reveals how people actively use material culture to draw social boundaries, Curta fails to mention one of the other key insights of Hodder's study—namely, the inherent difficulties in determining the particular kinds of identity signaled in artifacts. This problem is at the crux of Brather's argument *against* studying ethnicity in the material record: how can archaeologists distinguish when material culture is used to signal class, gender, age, or ethnic distinctions in a particular context, particularly without the luxury of first-hand ethnographic observations?<sup>83</sup>

Furthermore, Curta is occasionally at pains to distinguish between post-processual and culture-historical approaches to ethnicity; he makes several peculiar assertions, such as: "Artifacts are not properties of a society, but part of the life of a society... What should concern medieval archaeologists is not so much what people do, what kind of pots or brooches they make, what

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<sup>83</sup> It should be noted that this is a problem for archaeological studies of ethnicity more generally. It is not coincidental that the most compelling and widely cited literature on the topic has come from ethnographic rather than archaeological research (cf. Wiessner 1983, Wobst 1977, Hodder 1982, Larick 1991, Miller 1985, etc.). Even Jones (1997), who provides the most comprehensive investigation of ethnicity in archaeology, seems ambivalent as to whether such differences can actually be detected in the archaeological record, characterizing the relationship between ethnicity and material culture as "intangible and fleeting, and particularly problematic for archaeologists" (1997:124).

shapes of houses they build, but the ‘way they go about it’” (2007:177)<sup>84</sup>. Although Curta’s theoretical framework is coherent and compelling, his case studies fail to elucidate what exactly this new perspective means *in practice*.

#### **7.3.4. Summary: The Problems of Ethnicity**

The basic question investigated thus far concerns the connection of particular styles of material culture to the barbarian groups identified in the Late Roman and Early Medieval historical record. The attentive reader has probably already noticed the inbuilt definitional problem with addressing this topic: what *exactly* do we mean by ‘ethnic group’? The lack of agreement upon the precise meaning of the term ethnicity has long plagued the social sciences (see Jones 1997:56-83), but Late Roman and Early Medieval historical sources present an additional complication. As Pohl (1991) has pointed out, there was no single conception of social identity during this period. For example, ‘Roman’, ‘Avar’, and ‘Sclaveni’ were all terms that described some form of social identity, but they were not functional equivalents: Roman identity was based upon citizenship, Avar identity embodied a specific political meaning, while Slavic described a much broader linguistic and ‘cultural’ lifestyle. It is generally agreed that conceptions of identity are polymorphous, contextual, and nesting (Matthews 2001). But how can we address these in the archaeological record?

Based on the above examples, I suggest that archaeological approaches to ethnicity are faced with three distinct analytical obstacles: (1) a *sociological* problem: the complexity, fluidity, and situational nature of human social identities (2) an *archaeological* problem: the complex and multifaceted relationship between social identity and material culture; and (3) a

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<sup>84</sup> This might seem like nit-picking, but I fail to see the distinction between “what people do” and “the way they go about it”. Such semantic sleight-of-hand reveals an imprecise definition of ‘ethnicity’ as well as an inability to properly operationalize its study in the material record.

*historiographical* problem: the fact that the historical record—which serves as the primary means of conceptualizing ethnic groups in the Late Roman and Early Medieval period—is not only sparse, but comprised entirely of ‘etic’ accounts from writers who had their own political and ideological agendas.<sup>85</sup> These barbarian groups were, to borrow a term from Eric Wolf (1982), ‘peoples without history’ (cf. Slofstra 1992).

### **7.3.5. A New Way Forward?**

Based on the above investigations of ‘ethnicity’ in the disciplines of history, anthropology, and archaeology, we appear to be faced with a theoretical and methodological impasse. I would argue that in order to move forward, we must tackle these issues from a very different perspective, one that can help us to rethink some of the most basic assumptions and ideas held by early medieval historians and archaeologists. If we attempt to use material culture to access the immaterial (but supposedly more *real*) realm of culture, then we are doomed to failure. As argued in Chapters 5 and 6, this is not because of the complex representation of culture in ‘things’, but rather because *there is no pre-existing culture* to access.

If we consider the monstrous perspective outlined in the previous chapter, how might this help us transcend this problem? We might first recognize that despite vast differences among the approaches to social identity outlined above (i.e. essentialist versus instrumentalist), each posit a fundamental ontological division between the ‘social’ and ‘material’ worlds, where the former is constituted by relations among humans alone and the latter by nonhumans ‘things’ alone. In this schema, social identity (ethnicity) is the product of purely social (i.e. human) relations, and resides ultimately in the mind. Since this ‘social’ identity shapes our behavior (action), it is thought to potentially leave traces in the material record (see Figure 7.2 below).

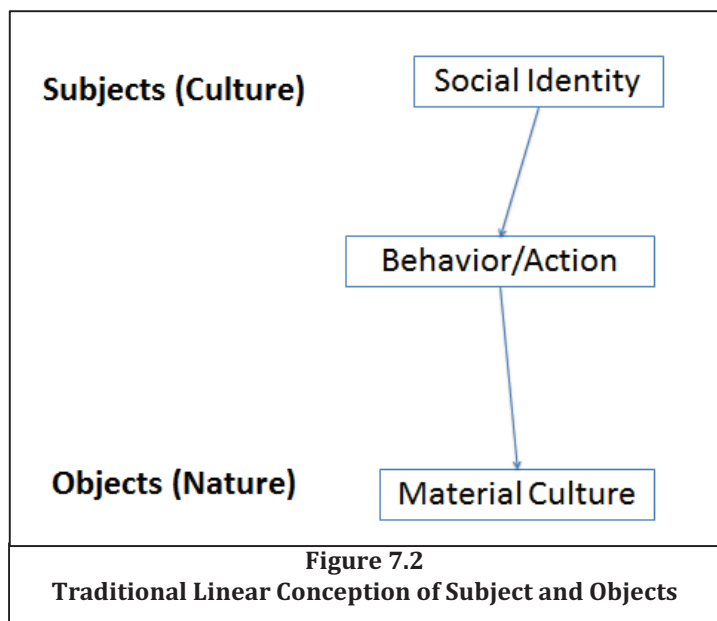
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<sup>85</sup> Garipzanov et al. (2008:3) make a similar observation.

For traditional culture historians, social identities are thought to be relatively stable and singular; therefore their representation in artifacts is easily detected. However, for archaeologists such as Brather who embrace the instrumentalist conception of ethnicity, identity is complex, layered, and contextual, making it impossible to detect social identity in the material record. So in spite of their differences, each perspective actually holds the *same* hierarchical, linear, and unidirectional understanding of the relationship between identity, behavior, and things (artifacts), where material culture constitutes nothing more than a passive reflection of human identity.

Keeping with our case study of the early medieval ‘Slavs’, if we assume for the moment that the Slavic-speaking communities connected to the early medieval polity of Carantania had some sense of social (ethnic) identity,

why not pose a very basic (although rarely asked) question: from where exactly did this sense of group identity derive? In traditional social theory, such ethnic identities are thought to be solely the product of the *relations among the individuals* (humans) who considered themselves Carantanian Slavs. In



other words, if these individuals chose to wear certain styles of jewelry, decorate their pots in a certain fashion, or fight with certain types of weapons in order to reinforce group solidarity or distinguish themselves from other ethnic groups, than this was seen as the material manifestation

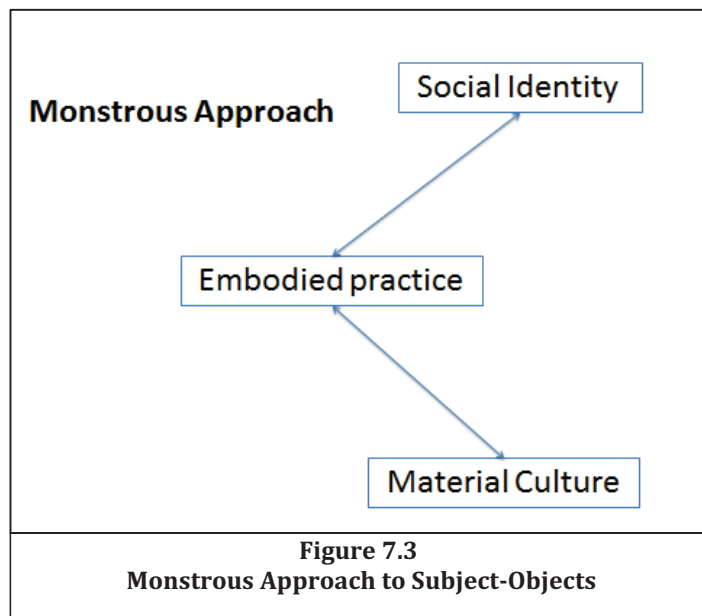
of the Carantanian identity that was *already in their heads*. Material culture styles are therefore seen only as secondary, epiphenomenal products of social identity and group behavior.

However, in the monstrous approach outlined in Chapter 6, material culture is *not* a passive reflector of identities generated from pre-existing social world of naked face-to-face human relations, but rather is an inseparable part of a heterogeneous collective of humans and nonhumans mixed together in complex, dynamic, and nonlinear relationships. Material culture is a *fundamental* part of the construction of social identities. Here we can draw on Bourdieu (1977) and Ingold (2000a), who stress that *embodied practice* serves as a mediator between human identity and the material world. It is through such practices that we shape our material environment, but it is also through such practices that material culture can in turn shape us.

The advantages of this approach for the archaeologist should be obvious. If one flattens the ‘material’ and ‘social’ realms to the

same ontological level, then the study of ‘things’ takes on new meaning. One might argue that for the better part of a century, archaeologists have sought to become something they were not well equipped to be: during the culture-history phase, they wanted to

be historians of prehistory; in the processual (and post-processual) phases, they wanted to be ethnographers of the past. This has been because ‘things’ have been valued only as a proxy indicator of something more real, more important, more meaningful. As outlined in the previous





two chapters, the materiality approach turns this perspective on its head. Now archaeologists—as much as historians or ethnographers—have *direct access* to an equally important component part of human society—things. Of course, this does not make understanding past processes any simpler or easier, but it places much greater significance in understanding the relationship between humans and material culture.

This holds particular import for post-Roman archaeology, where the focus still remains on identifying the ethnic groups that appear in the written records. The very questions that archaeology is allowed to ask are restricted by this ‘tyranny’ of the historical record. But what if we simply trace the formation of these material-semiotic machines in the Late Antique and Early Medieval SEANAR, unbound from questions of ethnicity? Would this not also help to counteract the dangers of ethno-nationalist manipulations of the past? What better way to do this than by tracing changes in embodied practices, which formed not only artifacts, but the people themselves? This is the goal of the following section, where the ceramic petrographic analyses presented in Chapter 3 are expanded to address issues of specific technological choices (practices) through the method of the *chaîne opératoire*.

## **7.4. TECHNOLOGICAL CHOICES AND SOCIAL IDENTITY**

### **7.4.1. The Potter’s Choices**

Chapter 3 attempted to distinguish the different fabric types observed at each of the four settlements under investigation, thereby giving some indication of the change and continuity of particular ceramic traditions over time. Yet compositional analyses can also sometimes provide additional information beyond simply grouping ceramic fabrics into different categories, such as

the different steps of the ceramic production process. The following sections explore how petrography can help identify the different steps in the ceramic production sequence, and then consider how this can help to provide a new approach to the study of social identity in the Late Antiquity and the Early Middle Ages.

Pottery production involves a complex process involving a number of different technological choices. Archaeologists aim to understand both the way the technology worked as well as its place in the broader social system (Sillar and Tite 2000:3). Rye (1981: ch 3) provides an excellent overview of the production process, including: (1) obtaining raw materials (clays and temper), (2) preparing the materials (removing coarse particles from the raw materials through sieving, Levigation, winnowing, etc), (3) preparing the body (mixing clays, adding water or temper), (4) forming the vessel (hand coiling and slab building, or turning on a slow or fast wheel), (5) adding surface treatments, and (6) firing the vessel.

Each of these different stages of the production process involves a making a decision based on a range of alternative techniques; anthropologists and archaeologists have often employed the concept *chaîne opératoire* to study this sequence (see Leroi-Gourhan 1964, Edmunds 1990, Lemonnier 1993, Dobres 2000, Hilditch 2008). Each of these decisions can *potentially* be discerned with archaeological investigations of the ceramic composition (macroscopic, microscopic, chemical, etc.). Yet it is important to note that such decisions cannot always be confidently identified through such analyses. The following sections examine the different stages of ceramic production, and how they might be detected through ceramic petrographic analyses.

#### *7.4.1.1. Clay Selection*

The first task of the potter, once s/he knows what blends of clay to use, is to obtain the raw materials within the local geology (Rye 1981:16). The clay (or mix of clays) will then constitute the basic matrix (groundmass) of the ceramic fabric body. Depending on the local geology, different clay sources could contain markedly different types or proportions of mineral inclusions. When one can eliminate all the subsequent technological choices that might affect ceramic composition, distinct fabrics probably reflect differences in these initial clay types. At one level, it is significant just to be able to say that a ceramic assemblage is constituted by a number of different clay sources. It is also sometimes possible to identify from where each of these clays were obtained, which generally requires one to obtain clay samples from the area. The ability to distinguish between local and non-local clays is often used in archaeological studies to establish networks of trade and exchange; such 'provenience studies' are one of the most common uses of ceramic petrography in the study of past societies (Whitbread 1995, Mason and Golombek 2003). Since this study focused local coarse-ware ceramics, provenience was not a major concern; there was nothing in the ceramic mineralogy that would have suggested a non-local origin for any of the ceramics.

#### *7.4.1.2. Tempering*

Another important technological choice that can often be identified with ceramic petrography is the addition of non-plastic inclusions during the preparation of the body, generally known as tempering. Potters often add various substances to improve the workability of the clay paste or its behavior during the firing process, as temper can prevent the pottery from shrinking too fast and cracking the pot (Rice 1987:408). Ethnographic and historical evidence has shown that a range of different materials be added as temper, including sand (quartz), limestone (carbonates),

various rocks, shells, organic material, or crushed pottery (the latter termed ‘grog’ or ‘chamotte’). Evidence of tempering can be petrographically identified in a number of ways: through the presence of sharp, angular inclusions in the matrix, voids from materials that burned out during the firing process, or sometimes the size distribution of inclusions (Rye 1981:52). In regard to the latter, one would expect tempering to produce a poorly sorted, perhaps bimodal distribution of inclusions.

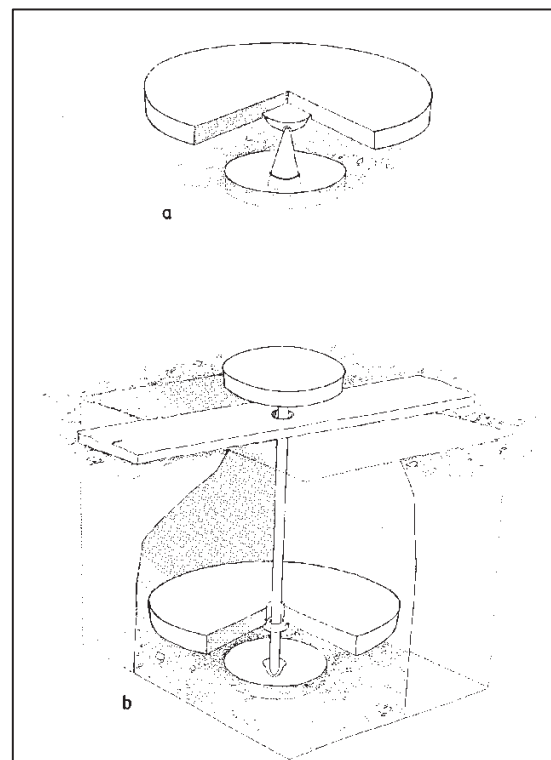
In the samples drawn from the dataset here, several of the fabric groups contained sharp, angular inclusions of calcite (limestone), one of the most common materials used to temper. There were also some samples with coarse quartz (sand), which is also frequently utilized as a temper. Other samples contained similar minerals that were smaller, more rounded, and weathered, which indicates that they likely existed naturally in the clay (Rice 1987:410). Based upon these observations, I made the assumption that such fabrics were indicative of different tempering techniques.

#### 7.4.1.3. *Vessel Formation*

Once the paste has been properly prepared, the potter must choose a method of formation.

Formation methods include pinching, coiling,

slab building, drawing, and throwing (see Rye 1981: ch 5). The formation method chosen will depend on the type of vessel being crafted and the technology available to the potter. Of the



**Figure 7.4**  
**Two Types of Potter's Wheel (after Rye**  
**1981:74)**

above methods, the first four can be grouped as 'hand built'; since a pottery wheel is necessary for the final method, it is known as 'wheel thrown'. There are two types of potter's wheels: the slow wheel (or tournette) is a horizontal rounded table mounted on a vertical shaft; the fast wheel (or 'fly' or 'kick' wheel) uses the stored inertia in a heavy stone and a set of pivots to allow for much faster rotation (King and Stager 2001:135, see Figure 7.4).

Late Roman ceramic production continued at a very sophisticated level into at least the 5<sup>th</sup> century in the Mediterranean region, employing all the techniques utilized in earlier Roman times (Arthur 2008:161). However during the transition from Late Antiquity to the Early Middle Ages, hand built ceramics replaced wheel thrown ceramics in much of the former empire. This process has traditionally been linked to the migration of barbarian peoples (Gothic, Slavic, Lombard, etc.). However it can also be attributed to a breakdown in long distance trade networks and an increasing necessity for economic self-sufficiency in the early medieval period (Rautman 1998). The ceramics at Tonovcov grad (Modrijan 2010) and Tinje (Ciglenečki 2000a:62) were mostly manufactured on the slow wheel, although some also appear to have been formed in a combination between hand building and finishing on the slow wheel. Although no comprehensive coarse-ware pottery analysis has been conducted at Koper or Rifnik, it seems likely that similar technologies were utilized at these sites.

There are several ways to detect formation methods petrographically, including surface markings and finish, variations in wall thickness, fracture type, preferred orientation of inclusions, particle size distribution, and vessel shape (Rye 1981:59-62).

#### *7.4.1.4. Surface Treatments*

The potter then has the option to treat the surface of the vessel; the principle surface coatings are slips, pigments, paints, washes, colorants, and glazes (Rye 1981:40). The coarse ware ceramics from this dataset were almost entirely without surface treatment, so this stage of the sequence is not applicable to this study.

#### *7.4.1.5. Firing Environment*

The final major step is the firing of the vessel, which hardens the material by insuring the complete destruction of the clay-mineral crystals. The minimum temperature required for a complete firing depends on the clay minerals, but varies from about 500 – 800° C (Rye 1981:96). The principle variables in the firing process are rate of heating, maximum firing temperature, duration of firing, and atmosphere surrounding the objects (oxidizing, reducing, neutral). All the ceramics in this study were low-fired earthenwares.

There are a variety of characteristics observed in macroscopic and microscopic analyses that can give some indication of the firing conditions.<sup>86</sup> The hardness of the ceramic can indicate the firing temperatures, but only in a relative way: harder ceramics were fired at higher temperatures than softer ones. When Matson (1971) conducted an experimental study to determine the relationship between ceramic hardness and firing temperature, he could only achieve an accuracy of  $\pm 200^{\circ}$  C for low-fired ceramics. More helpful is the presence (or absence) of particular minerals, which can serve as a proxy indicator of firing temperature: both carbonates and mica decompose under firing temperatures above 800° C (Dell'Mour 2001:191). While the absence of these minerals does not necessarily suggest a higher firing temperature (they may just not have

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<sup>86</sup> Other techniques, such as X-ray diffraction or the re-firing of samples, can also be useful indicators of firing temperatures, but were not employed in this study

been present in the original clay), the presence of *voids* in the shape of carbonates indicates that they were once present, but were subsequently burned out.

The colors of the ceramics can also provide some indication of the atmosphere of the firing. Rye (1981:115-116) distinguishes among four different type of firing environments with each of these different conditions will produce varying core and surface colorings in coarse-ware ceramics:

1	Atmosphere oxidizing, organic material absent	Cross-section of uniform color of fired clay
2	Atmosphere oxidizing, organic material present	Gray or black core, distinct from color of surface
3	Atmosphere reducing or neutral, organic material absent	Gray or black throughout, diffuse or absent core
4	Atmosphere reducing or neutral, organic material present	Grey or black throughout

**Table 7.1**  
**Firing Environments and Pottery Color (based on Rye 1981)**

#### **7.4.2. Ceramic Technological Choices and the Chaîne Opératoire**

In consideration of the different steps of the ceramic production sequence explored above, and the ceramic petrographic analyses conducted for this dissertation, the following sections outline changes and continuities of specific embodied practices in the creation of coarse-ware ceramics at these sites. Cluster maps are then used to illustrate the different technical sequences for each fabric that can be reconstructed from the petrographic analyses, based on tempering, formation method, firing temperature, and firing atmosphere.

##### *7.4.2.1. Tonovcov grad*

Group TG – D, which contained both quartz and carbonate inclusions, seems to represent the most common ceramic technological tradition at the site through each phase. Most of the samples contained roughly the same proportion of carbonates (20 – 30%), typically a mixture of

angular and rounded inclusions. There is no direct evidence to suggest that these were added as temper, although this possibly cannot be ruled out.<sup>87</sup> The once exception might be TG – C, which had a distinctly higher proportion of coarse quartz, perhaps indication the addition of sand as a tempering agent.

Overall, the void shape and orientation in the vast majority of samples appear to be the result of drying cracks, which indicates that the ceramics were turned on a wheel. The mineralogy also provides a few hints about firing temperature. It has been experimentally demonstrated that carbonates begin to disintegrate around 800° C, depending on the duration and intensity of the firing conditions. The shape of the voids in group TG – B, along with a conspicuous absence of carbonates, suggests that carbonates were burned out during the firing process, indicating a higher firing temperature than the other groups. The groups TG – D2 and TG – D3 also had very disintegrated carbonate inclusions, which may also indicate a higher firing temperature.

Although it is possible that these inclusions were naturally disintegrated, the fact that most of the carbonates from the site were not disintegrated suggests that this was not common in the local geology. The firing atmosphere of the ceramics in each group was also indicated by their core and surface colors (see table above).<sup>88</sup>

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<sup>87</sup> Future analyses will attempt to provide more conclusive results by comparing these samples to local clay sources near the site.

<sup>88</sup> The 'dashed' orange arrow represents TG – D3, and the 'faded' orange arrow represents TG – D2



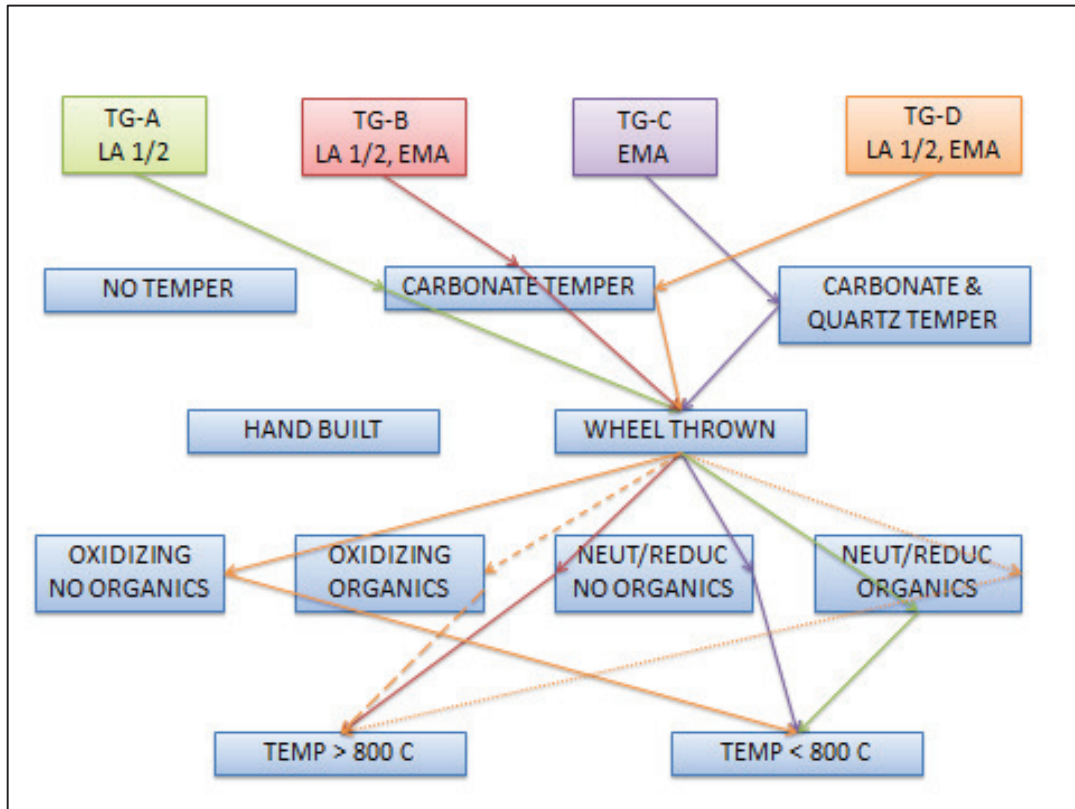
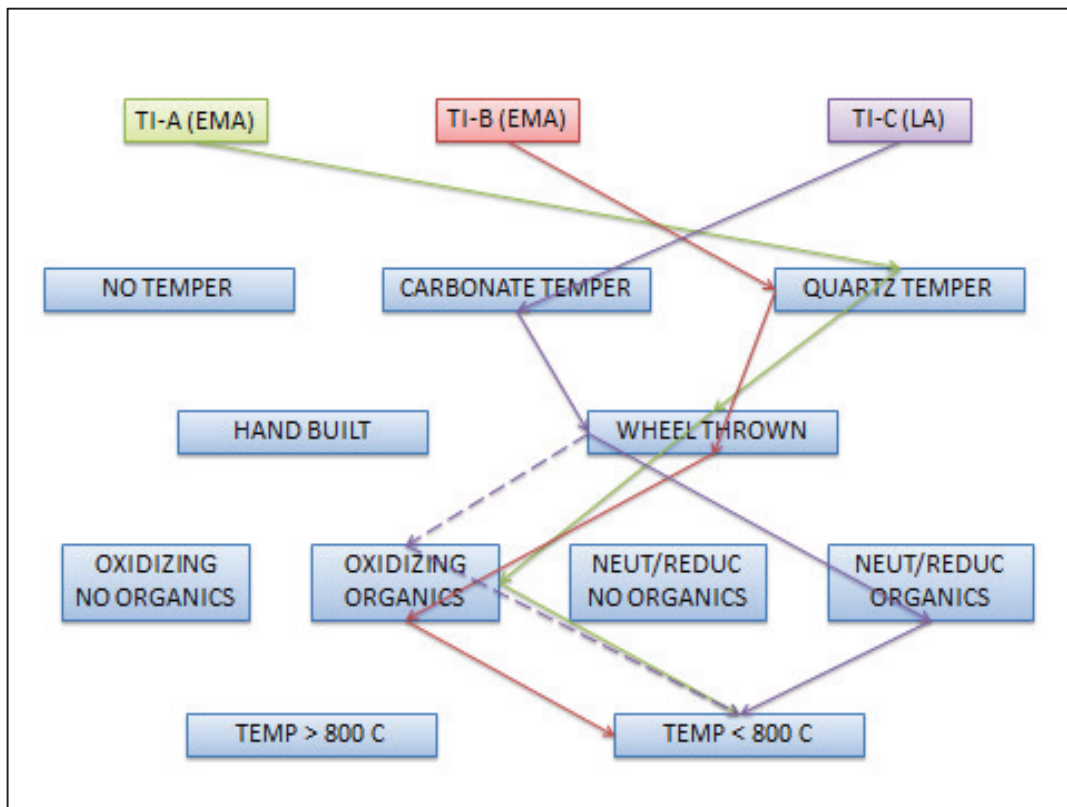


Figure 7.5  
*Chaîne Opératoire* of Ceramic Technological Choices at Tonovcov grad

#### 7.4.2.2. Tinje

At Tinje, there appears to be an obvious distinction in the types of temper used; TI – A and TI – C contained very high levels of coarse quartz, which suggests sand tempering. TI – C does not contain any quartz content, but does appear to be tempered with carbonates. It is not always possible to determine formation method, but many of the samples had distinctive void shape and orientations that resembled the ‘drying cracks’ associated with wheel-thrown vessels. It is possible that some may have been hand built, but this cannot be conclusively established. The

samples may have been subject to a number of different firing atmospheres<sup>89</sup>, but the presence of carbonates and mica indicate that they all must have been fired at a low temperature.

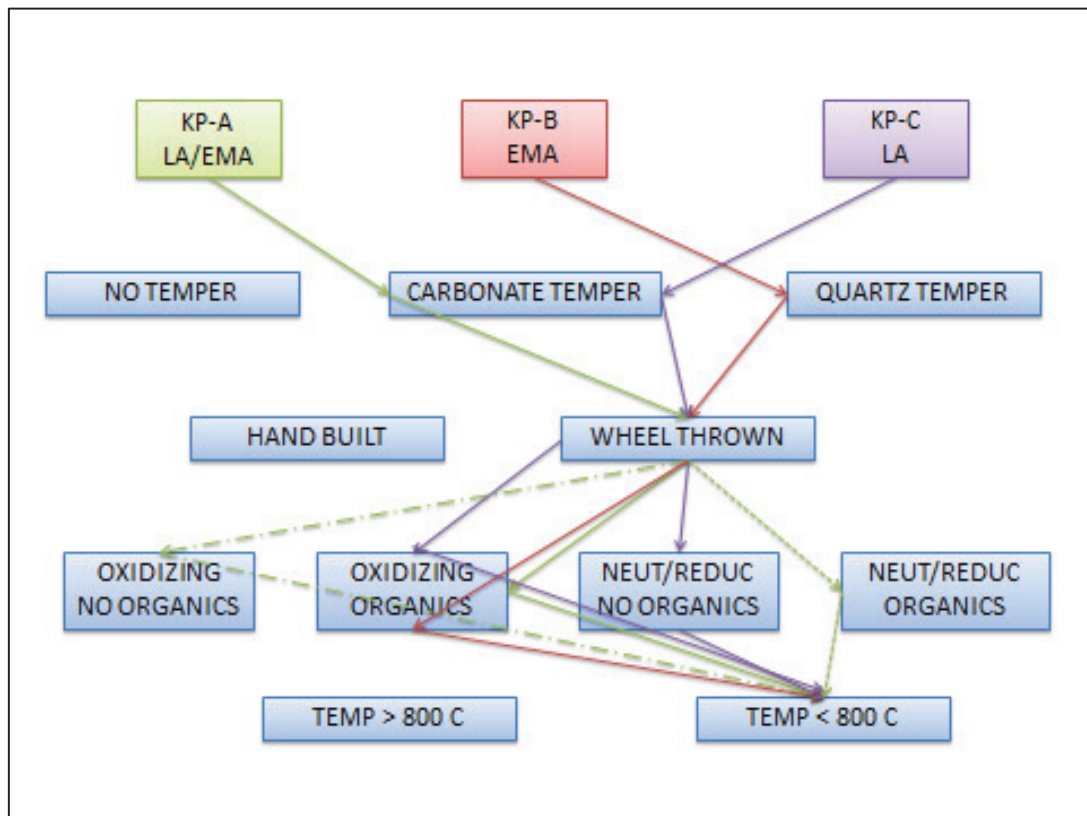


**Figure 7.6**  
**Chaîne Opératoire of Ceramic Technological Choices at Tinje**

#### 7.4.2.3. Koper

At Koper, most of the ceramics appear to have been tempered with carbonates, which were mostly very angular. However KP – B, which contained no carbonates but high quartz content, was probably sand tempered. Although the ceramics were subjected to a range of firing atmospheres, there is nothing to suggest that any were firing at a sustained temperature above 800° C.

<sup>89</sup> Dashed line indicates TI – C2



**Figure 7.8**  
*Chaîne Opératoire of Ceramic Technological Choices at Koper*

### 7.5. CONCLUSIONS AND FUTURE DIRECTIONS

The above ceramic compositional analyses constitute a new means of examining changes in past processes (or even material-semiotic machines) without relying solely on questions of ethnic identity. A traditional interpretive framework would seek to attribute such changes to the presence of new ethnic groups (such as the arrival of the ‘Slavs’); however we have seen the limitations of such an approach. Rather, what the cluster maps begin to illustrate are the ways in which embodied practices help to mediate the co-construction of people and materials during this transitional period. Many archaeologists have recognized that ceramic analyses can provide insight into social identities; choices in the particular way in which a pot is made can reveal

deeply engrained ideas about *how* a pot should be made. However it would be a mistake to consider such technological choices and practices to be mere reflections of deeper ‘social’ or ‘cultural’ entities. Rather, the materiality of the ceramic materials, and performance of pottery making exist in a dialectical relationship with the identity of the potter. Pots and potters are simultaneously fashioned, albeit in very different ways (see Michelaki 2008).

This is admittedly just a small preliminary step in what would constitute a very different approach to Late Roman and Early Medieval archaeology. Ceramics are just a single category of material culture; similar analyses must be undertaken for many different types of archaeological datasets. However, a long term goal of this research agenda is to more fully construct this alternative approach. Material culture ‘styles’ and ‘techniques’ could both be statistically analyzed to consider past patterns and processes without resorting to dubious constructions of ethnicity that are often inappropriately drawn from textual sources.

## CHAPTER 8

### GERMAN IMPERIALISM, NAZI ARCHAEOLOGY, AND THE EARLY MIDDLE AGES

#### I. INTRODUCTION

The previous chapter outlined a potential alternative means of archaeologically investigating the question of social identity during post-Roman period of Central Europe. One of the advantages of this new model is that it avoids the problems inherent in ethno-nationalist conceptions of the past. This chapter provides an illustrative example of how the past is manipulated for political purposes; here the construction of ‘past as Self’ is highlighted within the struggle between Germanic imperialism and Slovene nationalism in the eastern Alps. It also provides a transition to Part Three of this dissertation, which focuses on the role of the early medieval past, in the context of imperialism, identity, and temporality.

#### II. NAZI ARCHAEOLOGY AND GERMAN ‘INTERNAL’ COLONIALISM

One of the most complex yet important tasks for intellectual historians of the National Socialist period has been detailing the extent to which German and Austrian academics contributed to, provided justification for, or were complicit with the ideology and policies of the Third Reich (see Haar and Fahlbusch 2005, Smith 1991, Mees 2008). Compared to other fields, archaeologists have only recently come to terms with the discipline’s involvement in the Nazi movement, but over the past two decades the work of numerous scholars has revealed the ways in which archaeologists constructed a past amenable to the National Socialist worldview (see Veit 1989, McCann 1990, Arnold 1990, 1996, 2006, Arnold and Hassmann 1995, Wiwjorra 1996, Legendre 1999, Härke 2000, Ditt 2001, Leube and Hegewisch 2002, Eickhoff 2005, Halle 2005, Legendre et al. 2007).

Most research on the intellectual origins of Nazi archaeology has focused on its indebtedness to the national chauvinist and racist ideologies associated with Gustav Kossinna's *Siedlungsarchäologie* (see chapter 5). While there is no doubt that Kossinna's hyper-nationalistic approach would become the foundation of Nazi archaeological orthodoxy, another related, yet intellectually distinct movement of the 19<sup>th</sup> and early 20<sup>th</sup> century Germanophone world is often overlooked: a growing imperialist and colonialist fascination with 'the East'.<sup>90</sup> While this ambiguous concept certainly included overseas colonial contexts as well (see Marchand 1996, Kontje 2004), here the term is used in association with German imperial interests in East Central and Eastern Europe (Burleigh 1988, Piskorski 2002). It is argued here that one cannot properly address the complex ideological origins of Nazi archaeology without first considering the role that archaeology, in concert with other social and historical sciences, played in legitimizing a pan-German imperialist project in East Central and Eastern Europe.

Following Fehr's (2004:198) assertion that "the development of archaeology after 1918 has to be considered within the wider context of the general development of sciences in Germany", this chapter examines specifically how medieval historians and archaeologists participated in a broader German imperial project in East Central Europe in the first half of the 20<sup>th</sup> century. By tracing how a particular conception of medieval past became entangled with German social science research through the concepts of 'space' and 'race', it explores how the German imperial imagination constructed indigenous Slavic-speaking peoples of East Central Europe, focusing particularly on Slovenian communities of the southeastern Alpine region. A close reading of the work of two prominent German archaeologists on the Early Middle Ages in the eastern Alps

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<sup>90</sup> Notable exceptions include Müller-Wille 2002, Fehr 2004

demonstrates the surprising continuity of these colonialist themes from the interwar through the National Socialist periods (1919 – 1945).

### **III. MEDIEVALISM AND GERMAN SOCIAL SCIENCE**

The study of history is always as much about the present as the past. Since all constructions of the past are socially motivated, they must be understood within their sociopolitical milieu. All history—including modern historiography—is in this sense a type of *mythology* (Friedman 1992:837). Since having the ability to define and therefore control the past is critical for establishing political and ideological authority (see A.D. Smith 2001, Hobsbawm and Ranger 1983), institutionalized history allows a dominant power to establish its own legitimacy while controlling (or eradicating) the history and identity of subaltern groups (Young 1990, Goody 2006). As Dagenais and Greer note: “Colonization of the past is an indispensable companion of empire” (2000:431). However, not all parts of history are considered equally important for establishing political, cultural, and territorial legitimacy in a region; often one period is endowed with a special capacity for bestowing authenticity. For Europe, the Early Middle Ages have frequently served this purpose.

The manipulation of Europe’s medieval past by modern nationalist political agendas has received increasing attention from historians over the last twenty years (see Barclay 1993, Brühl and Schneidmüller 1997, Curta 2001b, Piskorski 2002, Geary 2002, Wood 1999, 2008, Wickham 2003). Historian Patrick Geary has argued that ethno-nationalist groups seek to identify the moment when they “established once and for all the geographical limits of legitimate ownership of land”, therefore making “similar subsequent migrations, invasions, or political absorptions...illegitimate” (Geary 2002:12). This moment of “primary acquisition” is often

located in the Early Middle Ages, since during this period many of the (semi-mythical) ancestors of modern ethnic groups first appeared on the historical stage.

Geary provides a convincing amount of historical evidence to support his main argument—that ethnic nationalism has “turned our understanding of the past into a toxic waste dump” (2002:15). However ethno-nationalism has not been the only modern political movement to seek control of the past. The power of imperial historiography and archaeology to deny political sovereignty of indigenous ethnic groups has been extensively explored in overseas colonial contexts (i.e. Chakrabarty 2000, McNiven and Russell 2005), but is often overlooked within Europe itself. Rather than simply a tool of ethno-nationalist ideology, control of the past in East Central Europe has been a site of political contestation between the centripetal forces of imperialism and centrifugal forces of ethno-nationalism.

#### **A. ‘Volk und Raum’**

The critical role of the past in constructing imperial ideology is well illustrated by the close relationship of German social science research and medievalism in the early 20<sup>th</sup> century. Here I suggest—following Bassin (1987)—that the two dominant paradigms of German social science research (i.e. ethnology, geography, psychology, political science, statistics, etc.) during this period were race and space (Ger: *Volk und Raum*)<sup>91</sup>. While the relationship between the social sciences and politics in Imperial Period Germany has been addressed extensively elsewhere (Smith 1991, Penny and Bunzl 2003, Mees 2008), here I explore the unique role of the *medieval* in each of these concepts.

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<sup>91</sup> Note that ‘race’ is not a directly translation of the German word *Volk* (which can also mean ‘people’ or ‘nation’), but the term had an increasingly racialized meaning during the early 20<sup>th</sup> century.



The central role of space in German social science research can be traced back to the development of Friedrich Ratzel's *Anthropo-Geographie* (see Ratzel 1921). Ratzel, an ardent advocate of German colonial expansion, viewed the acquisition of 'living space' (*Lebensraum*) as the primary determinant for the success or failure of all living organisms, including human societies (Smith 1978, 1986). His interdisciplinary framework exerted tremendous influence across the social sciences, from the hyper-diffusionist ethnology and archaeology of the *Kulturkreislehre* (Cultural Circle School) to the *Geopolitik* School of political science. Significantly, it was the latter that incorporated the idea of *Lebensraum* into an explicitly political project involving: "a supranational hegemonic order in Central and Eastern Europe under German leadership" (Teschke 2006:330).

Political hegemony in this supranational region (often termed *Mitteleuropa*) would be split between two German-dominated polities: the *Deutsches Reich* (German Empire) in the north and the Dual (or *k.u.k.*) Monarchy of the Austro-Hungarian Empire in the south. For *Geopolitik* proponents such as Karl Haushofer (1869 – 1946), this continental empire would consist of an ethnic core (*Volksboden*) inhabited by Germans surrounded by a much broader periphery (*Kulturboden*) where German culture (language, art, architecture, etc.) would predominate even when inhabited by non-German speaking communities (see Haushofer 1927, Chiantera-Stutte 2008). The *Kulturboden* was envisioned to extend far into Eastern Europe, stretching from the Baltic to the Balkans. A German-dominated *Mitteleuropa* was widely seen as the beginnings of "a culturally-based broader political entity that was bound to build a strong and powerful political system at the heart of Europe and, through it, to exercise its influence all over the world" (Chiantera-Stutte 2008:186).

The intellectual justification for German imperial ambitions in East Central and Eastern Europe would fall to members of the *Ostforschung*, an unofficial constellation of academics and institutions dedicated to demonstrating the natural cultural and historical rights of German hegemony in the ‘East’. Significantly, a number of medieval historians, such as Albert Brackmann (1926) and Hermann Aubin, played a major role in establishing the *Ostforschung* and advancing its central mission (see Burleigh 1988, Mühle 2003). Medieval history constituted a key element of this ‘Eastern research’ programme perhaps because the most compelling historical argument for German dominance of the region was premised upon the so-called *Drang nach Osten* (‘Drive to the East’). On one level, this term simply described the eastward migration of German-speaking populations throughout the Middle Ages, from 8<sup>th</sup> century Bavarian colonization of the eastern Alps, to Viking raids on the Baltic Sea, and even the high medieval colonization of Poland by the Teutonic Knights. However, embedded within this concept was also the subtext of industrious Germans both colonizing and civilizing a wild and exotic land—a region sparsely inhabited by savage peoples who would only benefit from the structure and efficiency of Germanic rule.

The clear parallels to ideology of ‘Manifest Destiny’ were not lost on either German or American historians of the time (Gorecki 2002). One 19<sup>th</sup> century German writer opined that medieval Bohemia was for Germany what California is to the United States (Piskorski 2004). Even the eminent American historian James Westfall Thompson (1928) called the *Drang nach Osten* “the great deed of the common people of medieval Germany, just as the making of the American West has been the achievement of the common people of America.” A number of other colonialist tropes were also subtly embedded in the *Drang nach Osten*, such as using moral imperative to mask economic exploitation (cf. the ‘White Man’s Burden’), depicting indigenous

populations as uncivilized and lacking history (cf. the ‘noble savage’), and privileging regional imperialist ‘spheres of influence’ over national sovereignty (cf. Monroe Doctrine in Latin America, Open Door Policy in East Asia).

### **B. *Volkism* and the Medieval Past**

The spatial, expansionist aspects of these colonialist arguments were—as with overseas colonialism—premised upon racial hierarchy, a concept of increasing importance in early 20<sup>th</sup> century German social science research. The growing obsession of German physical anthropology with the supposedly immutable physical characteristics of race in the 19<sup>th</sup> century has been well documented (see Proctor 1990, Massin 1996, Hutton 2005). Yet another important, more uniquely German concept also contributed to imperial perceptions of ethno-cultural variation. This was the idea of *Volkism*, inherited from 18<sup>th</sup> century Romantic Movement thinkers such as J.G. Herder (1744 – 1803) and J.G. Fichte (1762 – 1814), who held a utopian, organic, and almost mystical view of ethno-linguistic communities. Unlike physical anthropology, they viewed human groups as more than just scientifically classifiable organisms; rather, every ‘people’ (*Volk*) possessed a unique individual spirit, best expressed by their respective peasant cultures.

Significantly, *Volkish* ideas were deeply rooted in utopian conceptions of the Middle Ages. Romanticized fantasies of the rural, medieval German peasant deeply connected to ‘the earth’ offered a stark contrast to contemporary 19<sup>th</sup> and 20<sup>th</sup> century Germans, who were viewed as suffering from a malaise caused by processes of modernization, urbanization, and industrialization. The space of the medieval walled town was particularly significant, as it “represented a close-knit classless community of citizens bound together by tradition, civic pride, and the need for common defense” (Hagen 2004:208). This organic and mystical medieval past

deeply informed the Romanticist rejection of Enlightenment ideals like empiricism and scientism. From Wagner's operas to the Nazarene movement, German Romanticism is saturated with medieval and *Volkish* themes (Ortenberg 2006).

Significantly, early conceptions of the *Volk* were neither explicitly anti-Slavic nor inherently racist; Herder actually viewed Slavs as victims of German oppression (Wolff 1994:311). Yet later strains of *Volkism* increasingly acquired both of these connotations, perhaps under the influence of Nietzsche's *Übermensch* ideology (Mees 2008:25). Whatever the cause, by the early 20<sup>th</sup> century, *Volkism* was not only premised upon "an idyllic medieval past of cosmic and social harmony and unity" but also the idea of "German uniqueness, assuming the attributes of the *Volk* to be unique to a historically superior but repressed German people" (Ortenberg 2006:96).

The profound impact of racialized *Volkism* on German medieval historians is most evident in the rise of the *Volksgeschichte* approach, which rejected traditional constitutional and political history in favor of studying the past through the lens of the German nation—the totality of their political, social, economic and cultural history (see Schleier 1999). Medievalists such as Otto Brunner, Karl Bosl, and Walter Schlesinger strongly advocated this historical perspective during the interwar and National Socialist periods. Although—like the *Annales* School in France—*Volksgeschichte* should be credited for making important methodological advances and articulating a new interdisciplinary social history, incorporating historical, archaeological, and toponymic evidence, it was also irredeemably poisoned by Nazi racial ideology and directed by blatant ulterior political motives, such as a desire to prove the 'Germanness' of regions outside Germany's truncated post-Versailles national borders (Schönwälder 1997:145, see also Ditt 2001).

#### **IV. SLOVENES IN THE GERMAN IMPERIAL IMAGINATION**

This synthesis of expansionism, racialism, and medievalism proved to be a potent formula for German imperialists seeking to establish political and cultural hegemony in East Central Europe. The targets of such ideological attacks were typically indigenous Slavic groups, who—like colonized populations abroad—were subject to the ‘colonial gaze’. The overall tone of Slavic stereotypes ranged from utter contempt—such as the depiction of Polish communities in Gustav Freytag’s popular novel *Soll und Haben* (1855)—to paternalistic tolerance. This latter, patronizing attitude was frequently directed toward those Slavic groups who had lived for centuries under Habsburg rule. One such group, the Slovenes, serves as an illustrative case study.

Thanks to their proximity to the German *Volksboden* and fidelity to Roman Catholic (as opposed to Orthodox or Protestant) Christianity, many of the Habsburg cultural elite came to view Slovenes as ‘quasi-German’ and saw their incorporation into Germanic culture and history as both desirable and inevitable. In fact, many Slovene-speaking peoples *did* adopt German language, culture, and traditions during their centuries under Habsburg rule, as it was a prerequisite for socio-economic advancement in the Austrian Empire (Sugar 1963:19). Even the (phantom) possibility of Slovene self-governance was occasionally intimated, but only at an indeterminate future time to be determined by imperial authority. With an attitude remarkably similar to European colonialists abroad, Count Anton Alexander von Auersberg noted in 1848: “Slovenia should walk a while longer with the aid of its elder sister, Austria, and should not be ashamed of accepting such guidance...Once it achieves full maturity, the separation will also be natural—and therefore less painful” (quoted in Cvirn 1993:55).

Yet as evidenced by Habsburg-period ethnographic and travel literature, stark underlying differences between Germanic and Slavic communities in the eastern Alpine and northern Adriatic region were never in doubt. The former were typically portrayed as sincere, honorable, truthful, faithful, diligent, thrifty, and clean, while the latter were generally considered restless, pugilistic, sluggish, and dirty—but nonetheless merry, generous, and hospitable (see Carmichael 1996, Nikočević 2006, Reber 2002). While often viewed less harshly than other Slavic-speaking communities, the Slovenes often fit the role of the noble savage (Ger: *Naturmensch*) in the German imperial imagination. Depicted as simple farming peasants, closely connected to nature and mythology, Slovenes perfectly embodied the set of familiar cultural oppositions constructed by the German imperial ideology: “German culture is rational, domestic, and male. It represents civilization as progress. Slav culture is irrational, exotic, and female. It represents nature and myth” (Beasley-Murray 2006:132).

It is critical to recognize that such stereotypes served a very specific ideological purpose. Slovenes were considered good candidates for Germanization not only due to their historical proximity to the German ethnic ‘core’, but also because they were thought to *lack any culture or history of their own*. Without a long cultural (i.e. literary) tradition, Slovenes were relegated to the status of a ‘non-historical’ nation in the Habsburg Empire. Following the colonialist logic of the *Drang nach Osten*, any Slovene cultural achievement could be attributed to German influence. As long as they remained within the German *Kulturkreis*, Slovenes maintained a privileged position in the German colonial typological imaginary (*sensu* Biddick 2003): a historical and cultural *tabula rasa*, on which a superior Germanic identity could be inscribed.

## **V. ROLE OF THE MEDIEVAL PAST AFTER WORLD WAR ONE**

However by the late 19<sup>th</sup> century, increasing social mobilization within the Habsburg Empire precipitated a shift in the ‘availability’ of German identity, from anyone willing to adopt a particular set of cultural values to only those of a particular ethno-linguistic heritage (see Judson 1991, 1993). This new, less inclusive concept of ‘Germanness’ would in turn fuel a growing nationalist fervor that encouraged more Slovenians to eschew a Germanic identity in favor of greater solidarity with other South Slavic peoples<sup>92</sup>, a shift that many Austro-Germans viewed with a combination of anxiety and incredulity. Perhaps not surprisingly, as Slovene nationalists allied themselves with Belgrade rather than Vienna, they became increasingly saddled with negative Slavic stereotypes (Moll 2007:211). Such imperial anxieties were most strongly felt on German-Slav ethnic borderlands, such as the former medieval eastern Alpine duchies of Styria and Carinthia. In response to the perceived (but empirically unsupported) demographic threat of looming ‘Slavic masses’, pan-Germanist organizations in the first decades of the 20<sup>th</sup> century began to fund efforts to resettle ethnic Germans in these regions (see Judson 2007, Moll 2007).

The Austro-Hungarian Empire viewed the rise of Slovene nationalism, and its growing attachment to pan-Slavic ideology, as a significant threat to their political and cultural dominance in the southeastern Alps. Yet in the end, the collapse of German political hegemony in this region was triggered not by Slovene nationalism, but rather the defeat of the Triple Entente in the First World War. At the 1919 Paris Peace Conferences, the Treaty of Saint-Germain-en-Laye dissolved Austria-Hungary into a set of smaller independent polities. The Republic of Austria was created as a ‘German’ state, while a significant slice of the former Austrian Empire in the southeastern Alps—including the border regions of Carniola, Lower Styria, and southern

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<sup>92</sup> For studies of the Slovenes within the Habsburg Monarchy before WWI, see Rogel 1977, Zwitter 1967

‘Slovenian’ Carinthia—was given to the newly formed State of the Slovenes, Croats, and Serbs.<sup>93</sup> While this division was justified on the basis of the geographic distribution of ethnic groups, many ethnic Germans in Austria were furious at what they perceived as the unjust separation of the *Volksboden*.

The loss of political hegemony in the southeastern Alps only fueled German imperialist ambitions in the region. Their arguments were refocused to not only deny the cultural and historical autonomy of the Slovene people, but also to demonstrate the historical injustices of the national boundaries established by the Allied Powers. After what was widely considered humiliating treatment at the Paris Peace Conferences, Germans desperately sought a source of national pride in the achievements of their medieval ancestors. Not surprisingly, scholarly interest in the *Drang nach Osten* would greatly increase during the interwar period (Labuda 1964:231).

As outlined above, the *Drang nach Osten* allowed German imperialists to argue that the entire political, social, and cultural infrastructure of the newly formed East Central European states such as Poland, Czechoslovakia, and Yugoslavia was primarily due to the contributions of ethnic Germans who had colonized the land centuries ago. As Piskorski notes: “During the interwar period, nearly every historical work identified medieval colonization of Central and Eastern Europe as the greatest achievement of Germany’s medieval period; and cast that colonization in a strongly pragmatic light, namely, *as proof of Germany’s right to East Central Europe...*” (2002:16, emphasis added). After the Nazi annexation of Austria in 1938, these arguments were used to justify the re-conquest of the southeastern Alps, perhaps best illustrated by Hitler’s speech from the balcony of the City Hall in Maribor (capital of Lower Styria), in which he is

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<sup>93</sup> Shortly thereafter, it was renamed the Kingdom of Yugoslavia



reported to have urged the gathered crowd to “make this land German again” (Novaković 2002). A year later, the *Drang nach Osten* was (not coincidentally) the topical focus of a volume of the German history journal *Jomsburg*, published on the eve of the Third Reich’s invasion of Poland (Piskorski 2004:323).

During the interwar period, the authority of medieval historians and archaeologists was sought to provide evidence for the historical absurdity of the Paris Peace Conferences. As Promitzer (2003:195) notes: “The historian could go further back and demonstrate that the Slovenes had never had a state of their own, nor an upper class nor towns, but had been peasants, dependent on German nobles and German towns”. If it could be demonstrated that the Slovenes were in fact a non-historical nation, wholly dependent on Germanic culture and history, political independence would be ill advised, if not completely absurd. As noted by Austrian novelist Rudolf Hans Bartsch in 1908: “And the Slovene nation? It has no past and no monuments. Only a bit of Glagolitic script [the earliest known Slavic alphabet]. No heroism, no divine thoughts; nothing but the idol of Triglav<sup>94</sup>” (1908:171, quoted in Cvrin 1993:59). Historicism, just as with European overseas colonialism, was “somebody’s way of saying ‘not yet’ to somebody else” (Chakrabarty 2000:8, see also Young 1990).

## **VI. EARLY MEDIEVAL ARCHAEOLOGY IN THE SOUTHEASTERN ALPS**

### **A. Early Medieval ‘Carantania’ and Slovene Nationalist Archaeology**

Although medieval historians and archaeologists would come to play an increasingly important role in the German imperial project in East Central Europe after the First World War, they

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<sup>94</sup> *Und das Slowenische Volk? Keine Vergangenheit, kein Denkmal, als das bishen glagolitische Schrift; kein Heldentum, kein Gottesgedanke als einen dreiköpfigen Götzen...*

encountered several historical inconveniences in their attempt to demonstrate the legitimacy of Germanic rule in the southeastern Alps. For example, it was widely accepted that Slavic groups had immigrated and settled in this region at the end of the 6<sup>th</sup> century AD following the collapse of Roman authority, as part of the so-called *Völkerwanderungszeit*. Proper German colonization only began several centuries later with Bavarian and Carolingian political expansion<sup>95</sup>. This chronological precedence of Slavic-speaking communities made a traditional ‘primary acquisition’ (*sensu* Geary 2002) argument difficult to justify.

The early settlement of Slavic-speaking communities in the southeastern Alps did not go unnoticed by early Slovene nationalists in the 18<sup>th</sup> century. Since language was considered the central element of ethnic identity during this period, it is unsurprising that Slovene nationalists sought to trace their ancestral origins to the settlement of Slavic-speaking communities in the eastern Alps in the late 6<sup>th</sup> century AD<sup>96</sup>. Slovene playwright and historian A.T. Linhart (1756 – 1795) was the first to outline the first history of the Slovene people (Štih 2010:15). He traced their heritage directly back to *Carantania*, an enigmatic eastern Alpine polity mentioned in several early medieval sources, which has been (controversially) identified by some historians as the first example of a ‘Slavic state’. Linhart specifically argued that this deep historical continuity legitimated a Slovenian right to political sovereignty—an important and surely controversial claim since the Slovenes had been relegated to the status of a ‘non-historical nation’ in the Habsburg Empire (Slapšak and Novaković 1996). Such arguments also appeared to

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<sup>95</sup> Much of the southeastern Alps were under ‘Germanic’ (Ostrogothic and Lombardic) political hegemony in the 5<sup>th</sup> and 6<sup>th</sup> centuries AD, but without any coordinated efforts at colonization (see chapter 2).

<sup>96</sup> A very small number of Slovene linguists and archaeologists (largely outside academia) have forwarded the idea that the Slovenes are not descendants of the early medieval Slavs, but rather the Iron Age ‘Veneti’ (for an example, see Savli 1996; for a critique, see Štih 2010)

contradict Germanic assertions that political autonomy was unknown among Slovene communities.

Subsequent Slovene historiography of the 19<sup>th</sup> and 20<sup>th</sup> century continued to pursue a similar agenda; that is, connecting modern Slovenes to their glorious early medieval past, before the ‘dark times’ of German (Habsburg) rule<sup>97</sup>. Significantly, historians and archaeologists almost always identified these Slavic-speaking communities as ‘early medieval Slovenes’, even though this ethnonym was only first recorded in the 16<sup>th</sup> century, and most linguists agree that it could not possibly have predated AD 1000 (Štih 2010:74). It seems clear that modern Slovenes continue to trace their ancestral roots through the early medieval Slavic communities, and specifically the ‘state’ of Carantania (most of which, it should be noted, lies today in southern Austria).

The Slovene obsession with Carantania is also evident in the work of Valter Šmid<sup>98</sup> (1875 – 1951), one of the earliest professional archaeologists of Slovene descent. Šmid attempted to determine the political extent of Carantania by connecting it to the Kottlach culture—the primary ‘archaeological culture’ of the early medieval eastern Alps, which was usually identified by specific styles of jewelry in burials. Šmid (1925) would even rebrand it the *Karantanisch* culture, infuriating German archaeologists of the period, who made a special point of refuting Šmid’s positions (see below, Dinklage 1941a:241). Many Slovene archaeologists would subsequently employ the term *Karantanisch-Köttlacher Kulturkreis* (Carantanian- Kottlach cultural circle) to describe the burial archaeology of the early medieval eastern Alps (see Vinski 1966, Modrijan 1977, Šribar and Stare 1978/79, Tovornik 1980, Šribar 1983). Not surprisingly, German and

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<sup>97</sup> Here Slovene ethnic nationalism follows a common motif: positing an early ‘golden age’ before some unjust calamity befell their people (namely, the loss of sovereignty and incorporation into the Habsburg Empire).

<sup>98</sup> His name also appears in some publications under its German rendering—Walter Schmid.

Austrian archaeologists did not eagerly embrace this new hyphenated terminology (cf. Hampl 1953, Denk 1957, Giesler 2001).

There is also a curious denial among some Slovenian archaeologists regarding the nationalist character of earlier Slovene archaeology. For example, it is clear that Šmid's interpretation of early medieval assemblages drew from an important symbol of ethno-nationalist identity, yet in a recent historical overview of Slovenian archaeology, Slapšak and Novaković (1996) explicitly characterize Šmid's approach as "not burdened with nationalist abuse" (ibid:285). Strikingly, while these authors have no problem (correctly) identifying the political biases of World War II era German archaeology in the southeastern Alps, or dismissing amateur advocates of the autochthonous 'Veneti' theory as "nationalist zealots" (ibid:290), they proudly proclaim that mainstream academic archaeology in Slovenia to be "national archaeology without nationalism."

### **B. German Imperial Archaeology: Paul Reinecke and Karl Dinklage**

Due to these historically inconvenient facts, Germanic medieval historians and archaeologists in the early 20<sup>th</sup> century shifted their arguments about rightful political authority in the southeastern Alps from primary acquisition to the "relative contribution by a people to [a territory's] economic transformation, expansion, and use...the right of civilized nations to take the land from barbaric peoples" (Piskorski 2002:11). When viewed from this perspective, German justifications for territorial hegemony in the southeastern Alps have greater affinity with European colonial and imperial overseas contexts than other European nationalist historical traditions, in that they both sought to delegitimize the territorial rights of population that appeared to have chronological priority. Their methods also dovetailed: (1) reject the *historicity* of indigenous populations, (2) deny their cultural autonomy, and (3) emphasize the vast benefits of colonial rule. The importance of the Middle Ages for this project in East Central Europe has

been outlined above. Here, the work of two prominent German archaeologists, Paul Reinecke and Karl Dinklage, illustrates how these arguments were advanced in the southeastern Alps from the end of the First World War through the Nazi occupation.<sup>99</sup>

Paul Reinecke was born in Berlin in 1872. He received his doctorate in anthropology from the University of Munich, having studied under the preeminent archaeologists of the day, including Rudolph Virchow and Adolf Furtwängler. He would join the staff at the *Römisch-Germanisch Zentralmuseum* at Mainz, eventually rising to become the head conservator from 1908-1937, where he made several major contributions in the archaeology of Central Europe (Koch 2006:1487).

A generation younger than Reinecke, Karl Dinklage was born in Dresden in 1907. He was also awarded his doctorate at Munich (in both archaeology and history). He was then initially hired at the *Südostinstitut* (Southeast Institute) in Munich. In 1942, Dinklage left Germany to head the pre- and early history department of the Nazi-backed *Institut für Kärntner Landesforschung* (Institute for Carinthian Regional and Cultural Studies) at the University of Graz in the Austrian province of Styria (Ger: *Steiermark*). The task of this newly formed institute was explicit: “to guide and support National Socialist Germanization policy and to ensure the ‘mental conquest’ of Upper Carniola [today northern Slovenia]...and to demonstrate ‘that Upper Carniola is a province of ancient German civilization in the fullest sense of the word and had mainly been a German settlement territory, although due to slovenization all German bonds have deliberately been cut off or even turned inside out’” (Wedekind 2005:118, 119). A leading medieval scholar during the Nazi occupation of Austria, Dinklage also excavated sites throughout the region under

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<sup>99</sup> See Jernej (2007) for another important study of the political manipulation of archaeology in the southeastern Alps during the National Socialist period.

the auspices of the *Ahnenerbe*, the archaeological wing of the Nazi party (Novaković 2002, Wedekind 2008).

During their careers, both Reinecke and Dinklage published important articles on early medieval Alpine archaeology. Yet while one worked primarily during the interwar period (before the Nazi seizure of power) and the other operated directly under the Nazi regime during the Second World War, the basic arguments outlined in their publications are disturbingly similar. This reinforces the notion that political influence on German archaeological practice, well documented during the Nazi period, has much deeper roots in continental imperialism.

The primary goal of each author is to ‘prove’ the early colonization of Germanic populations in the eastern Alps in the Early Middle Ages. Adopting a basically Kossinlean framework (i.e. “Sharply defined archaeological culture areas correspond unquestionably with the areas of particular peoples or tribes”), each sought to use material culture to trace the movements of these early medieval ethno-political groups. As evidenced by the title of one of Reinecke’s articles, “Slavisch oder Karolingisch?” (1928), the assumption of a one-to-one correspondence among material assemblages, political identity, and early medieval populations was unquestioned (see also Reinecke 1936). Reinecke seeks to demonstrate the ‘misinterpretation’ of a Slavic presence in the early medieval material culture of the southern German region (including the eastern Alps). Attacking his former mentor Virchow, he notes that similar misinterpretations in parts of northern Germany have been recently corrected (1928:269). Based on his studies of grave goods in row-grave cemeteries (*Reihengräberfelder*), Reinecke argues that the eastern Alps must be understood as within a Germanic *Kulturkreis*. In addressing the numerous Slavic toponyms that appear across the eastern Alps, Reinecke asserts they are assuredly not evidence of autonomous

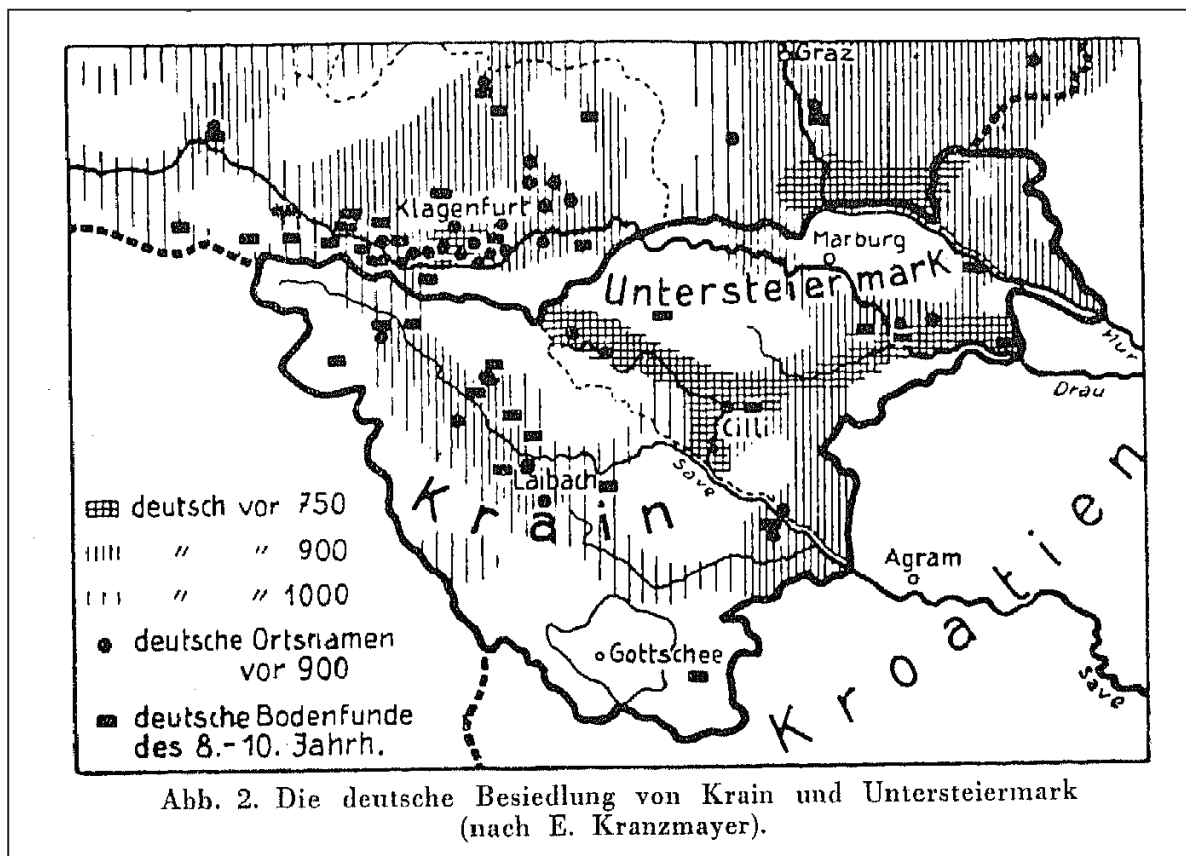
Slavic settlement, but rather can be tied to “an earlier colonization of Germanic lords establishing settlements” from Merovingian France (1928:270).

Similarly, the stated goal of Dinklage’s series of articles published in the early 1940s (e.g. Dinklage 1941a, 1941b, 1941c) was to prove the existence of early Germanic “*Frühdeutsche*” colonization of the eastern Alps, particularly along the ethnic border regions of Styria and Carinthia (see Figure 8.1). Also using a Kossinlean framework, Dinklage equates the presence of a particular style of jewelry (known as *Köttlach*) with the advancing Germanic migration across the region. Like Reinecke, he is forced to address the problematic toponymic data, drawing on the dubious studies of Eberhard Kranzmayer (e.g. Kranzmayer 1941), a historical linguist who openly asserted the “enormous cultural superiority of the German nation compared to the whole East” (Wedekind 2005:119).

Dinklage also uses surname data to argue for a *mass* colonization in the early medieval period, what he clearly views as an early example of the *Drang nach Osten*. Although most historians agree that Carolingian expansion in the Early Middle Ages was largely accomplished through large land donations to elite families, Dinklage insists that large numbers of Germans must have also been brought along (1941a:240). He also emphatically rejects Valter Šmid’s argument that *Köttlach* material was connected to the Slavic state of Carantania, suggesting: “At that time, when the finds from Šmid’s ‘Carantanian culture’ were worn in the *Ostmark*...it is known that in Carinthia there were already Germanic people” (1941a:241; see also 1941b:364).

In addition to advocating for early Germanic colonization, each author also explicitly rejects the possibility of Slavic political or cultural autonomy. Towards this end, Reinecke continually notes the strong ‘foreign’ (i.e. Avarian, Frankish, Byzantine) influences on early medieval Slavic

culture. He argues that Slavs only migrated into the eastern Alps under the dominion of the Avars, before falling quickly and fully under the influence of Germanic (Carolingian) culture, echoing another common myth at the time: that modern Slovenes were not *actually* the descendants of early medieval Slavic peoples but were instead later *Germanic* peoples who had become ‘Slavicized’ in the High Middle Ages. According to this theory, the ‘real’ early medieval Slavs were just the slaves of the Avars who apparently disappeared along with their masters (Promitzer 2003:198).



**Figure 8.1**  
Early Medieval “Germanic” Settlement of the SE Alps (after Dinklage 1941b:240)

By arguing for a quick and widespread Germanization of early medieval Slavic peoples, Reinecke again intimates that Slavic peoples showed no signs of an autonomous or self-



sufficient culture. “The Slavs adopted many forms of new cultural material from their Germanic neighbors...the notion of a self-sufficient Slavic culture with exclusively Slavic forms is out of the question, and their dependence on the details of the Germanic circle is absolute” (Reinecke 1928:278-279).

Dinklage also picks up the theme of Germanization (*Eindeutschung*). By linking the spread of *Köttlach* material to a process of Germanization in the region, he hopes to prove the existence of uninterrupted Germanic cultural continuity in the southeastern Alps since the Early Middle Ages; a region currently suffering (in his view) under “Slavic foreign lordship” (1941a:235). Moving even beyond the southeastern Alps, Dinklage argues for a contiguous and coherent Germanic cultural tradition across all of Western and Central Europe, concluding: “Hopefully already these few lines have contributed to remove the fairytale of any Slavic culture in the eastern Alpine lands. A summary interpretation of Carolingian finds from Northumberland to Venice and from Oxford to Székesfehérvár [a city in central Hungary] has demonstrated the uniform picture of early German culture in its full extent<sup>100</sup>” (1941a:256).

## **VI. CONCLUSION**

This case study illustrates a number of important aspects of the intersection of archaeology, politics, and the past. First, locating the origins of National Socialist ideology in a long-standing German colonial fascination with East Central and Eastern Europe raises a number of important but unsettling issues. It supports the argument that political influence on archaeological

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<sup>100</sup> “Möchten schon diese knappen Zeilen dazu beigetragen haben, das Märchen von einer eigenen frühmittelalter Kultur der Slawen in den Ostalpenländern zu beseitigen. Eine zusammenfassende Darstellung des karolingischen Fundguts von Northumberland bis Venedig und von Oxford bis Stuhlweissenburg wird bald das einheitliche Bild der frühdeutschen Volkskultur in vollem Umfang zeigen.”

interpretation in Germany did not appear *ex nihilo* with the National Socialist *Machtergreifung* (seizure of power) in 1933, but is already evident in the early decades of the 20<sup>th</sup> century (see Fehr 2004). It also more broadly questions the degree to which Nazi acts of mass violence can be considered in isolation from broader Western colonial ideologies and practices. Was East Central Europe Germany's India or Algeria, as argued by Blackbourn (2004)? What exactly was the relationship between the legacy of European colonialism and the Final Solution (see Zimmerer 2008, Gerwarth and Malinowski 2007, 2009, Kopp 2010)?

Furthermore, debate continues to rage over whether 'imperialism' and/or 'colonialism' are appropriate descriptions of the relationship among Germanic and Slavic communities of East Central Europe. While the asymmetrical nature of historical power relationships among these groups is undeniable, some feel uncomfortable drawing direct parallels to European colonialist ventures abroad (i.e. the British in South Asia, the French, Dutch, and Portuguese in Africa, or European colonization of the Americas). While significant differences *did* exist between overseas and continental systems of domination, it is argued here that such differences were one of degree rather than kind. As outlined above, the imperialist and colonialist ideological framework used to justify German political, economic, and cultural hegemony in East Central Europe (reflected and emphasized in the archaeological literature) bears striking resemblance to other 18<sup>th</sup> and 19<sup>th</sup> century Western colonial ideologies (see Furber 2004). Furthermore, not only did justification for German eastward expansion explicitly draw inspiration from European colonial ventures abroad, but the latter also saw medieval Germanic eastward expansion as a logical historical precursor.

Research on the influence of politics and society on archaeological practice has reached a moment of intellectual maturity, where this link is demonstrated to be present not just under

totalitarian or autocratic regimes, but rather consistently underpins all our interpretations of the past. Recognizing that objectivity (i.e. historical veracity) is a goal to strive for, but one that can never be fully realized, archaeologists must continue to generate knowledge about the past while always acknowledging their own inherent biases and perspectives. This 'loss of innocence' has important political and ethical ramifications, particularly regarding polyvocality and the rejection of a 'single' past, and is a necessary step toward a fuller maturation of the discipline.

## CHAPTER 9

### MEDIEVALISM, COLONIALISM, AND THE TEMPORAL LOGIC OF ANTHROPOLOGY

*The history of anthropology requires no such invidious comparisons between eras, just as the pursuit of anthropology requires no invidious comparisons between cultures.*

-- J.A. Boon<sup>101</sup>

#### **9.1. INTRODUCTION**

There is a longstanding tension in the anthropological perspective between understanding cultural practices and belief systems by the standards of their own internal logic rather than based on some external ‘universal’ principles, and the project of ethnology, which emphasizes cross-cultural comparison and generalization. Although the ultimate role of cultural relativism, particularly in the context of universal human rights, continues to be hotly debated in the discipline (i.e. Geertz 1984, Brown 2008), at least some degree of methodological relativism (*sensu* Obeyesekere 1966) remains a broadly accepted fundamental element of proper ethnographic fieldwork.

Yet at the same time, anthropologists have also recognized the dangers in homogenizing “culture”, of collapsing its internal socio-political complexities and tensions—along lines of gender, class, and faction—with overly tidy and ethnographic descriptions and simplistic ‘culturalist’ explanations (i.e. *all* members of culture ‘X’ believe or do ‘Y’). Such approaches risk implicitly reducing people to mere cultural automatons who lack the agentic capacity to question or dissent from broader social norms (Sandall 2001, Li 2006).

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<sup>101</sup> Boon 1980:73-74

In following these two important (if at times incongruous) principles, cultural anthropologists continue to produce a vibrant body of ethnographic literature on human societies across the globe. Yet should not these same principles also apply to ethno-historical analyses of Euro-American societies both past and present? As Frederick Barth once noted: “It is a widely held ideal, which I share, that anthropological theory should have the property of being ultimately self-reflexive, i.e. be as applicable to the culture and life in which we participate as to other cultures and lives” (1987:18). In this chapter I argue—following Barth and Bruno Latour (1993, 2010)—that anthropologists have in fact often *not* followed these same basic epistemological and methodological principles of anthropology outlined above when studying their own historical developments. Although there are surely numerous cases of this double standard, here I examine one specific manifestation, namely the place of Europe’s medieval past in the contemporary anthropological imagination.

### **9.1.1. Chapter Outline**

In order to properly frame my concerns about anthropological approaches to the medieval past, I begin by briefly exploring some contemporary issues in ‘medieval studies’, a meta-discipline that includes aspects of historical, archaeological, architectural, and literary approaches.

Influenced by the ‘postmodern turn’ in fields such as philosophy, critical theory, and anthropology, medievalists have sought to destabilize the traditional historical narrative that marks the beginning of ‘modernity’ at the end of the 15<sup>th</sup> century. Scholars such as Cohen (2003), Dube (2002), de Grazia (2007) and Davis (2008) have questioned a narrative that posits radical epistemological rupture between the medieval and the modern, in which the latter is assumed to be qualitatively different and categorically superior (culturally, economically, politically) to the former.

Not coincidentally, this medieval/modern periodization emerges virtually simultaneously with a parallel *racial* division of the world between the West and its colonial Other. I argue that the pre-modern ('medieval') and non-Western ('primitive') functioned as foils against which the modern West sought to define itself (Dagenais and Greer 2000). While anthropologists have made great strides in exposing the colonial ideologies that underlay the racial hierarchy between Western and non-Western, they have largely overlooked this analogous temporal colonization of Europe's own past. In the middle part of this chapter, I identify the place of the medieval in the anthropological imagination through an exploration of the discipline's own autobiographical narrative. In the final section, I examine the consequences of a primitivized, singular Middle Ages for anthropological thought and practice, which become manifest in unanticipated places and times. I conclude, following Boon's epigraph above, that anthropologists must exercise the same analytical caution in making generalizations about the medieval past that they readily do in their study of contemporary non-Western cultures.

## **9.2. MEDIEVAL STUDIES, POSTMODERNISM, AND THE CULTURAL TURN**

Over the last two decades, medieval studies have experienced something of a theoretical renaissance. During this period, a tidal wave of 'posts-' (i.e. post-modernism, post-colonialism, post-structuralism, post-humanism) has swept away traditional stable identities and epistemologies, and profoundly influenced the perspectives of many scholars of the European Middle Ages. These intellectual currents, and the epistemic 'loss of innocence' that accompanied them, have had a tremendous impact on the study of medieval history, art, and literature. Perhaps it was the very nature of their source material—those notoriously fragmented, allegorical, and surreal medieval texts—that prepared medievalists to embrace the end of positivism, of knowing

the past *wie es eigentlich gewesen*<sup>102</sup> (Spiegel 1997). Whatever the reasons, many medievalists have taken a decidedly post-modern turn in their analyses, addressing such complex (and to their detractors, anachronistic) issues as gender and queer studies (Dinshaw 1999, Burger and Kruger 2001), Orientalism (Ganim 2005), psychoanalysis (Uebel 2005), post-humanism (Joy and Dionne 2010), materiality (Robertson 2008, 2010), and perhaps most significantly, postcolonialism (Biddick 1993, Cohen 2000, Altschul 2008, Holsinger 2002), As Kabir and Williams (2005:1 – 2) have recently noted:

As postcolonial scholars have sought to dismantle the notions of modernity upon which colonialism was predicated, medievalists have, in turn, challenged the binaries of medieval and modern (or early modern) that bracket off the Middle Ages, and keep it as exotic and foreign – and also as domitable – as any orientalist fantasy. As critiques of colonialism work in tandem with critiques of modernity, medieval studies and postcolonial studies have sought to undermine a series of western myths of origin, history, identity, and temporality.

Significantly, this ‘postmodern’ turn in medieval studies has been accompanied by a ‘cultural’ turn; many medievalists—recognizing the surprising degree of hermeneutic similarity between medieval studies and anthropology—explicitly adopted anthropological frameworks and approaches in their own work (see Gurevich 1992, de Jong 1996, Buc 2001, Smith 2005). Since both anthropologists and medievalists have traditionally studied human groups considered peripheral (temporally or spatially) to Western modernity, both have come under attack in a neo-liberal intellectual climate that constantly demands justifications of relevance and profitability.

More profoundly, both disciplines must confront the *double-bind of alterity*; that is, while the study of alternative and marginal lifeways continues to hold great potential for critiquing politically, economically, and socially hegemonic institutions, it also risks objectifying, homogenizing, and ultimately dehumanizing the Other. According to Michael Uebel, medieval

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<sup>102</sup> “as it actually happened”

history and anthropology are closely aligned in their need to address “the differences, projections, doubleness, and ambivalence attending past and present construction of otherness” (2005:252). Uebel—following Michel de Certeau (1986)—has termed this transdisciplinary approach *heterology*. It is argued here that since such epistemological and ethical complications haunt both fields, increased dialogue between these two disciplines is potentially invaluable for each side.

The incorporation of postmodern and anthropological approaches has injected new vitality into medieval studies by opening up fresh lines of critique and intellectual exploration. However, I believe that anthropology recognize how our discipline has homogenized and stereotyped the European medieval past. If the medieval past is indeed another country, we have often been less than kind to its inhabitants, who (not unlike many colonized peoples) cannot speak for themselves. Of utmost importance for this goal is reconsidering the origins and consequences of one of the most fundamental and ubiquitous elements of Western historiography: the medieval/modern periodization.

### **9.3. THE MEDIEVAL/MODERN PERIODIZATION: ROOTS AND CONSEQUENCES**

#### **9.3.1. Modernity: the West’s Creation Myth?**

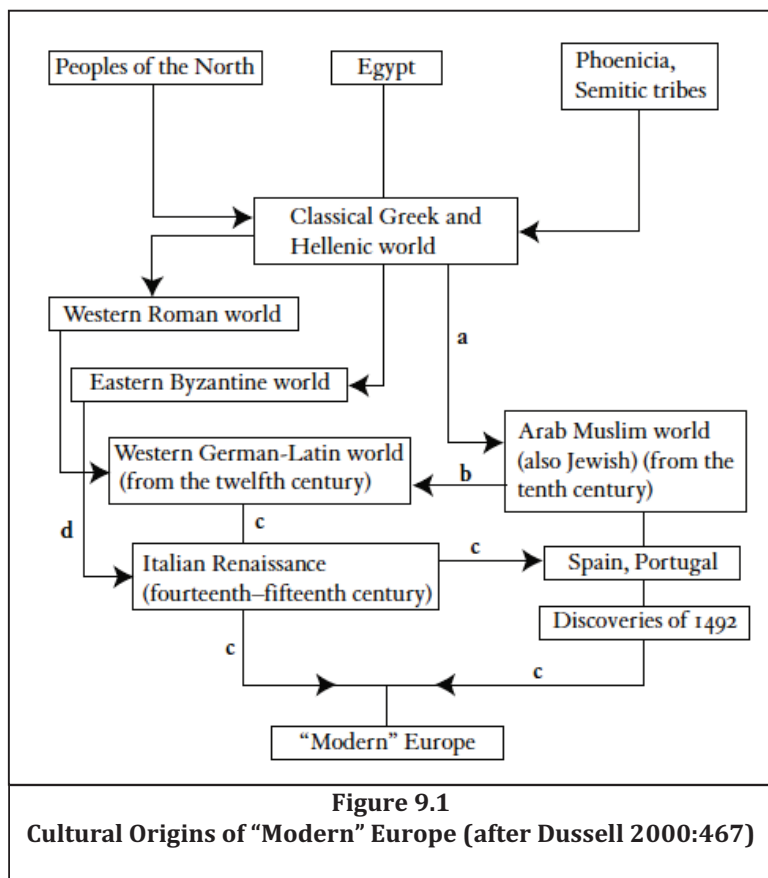
Medievalists have long argued that the traditional linear division of European history into ancient, medieval, and modern is deeply problematic for a number of reasons<sup>103</sup>, perhaps most importantly because in this temporal schema modernity situates itself as the direct inheritor of philosophical principles and political traditions first developed by the ancient Greeks and

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<sup>103</sup> Alternative periodizations include those of Le Goff (1988), who argues for an “extended Middle Ages” stretching from approximately the fourth through nineteenth centuries, and Gerhard (1981) who emphasizes continuity from AD 1000 – 1800, a period which he terms “Old Europe”



Romans. This periodizing move has two major consequences: (1) it ignores the mediating role played by neighboring cultural traditions (Byzantine and Arab) in the transmission of Classical (particularly Greek) knowledge to Italian Renaissance scholars (see Figure 9.1); and (2) it reduces the intervening epoch in the West (c. AD 450/500 – 1450/1500) to an unfortunate interruption of this historical teleology, a ‘dark’ millennium ending only with a rebirth that



would in turn render it obsolete (Cohen 2003:19). This perceived divide between medieval and modern has become one of the most powerful and enduring periodizations in all of Western historiography. Furthermore, it created the necessary epistemological space for Western modernity to establish a sense of superiority (cultural, ethical, and political) over its own past, as well as those

contemporary non-Western societies under its colonial gaze.

One could convincingly argue that the birth of modernity is nothing less than the West’s creation myth<sup>104</sup>. According to the narrative enshrined in Western historiography, the beginnings of a modern worldview were first emplaced with the ‘rediscovery’ of Classical knowledge and

<sup>104</sup> Although the exact moment at which ‘modernity’ began is still hotly debated, many historians (implicitly) assume that it constituted a qualitative change from the previous period

political values during the 14<sup>th</sup> century Italian Renaissance, which instigated (albeit indirectly) a series of fundamental social, economic, religious, and political changes over the following centuries, including the Protestant Reformation, Scientific Revolution, Age of Enlightenment, and Industrial Revolution. In the course of this ‘modern project’, Europeans supposedly emerged from a prolonged period of cultural, economic, and intellectual stagnation by breaking the chains of feudal servitude, religious superstition, and political absolutism. Despite some broadly acknowledged setbacks, they strove to create a society grounded in the universally enlightened principles of Reason, Science, and Capital. From the 15<sup>th</sup> century on, the invention (or rediscovery) of pluralist democracy, the nation-state, secularism, political and economic individual freedoms, modern philosophy, empirical science, and unprecedented technological advances allowed the West to exercise political, economic, and cultural hegemony over the rest of the world. Indeed the very identity of our ‘Western civilization’ is directly tied to this historical and cultural mythology.

The beginning of modernity was also accompanied by a period of unprecedented colonial expansion and cultural interaction<sup>105</sup>. As postcolonial theorists have long argued, it was only through this extensive encounter with non-Western peoples that the concept of ‘the West’ first emerged as a coherent identity for Europeans<sup>106</sup> (Saïd 1978, Todorov 1984). Yet the *temporal* manifestation of this Self/Other identity formation is far less recognized—that the West could only become ‘modern’ by inventing its own antithesis: the pre-modern (or medieval). If such is the case, it becomes essential to excavate the historical origins of the concept of a primitive, backward, and ‘dark’ Middle Ages.

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<sup>105</sup> The year 1492 is sometimes used to mark the end of the medieval world (i.e. Kirchner 1968, Dwyer 2009)

<sup>106</sup> As the anthropologist Bernard McGrane (1989:ix) once famously noted: “A culture that discovers what is alien to itself simultaneously manifests what is in itself.”

### 9.3.2. The Invention of Medieval

It is critical to recognize that the medieval/modern periodization was *not* initially formulated through the dispassionate analyses of professional historians, but was actually first articulated by those very men who saw themselves as living through it. When early academic historians in 18<sup>th</sup> century Europe used the term ‘dark ages’, they were drawing on a long established perception of the pre-modern period first developed by 14<sup>th</sup> century Italian humanists. Perhaps the most famous of these early humanists was the poet Francesco Petrarch (1304 – 1374), who hoped to usher in a new period of enlightened Classical learning in order to end what he considered centuries of intellectual and cultural decline (Mommsen 1942, Nelson 2007). A century later, papal librarian Giovanni Andrea invented the term *middle ages* “in order to draw a contrast between the ‘ancients’ of that era and ‘the moderns of our own time’, that is, the men of the Renaissance” (Le Goff 1988:19). This obsession with periodization encouraged early Renaissance humanists to summarily reduce an incredibly long, complex, and heterogeneous historical period to nothing more than a prolonged era of cultural stagnation. Some have even argued that this act of *temporal* colonization in many ways anticipated the *geo-spatial* colonization soon to begin<sup>107</sup> (Dagenais and Greer 2000).

Although such early formulations of a post-Roman ‘dark ages’ were premised more upon the political and cultural ideologies of Italian Renaissance scholars than historical reality, the classical/medieval/modern periodization, with all of its reductive homogenization, was later enshrined in Western historiography by such seminal figures as Edward Gibbon (1896 [1776]), G.W.F. Hegel (1881 [1807]), Jacob Burckhardt (1990 [1860]), Oswald Spengler (1926), and even Will Durant (1935) (see de Grazia 2007). One need only briefly peruse the adjectival choices

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<sup>107</sup> Or in some instances had already begun: the Crusader states, the English colonization of Ireland, or the Spanish colonization of the Azores.

later appended to the middle ages—*misty, dark, ignorant, barbarous, monkish, and Gothic* to name a few—to realize that Petrarch’s negative conception of the period was largely retained by subsequent historians (Robinson 1984). By the 19<sup>th</sup> century, the rupture between the medieval and modern had become nearly absolute, with ‘medieval’ becoming not only a universally accepted historical category, but also a powerful cultural symbol against which a self-congratulatory modernity could celebrate itself (Patterson 1990). It is reiterated in virtually every contemporary history textbook and primer, and the adjective ‘medieval’ has become synonymous with anything barbaric, archaic, cruel, or evil.

Furthering this colonization of the past, historians articulated a vast array of medieval/modern binaries that served to reinforce the cultural, economic, political, and intellectual distance between these two periods

<b><u>Medieval</u></b>	<b><u>Modern</u></b>
• Feudal	• Capitalist
• Rural	• Urban
• Christian	• Secular
• Superstitious	• Rational/Scientific
• Communal	• Individualist
• Backwards	• Progressive
• Ahistorical	• Historical
• Insular	• Connected
• Pre-political	• Political
• Mystical	• Disenchanted

**Figure 9.2**  
**Commonly Cited 'Differences' between the Medieval and Modern World**

(see Figure 9.2). Even the Romantics, modernity’s earliest critics, formulated an escapist medievalism that only further reinforced these binaries. Whether seen through the ideological prism of disdain or nostalgia, the medieval remained an essentialized Other against which modernity could be either celebrated or condemned.<sup>108</sup>

<sup>108</sup> For an excellent recent collection of short essays debunking many of these misconceptions of the medieval, see Harris and Grigsby (2008).

#### **9.4. MEDIEVALISM, COLONIALISM, AND THE SPATIO-TEMPORAL HIERARCHY**

Although it is widely acknowledged that control of the past is a critical aspect of colonial and imperial domination, it is sometimes overlooked that this can include not only the past of the colonized, but that of the *colonizer* as well. With this in mind, I suggest that the near simultaneous creation of a primitivized and essentialized medieval Other in Europe's past, and the construction of the non-European "modern savages" (Lubbock 1872) was *not* coincidental. Rather, these two ideas were mutually constitutive, co-created in the Western project of modernity/colonialism. As Barry Hindess (2007:336) notes: "the interpretive resources which Europeans employed to make sense of the inhabitants of their newly acquired possessions resulted in the construction of parallels between their contemporaries in the New World and long-dead peoples of the Old." This further explains the striking parallels between European colonial constructions of the *not*-modern and the *not*-Western (as outlined in Figure 9.2), particularly in considering the essential role of temporality in the colonial encounter.

As Johannes Fabian (1983) has eloquently argued, the anthropological encounter has often been premised upon a *denial of coevalness*. 'Primitive' non-Western peoples were seen in the colonial gaze as either vestiges of the past and/or existing outside of history (see also Thomas 1989, Wolf 1982). Fabian notes that early colonial anthropologists

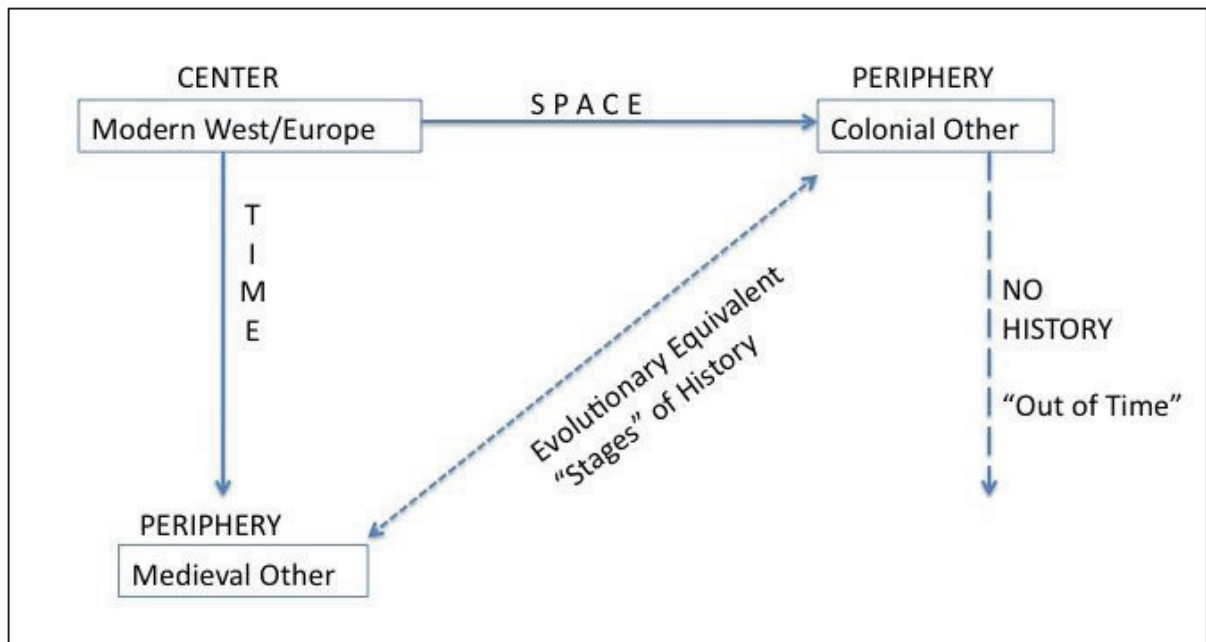
promoted a scheme in terms of which not only past cultures, but all living societies were irrevocably placed on a temporal slope, a stream of Time—some upstream, others downstream. Civilization, evolution, development, acculturation, *modernization*...are all terms whose conceptual content derives, in ways that can be specified, from evolutionary Time...Primitive being essentially a temporal concept, is a *category*, not an *object*, of Western thought" (Fabian 1983:18, emphasis mine)

As Fabian indicates, a spatio-temporal hierarchy was constructed upon which all societies past and present could be linearly categorized, ordered, and ranked. Not surprisingly, the modern West placed itself at the pinnacle, with those at the temporal or geographical margins filling the slots below (see Figure 9.3). The logic of this hierarchy dictates that modern Europeans would have to construct a more primitive version of their own pre-modern (medieval) ancestors, who might even be seen as evolutionary equivalents to the contemporary primitives in the colonial imagination.

Influenced by Marxist History, as well as Spencer's social evolutionism, this hierarchy conflated spatial and temporal relationships, establishing a universalizing history of empty, homogeneous time, a move that has had profound political and intellectual consequences (Chakrabarty 2000). First, it allowed European periodizations to be expanded into global categories of analysis (Davis 2008); for example, both Indian and Chinese histories are often periodized into classical, medieval, modern eras, a schema clearly influenced by European categories. Furthermore, in colonial Southeast Asia, 'medieval' was exported as a socio-temporal category, serving as an intermediate stage between 'savagery' and 'civilization' in the hierarchy of social evolution. Interestingly, being 'medieval' actually marked native peoples as *eligible* for socio-evolutionary progress or political modernization, in contrast to 'savages' who were seen as inherently inassimilable<sup>109</sup> (Goh 2007).

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<sup>109</sup> This makes sense within such temporal logic, since Europeans, once medieval themselves, were able to 'progress' into modernity



**Figure 9.3**  
**The Spatio-Temporal Hierarchy**

Even today, the ‘medieval’ continues to hold powerful sway over the Western (neo)-colonial imagination. For example, the spatio-temporal hierarchy still underwrites contemporary cultural representations of ‘tribal’ states such as Afghanistan, where moving away from the Western center is still coded as time travel (Davis 2000, Holsinger 2007). Likewise many have argued that notions of (neo)-primitivism still linger in anthropological thought (Sandall 2001, Li 2006) as well as in ethno-archaeological work, which has been accused of establishing tenuous parallels between prehistoric Europeans and contemporary non-European groups (Gonzalez-Ruibal 2006), often still premised upon the very same ‘timeless’ and ahistorical assumptions of colonial anthropology (Spriggs 2008).

## **9.5. WHITHER THE MEDIEVAL IN THE PRE-HISTORY OF ANTHROPOLOGY?**

### **9.5.1. The Roots of Anthropological Thought**

In this way, the modern West's colonization of its geographical and temporal peripheries marked the co-creation of non-European and pre-modern primitive Others to fill the 'savage slots' (Trouillot 1991) of its spatio-temporal hierarchy. Of course, over the past several decades anthropologists have addressed their complicity in the West's colonial and imperial projects and reconsidered the Self/Other binaries that previously grounded the logic of anthropological practice (see Clifford 1988, Marcus and Fischer 1986, Thomas 1989, McNiven and Russell 2005). At the same time, greater reflexivity and historical sensitivity in anthropological research has helped to transcend the temporal 'distance' that once characterized ethnographic fieldwork (Hastrup 1995). This attempt to place colonized peoples 'back in time' is perhaps most evident in the rise of historical anthropology, a subfield that frequently tackles issues of colonialism and imperialism through the integration of historical and ethnographic datasets (e.g. Wolf 1982, Comaroff and Comaroff 1992, Trouillot 1995, Hastrup 1992, Herzfeld 1987, Stoler 2009).

However, as noted at the beginning of the chapter, those principles of cultural relativism and heterogeneity that anthropologists have so successfully applied to the study of colonized peoples in the last several decades have not been as routinely extended to understanding their own pre-modern (and specifically medieval) ancestors in the West. They have largely overlooked the temporal colonization of the European past that accompanied the geographical colonization of Africa, Asia, and the Americas.

One metric for assessing anthropologists' conceptions of the medieval is contained within the discipline's own autobiographical narrative; in other words, where anthropologists themselves identify the intellectual origins of their discipline. Of course, there is no consensus concerning



where exactly to locate the genesis of anthropological thought. In a useful overview of this topic, Vermeulen and Roldan (1995:4-7) identified four different approaches to the genealogical problem of the history of anthropology, which they call the (1) *problem* orientation, (2) *conceptual* orientation, (3) *professional* orientation, and (4) *epistemological* orientation. Those who adopt the latter three of these approaches typically trace anthropology's beginnings to the first direct ethnographic fieldwork or development of the culture concept in the 19<sup>th</sup> century, such as the publication of E.B. Tylor's *Primitive Culture* (1871). Yet many histories of anthropology at least consider the first approach by searching for the intellectual roots of anthropological inquiry that far precede an institutionally coherent discipline; what Harbsmeier (1995) has termed the "pre-history" of ethnography. Those who define anthropology more loosely to include the investigation of general 'anthropological problems', such as curiosity about other ways of life or inquiries about the human condition, note that such issues were broached long before the work of Tylor, Morgan, or Malinowski, as explored below.

#### 9.5.1.1. *The Enlightenment*

This pre-history of anthropological thought is generally traced to one of several important moments in European history. One of the most popular points of departure is the 18<sup>th</sup> century 'Age of Enlightenment'. Although a number of scholars embrace this perspective—see Evans-Pritchard (1981), Foucault (1966), Geertz (1973), and Denby (2005,) among others—it is perhaps most forcefully argued in Marvin Harris' seminal text *The Rise of Anthropological Theory* (1968). Harris locates such a 'rise' in the century precisely between the publication of John Locke's *Essay Concerning Human Understanding* in 1690 and the outbreak of the French Revolution in 1789. Harris' famous insistence on the scientific character of anthropological research makes the Enlightenment, with its dual emphasis on rationalism and empiricism, the

logical choice for his disciplinary genealogy. His central thesis is that “The issues of sociocultural inquiry brought forth during the Enlightenment embrace most of the themes that serve either as the foundation of contemporary theory or as the basic frame of reference in terms of which modern sociocultural research is still being carried out” (Harris 1968:9).

#### 9.5.1.2. *Romanticism*

Perhaps paradoxically, the origins of anthropological thought have also been frequently located in the Romantic Movement, which constituted an intellectual reaction *against* Enlightenment values of rationalism and universalism (advocates of this perspective include Shweder 1984, Stocking 1968, Purdy 2005). John Zammito’s (2002) recent excellent work on the Enlightenment locates the birth of ethnology in the philosophical split between Immanuel Kant (the archetypal Enlightenment figure) and his student J.G. Herder, the early Romantic philosopher and poet. Zammito argues that while Enlightenment thinkers subordinated issues of culture to universal metaphysics, Romantics such as Herder articulated the earliest framework of cultural relativism through the notion of *empathy* (see also Kramer 1985). Such histories of anthropology argue that the idea of epistemological relativism would eventually become the intellectual basis of the ‘culture concept’ most rigorously articulated several centuries later by Franz Boas.

#### 9.5.1.3. *Renaissance*

Some histories of anthropological thought—such as those of Rowe (1965), Slotkin (1965), Darnell (1974, 1977), and Harbsmeier (1995)—reach back even farther, arguing Europe’s Renaissance to be the historical moment that opened up the possibility for true anthropological inquiry. Slotkin (1965:vii) asserts that the bases of anthropology were laid in the sixteenth and seventeenth centuries, thanks to the birth of commercial capitalism, cosmopolitanism, and the comparative method. Rowe (1965:1) extends this logic even further into the past, suggesting that

the “anthropological tradition of interest in the differences among men had its beginnings in the Italian Renaissance of the 14<sup>th</sup> and 15<sup>th</sup> centuries and specifically in Renaissance archaeology.”

#### 9.5.1.4. Antiquity

A final group of disciplinary histories (Kroeber and Kluckhohn 1952, Hymes 1972, Erickson and Murphy 2008) argue that the Classical tradition of the Greeks and Romans should be considered the earliest proper manifestations of anthropological inquiry. This argument is perhaps most extensively made in Margaret Hodgen’s classic *Early Anthropology in the Sixteenth and Seventeenth Centuries* (1964). In spite of the title, Hodgen dedicates the first section of her book to the Classical antecedents of modern anthropology, particularly Herodotus, who she describes as “a cheerful, inquisitive, and rationalistic extrovert who traveled over his world to discover the facts, who took delight in telling a good story but usually avoided the temptation to wander very far from sober common sense” (Hodgen 1964:28). Despite his rather imaginative ethnographic descriptions of the Callataie of India (who ate their own fathers), the Arimaspi of China (who only had a single eye), and the peoples of the eastern steppe (who had feet like goats), Hodgen presents Herodotus as an enlightened (modern?) man of Science and Reason. She excuses Herodotus’ beliefs in those aforementioned ethnographic accounts on the grounds that “remoteness lends a kind of plausibility. Such marvels might be possible in appropriately distant locales” (ibid:27). Although his ethnographic accounts might be lacking factual accuracy, clearly Hodgen and others would argue that travel accounts attempting to identify and describe other cultures should still be considered anthropological.

#### 9.5.2. Medieval Anthropology

There are, to be sure, a wide range of positions concerning where to identify the true origins of the anthropological approach, whether in the Romantics cultural relativism, the Enlightenment’s

concern with shared universal human characteristics, or even Classical or Early Modern travelogues, despite being filled with ethnographic descriptions of questionable reliability. Anthropological ideals and approaches have also been occasionally identified in medieval Islamic (Bennett 1966) and Byzantine (Hoffman 1973) civilizations. Yet a perusal of the vast body of literature on the history of anthropology reveals one period to be conspicuously absent: the (Western) European Middle Ages. Most accounts completely omit any mention of pre-modern Europe; a few others briefly mention the period in passing (e.g. Slotkin 1965, Erickson and Murphy 2008), but tend to brush it off with unsympathetic generalizations, such as Rowe's (1965:1) comment that "there was no continuous anthropological tradition of comparative studies in...the Middle Ages." Of all the histories of anthropology researched by this author, none extensively engages with the small but significant corpus of medieval ethnographic literature, or even begins to explore the role that anthropological curiosity might have played in the imagination of medieval peoples in Western and Central Europe.

Hodgen, who considers ethnographic texts of Antiquity and Renaissance in depth, briefly considers the intervening period. Yet her handling of the Middle Ages only serves to reinforce those cultural stereotypes outlined above. Although she seems to forgive Classical authors for their excursions into the mythical and monstrous, Hodgen is far less sympathetic of what appear to be quite similar accounts from the Middle Ages. Curiously, she attributes such imaginative descriptions in medieval ethnographies to the "twisted imaginations", "innate incaution", "mental apathy", "careless repetition and invention" and "unswerving fidelity to tradition" of the medieval mentality. She laments: "Having lost touch with the classics, medieval scholarship purveyed a preposterous and fabulous sediment of what had once been a comparatively realistic antique ethnography", further suggesting that this incuriosity stems from the fact that "medieval

man was so often the very savage the ancients had seen fit either to eulogize or belittle” (Hodgen 1964:34, 35)<sup>110</sup>.

Why have anthropologists so categorically rejected the possibility of locating the intellectual origins of their discipline in the Middle Ages, or even acknowledging that the ‘medieval mind’ was capable of thinking anthropologically? The general consensus on the medieval seems to suggest that this period was the very *antithesis* of anthropological inquiry: a world stuck in religious dogmatism with a childlike naïveté concerning other cultures or ways of life, even (or especially) in comparison with Classical Antiquity or the Renaissance. Why is it assumed that while ancient and modern Europeans could appreciate and contextualize the allegorical references that filled many early travel accounts, the medieval mind lacked this ability to distinguish between fact and fiction?<sup>111</sup>

Reading many of the above histories of anthropology, one would assume that nothing was produced that could remotely qualify as ethnographic or anthropological in nature from c. AD 450 – 1450. Yet this is simply untrue; in reality, there were a number of early ethnographies and travelogues produced and circulated in medieval Europe (particularly after the 12<sup>th</sup> century) that certainly merit inclusion in a pre-history of anthropological thought (see numerous recent contributions in Classen 2002, Rubies 2009, and Muldoon 2010). Of course, works such as *The Travels of John Mandeville* (c. 1360), Gerald of Wales’ *Description of Wales* (c. 1194), and Marco Polo’s *Travels* (c. 1280) do not adhere to contemporary standards of ethnographic

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<sup>110</sup> Ironically, medieval accounts of the monstrous were largely due to their extreme *fidelity* to Classical ethnography, not deviations from this tradition (Rubies 2009:xxv).

<sup>111</sup> The common argument that clearly fictional travel accounts (such as those attributed to John of Mandeville) were more widely believed than fact-based ones (for example, the travelogues of Marco Polo) because they were more widely read is questionable at best. As Muldoon (2010:xviii) points out, just because science fiction books today are far more widely read than astronomy journals doesn’t mean that *Star Trek* is taken more seriously than NASA!

accuracy; indeed they are often an amalgam of Biblical allegories, elements drawn from Classical mythology, and often bizarre, monstrous images. Yet as noted above, this does not significantly distinguish them from ethnographic descriptions produced during either Antiquity or the Renaissance. One might reasonably wonder how Herodotus could be considered the “father of ethnography” (Strassler 2007), or that Early Modern (16<sup>th</sup>-17<sup>th</sup> century) travelogues have received extensive analyses by historians of anthropology (i.e. Hodgen 1964, Slotkin 1965, Harbsmeier 1995), yet the proto-ethnographic literature composed and circulated during the (later) Middle Ages, which was strikingly similar in content, form, and tone, barely merits any mention at all. As Rubies (2009:xiii) has recently emphasized: “medieval ethnographic texts articulated European views of other cultures no less decisively than would be the case after the Renaissance.”

## **9.6. DE-ENLIGHTENMENT**

### **9.6.1. Tierra del Fuego**

How then might we attempt to explain this curious exclusion of medieval Europe from virtually all histories of anthropological thought? Some might argue these medieval travelogues were warped by an ideological dogmatism or cultural chauvinism that radically distinguished them from the more empirical, objective accounts produced after the Enlightenment and Scientific Revolution. While our traditional conceptions about European cultural/intellectual progression might seem to support such reasoning, the illogic of this argument is exposed by the insightful work of anthropologist James Boon on pre- and post-Enlightenment ethnographies, in what might be thought of as a ‘counter-history’ of anthropology (see Boon 1980, 1982). Although, as noted above, some histories of anthropology include Renaissance travel literature, most

(implicitly or explicitly) accept their inferiority to later 18<sup>th</sup> and 19<sup>th</sup> century accounts. However, Boon advances a provocative counterclaim:

If one were to brand an age as inward-turning and Europocentric, the Reformation and Enlightenment are possibly better candidates than the Middle Ages, which resisted singular modes of authority, singular types of love, and singular, uniform standards of national languages and legal codes (Boon 1980:80).

To support this controversial thesis, Boon deftly analyzes early European travel accounts of Tierra del Fuego in South America, famously described by early 16<sup>th</sup> century explorers as the land of Patagonians (giants). Although this seems at first to reinforce the idea of imaginative pre-Enlightenment ethnography, Boon further explores the ways in which descriptions of the peoples of Tierra del Fuego as *inhuman* would continually resurface well into the 19<sup>th</sup> century. While conceptions of human difference would shift away from Christian categories of the ‘Saved’ and ‘Damned’ in the medieval and early Renaissance periods to morphological metrics thought to reflect racial hierarchy during the Enlightenment, Europeans maintained the same sense of cultural superiority<sup>112</sup>. As Boon (1980:78) further observes:

Does a secular analysis of harems and human sacrifice as abstract variables mark an epistemological advance over pre-Enlightenment interpretations that, for all their value-ladenness, often contained as much ethnographic information? Is the difference a matter of increased rationality, as Enlightenment philosophers needed, culturally, to think? Or is this difference, too, a kind of simplification?

When viewed from a perspective of cultural relativism, are Enlightenment principles of empiricism and rationalism actually antithetical (and superior) to medieval religious orthodoxy, or were they similar ideologies dressed up in secularized language? The unit of analysis clearly shifted from religion to culture/race, but the ethnocentrism remained in place, or as Boon seems to imply, became more pervasive and absolute.

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<sup>112</sup> Of course, anthropologists don’t need to be reminded that Europeans never had a monopoly on ethnocentrism. Ethnographic literature from contemporary state-level (Islamic and Chinese) societies reveals similar cultural prejudices (Rubies 2009).

### 9.6.2. The Antipodes

A second historical example also serves to complicate the traditionally accepted epistemological and ethical superiority of the ‘modern’ over the ‘medieval’ mentality. One might take the case of the ‘Antipodes’, a mythical continent that supposedly existed on the other side of the earth, whose existence was often debated during the Middle Ages. Quite infamously, the medieval Roman Church declared belief in the existence of such a place as heretical, a fact often used to exemplify the geographic myopia and cultural ignorance that supposedly characterized medieval Europe. In comparison, a growing public interest of the existence of the Antipodes during the Renaissance seems to indicate a society becoming more curious and intellectually tolerant.

However, a more careful contextual reading undermines this simplistic narrative. As British historian Valerie Flint (1984) has noted, the medieval Church’s seemingly obdurate stance on the Antipodes was derived from the Biblical affirmation of monogenesis; the idea that all human beings—Christian, Pagan, or otherwise—were descended from a common ancestor (i.e. Adam). An inhabited Antipodes, thought to be inaccessible to the descendants of Adam and Eve, therefore could not possibly exist. Although perhaps unsophisticated in its literalist reading of the Old Testament, one might argue that the medieval notion of a shared humanity through Adam was actually remarkable in its tolerance of the foreign and different. In contrast, increased openness to the existence of the Antipodes in the early modern period was at least in part buoyed by new polygenist ideas that *denied* the shared humanity Europeans held with other peoples (a convenient argument during the early phases of colonialism). Although this ideological-cultural transition from the medieval to the modern is typically characterized as the replacement of religious superstition with scientific objectivity, it could also be considered a shift from the belief



in a shared humanity to its rejection under the guise of racial difference and hierarchy. As Flint has noted (1984:78-79), by the onset of modernity:

Pressure to receive strange or monstrous races upon equal terms by man had all but vanished, and ample measure for subjection and even elimination had taken their place. It is difficult to argue at this point that this development was conducive to any great increase of “enlightenment”; and one might well at least begin to ask whether their admission on these terms into the realm of the scientifically possible boded very well for the postulated inhabitants of the supposed Antipodes themselves.

The arguments advanced by Boon and Flint complicate the clean break between medieval and modern, and the assumption of ‘progress’ in the history of anthropology (and the West more generally). But neither is this to say that the pre-modern was somehow superior to later developments in the Renaissance, Enlightenment, and Reformation. It is instead crucial to trace the similarities and differences between these eras without (at least as much as possible) succumbing to the weighty historical preconceptions that often accompany such analyses. We also must retain an appreciation for the complexity that existed within each of these periods (generally recognized more for modern than pre-modern periods). Likewise, the concept of modernity is complex and multifaceted, and cannot be reduced to a single variable. In this way, historical eras are analogous to cultural groups: once they become essentialized and singularized, they lose any explanatory capacity. Anthropologists have developed sophisticated means to address these complicated issues, but they have employed them far less in their analyses of Western history than in the study of world culture. In other words, we must analyze our own past with the same anthropological sensitivity we extend to contemporary cultures.

## **9.7. CONSEQUENCES**

This discussion of the complexity and multifaceted nature of historical periods brings us to some of the consequences that this ‘primitivization’ of the medieval has for anthropology as a whole. These consequences go deeper than simply producing a truncated disciplinary history as outlined above. When anthropologists reiterate the notions of rupture and supersession that frame the traditional medieval/modern periodization, they reinforce the teleological narrative of the emergence of the modern West as well as intimations of epistemic exceptionalism.

### **9.7.1. Singular Medieval → Singular Modern?**

This emergence of modernity is not just something that occurred in Europe’s past. European expansion, colonialism, and globalization brought the Western way of life to virtually every corner of the globe in the last five hundred years. During decolonization in the first half of the 20<sup>th</sup> century, national independence movements in Africa, South and Southeast Asia, and Latin America drew on European ideals to claim their own sovereignty. As the rest of the world has ‘caught up’ with the West, anthropologists have struggled over how to properly characterize these processes of ‘development’ and ‘modernization’. This led in the last several decades to the notion that ‘alternative’ or ‘plural’ modernities were emerging across the post-colonial world (Bhabra 2007, Wagner 2008). This has been seen by some as a welcome means of de-centering the idea that modernity must be understood in distinctly European terms. But as Dipesh Chakrabarty (2000:4) has observed: “political modernity is impossible to think of anywhere in the world without invoking certain categories and concepts which go to the intellectual and theological traditions of Europe.” Others go further, arguing that: “the strategy of pluralizing easily sidesteps asymmetries of power in the global system, by injecting everyone with ‘agency’ and creating an illusion of equality” (Thomassen 2010:323).

The legacy of the spatio-temporal hierarchy described above seems to linger in discussions of modernity. By positing a *singular* middle ages, one devoid of the complexity, agency, and sophistication that should be accorded to all human groups, the appearance of ‘modernity’ acts as a kind of a *deus ex machina* that occurred thanks to the inevitable progression of History rather than the historically particular actions of individuals and groups. This reinforces the notion that modernity is an inevitable stage of historical progression that will (eventually) occur everywhere with the same particular package of secularism, rationalism, capitalism, empirical science, and plural democracy. Anthropologists have recently acknowledged that these processes of ‘modernization’ have occurred quite differentially in other parts of the world (Faubion 1988, Thomassen 2010). By recognizing that there was no simple, singular passage from pre-modern to modernity in the West, we are in a better position to appreciate how these processes unfold across the globe.

### **9.7.2. Disciplinary Consequences**

The continued acceptance of a Middle Ages rendered irrelevant by the rupture of modernity can also perpetuate a “giddy presentism” (Graeber 2002) in which anthropological analyses can sometimes indulge. As David Graeber has argued, many anthropological studies of globalization and transnationalism talk as if these processes were somehow unique, when in fact historical precedents can be detected. Following the lead of medieval historian Patrick Geary, Graeber (2002:1225) points out that:

The situation in most European cities—with an essentially international elite doing its business in an international language incomprehensible to most of their countrymen, with working-class neighborhoods full of people drawn from across the Mediterranean—is remarkably similar to what those same cities looked like in 1450, or for that matter C.E. 250. It raises the question of whether the last couple hundreds of years and the ideal of the uniform territorial nation-state has really been something of an anomaly.

Graeber reminds us that providing a bit of historical perspective on the pre-modern world is crucial to the way we address contemporary issues. This theme is further picked up by Charles Cobb (2005:564), who writes: “It is incumbent on archaeologists who also view themselves as historical anthropologists to deconstruct the savage slot in the premodern era, undermining stereotypes about the past often encountered in our allied disciplines.” Here, Cobb is specifically addressing common misconceptions of pre-Columbian North America, but his words are equally valid for those studying pre-modern Europe as well, as is the following assertion: “If we adopt a deep historical anthropology that extends well before the age of European exploration, we can clarify even more the emergence of *modernisms* as opposed to modernism, *capitalisms* as opposed to capitalism (Cobb 2005:571, emphases mine).

Cobb’s call for archaeologists to become historical anthropologists is a reminder of yet another consequence of anthropology’s acceptance of the modern/pre-modern divide, one with significant implications for the division of labor within the discipline. As outlined above, socio-cultural anthropologists’ object of analysis is the same category out of which they have constructed their own disciplinary genesis: modernity. This perhaps begins to explain why, despite the indisputable growth of historical anthropology in the past several decades surprisingly few socio-cultural anthropologists have directed their analyses specifically to the European Middle Ages<sup>113</sup>.

At the risk of oversimplification, such a temporal logic in the discipline may also help to explain what archaeologists have long recognized as the blatant asymmetry in intra-disciplinary communication: while most American academic archaeologists immerse (or at least familiarize)

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<sup>113</sup> There are of course exceptions here (see Kroeber 1963, Asad 1986, Goody 2006; additionally Herzfeld 1987 for Classical Greece), but a perusal of major journals such as *History and Anthropology* reveal very few entries addressing anything before AD 1500.

themselves in socio-cultural theory, such familiarity is far less often reciprocated by socio-cultural anthropologists, many of whom see little in archaeological research that is germane to their own interests (see Gosden 1999, Garrow and Yarrow 2010)<sup>114</sup>. This situation has often frustrated archaeologists and at least partially underlies the periodic calls for disciplinary independence (Gumerman and Phillips 1978, Wiseman 2002, Lyman 2007). This attitude seems to echo another recent observation made of literary studies: “Whether you work on one side or the other of the medieval/modern divide determines nothing less than relevance. Everything after that divide has relevance to the present; everything before it is irrelevant” (de Grazia 2007:453). This may help to explain why so little ‘historical anthropology’ is explicitly focused on the pre-modern world<sup>115</sup>.

Interestingly, the medieval/modern divide may also explain an inverse disciplinary hierarchy existing within archaeology itself: the marginalization of historical archaeologists. As Laura Wilkie (2005:338) has recently observed: “there is a clear sense on the part of American historical archaeologists that we are a subaltern group within the discipline, and have been systematically excluded from certain publication, funding and employment opportunities in the field.” Just as many sociocultural anthropologists see no reason to engage in a dialogue with their archaeological counterparts (whose work in the premodern/prehistoric world must therefore have little significance for them), so prehistoric archaeologists have internalized this temporal logic, viewing their historical colleagues’ work as “too particularistic” or “unscientific” and trapped within an archaic “culture-history” paradigm (ibid:339).

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<sup>114</sup> For a recent exception, see Herzfeld 2009

<sup>115</sup> This point was also recently made in a recent blog post by linguistic anthropologist Stephen Chrisomalis (see <http://glossographia.wordpress.com/2009/05/11/medieval-anthropology/>).

However the rise of new and sophisticated approaches to materiality, identity, and temporality—as sketched in Part Two of this dissertation—may help to bridge the disciplinary gap between historical and prehistoric archaeology, as well as between cultural and archaeological anthropology (see also Hamilakis 2011).

## **9.8. CONCLUSION**

This chapter has examined some of the connections between colonialism and medievalism, and demonstrated how anthropology's autobiographical narrative is often premised upon a rupture between the medieval and modern. Like Chapter 8, it illuminates the interpenetration of the medieval and modern, and demonstrates the role of the past in current socio-political and disciplinary constructions. It argues that anthropologists must be careful not to stereotype pre-modern communities the way they once did to non-Western peoples. By problematizing the relationship between the medieval and modern, it also provides a greater conceptual space for appreciating and studying the multiple modernities that continue to emerge across the globe. The next and final chapter of the dissertation broadens this theme by exploring the intersections of temporality, identity, and materiality across history, archaeology, and anthropology.

## CHAPTER 10

### TIME TO TRANSGRESS: ARCHAEOLOGY BEYOND MODERN TEMPORALITIES

*Time present and time past  
Are both perhaps present in time future,  
And time future contained in time past.  
If all time is eternally present  
All time is unredeemable.*

- TS Eliot "Burnt Norton"<sup>116</sup>

#### **10.1. INTRODUCTION AND CHAPTER OUTLINE**

In Part Two of this dissertation, we considered how a theoretical framework grounded in a relational social ontology and nonlinear science could potentially provide a useful alternative to traditional understandings of social action in archaeological interpretation, and even perhaps offer a new way to conceptualize human sociality that avoids employing essentialized social totalities such as culture and ethnicity. In the first two chapters of Part Three, we have examined the intersections of time, identity, and politics, specifically the relationship of the medieval and modern. This chapter ties these two themes together by investigating the utility of a relational, nonlinear perspective for the understanding of time in archaeology.

The chapter begins with a brief overview of the 'standard' view of time in archaeology—time as linear, uniform, homogeneous, and spatial—that has been strongly influenced by the modernist temporality of industrial capitalism. Following McTaggart (1908), it then distinguishes two categories of time relevant for archaeology, one associated with 'etic' historical chronology and the other with 'emic' phenomenological/psychological experience (both individual and cultural).

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<sup>116</sup> *Collected Poems 1909 – 1935* (1936)

The following sections detail some of the inherent paradoxes in each of these two categories of time, namely the binaries of event/structure and present/past, and outline previous archaeological attempts to address them. Finally a nonlinear, complex, heterogeneous, relational, and non-spatial concept of time is forwarded, which offers a potential avenue for transgressing these problematic dichotomies. Finally, I explore the potential implications of this new concept of time for archaeology, and argue that they represent a truly postcolonial approach to the past.

## **10.2. ARCHAEOLOGY AND THE TIMES OF MODERNITY**

Time is a central concern for archaeologists. More than any other social science, archaeology must address and interpret data that stretch across vast – almost unfathomable – spans of time, and few would argue that reliable archaeological interpretation largely rests on our ability to construct detailed chronologies with our materials (Renfrew 1973:20, Bayliss et al 2007). In other words, understanding whether event ‘X’ occurred before, after, or concurrently with event ‘Y’ is critical for understanding how these two phenomena may have interrelated.

Although controlling for time is an essential element in archaeological interpretation, archaeologists have traditionally been less concerned with the fundamental *nature* of time. In other words, the discipline has rarely problematized time itself, instead assuming its linearity, uniformity, and homogeneity, and often imbuing it with evolutionary, progressive, and teleological overtones (Lucas 2005). For example, anthropologists and archaeologists have often framed the human past in terms of ascending evolutionary sequences, such as savagery-barbarism-civilization (Morgan 1877), band-tribe-chiefdom-state (Service 1962), and Stone-Bronze-Iron Ages (Thomsen 1836).



However, in recent decades archaeologists have recognized that the formulations of time that have long dominated our discipline are neither given nor universal, but are rather the product of our particular socio-historical context. The current ‘standard’ conception of temporality in Western social science is unquestionably connected with the ascension over the past four hundred years of Cartesian metaphysics, western empirical Science, and the capitalist mode of production—processes that have given birth to what is generally referred to as ‘modernity’<sup>117</sup> (see Nguyen 1992, Dawdy 2010).

As Cohen (2003:4) has noted, a modernist conception of time—that is, time as quantified, spatialized, and divided into discrete, regular, and measurable segments—is a necessary prerequisite and indispensable base for the functioning of industrial capitalist society. This temporal schema is the time of the clock, the watch, and the calendar, the time of railroad schedules and industrial capitalist labor (see O’Malley 1990, Dohrn van-Rossum 1996). As Shanks and Tilley have observed (1987:10), it is “uniform, abstract, and commodified time, the time of capitalist production.” Indeed, historians have long argued that the standardization of metric time was essential for the synchronization of industrial human labor. As Dan Thu Nguyen reminds us, the true terms of the transaction between the worker and capitalist is not an agreed upon amount of labor, but rather the power to labor over an agreed *period of time*:

That it was the capitalist as well who initially had the power to *define* that ‘period of time’ for which the worker was committed to labor, i.e. that a monopoly of ownership of the means of time-measurement rested in the hands of those who owned the means of production, came very soon to have far reaching implications for the reconceptualization of time, labour, and capital (Nguyen 1992:35, emphasis in original).

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<sup>117</sup> It is important however not to overestimate the ‘rupture’ of modernity with the pre-modern (see chapter 9); current standard conceptions of time are still greatly influenced by the legacy Christian eschatology, what Agamben (1993:96) has called “a secularization of a rectilinear, irreversible Christian time.” Furthermore, aspects of the ‘modern’ conception of time had definite precedents in later medieval Europe—what Le Goff (1980) terms “merchant’s time.”

It is therefore unsurprising that archaeology, which arose as an explicitly modernist, scientific discipline (see Thomas 2004, Lucas 2004b) internalized this rectilinear, ‘standard’ view of time. Like other social scientists, archaeologists adopted the modern understanding of time as an empty, homogeneous container *in* which all action occurs—a ‘fourth dimension’ of Cartesian space. This temporality undergirds our chronological sequences, whether rendered through historical sources, artifact typology, or radiometric dating. It allows us to place world (pre-) history on a single timeline, to teach our students about the origins and global spread of behaviorally modern humans, agricultural practices, and urban life (Lucas 2005:14, Taylor 2008).

Few would dispute that this notion of time has served professional archaeology well in its appearance in the mid-19<sup>th</sup> century. Yet modernist time contains significant ontological, epistemological, and ethical implications, which have gone largely unnoticed thanks to the ubiquity and ‘commonsensical’ understanding of this temporal framework. Thankfully, in recent years archaeologists have begun to rethink our understandings of the nature of time, making great progress in formulating a more nuanced approach to this critical aspect of archaeological interpretation<sup>118</sup>. Of course, this chapter does not aim to provide exhaustive coverage of every issue in the archaeology of time. My goal here is somewhat more limited; I examine the tension between two different *kinds* of time addressed in archaeology, and consider some alternative perspectives that allow us to think beyond, but not replace, concepts of modern temporality in our discipline.

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<sup>118</sup> For some of the more explicit attempts to rethink the nature of time in archaeology, see Bailey 1983, 2007, Ramenofsky 1998, Gardner 2001, Normark 2004, Lucas 2005, Gosden 1994, as well as contributions in Bolender 2010, Murray 1999, Holdaway and Wandsnider 2008, Karlsson 2001

### **10.3. TWO CATEGORIES OF TIME**

The enigmatic nature of time has perplexed philosophers for millennia. It is impossible here to comprehensively address so broad and complex a body of literature as the one that exists on this central paradox of philosophy (see Le Poidevin and MacBeath 1993, Turetzky 1998).

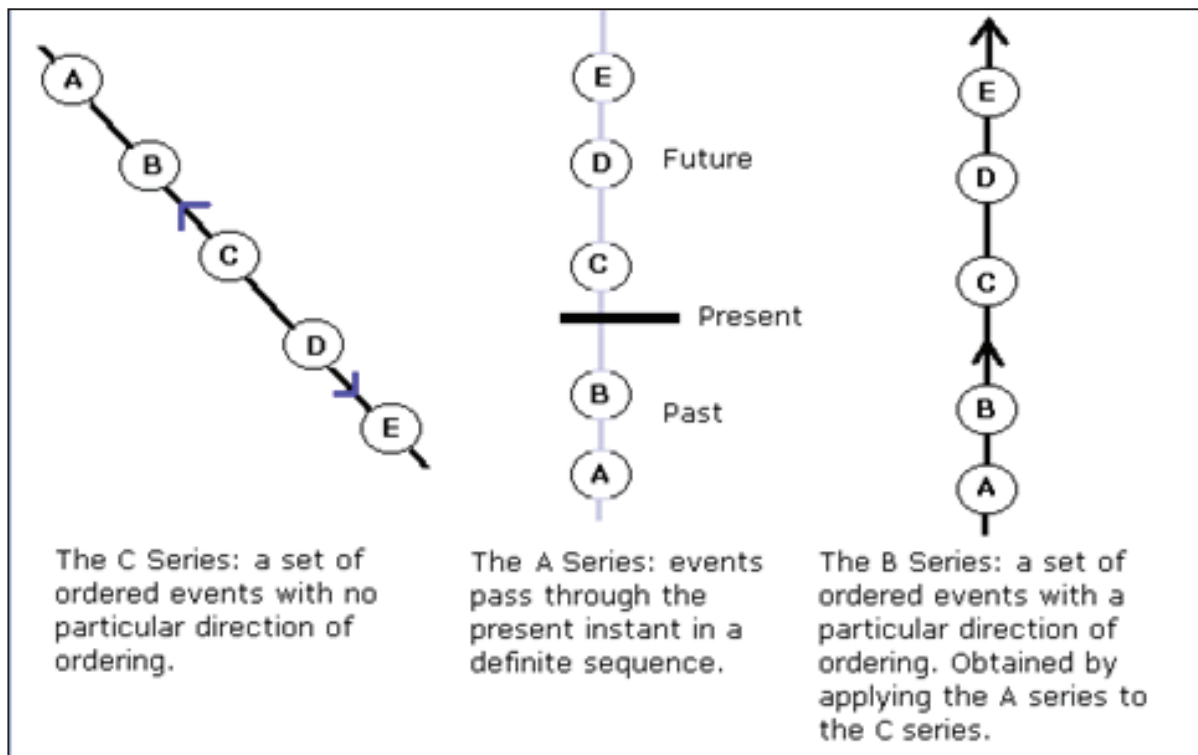
Nevertheless, a general introduction to the issues at hand is necessary before one can appreciate the ways in which archaeologists and anthropologists have approached the nature of time in their own disciplines.

#### **10.3.1. McTaggart's Paradox**

The seminal essay on the nature of time by British philosopher J.M.E. McTaggart (1980) serves as a useful point of departure. McTaggart posited that all previous philosophical explorations of the nature of time could be distilled into two distinct categories, which he termed the 'A-series' and the 'B-series'. For McTaggart, the A-series referred to the 'flow' of time that humans experience on a daily basis. For example: right now I am typing away on my desktop computer; this is my current perception of the *present*. I can remember waking up, making pot of coffee, and eating some cereal earlier this morning; I assign these events to the *past*. Likewise, later this afternoon I plan to take a break and go out jogging; such (uncertain) events remain decidedly in the *future*. A-series time is therefore best understood as *tensed* time; in my phenomenological experience of reality, any event *M* is either something that I've already done (coffee), am currently doing (typing), or plan to do in the future (jogging).

McTaggart also posited a related, but analytically distinct category of time that he termed the B-series. While A-series time is tensed time, the B-series is the temporal understanding of

succession, that is, of *order* and *direction*<sup>119</sup>; simply put, any event *M* must occur before, after, or simultaneously with a second event *N*. Of course, in our daily lives we make little distinction between the A- and B-series categories. If I was to write down my daily activities in a journal tonight, I could sequentially order all those activities described above (first coffee, then typing, and then jogging); if I wanted a more visual representation, I could draw them on a timeline. So why does McTaggart consider these two distinct categories? Without getting too bogged down in the details of his argument, McTaggart concludes that these different categories of time are ultimately paradoxical because they are *analytically distinct yet co-dependent*.



**Figure 10.1**  
**Different Categories of Time according to McTaggart (adapted from**  
**[http://en.wikibooks.org/wiki/Consciousness\\_Studies/The\\_Philosophical\\_Problem](http://en.wikibooks.org/wiki/Consciousness_Studies/The_Philosophical_Problem)).**  
**Permission of use granted under GNU Free Documentation License.**

<sup>119</sup> McTaggart also identified a third atemporal series (C-series) which has order, but no direction

What McTaggart means is that, in his view, the B-series is more *permanent* than the A-series because in the B-series, event *M* will always be before event *N*, while in the A-series, *M* will *move* from the future through the present to the past. Additionally, we cannot think about the past, present, and future (A-series) without giving them the order and direction (the irreversible arrow of time) that can only be represented in the B-series. In this way, the A-series appears dependent on the B-series. Yet McTaggart asserts that, at the same time, the A-series is more *fundamental* to time than the B-series because the latter cannot explain *how* change occurs; in other words, if *M* *always* precedes *N*, how can we move from one to the other? It is only in the A-series, our subjective, phenomenological *experience* of time as continuous duration, where change and movement from one event to the next are possible. Therefore, the B-series must also be dependent on the A-series, since there is simply no change without the A-series (McTaggart 1908:461). Since each category of time is dependent on the other, McTaggart concludes that time is fundamentally illogical and *unreal*.

### 10.3.2. Temporal Tensions in Anthropology

There has been extensive debate over the past century surrounding the legitimacy of McTaggart's provocative argument<sup>120</sup>, which does not need to be revisited here (see Dummett 1960, Ingthorsson 1998). Rather, I introduce these two different kinds of time because the 'A- vs. B-series' paradox is a useful way to frame our following discussions of temporality in archaeology, anthropology, and history. Although McTaggart's terminology is not universally adopted, it will become evident that many of the debates over time in cultural anthropology and archaeology boil down to differential emphasis between the A- and B- series.

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<sup>120</sup> Once called "the most fertile mistake in modern philosophy" (Bentley 2006:352).

As outlined above, the B-series concerns the sequential ordering of events and is therefore the basis of thinking about *chronological* time; this makes the B-series a central element of the historical sciences (e.g. history, paleontology, geology, historical sociology, archaeology, etc.). Whenever we place events on a timeline, develop artifact chronologies, formulate archaeological periods, or consider issues of historical causality, we are ‘working in’ the B-series time, because we are ultimately concerned with the *order* and *sequence* of past events and processes. As a historical science, archaeology has been traditionally concerned with properly reconstructing and interpreting those events along B-series temporal sequences.

However, less consideration has traditionally been given in archaeology to issues of *how* time passes; most archaeologists assume that time flows in a strictly Newtonian fashion; that is, completely independent of external factors. But as McTaggart demonstrates, the B-series cannot account for the movement of time we experience phenomenologically; it provides only static points ‘frozen in time’, as any artifact typology illustrates. A myopic focus on the B-series has left archaeology and other historical sciences open to accusations of ignoring how other cultures may perceive and experience time differently, thereby implicitly privileging modern Western conceptions of temporality and history (i.e. time as linear, uniform, evolutionary, etc.).

Many of these accusations have come from socio-cultural anthropology, which perhaps more than any other field has sought to expose the Eurocentric, modernist biases of historical, B-series time. Ethnographers have long been interested in investigating differential experiences of temporality across cultures, raising important questions such as: do all human societies understand the passage of time in the same way? Do all conceptualize the tenseness of time and the relationship among past, present, and future in an identical fashion? The answer from ethnographers has been a resounding ‘no’; for many years, anthropologists have insisted that

Western conceptions of temporality and history are neither natural nor universal (Malinowski 1922, Evans-Pritchard 1940, Lévi-Strauss 1963, Geertz 1973).

As a discipline traditionally focused on ‘emic’ topics, contemporary cultural anthropology continues to address issues of A-series time, or *chronotypes* (see Bird-David 2004, Herzfeld 1991, Goody 1991, Greenhouse 1996). One of the most comprehensive and practical approaches to the ‘cultural’ construction of time is contained in the work of Nancy Munn. Drawing on Bourdieu’s practice theory, she argues that cultural conceptions of time are (re)produced in social activities, arguing that temporal dimensions “are lived or apprehended concretely via the various meaningful connectivities among persons, objects, and space continually being made in and through the everyday world” (Munn 1992:116). Time is not a homogenous container in which all human action occurs; time itself is *created* through the human interaction with the world. This perspective is a powerful reproach to the standard atomized notions of ‘clock time’ that pervade the historical sciences.

#### *10.3.2.1. The Denial of Coevalness*

However in the 1980s, in what might be described as the beginning of a ‘historical turn’ in socio-cultural anthropology, some scholars argued the temporal ‘othering’ emphasized in early ethnographies had essentially functioned to take non-Western societies “out of time” (Sahlins 1981, Wolf 1982, Fabian 1983, Thomas 1989). These authors were critical of the synchronic approach to cultural systems in structuralist and functionalist anthropology, which ‘froze’ these societies in the ethnographic present and effectively robbed them of any historical dynamism. Anthropology was accused of implicitly or explicitly imagining non-Western cultures as static and ahistorical (akin to Lévi-Strauss’ ‘cold societies’) and assuming that social change only

occurred upon European colonial contact (Thomas 1989:11), what Bernard Cohn has called the “missionary in the row boat” model of change:

In this model, the missionary, the trader, the labor recruiter or the government official arrives with the bible, the mumu, tobacco, steel axes or other items of Western domination on an island whose society and culture are rocking along in the never never land of structural-functionalism, and with the onslaught of the new, the social structure, values and lifeways of the “happy” natives crumble. The anthropologist follows in the wake of the impacts caused by the Western agents of change, and then tries to recover what might have been. (Cohn 1980:199)

These critics basically argued that ethnographers effectively removed non-Western peoples from the narrative of global history by focusing *too much* on A-series (emic, phenomenological) time at the expense of B-series (historical, chronological) time; the result was that global history became *ipso facto* the sole provenience of the West. History needed to be re-injected into ethnographic accounts (see Chapter 9).

Cultural anthropology has struggled to find a way to reconcile the ‘emic’ aspects of the A-series with the ‘etic’ aspects of the B-series, of balancing cultural relativism with universal narratives of domination (see Gell 1992, Hodges 2008). Archaeologists must also deal with both these aspects of time; we must build local and regional chronologies in order to appropriately reconstruct past events and processes, but must also be sensitive to the notion that past societies probably had very different ways of conceptualizing temporality (Olivier 1999b). Indeed it is only by dealing with these two aspects of time *symmetrically* that we can appreciate the complexity of social and historical change; this perhaps puts archaeology in an advantageous position to draw on both socio-cultural and historical approaches. In the following discussion, I address archaeological concerns with A- and B-series time by identifying some persistent binaries that continue to frustrate interpretation. Building on discussions from the previous



chapter, I offer how a framework based on relational ontology and non-linear dynamics can help to transcend some of the problems of time faced by archaeologists.

#### **10.4. B-SERIES TIME IN ARCHAEOLOGY AND HISTORY**

For the historical sciences, one events are placed along a chronological axis, the next important step is to explain their relationship to one another; in other words, one must establish *historical causality*. Similar to the way that approaches to social action have traditionally oscillated along an agent/structure axis, historical change has also traditionally been accounted for in one of two ways: through a series of particularistic, idiosyncratic events (initiated by agents), or through larger historical/structural (environmental, economic, evolutionary) processes. In the former approach, the focus is on how particular individuals affected historical change through events, while in the latter, individuals are viewed as subordinate to larger temporal, structural processes<sup>121</sup>.

With few exceptions, historians have been fairly uniform in their privileging of the event or individual agent over any meta-historical process. Archaeology, as both a historical and social science, has long been divided between such *nomothetic* and *ideographic* explanations of historical change; one might even view the history of Anglo-American archaeological thought as an oscillation between the importance of processes (evolutionism, processualism) and individual agents (culture-history, post-processualism). Yet aside from being symptomatic of these broader

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<sup>121</sup> It is interesting to note that the relative emphasis we place on one approach or the other is also an indication of how *necessary* we believe individual events are to explaining historical change. Such a scalar view of historical causation can even lead to what Steve Fuller has termed the *paradox of counterfactual explanation*: “the more necessary an agent is shown to have been to some outcome, than the less necessary that outcome is shown to have been in general. In other words, if we lived in a world populated entirely by absolute agents, then power would reduce to pure accident—and had *anyone* done otherwise, *everything* would have been different” (Fuller 1994:745, emphasis in original).

shifting paradigms, the tension between processual and particularistic explanations reflects a deeper interpretive complication in archaeology: while our data is largely eventful in nature (cf. Lucas 2008, Beck et al 2007, Shennan 1993), the broad spans of time with which most archaeologists deal lend themselves more easily to processual explanations (Bailey 2007, Wandsnider 2004)<sup>122</sup>.

Despite these difficulties, archaeologists have made several admirable attempts at integrating event and process in their explanations of historical change, two of which I will examine here in greater depth: the adaptation of *Annales* history and the historical sociology of William Sewell. I then examine how a non-linear and polytemporal approach inspired by the relational social ontology sketched in the previous chapter can constructively build upon these approaches.

#### **10.4.1. *Annales* Archaeology and the Rhythms of History**

One of the best-known attempts to integrate the processual and eventful aspects of historical change has been the archaeological research inspired by a group of French historians known informally as the ‘*Annales* school’, named after their primary journal *Annales d'histoire économique et sociale*. These scholars sought to make history a more analytically rigorous social science by incorporating various qualitative datasets and eschewing the traditional political and diplomatic topics in favor of broader social and cultural ‘mentalities’. Although the *Annales* approach has always maintained a marginal position within the discipline of history, their attempt to integrate long-term structural changes in human societies with proximal historical events has proven fertile ground for archaeological reinterpretation (see Hodder 1987, Knapp 1992, Bintliff 1991, Bailey 2007, Holdaway and Wandsnider 2008).

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<sup>122</sup> This tension was also perhaps at the root of the famous Binford vs. Schiffer debate about the so-called “Pompeii premise” (see Binford 1981, Schiffer 1985).

Significant to the discussion here, Annales historians were particularly sensitive to the complexities of historical time. Ferdinand Braudel, one of the founders of this historical methodology, identified three temporal rhythms in history: short- (*événements*), intermediate- (*conjunctures*) and long- (*longue durée*) term processes (Braudel 1972). These three timescales correspond roughly to the history of events, structural/social history, and environmental time (Bintliff 1991). While admittedly artificial categories, Annales historians argued that these temporal divisions serve as a helpful heuristic device for recognizing that time and change are not necessarily uniform. This is an important insight because it recognizes that time does not necessarily flow in a linear, uniform way. It complicates the development of history, emphasizing that environmental, geographical, and social processes are as important to historical change as events or individuals.

However, the Annales approach has come under significant criticism from both historians and archaeologists. Some have pointed out that while Annales historians (particularly Braudel) pay lip service to the importance of the short and intermediate *durée*, their approach in practice too often privileges the structural over the eventful (Kinser 1981). They have also been criticized for not explaining the how the different temporal rhythms of history intersect. As Lucas (2008:59) notes: “historical entities are being posited which effectively exist on different ontological planes such that it becomes a problem of how to relate one plane to another.” The validity of artificially separating different historical temporalities has also been questioned by Jan Harding (2005:93):

What, then, is the point of imposing the analytical scales of time perspectivism without first assessing whether they may have actually existed as recognizable categories to the societies in question[?]... These schemes, therefore, detach temporality from the very social context in which event and structure acquire their specific meaning.

This final criticism is particularly germane to the discussion here because it highlights how the Annales approach to time is wholly dependent on the B-series, and (like many historians) pays little attention to how different societies perceive the flow of time. In other words, it gives little credence to A-series, 'emic' construction of time. Harding accuses the Annales perspective as being fundamentally "historical" rather than "temporal", and that its privileging of structure over events reduces the reproduction of any social system to "an exercise in predictive modeling" (Harding 2005:95).

Annales historians also are guilty of spatializing time, the problems of which are further explored below. The temporality of the 'longue durée' is so slow that it literally collapses into the spatial aspects of environment and climate (see Bentley 2006). Because of its emphasis on long durée structures, Annales history privileges stability over change, determinism over contingency, and reduces agency and the event to "crests of foam that the tides of history carry on their strong backs" (Braudel 1972:21). Although the Annales approach should be commended for introducing a polytemporal and multi-scalar approach to history, it ironically retains a linear conception of historical causality, where the 'big' processes of geological and environmental time swallow the medium and short durations; there is no recognition that small changes can have large impacts, as a nonlinear social ontology would suggest.

#### **10.4.2. Eventful Archaeology**

Another useful attempt to mediate between structure (process) and event can be found in the work of historical sociologist William Sewell (1996, 2005). Following the practice-oriented approaches of Giddens and Sahlins, Sewell seeks a way to integrate event and process in a dialectical fashion. He articulates a much more limited definition of events: those historical moments that "transform structures". In his view, events create unexpected ruptures in the

structural fabric of a society that “spiral into transformative historical events when a sequence of interrelated ruptures disarticulates the previous structural network, makes repair difficult, and makes a novel rearticulation possible” (Sewell 2005:228, cited in Beck et al. 2007:835).

Beck et al (2007) attempt to implement Sewell’s framework through a series of archaeological case studies. They argue that Sewell’s practice-inspired approach allows archaeologists to consider both structure and event through an analysis of material culture, and where possible, historical data. They present four case studies (medieval Iceland, Bronze Age Denmark, Formative Chiripa, and Mississippian Cahokia), in which they attempt to understand large-scale changes in the archaeological record through an ‘eventful’ analysis. Another recent edited volume (Bolender 2010) further explores the utility of Sewell’s eventful approach for archaeology. Sewell’s approach is arguably more sophisticated than the Annales School; his focus on events illustrates how small, local actions can cascade into larger transformative processes. Where the Annales effectively subsumed all change within the long *durée*, Sewell’s historical sociology is sensitive to the contribution of individual actors.

Perhaps because of Sewell’s intellectual indebtedness to Giddens’ concept of structuration, in the end he succeeds where Giddens’ succeeds (in finding a clever way to connect events to wider historical processes) but, like Giddens, ultimately fails to transcend the event and structure dualism. It is critical to recognize that Sewell’s ‘historical structures’ remain grounded in an essentially Durkheimian notion of *sui generis* society; that is, a society that exists *a priori*.<sup>123</sup> Sewell’s idea that structures exist relatively intact and homogeneous until ‘ruptured’ by some event also implicitly suggests that only *change*, and not *stability*, demands historical explication. Non-linear social ontology suggests that dynamism, change, and chaos are inherent in all human

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<sup>123</sup> The inherent limitations of this perspective have been extensively explored in Chapter 6.

groups and institutions, and paradoxically an integral to the maintenance and reproduction of the social order.

A number of additional analytical problems also arise for archaeologists: how do we analytically distinguish between events that reinforce structures, events that disarticulate structures, and events that do neither (Joyce 2007:849)? How do archaeologists determine the ‘thresholds’ that initiate these unexpected ruptures? What holds social structure together in the first place? By going back in the historical or archaeological records and identifying change as the result of transformative events, and stability as a lack thereof, seems to make some fundamental unwarranted assumptions about the nature of human institutions. Lucas (2008:62) also advocates an eventful archaeology, but one that is specifically developed “from a material point of view” rather than borrowed from history or sociology.

#### **10.4.3. Towards a Relational Temporal Ontology**

The ‘Annales’ and ‘Eventful’ archaeology are admirable attempts to rethink a singular and uniform conception of time in archaeology. They highlight the different temporal rhythms of historical and archaeological processes, and attempt to articulate the complex interaction among singular events and larger structures. However these attempts remain limited because they continue to maintain the ontological distinction between humans and nonhumans that has been addressed in Part Two of this dissertation. By introducing relational ontology and non-linear science, we might be able to further build on these theoretical frameworks.

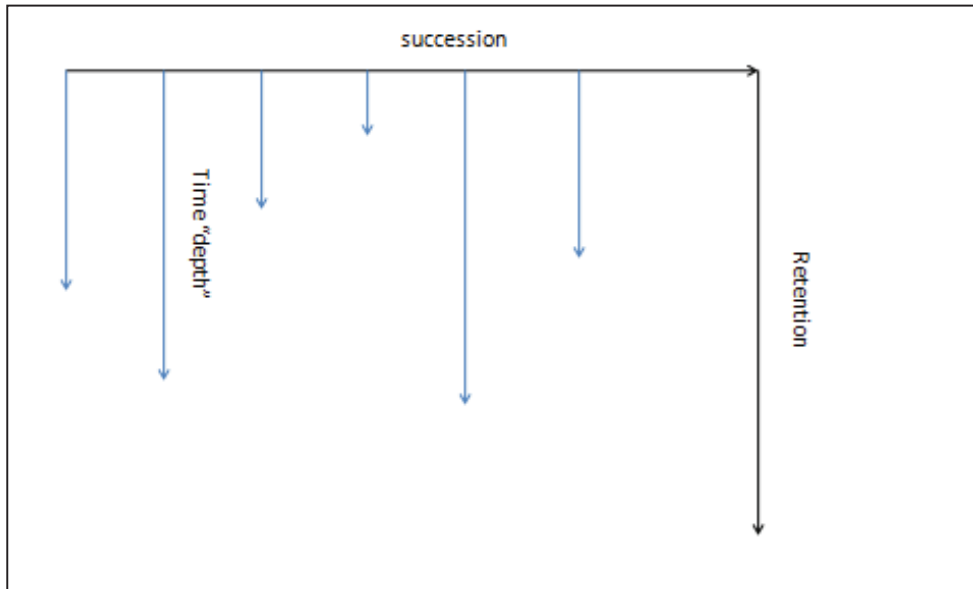
As with the problem of social action, the event/process dualism is difficult to resolve because of the scalar division. Therefore, just as we ‘flattened’ structure and agency onto a single ontological level by tracing the association of humans and nonhumans into a durable collective,

the same solution might work in this case. We cannot jump from the micro level of singular ‘events’ to historical ‘process’ without carefully tracing how these heterogeneous assemblages are made durable in time and space.

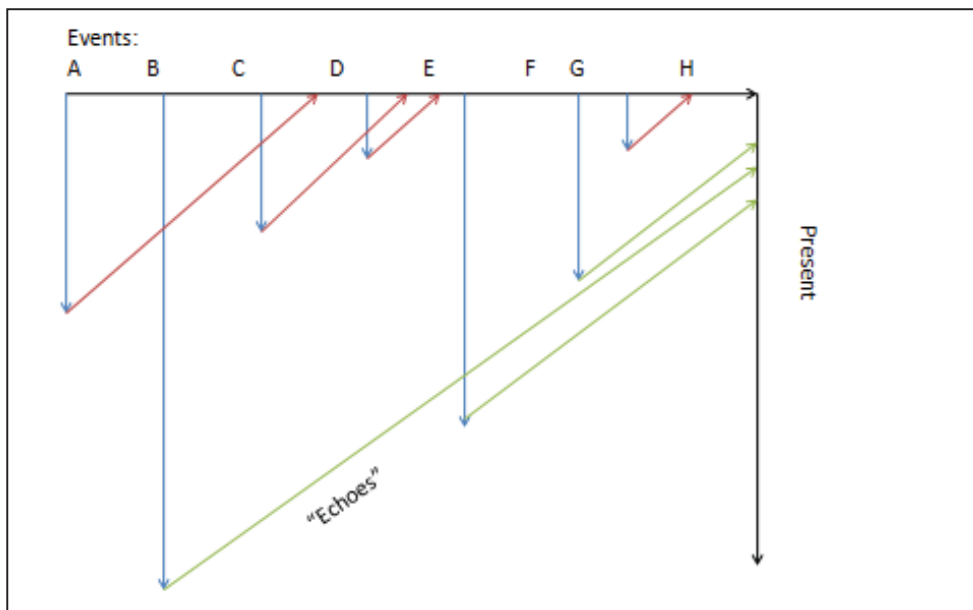
‘Events’ do have consequences, of course, and some are clearly more impactful than others, but to attempt to devise some kind of ‘threshold’ that an event must reach in order to transform structures seems capricious and unnecessary. Alternatively, we might suggest that events have greater transformative impact when they are made durable by alliances forged among human and nonhuman actors. It is these alliances that leave material traces which archaeology is well equipped to trace. Stripped of its reliance on the event/structure dichotomy, Sewell’s formulation of historical change retains its utility. How might we then conceptualize and examine the differential impact of events in time?

#### *10.4.3.1. Husserl’s Time Diagram*

There may be another way to transcend the notion of linear, uniform time without remaining dependent on the event/structure dualism. This is illustrated by Gavan Lucas’ (2005) adaptation of Edmund Husserl’s (1966) time diagram. Husserl, a phenomenologist and a major 20<sup>th</sup> century philosopher of time, recognized that representing time as a line or arrow is only one possible way of understanding its passage. As a more sophisticated alternative, he suggested that each moment of time has a *depth* as well as duration (Figure 10.2). Lucas has slightly reformulated Husserl’s diagram to demonstrate how past events differentially impact the present, through his notion of ‘echoes’ (Figure 10.3). However, I would argue that the diagram needs to be more complex.



**Figure 10.2**  
Based on Husserl's (1966) Time Diagram

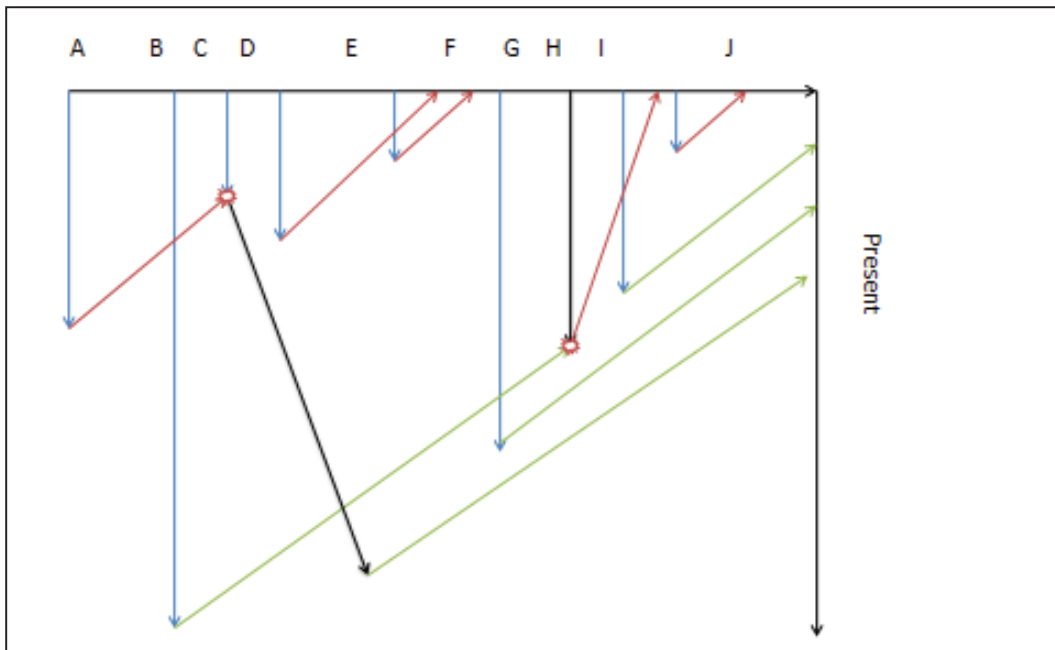


**Figure 10.3**  
Based on Lucas' (2005) Adaptation of Husserl's Time Diagram

When we identify any event A, we can conceive of this event having a duration (how long it took for the event to elapse) as well as a depth (the degree to which the actants in this event were able to affect change [their agency] in both space and time). From the perspective of relational



ontology, the extent of this ‘depth’ of this event would correlate with the ability of the actants involved to mobilize other actants (human or nonhuman), allowing their actions to become *more durable* in time and space. However, we must also acknowledge that there could be opposing forces that inhibit the durability of this event, when a fellow actant does not comply but rather resists. When we begin outlining these mobilizations and counter-mobilizations, we realize that Husserl’s time diagram – while an excellent template – is in practice too simplistic (Figure 10.4). The only way for ‘naked’ face-to-face social interactions to become more durable through time is with the mediation of nonhumans.



**Figure 10.5**  
**The Author's Own Version of the Time Diagram**

The focus of this perspective is not on whether a specific event ruptures some preexisting structure, but rather *how the actants in this event were able to assemble* (or not). Remembering that material-semiotic machines are multi-scalar (see Chapter 6), we can trace how they appear and disappear in the archaeological record. What this forces us to consider is when we examine

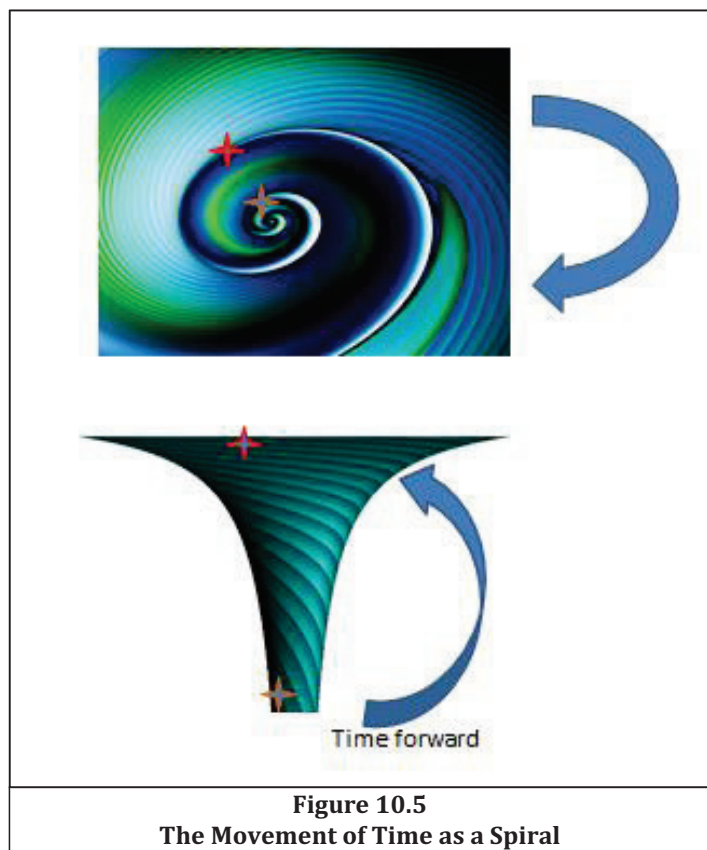
change or stability over time, we must consider the multifaceted ways that humans and nonhumans mutually interact.

As we can see in this diagram, time does not always move linearly, nor can it be said to be progressive, evolutionary, or teleological. What it does indicate, however, is that our world is always *polytemporal*. In the diagram, we notice that events B, C, and H continue into the present, while D, E, and G do not. It is of course not the *event* itself that endures, but its material remnants. Simply because event E is closer to us than event B in our linear understanding of time, it does not impact the present the way B does. This emphasizes how history does not unfold in such a linear evolutionary manner. As Michel Serres has noted: “Time doesn’t flow. It percolates” (Serres and Latour 1995:58). Things that appear distant when in view of our

chronological time may actual quite close in other respects; likewise, things that are quite near in our modernist scientific notion of time may be quite distant.

One might consider the example of a brand-new car as it rolls off the assembly line. We tend to think of this as very ‘new’, that is, recent in time. But in fact, it is “a disparate aggregate of scientific and technical solutions dating from different periods” (Latour

1993:45). Maybe the mp3 stereo-system is a very recent technological innovation, but the



**Figure 10.5**  
**The Movement of Time as a Spiral**

internal combustion engine was invented in the mid-19<sup>th</sup> century, the formula for steel in the chassis was known since Antiquity, and the wheel is a Neolithic technology. The same could even be said of our own genetic makeup: some of our genes are millions of years old, others mere thousands (Latour 1993:75). In this sense, we can think of objects as “the material presence of the past” (Domanska 2006), a concept to be further explored below.

What if, as Latour suggests, we think of time not as a straight line, but as a spiral? “We do have a future and a past, but the future takes the form of a circle expanding in all directions, and the past is not surpassed but revisited, repeated, surrounded, protected, recombined, reinterpreted and reshuffled” (Latour 1993:75). Here we have a better visual of how things might seem distant from one perspective, and near from another (Figure 10.5). Serres views time in this manner:

If you take a handkerchief and spread it out in order to iron it, you can see in it certain fixed distances and proximities... Then take the same handkerchief and crumple it, by putting it in your pocket. Two distant points are suddenly close, even superimposed. If, further, you tear it in certain places, two points that were close can become very distant... *People usually confuse time and the measurement of time*, which is a metrical reading on a straight line (Serres and Latour 1995:60-61, emphasis in original).

What Serres seems to be highlighting here is the problem with a linear spatialization of time. In the modernist notion of time is as a ‘fourth dimension’ of Cartesian space, things that occurred further in the past are understood to be more ‘distant’ to use in the present. This perspective also makes the more ‘distant’ past less relevant to the present. However Serres’ ‘topological’ view of time indicates that it is misleading to understand time in this way; as he puts it, it confuses ‘time’ with the ‘measurement of time’, or perhaps put another way, confusing the A- and B- series of time. This is an appropriate segue to the following section, which examines some of the issues with A-series time, particularly the spatialization of time and absolute rupture between past and present that Latour and Serres seem to be questioning.

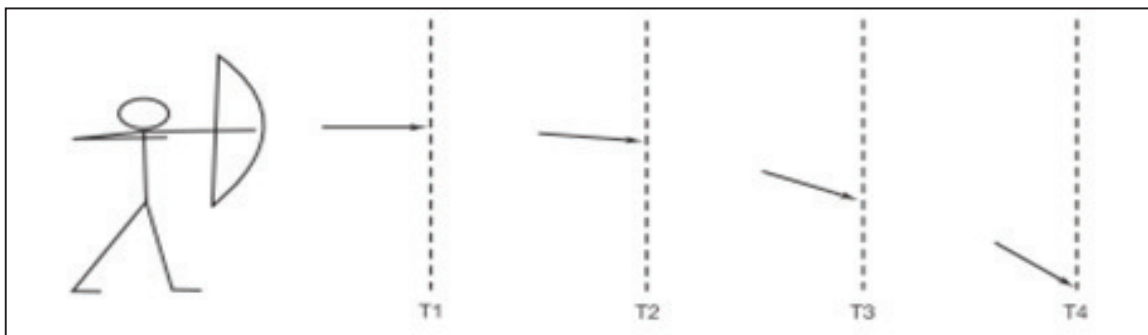
## **10.5. A-SERIES TIME IN ARCHAEOLOGY AND HISTORY**

If B-series time can be thought of as related to chronology and historical causality, A-series time is the subjective and phenomenological experience of temporality; it is concerned with the movement of time. This aspect of time has been of greater significance to cultural anthropologists and philosophers than those in the historical sciences, but as we shall see, it also has considerable implications for archaeology. As we explored how the dualism of B-series time (event/process) could be transcended with a polytemporal and non-linear approach, this section examines a similar binary associated with A-series time: the spatial conception of time as ‘dimension’ that cuts the past off from the present. Although not a ‘scalar’ dualism like agency/structure and event/process, a spatialized conception of time is even more deeply engrained into our everyday consciousness.

### **10.5.1. Zeno’s Arrow**

As outlined above, the A-series can be thought of as *tensed* time; that is, time is generally conceptualized as divided among a present that currently *is*, a past that *was*, and a future that *will be*. As McTaggart observed, it is distinct from, but dependent upon, the notion of sequential, ordered B-series time; the A-series provides a *direction* that B-series time otherwise lacks, but the former cannot be adequately conceptualized without the *order* inherent in the B-series. In the standard conception of modern Western temporality, tensed time is understood to ‘flow’ in a linear fashion from the future through the present and into the past, never to return (Hodges 2008).

The notion of time as an infinite series of passing ‘instants’ (or ‘slices of time’) has deep roots in the Western intellectual tradition; perhaps the first thinker to confront some of the paradoxes of spatialized time was the pre-Socratic Greek philosopher Zeno of Elea in the 5<sup>th</sup> century BC. Zeno provides a number of riddles that have perplexed philosophers for millennia; in one, he asks us to imagine an archer who shoots an arrow in a long arc across the sky (Figure 10.6). It seems clear that if we had the ability to capture a particular ‘moment’ in time, the arrow must occupy a particular fixed geometrical space where it appears motionless<sup>124</sup>. Here Zeno offers the paradox: if the arrow does not move at *each* of the infinite number of particular instants, than how does it move at *any* of these instants? For motion to occur, the arrow must either be moving to where it is, or to where it is not, but at every ‘instant’, the arrow appears to be at rest. A simple but unanswerable question: if at every instant the arrow occupies a particular place, when does the arrow actually move?



**Figure 10.6**  
**Zeno's Arrow (after Lucas 2005:20)**

One could also think of this as the ‘flip book’ model of time. Each page of a flip book displays an ‘instant’ in time, each slightly different than the previous. When you flip the pages quickly, you get the *illusion* of motion. Yet we recognize that this is an illusion; no motion is actually

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<sup>124</sup> Of course, today we have a technological advantage over Zeno in our ability to actually make such an observation with a high-speed camera!

occurring in the static pictures. This is precisely the problem with Zeno's paradox: if each page is still, how do we account for change from one page to the next without the *deus ex machina* of a 'flipper'?

Zeno's ancient paradox indicates that our 'commonsense' conceptions of time are deeply problematic. Furthermore, this conception of time seems to place the present and past at different ontological levels. If the 'present' is by its very definition that which is currently occurring, how does it *become* something else entirely (i.e. the past)? How can we resolve this paradoxical relationship among the past, present, and future? One might attempt collapse both the past and future into an 'eternal present' by arguing that only the present has metaphysical reality, while everything else is mere memory or anticipation. Inversely, one might deny the present any metaphysical existence by suggesting that it is only an illusion that occurs as the future continuously becomes the past. Yet each of these constructions is inadequate and only presents further analytical complications. I believe that there is a solution to these persistent paradoxes of time, but first the consequences of a spatialized time that severs the past from the present need to be addressed.

### **10.5.2. Spatialized Time**

It seems clear that conceptualizing time as a series of instants is to make it analogous, if not wholly equivalent, to space. This *spatialization* of time—which is at the roots of the paradoxes presented by both McTaggart and Zeno—has been a primary metaphor for understanding time in the West for thousands of years. Philosopher Milič Čapek (1976:26) has asserted: "From Zeno to Russell and some contemporary misinterpretations of relativity, the fallacy of the 'spatialization of time' is one of the most persistent features of our intellectual tradition." As outlined above the dual forces of capitalism and colonialism brought this conflation of time and space to a new level

(Nguyen 1992), but there is debate over thinking time as space is a universal human attribute perhaps attributable to the way we are cognitively hard-wired. This spatialization of time may stem from the fact that we *experience* time but have no way of *representing* it. Although some linguists and cognitive scientists have argued for the universality of perceiving time in a spatial manner (termed ‘lexical space-time mapping’), others have argued that foraging groups perceive time in a fundamentally non-spatial way (see Sinha et al. 2011).

Regardless of its universality, it is evident that both philosophical and ‘commonsensical’ understandings of time in the West are fundamentally spatial: that we move or ‘flow’ through time in a similar way that we move through three-dimensional space. Space and time are simply different dimensions of the homogeneous and unbounded medium in which the universe exists; just as we are aware of the ‘side-by-sideness’ of things in space, we are also aware of temporal succession, or the ‘side-by-sideness’ of things in time (Gunn 1920).

Western science has also been strongly influenced by a spatialized understanding of time.

Newton proposed an absolute (linear, uniform) mathematical time that flows uniformly and is wholly independent of anything external; he viewed both time and space as empty, homogeneous containers in which all the actions of the universe occurred. Although Albert Einstein rejected absolute Newtonian time in his theories of General and Special Relativity, he largely retained the ‘time as an infinite series of instants’ perspective. In fact, many have argued that the Theory of Special Relativity further aligned the concepts of space and time by mathematically deducing the existence of a *single entity* called ‘space-time’ (Robbins 2010).

However, the notion of a four dimensional space-time was not first proposed by Einstein, but rather his colleague Hermann Minkowski, who saw it as a logical extension of Special Relativity.

As Einstein noted: “Time and space are fused into one and the same continuum, but this *continuum* is not isotropic. The element of spatial distance and the element of duration remain distinct in nature” (cited in Craig 2000:161). Therefore Einstein’s Special Relativity “does not teach that time is a dimension of space; but under Minkowski’s formulation one dimension is temporal only because it has already been decided in advance that Minkowski 4-space is to be taken as a representation of spacetime” (Craig 2000:162).

Yet this subtle distinction was lost on many later thinkers, who argued that physics had proven the ‘reality’ of a single four dimensional space-time as the basis of the universe. A notable opponent of this perspective was French mathematician and philosopher Henri Bergson; although Bergson accepted the mathematical validity of the Special Relativity equations, he rejected the conflation of ‘mathematical time’ with ‘lived time’. Bergson and Einstein engaged in a series of debates over the implications that Special Relativity had for understanding the nature of time. Bergson is generally thought to have been defeated, and is often accused of misunderstanding relativity theory (Canales 2005:1168). Although Einsteinian space-time continues to be paradigmatic in contemporary physics, some have reengaged with a Bergsonian understanding of a non-spatialized time as *duration*, to which we will return (Lynds 2003, Olma 2007).

### **10.5.3. The Politics of Time**

I argue here that a logical extension of the quantification and spatialization of time is an absolute ontological separation of past from present. When we make time analogous to space, the present is equated with ‘here’, the realm in which human agency operates, while the past is ‘there’, a series of past presents that are necessarily closed and already determined. Although a spatialized understanding of time can perhaps be traced to the Ancient Greeks, and was accelerated by the



forces of modernity, historian Constantin Fasolt (2004) argues that the ontological division between the present and past actually has a more recent genealogy, which is steeped in politics as much as philosophy.

It seems a truism that both modern history and archaeology are premised upon an ontological division between the past and present, as they are the study of things that *exist* in the present (texts, artifacts, etc.) but yet provide *information* about the past (cf. Binford 1983:19). It is often remarked that before the emergence of a modernist historical perspective, stone axes were perceived as supernatural ‘lightning stones’ and Neolithic megaliths were thought to be constructed by giants (Liebers 1986, but see Godden 2008 for a critique). It was only in the modern period that such a perception of time emerged “when people recognize that the remains of the past are different and unusual and that this distinctive strangeness is proof of their age” (Olivier 2004:206). Yet how did this come about?

In his provocative book *The Limits of History* (2004), Fasolt links the separation of the past from the present to the formation of ‘History’ as the only legitimate means of understanding the past in the West. He offers that our modern ‘academic’ understanding of the past is guided by three principles (based on Fasolt 2004:ix, but slightly amended here to include archaeology):

1. The past is gone forever;
2. To properly interpret evidence about the past (whether textual or archaeological) you must first put it in its appropriate time and place;
3. You cannot tell where you are going unless you know from where you came.

Although to the contemporary archaeologist these propositions appear obvious and beyond critique, Fasolt argues that they are the result of a 17<sup>th</sup> century ‘historical revolt’ that was motivated as much by a political struggle against medieval universalism as dispassionate intellectual curiosity. He notes that during the medieval and early modern periods of Europe, the

two most important figures of authority in the West were the Holy Roman Emperor and Roman Pope. In order to establish their political and social power over all Christendom, these two figures claimed not only universality in space, but in *time* as well:

Both the emperor and the pope insisted that they were in communion with eternity, and both sought to embody the past as though it had endured over the centuries without change. They founded their authority on a deliberate anachronism that only a modern point of view can construe as an error in historical methodology (Fasolt 2004:17).

Although medieval and early modern Europeans were surely aware of their temporal ‘distance’ from Antiquity, the power of the Emperor and Pope ultimately stemmed from an emphasis on the *continuity* between past and present. They established their legitimacy in the present by drawing on the authority of texts from an ancient, foreign civilization (i.e. classical Rome). As a challenge to this authority, humanist scholars forged a new, completely different means of understanding the past. In creating the idea of ‘history’ as an object of intellectual study, they fashioned an insurmountable *division* between past and present, thereby undermining the ahistorical framework of imperial and papal power:

By exploding the temporal unity of the period from ancient times to the present, the humanists changed truths that had enjoyed apparently unshakable permanence into mere antiquities. They transformed things that seemed self-evidently true into things of the past that were henceforth impossible to know without special effort. They demoted the universal power of pope and emperor from present experience to an aspect of history that had to be judged by means of evidence (Fasolt 2004:20).

In other words, the creation of history as an intellectual enterprise was a *thoroughly political act*, a prime example of Foucault’s power/knowledge: “the deployment of force and the establishment of truth” (Foucault 1979:184). As ‘natural’ as the division between past and present appears today, it unquestionably supports the very notions of freedom and autonomy on which modern politics have been built. As Fasolt (2004:7) notes: “Sovereignty and citizenship

require freedom from the past as least as much as freedom from contemporary powers.” In other words, it was only through the construction of a historical consciousness that the past and present became permanently separated.

This separation of the past from the present has had significant consequences for Western thought. When we view time in a linear, progressive fashion, the present as an ontological category is privileged over the past, which is dead and gone. Australian sociologist Barry Hindess argues that by disconnecting the past from the present, Western social thought has “come to treat belonging to the past as a kind of moral and intellectual failure” (Hindess 2007:328). This helps to explain why European colonial thought relegated indigenous groups not only to lower stages of historical development, but literally to the past itself. It was during the 16<sup>th</sup> and 17<sup>th</sup> centuries that European superiority was often put in terms of a temporal idiom (Hindess 2007:333). It also illustrates one of the fundamental ironies of the modern conception of time: while the historical revolt seemed to disconnect the past from the present, defining the past as that which is no longer, Europeans, through the colonial encounter, began to view non-Western people as vestiges of this very past that was supposedly gone forever. I discussed the conflation of time and space in relation to European colonial anthropology further in Chapter 9, so here I address specifically the problems of a spatialized time for archaeological analysis.

#### **10.5.4. Spatialized Time and the Past/Present Divide**

The spatial understanding of time and the separation of the past from the present are two of the foundational principles upon which archaeological interpretation is based. Yet this problematic conception of time has not gone unnoticed by archaeologists (Bailey 1983:170, Gardner 2001). Shanks and Tilley first outlined this problem in their post-processual manifesto *Re-Constructing*

*Archaeology* (1987). Although they offer more critiques than solutions, their formulation of this problem is worth quoting at length:

The traces of the past which we find in the present ‘belong’ to time other than the present. The problem is how to relate to this otherness. The traces belong to a time in the distance which we cannot see clearly. In this way time is conceived spatially, as distance. *Spatial time is at the centre of the problematic past...*

The past is conceived as completed. It is in grammatical terms ‘perfect’, a present state resulting from an action or event in the past which is over and done. This ‘perfected’ past is opposed to the flow of the ongoing, incompleting, ‘imperfect’ present. Although the past is completed and gone, it is nevertheless physically present with us in its material traces. But the attribution of the traces to a ‘perfect’ past, distant from the present, brings ambiguity, the problem (1987:9, emphasis mine).

This highlights some of the same issues raised by Fasolt. When historians or archaeologists identify their evidence for understanding the past, they must place it somewhere in time and space. In order to tell us something about a past that is completed and otherwise inaccessible, this evidence has to *belong* to that time; we can only properly *understand* that object by placing it in its proper spatial and temporal context. However, considering our discussion of the polytemporal nature of both humans and nonhumans, how can one find a single ‘appropriate’ time for any object? What happens when objects resist such simple chronological emplacement? French archaeologist Laurent Olivier terms this the *paradox of the archaeological remains*:

The archaeological remains come from the past, but they belong to the present: they bring back from the ancient past material evidence of vanished temporalities, but they are mute...whereas the past has not ceased to be—as physical evidence of past temporalities—it has ceased to exist as a human or cultural creation (Olivier 1999a:534).

Spanish archaeologist Alfredo González-Ruibal (2006) highlights the problems of the dichotomy between past and present in a critique of ethnographic analogy in archaeology. Just as Fabian (1983) has argued that ethnographers temporally displace their subjects in order to maintain an objective distance, González-Ruibal asserts that ethno-archaeologists elicit a construction of ‘the

Other' twice over: in both the present and past. How are ethno-archaeologists supposed to determine what objects are 'of the past' or 'of the present' in order to make analogies to prehistoric European societies "without breaking the essential conflation of times and things that is characteristic of any human society" (González-Ruibal 2006:112)? The object world, as noted by Latour and Serres above, is polytemporal; one might find in modern African villages technologies that are thousands, hundreds, or just a few years old. This seems to disturb the normal archaeological impulse to identify the 'proper' time and place for artifacts.

González-Ruibal provides an illustrative example of a small village of swidden farmers in western Ethiopia, when he was surprised to find farmers using a wooden plough next to the decaying remnants of advanced agricultural machinery brought in by the former communist regime under the impetus of modernization; he observes that the advanced machinery, which is surely more 'recent' in a linear sense and technologically 'superior' has been paradoxically rendered 'archaic'. This upends some of the commonsense assumptions of ethno-archaeology, that "among non-capitalist groups the present is primitive; things have always been this way; the modern comes after the premodern" (González-Ruibal 2006:115).

#### **10.5.5. Periodization**

This final example highlights another consequence of a linear, uniform and spatialized past: the act of periodization, the division of the past into discrete, successive blocks of time. Although the inherently political and problematic nature of periodization has been extensively addressed in history, literary studies, and philosophy, it has not garnered much attention yet in archaeology. Yet we make and use such divisions all the time, whether along axes of technological development (Stone, Bronze, Iron Ages), culture-historical phases (pre-Classic, Classic Maya) or even arbitrary decimal numeral systems (decades, centuries, millennia). Although these

categories are of course necessary for making the past comprehensible and are generally recognized to be (at least in part) ‘etic’ constructions, they also have significant consequences of the way we think about the past.

Periodizations are in a sense the temporal equivalent to synchronous ‘cultures’, and therefore are burdened with many of the same limitations. They tend to emphasize discontinuity between periods and homogeneity within periods (see Besserman 1996). As Timothy Reiss (2001:429) argues, such periods “overcome—or at least blur—complex problems of historical change and continuity and the struggling array of events, experiences, and worldviews that actually characterize human life.” They also gloss over the polytemporal nature of reality; they force us to think about a particular period in isolation, separated from adjacent periods. They also encourage linear, even teleological and progressive thinking; the mistaken evolutionary idea that history moves ever upwards.

#### **10.5.6. Summary**

To summarize, there are both analytical problems with conceptualizing time as space, as well as political and ethical consequences for this understanding of the relationship of past and present. In order to overcome these difficulties, we need to consider a temporal framework that is not only polytemporal (as examined above), but also fundamentally *non-spatial*. Once again, we turn to relational/process ontology for a potential solution. Here I draw on the non-spatialized concept of time as articulated by two French process philosophers, Henri Bergson and Gilles Deleuze.

### 10.5.7. A Non-Spatial Time

#### 10.5.7.1. Bergson: Lived Time as Duration

Henri Bergson was a major philosophical figure in the late 19<sup>th</sup> and early 20<sup>th</sup> century Europe. World renowned for his work in mathematics, literature, and philosophy, Bergson exerted unequalled influence on 20<sup>th</sup> century French philosophy. One of the central goals of Bergson's philosophical endeavor was to *disentangle* the concepts of time and space; therefore his approach will be critical for articulating a non-spatialized notion of time. As noted above, Bergson sharply criticized Einstein's conception of relational time, which fused space and time into a single universal fabric. While he acknowledged that a spatial time could be useful for mathematics and physics, Bergson insisted that it did not fully capture the way in which humans experience time. For Bergson, the clock was as much a concept of thought as an instrument of measurement (Scott 2006:188). He always made a distinction between 'lived time' and 'mathematical time', echoing distinction between 'time' and the 'measurement of time' noted above.

How is it possible to articulate a non-spatialized understanding of time, when it seems so entrenched in the Western (or perhaps even human) mentality? In order to understand Bergson's non-spatial formulation of time, one must first recognize the important distinction he draws between *quantitative* and *qualitative* multiplicities (Bergson 1910:122), which he adapted from the German physicist and mathematician Bernhard Riemann. Bergson argues that quantitative multiplicities are spatial, homogeneous, and numerical. An example would be thirty jellybeans in a candy dish; these jellybeans are similar to one another (homogeneous), yet also spatially discrete, and can therefore be counted (numerical). The quantity of jellybeans can even be represented with a symbol: "30". We could even hypothesize many different multiplicities of

these jellybeans: 30, 300, 3000, etc. and recognize that the difference among these quantitative multiplicities is clearly one of *degree* rather than *kind*.

Qualitative multiplicities, on the other hand, are neither spatial nor homogeneous, but rather temporal (progressive) and heterogeneous; they are continuous rather than discrete, and their difference is one of kind rather than degree. Although qualitative multiplicities are not as easy to visualize, Bergson provides the example of musical notes that ‘melt’ into one another:

Might it not be said that, even if these notes succeed one another, yet we perceive them in one another, and that their totality may be compared to a living being whose parts, although distinct, permeate one another just because they are so closely connected? The proof is that, if we interrupt the rhythm by dwelling longer than is right on one note of a tune, it is not its exaggerated length, as length, which will warn us of our mistake, but the qualitative change thereby caused in the whole of the musical phrase. We can thus conceive of succession without distinction, and think of it as a mutual penetration, an interconnection and organization of elements, each one of which represents the whole, and cannot be distinguished or isolated from it except by abstract thought (Bergson 1910:101).

It is this concept of qualitative multiplicity that forms Bergson’s non-chronological understanding of time as *la durée*<sup>125</sup> (duration). Tim Ingold presents a similar musical metaphor to distinguish quantitative and qualitative time, which he terms *metronomic* and *rhythmic* time respectively. While the former “inscribes an artificial division into equal segments upon an otherwise undifferentiated movement”, the latter “is intrinsic to the movement itself” (Ingold 1993:160).

Spatialized time, with its emphasis on a series of instants (quantitative) that can be counted along a number line, is problematic for Bergson because it constitutes a *quantitative* multiplicity.

Zeno’s mistake in his arrow paradox outlined above was that he focused on the *spatial distance*

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<sup>125</sup> It should be noted that when Braudel borrowed Bergson’s concept of “durée” for his historical approach, he betrayed its very essence by converting the temporal back to the spatial (see Bentley 2006:353).



traversed by the arrow rather than the *movement* of the arrow itself. Because time is a qualitative multiplicity, you cannot divide it *ad infinitum* into a series of successive instants.

How could the movement be applied upon the space it traverses? How can something moving coincide with something immobile? How could the moving object be in a point of its trajectory passage? It passes through, or in other terms, it could be there. It would be there if it stopped; but if it should stop there, it would no longer be the same movement we were dealing with. It is always by a single bound that a passage is completed. (Bergson 1946:143)

True 'lived time' is neither divisible nor measurable; it is heterogeneous and continuous. When it divides, it changes qualitatively; "measurement requires repeatable qualitatively invariant intervals to serve as a standard" (Turetzky 1998:198). It would be mistaken to consider Bergson's *durée* as only an A-series idea. Although Bergson was influential on later phenomenologists, he still adheres to empiricism. Bergson would argue that the A- and B-series are artifacts of analysis, and not indicative of an illogical time.

#### *10.5.7.2. Deleuze's Three Syntheses of Time*

A later French philosopher, Gilles Deleuze, further developed Bergson's understanding of time. It is important to note that both Bergson and Deleuze are relational thinkers; they reject the substantivist ontology that dominates Western philosophy for the ontology of process, movement, and relationality that is at the foundation of a 'monstrous' archaeology (see Chapter 6). This allows them to avoid the trap of time as consecutive instants, as space or movement, and focus on time as internal. If time has a movement, it is one of *flux* rather than flow (Hodges 2008).

Although Deleuze is heavily indebted to Bergson's thought on time, he develops it more thoroughly in this monumental work *Difference and Repetition* (1994 [1968]). Here Deleuze outlines three 'syntheses' of time that transcend both the spatialized conception of time and also

the ontological separation of the past from present. Although his framework is complex, I will attempt to explain it here with as much clarity as possible<sup>126</sup>.

The first synthesis concerns the present. In it, Deleuze recognizes the problems with viewing time as a series of successive instants, as outlined above. He argues that such a system: “does not constitute time any more than it causes it to disappear; it indicates only its constantly aborted moment of birth” (1994:97). He argues instead that both the past and future must be seen as *dimensions* of the living present, which connects these elements (Turetzky 1998:212). It is within this present that life is constituted through need, habit, and contemplation. As Ansell Pearson (1999:101) notes: “It is only the need of the present which can impart signs to the past and future as signs in need of interpretation and action”. However Deleuze is careful not to deny the *existence* of the past and future, thereby falling into the illusion of a perpetual present. He argues that the present is not coextensive with time itself, invoking a concept of the present that includes features that one would normally attribute to the past and future (Lampert 2006:27), as is examined in greater detail below.

The second synthesis concerns the past, and is simultaneously the most famous and most complicated component of Deleuzian time, perhaps because it is so counterintuitive. The first synthesis demonstrated the importance of the present as the time in which action occurs. Yet we have already seen the logical impossibility for the present to *become* the past. As Al-Saji notes: “the present has no *internal* reason for passing” (2004:209, emphasis in original). Therefore the living present from the first synthesis cannot be coextensive with time itself; there has to be another dimension of time in which the present occurs. Deleuze calls this the ‘pure’ or ‘*a priori*’

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<sup>126</sup> As we will see, our very language is immersed in these temporal conceptions, which often makes the discussion of time quite confusing, as it becomes increasingly difficult to articulate an alternative conception of time within our own linguistic limitations.

past. Not surprisingly, Deleuze finds it most useful to describe these concepts through a series of paradoxes. Since the past cannot be just a former present, Deleuze argues:

The past would never be constituted if it did not coexist with the present whose past it is. *The past and the present do not denote two successive moments, but two elements which coexist*: One is present which does not cease to pass, and the other is the past, which does not cease to be but through which all presents pass (Deleuze 1988:58-59, emphasis mine).

In this formulation, the past is contemporary and coexistent with the present. Although Deleuze uses the term ‘past’, it is not synonymous with the ‘datable’ past associated with spatialized conceptions of time. Deleuze’s past is *not* a former present, but rather “a general region in which particular presents preserve themselves so that it is possible to focus on and represent them in the present present” (Turetzky 1998:214). For Deleuze, this is not a specific past, but “the whole, integral past; it is *all* our past which coexists with each present” (Deleuze 1988:59, emphasis in original). This past must therefore actually *pre-exist* the passing present. “The past does not follow the present, but on the contrary, is presupposed by it as the pure condition without which it would not pass. In other words, each present goes back to itself as past” (ibid:59).

This *a priori* past, as Turetzky notes (1998:215): “is the synthesis of the whole of time rather than part of a series of times; it is the whole of time in itself, outside the living present, the whole of the past coexisting with each present.” The *a priori* past is not actually dependent on the present for its existence, but “preserves itself in itself” (Deleuze 1988:59). Although I admit this is quite confusing at first, such a framework is necessary for Deleuzean time because it serves to explain the apparent movement of time: the present can ‘become’ the past precisely because *it is always/already the past*.

So while the first synthesis addressed the present and the second addressed the past (or at least Deleuze’s unique understanding of those terms), the third synthesis addresses the future. Deleuze

describes a 'crystal of time' with the past and present, material and idea, and actual and virtual on forming two distinct sides. Since the present must contain both the (actual) living present as well as the (virtual) pure past, time must split into each of these dimensions. "Time splits into two heterogeneous dissymmetrical emissions, one toward the future, making the present pass, and another towards the past, coexisting wholly with the present it was" (Turetzky 1998:217).

## **10.6. ARCHAEOLOGICAL IMPLICATIONS AND CONCLUSIONS**

To briefly review, we might categorize the above approaches to time into three basic types. The first is what is generally termed 'standard' or 'modern' time. This perspective views time as quantifiable, homogeneous, and uniform; time (like space) is nothing more than an empty container in which all action occurs. It is 'pure' B-series time, where every event has a particular location and duration that can be placed on a linear, chronological axis. This perspective without question still dominates Western conceptions of temporality, and has served as the (often implicit) basis for conceptualizing time in traditional archaeological interpretation. While such a conception of time has certainly served archaeology well, its limitations have been carefully detailed above.

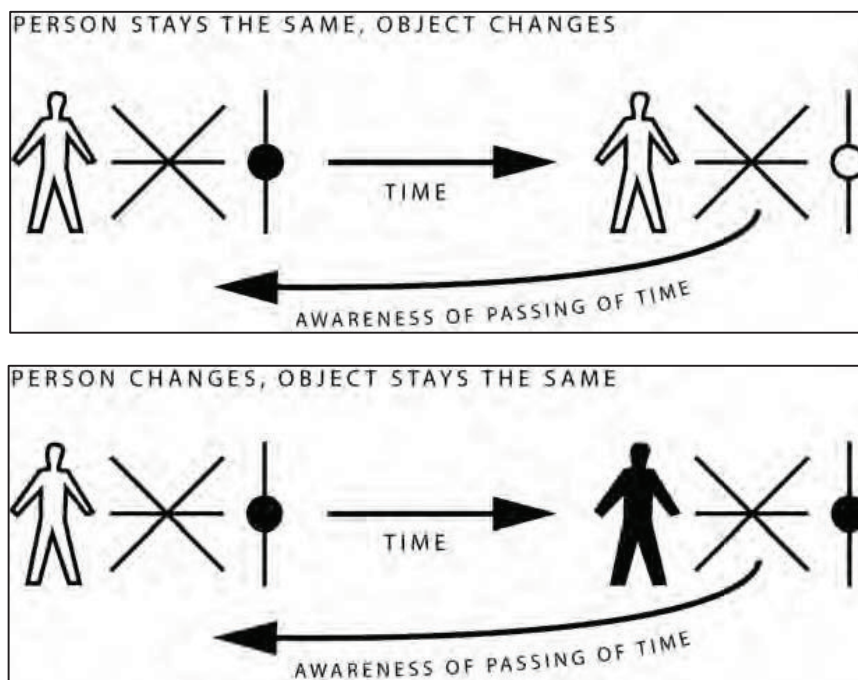
The second category is 'emic' time; the phenomenological passing of time psychologically experienced by all people. This purely subjective, A-series approach to time was first articulated by phenomenological philosophers such as Husserl (1966) and Merleau-Ponty (1962), but became an important component to the 'culturalist' approach to time adopted by early ethnographers, who argued that the Western approach to time noted above was only one of many different experiences of temporality. This second category was important for highlighting the culturally-specific, if not ethnocentric character of 'modern' time, but also runs in to some

analytical problems endemic to the ‘culture concept’; for example: from where does each culture’s conception of time derive, and how can one account for change? Can individuals think beyond their culturally-specific notions of time, or are they forced to reproduce it? In order to address these concerns, some anthropologists have turned to practice theory. For example, Nancy Munn (1992) argues that time as a symbolic process continually reproduced in everyday practices.

This notion of time as reproduced in everyday practices is an important step toward the third concept of time, which is neither wholly premised upon McTaggart’s A- or B-series. Based on the discussion in Part Two of this dissertation, it is critical to remember that such daily routines involve a collection of heterogeneous forces: human and nonhuman alike. Time is therefore neither a wholly external, independent variable, nor is it entirely subsumed within human consciousness (whether individual or social). Time is rather generated through the dynamic interactions of humans *with* the world, what I have previously termed ‘embodied practice’, and is therefore simultaneously material *and* ideational/ symbolic; time is a hybrid, a ‘monster’. And since the relationships among these heterogeneous forces are nonlinear and chaotic, so will time itself necessarily be multiple, polytemporal, and ‘percolating’. As emphasized by Bergson and Deleuze, it is also creative, inherently erupting in novelty. Since time is not spatial, the past is never ‘gone away’, but is constantly folded back on the present. Archaeologists make a fundamental mistake when we try to think about “the past when it was present”; rather, the current state of the present—as it is physically—basically consists of a palimpsest of all the durations of the past that have been recorded in matter (Olivier 1999a).

While this third understanding of time is perhaps at first difficult to digest, it should not be all that surprising for archaeologists, who concern themselves with those paradoxical traces of the

past that continue to exist in the present (Olivier 1999a, 2008). Archaeologists have long recognized that landscapes are palimpsests of the past, on which each generation contributes something of its own while wiping out some of the traces of earlier generations (cf. Aston and Rowley 1974). Present landscapes are simply palimpsests of all the durations of the past that have been recorded in matter (Olivier 1999a:532). As Barbara Bender (2002:S103) has observed: “*landscape is time materializing.*” Archaeologists are therefore in a key position to explore the relationship of time to material culture and embodied practice. As Andrew Jones (2007:47) further remarks: “one way in which time is stabilised and measured is through the use of material culture.”



**Figure 10.7**

**Two means by which humans interpret the temporal persistence of nonhumans (after Jones 2007:59).**

Time is, in a sense, a product of the co-creation of humans and things through embodied practice. We can perceive material culture to be the same as humans change, or humans to stay the same as material culture changes (Figure 10.7). Material culture serves as materialized social

memory, whether through written histories, monuments, or individual artifacts; as explored in Chapter 2, Late Antique communities in the eastern Alps appear to have purposefully worn ‘antiquated’ jewelry and dress ornamentation in order to maintain their cultural link with the Roman past.

## CHAPTER 11

### GENERAL CONCLUSIONS AND INTERPRETATIONS

#### 11.1. INTRODUCTION

This dissertation has investigated a variety of intersecting topics along the broad thematic axes of time, identity, and technology, specifically within the historical and archaeological context of the transition from Late Antiquity to the Early Middle Ages in the greater eastern Alpine region.

Theoretical frameworks and methodologies have been drawn from variety of disciplinary approaches – in particular, archaeology, history, and anthropology. Yet, as with any dissertation project, while some questions were answered, many others remained unresolved. This final chapter therefore serves as a brief summary of the overall conclusions and interpretations of the previous sections (following the same basic framework as the introductory chapter) and considers some prospects for future research.

#### 11.2. CONTINUITY AND CHANGE IN THE EASTERN ALPS

The first section of the dissertation dealt with questions of change and continuity in the aforementioned project region during the centuries between the collapse of the Western Roman Empire and the expansion of the 8<sup>th</sup> century Frankish Empire under Charlemagne. As explored in Chapter 2, the historical and archaeological evidence paint a complex picture, characterized by political instability, extensive intercultural contact, and shifting social identities – perhaps what one might expect from a post-imperial milieu. Recent archaeological evidence has forced us to rethink the nature of some of the most significant processes that occurred during this socio-political transition, including (1) shifts in settlement pattern, (2) contact between Romanized



populations and immigrating Slavic-speaking communities, (3) the continued maintenance of a 'Roman' identity, and (4) intersections of Christianization and paganism. Chapter 2 addresses each of these issues.

It was once assumed that by the early 5<sup>th</sup> century AD, the 'Romanized' populations in the southeastern Alps had completely fled from the lowland towns and villas towards the Italian peninsula or up into the rugged Alpine highlands. While such demographic movements certainly did occur, recent excavations in this region (Črnomelj, Mengeš, and Kranj) have revealed that not only did Romanized populations continue to inhabit lowland areas along major waterways, but that their contact with immigrating 'Slavic' and 'Avar' groups was more extensive than previously considered. It is increasingly clear that interactions between 'indigenous' Romanized groups and these immigrants from the east was frequently nonviolent, as well as occasionally hostile<sup>127</sup>.

Another surprising revelation has been growing evidence for the continued persistence of a 'Roman' identity among the indigenous Late Antique southeastern Alpine communities. Several recent excavations in this region have demonstrated the continued use of Provincial period dress ornamentation into the 6<sup>th</sup> and 7<sup>th</sup> centuries – several hundred years after they went out of style<sup>128</sup>. The case of Črnomelj is particularly compelling: while the craftsmen at this settlement were still connected the Mediterranean trade routes (and therefore must have been aware of contemporary Late Antique stylistic trends), archaeological evidence indicates that they continued to make arm rings, fibulae, and pins that were typical of the 4<sup>th</sup> and 5<sup>th</sup> centuries! I would argue that this constitutes compelling evidence of an attempt to emphasize a traditional

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<sup>127</sup> See section 2.6.2.2

<sup>128</sup> See section 2.5.2.2

Roman identity, perhaps even revealing a kind of ‘social nostalgia’ for previous periods characterized by imperial authority and prosperity.

Recent excavations have also continued to undermine a simple, linear transition from paganism to Christianity during the Late Roman and Late Antique period. Although paganism was outlawed in the Empire during the late 4<sup>th</sup> century, evidence for continued use of pagan temples and sanctuaries appears at least until the end of the 5<sup>th</sup> century. In fact, at the site of Tinje in eastern Slovenia, the remains of a pagan sacrificial stone altar with burnt animal bones were discovered in close proximity to contemporaneous burials containing Christian iconography<sup>129</sup>. Is this evidence for a peaceful coexistence of pagan and Christian believers, or even perhaps some syncretic mixture of these two belief systems? The possibilities are intriguing, and merit further investigation.

In summary, Chapter 2 outlines how recent archaeological excavations in the southeastern Alps and northern Adriatic have begun to shatter disciplinary orthodoxy concerning the fundamental nature of this enigmatic period. They continue to paint an increasingly complex and fascinating picture of local social dynamics in the post-Roman world, which is not generally well represented in the historical narrative. The orderly and linear transition between Roman and Slavic populations, paganism and Christianity, and Classical and Early Medieval identities are yielding to more sophisticated and nuanced conceptions of this period.

Chapter 3 also addressed questions of change and continuity in the Late Antique and Early Medieval southeastern Alps, but with a more specific focus on ceramic technological traditions. Petrographic analysis was conducted on ceramic coarse-ware samples drawn from four important

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<sup>129</sup> See section 2.5.2.3

settlements throughout the region: a large upland site in western Slovenia, near the Italian border (Tonovcov grad), two upland sites in eastern Slovenia near the Croatian border (Tinje and Rifnik), and a lowland settlement on the Adriatic coast in northwest Istria (Koper).

These particular sites were selected for analysis because each of them (excluding Rifnik) were occupied during *both* Late Antiquity (5<sup>th</sup> and 6<sup>th</sup> centuries) *and* the Early Middle Ages (8<sup>th</sup> and 9<sup>th</sup> centuries). This allowed for the comparison of ceramic technological traditions over both time and space—a crucial factor in addressing the key research questions<sup>130</sup>. Coarse-ware ceramics were selected for analysis because they were locally produced, and therefore reveal the technological traditions of potters living at these settlements. The samples were subjected to macroscopic and microscopic methods, which helped to construct a ceramic fabric typology that addressed the following research question: did ceramic technology at these sites indicate significant change, continuity, or both during this important transition?

The petrographic results illuminated significant regional differences in the maintenance of ceramic traditions. The greatest degree of ceramic technological continuity between Late Antiquity and the Early Middle Ages was evident at Koper, on the Adriatic coast, which continued to maintain economic ties to the Mediterranean world into the Early Middle Ages. A high degree of continuity was also present at Tonovcov grad, although not as extensive as at Koper. The most significant change in ceramic traditions occurred at Tinje in the east, suggesting a dramatic break in the technological tradition of coarse-ware ceramic production. Significantly, the ceramic material at the nearby Late Antique fortified settlement of Rifnik demonstrated strong parallels to contemporary materials at Tinje<sup>131</sup>.

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<sup>130</sup> See section 3.3.2

<sup>131</sup> See section 3.4

These results provide some fascinating insights when integrated with the known historical narrative. The coarse-ware ceramic data support the general historical consensus that there was less political and economic upheaval, as well as social discontinuity, in the southern and western portions of the project region. While these four sites do not necessarily reflect the situation across the entire southeastern Alps, this study nevertheless serves as further evidence that socio-political change and continuity were highly varied across this region. Although future research will surely shed greater light on these issues, this study clearly demonstrated that ceramic mineralogy can provide a useful and effective means of examining past technological traditions in this region.

While Chapter 3 examines change and continuity in the eastern Alps from a broad, regional perspective, Chapter 4 addresses similar questions at a more targeted geographic scale. This chapter presents the results of an intensive, interdisciplinary landscape reconstruction along a small (~4 km<sup>2</sup>) section of the Mura river valley in southeastern Austria. A comprehensive examination of the human landscape was achieved through the integration of pedestrian surface collection, soil chemical sampling, and historical/toponymic research. This methodology served as a useful complement to the ceramic compositional analyses; since these datasets operate on different scales, they can therefore be used to approach different kinds of questions in terms of continuity and change. While the ceramic analysis focused on local production and skilled craft practices, the landscape survey provided important data on land-use, settlement, and human activity beyond individual sites more generally. The more restricted geographical scope of the landscape survey also allowed for a more temporally sensitive investigation. In other words, the Roman to Medieval transition could be contextualized in a much broader time-depth: from earliest prehistory through the modern period.

The landscape reconstruction yielded significant archaeological information on this small section of the southeastern Alps<sup>132</sup>. The surface collection identified broad spatial patterns of land-use and activity across vast timespans. Despite the inherent difficulties in properly identifying the typically small, broken, undecorated coarse-ware ceramic material gathered in the survey, some general patterns of settlement and activity through time were readily apparent. The first significant, widespread occupation of this valley appears to have occurred during the Late Bronze and Early Iron Age, with settlement in close proximity to freshwater sources. Less material from the La Tène Iron Age, and the Roman Provincial period perhaps indicates a gradual decline in settlement density and agricultural activity, although it is known that settlement did continue in several areas that could not be included in the surface collection, such as on the *Wildoner Schlossberg*.

This dearth of archaeological material from the Roman Provincial period becomes even more pronounced during the several centuries following the collapse of the Roman Empire, which was somewhat disappointing considering the chronological focus of the dissertation. For example, one of the main limitations in understanding the post-Roman centuries is our current inability to properly identify diagnostic ceramic materials from Late Antiquity – a fundamental problem that is characteristic of all of southeastern Austria. However, this does provide a significant opportunity to address these problems in future research. After the Late Roman period, the next diagnostic ceramic material in the project area is associated with the immigration of Slavic-speaking communities in the 7<sup>th</sup> century AD, a period in which human activity once again becomes archaeologically visible. However, the scant nature of these ceramics also suggests that population densities remained low throughout the Early Middle Ages.

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<sup>132</sup> See section 4.2 for a detailed explanation of the methodology employed

The surface collection supports the textual evidence that the next major demographic expansion occurs during the High and Late Medieval period (c. AD 1100 – 1500). The traditional historical narrative suggests that this increase in settlement is concurrent with the integration of this region into the (Germanic) Holy Roman Empire, and immigration of Germanic-speaking groups from parts of modern day Bavaria and Austria. This was archaeologically apparent during the surveys through the appearance of a variety of diagnostic ceramic materials across the landscape.

Toponymic evidence also supports this general conclusion, as many of the village names in the project area date to these centuries. Continued expansion occurred periodically throughout the Early Modern period as the region was elevated to a Duchy in the Habsburg Empire.

The integration of surface collection, soil survey, and targeted test unit excavations provide further significant information regarding long-term settlement and land-use patterns. The spatial distribution of surface artifacts reveals a striking continuity between prehistoric and historic settlement patterns, as Late Medieval farmsteads were generally put in the same locations in the landscape as their prehistoric (Iron Age) predecessors<sup>133</sup>. Lower densities of surface artifacts and elevated soil phosphate levels also provide a glimpse of past areas of trash deposition, ancient field systems, and farming practices such as manuring. As one might expect, these areas of agricultural activity appear immediately adjacent to the farmsteads, which were inferred from the highest densities of surface artifacts. Test units correlated high phosphate levels with low densities of prehistoric and historic materials, further indicating the presence of long-term agricultural practices. Although no readily identifiable structures were discovered in these small excavations, the information provided in the landscape reconstruction paved the way for more

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<sup>133</sup> See section 4.3.3

intensive future research on the development of the landscape in this small section of the eastern Alpine region.

### **11.3. SOCIAL IDENTITIES, MATERIALITY, AND EMBODIED PRACTICE**

As outlined above, Part One of the dissertation examined aspects of time, technology, and identity largely within a historical and archaeological research framework. While it also drew on anthropological and postcolonial perspectives, the main thrust of these chapters was to shed light on issues specific to the Late Antique and Early Medieval periods of Central Europe. In the second major section of this dissertation (Chapters 5, 6, and 7), issues of identity, technology, and time are approached from a broader and more comprehensive perspective. The primary points of departure for the middle section of this dissertation are the exciting, cutting-edge theoretical perspectives that question an absolute division between humans and nonhuman (or ‘people’ and ‘things’) that has long dominated social science research. Such approaches, which have emerged over the past decade from a number of disciplines, are beginning to coalesce into an important new theoretical avenue with tremendous analytical potential. Although no single moniker fully captures the richness of this heterogeneous and transdisciplinary movement, for the sake of convenience, I refer to them here as ‘materiality’ approaches. The collective goal of these three chapters is to assess the utility of such theories for archaeological practice.

Chapter 5 provides a thorough historical background for the emergence of such theories—particularly within archaeology and anthropology—by carefully tracing the ways in which scholars have theorized the complex connections among the concepts of ‘human’, ‘culture’, and ‘technology’. The history of archaeological and anthropological thought reveals that a variety of

perspectives on this critical issue have gone in and out of fashion over the past century and a half; from 19<sup>th</sup> century evolutionism to early 20<sup>th</sup> century structural-functionalism, the rise of neo-evolutionism and processualism in the 1960s, to the more recent theoretical dominance of postmodern, poststructural, and post-processual approaches, ‘things’ have served a multitude of conceptual roles in the anthropological study of human groups in the past and present. Yet in virtually all of these perspectives, an underlying modernist barrier erected between humanity and non-humanity has remained dutifully intact. In anthropology and archaeology, this basic ontological division has given rise to the general idea that material objects reflect or embody human symbolic *meaning*, which is ultimately generated at a ‘deeper’ non-material level. Depending on the paradigm, this ‘deeper’ and more ‘real’ substance has been identified as race, ethnicity, culture, language, ‘hard-wired’ cognitive structures, cultural symbols, genotypes, social or individual identity, collective unconscious, etc.

However, in the 1980s, an alternative conception of the human-object relationship began to emerge out of several disciplinary milieus. Over the past several decades, a number of archaeologists, ethnographers, sociologists, geographers, and philosophers have begun to articulate (often independent of one another) a remarkable new significance for ‘things’ in the constitution of human society and culture. Rather than viewing materials as *epiphenomenal* to culture and/or society, or simply as a *passive* vehicle for human agency and identity, these approaches forcefully argued that “humanity begins with things” (Serres and Latour 1995). In short, the linguistic and discursive perspectives that dominated 20<sup>th</sup> century social theory have



begun to yield to novel approaches focused on concepts of materiality, corporeality, and relationality<sup>134</sup>.

The implications of this new perspective are teased out in Chapter 6, which offers a new theoretical framework – playfully dubbed a ‘monstrous’ archaeology – that combines elements of materiality studies, relational sociology, and complexity/chaos theory into a coherent (if still preliminary) means for thinking through human-object relationships. This originality of this new perspective is best captured through its unique approach to the enduring question of ‘social action’, which is explored in the second half of Chapter 6. Traditional social theories have endlessly debated whether social action ultimately resides at the level of ‘structure’ or ‘agent’. Yet despite their apparent differences, these theories (including practice theories) all assume the same underlying basic scalar dualism: that human action must come from *either* individual agency *or* social/cultural influences. Drawing on the work of Bruno Latour, Tim Ingold, and Daniel Miller, a monstrous approach argues that the root of the problem in both structural and agency theories of social action lies in the more fundamental ontological division between ‘active’ human agents and a ‘passive’ material world. Contrary to commonsensical notions, ‘agency’ is *not* something possessed by individuals; rather, it continually circulates among heterogeneous webs of humans and nonhumans. This means that in some sense, agency always exists *between* subject and objects.

The final section of Chapter 6 explores the profound implications of this relational perspective for the way that archaeologists think about ‘culture’ and ‘society’. Such ideational ‘social totalities’ have long been employed as explanations for human behavior or social institutions. Social science literature is replete with investigations of social or cultural ‘constructions’ of

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<sup>134</sup> See section 5.4

reality, yet such studies rarely reflect on why immaterial concepts should be endowed with such explanatory powers! The assumption is that categories like ‘culture’ are the product of relations among people alone, which somehow pre-exist out interactions with the nonhuman (material) world. Therefore, when archaeologists study the material world, they seek to identify and explain how a socio-cultural system is *projected upon* these physical objects, rather than considering the objects themselves to be *intrinsic* to very creation of human identity and society.

A monstrous approach seeks to invert this framework, arguing that the material world plays a central and indispensable role in the construction of human society and social identity. As Danny Miller (2005) has argued, material culture is not merely an expression or reflection of an *a priori* socio-cultural system, but is rather the means by which this system *becomes materialized*. People and things are enmeshed in a dialectical process of co-creation; they are, in this sense, ontologically inseparable and co-dependent – hybrids, or monsters. Abstract and immaterial social totalities such as culture are not inherent, stable, underlying essences or substances; they are the *consequences*, no the causes, of the constant assembling of heterogeneous actors.

The social, historical, and archaeological implications of this new approach to identity are further pursued in Chapter 7, which focuses specifically upon the investigation of ‘barbarian ethnicity’ in Late Antique and Early Medieval Central Europe. Drawing on the traditional approaches to social theory outlined above, early medieval archaeologists have sought to investigate ethnic identity in the material record through the study of particular stylistic attributes: Slavic fibulae, Lombard weaponry, Avarian belt buckles, etc. These particular styles have traditionally been viewed as material manifestations of the ‘social identity’ that lay inside the heads of their owners, who used it to reinforce group solidarity or reinforce social/ethnic boundaries. However, in a monstrous approach, such materials are not the passive reflectors of social identity, but are

rather *active participants in the constructions of these identities*. People make artifacts, but in turn, artifacts help to create people. It is asserted that *embodied practice*, whether through activities of production or consumption, mediates this dialectical process. Therefore, when we discuss ‘cultural’ or ‘social’ groups in either the past or present, we must account not only for the human, but also the nonhuman, components of these ‘material-semiotic machines’.

What does this all mean in practice for archaeologists working in the post-Roman period? How do we study past groups beyond the ‘ethnic’ identity that has always defined the questions that we could ask? Although this is a very complex and daunting task, Chapter 7 draws upon the ceramic petrographic dataset from Chapter 3 to begin to consider how we might forge an alternative approach to barbarian identity. Recognizing that embodied practice mediates the co-construction of people and things, one might trace the *technological choices* made during ceramic production to gain insight into this process. By adopting the *chaîne opératoire* method, one can trace subtle shifts in embodied practice across time and space without recourse to traditional ‘ethnic’ explanations. Does it mean to consider changes in ceramic technological choices in the context of continually shifting patterns in the material-semiotic relations between humans and nonhumans? This is perhaps the first step to transcending the culture-historical pots=people=language formula that still (implicitly) underlies much interpretation in post-Roman archaeology. Future research must continue to build upon this approach if we seek a truly postcolonial way of dealing with this complex and politically explosive period of European proto-history.

#### **11.4. IDENTITY, TEMPORALITY, AND THE POLITICS OF THE PAST**

Part Three continues to broaden the theoretical and disciplinary purview of the dissertation while simultaneously building upon the themes broached in the first two sections. The three chapters constituting the final portion of the thesis address the issue of *time*, a central but often under-theorized aspect of the three disciplines that constitute the framework of this research (archaeology, anthropology, and history). Each of these chapters questions the linear, uniform, and homogeneous constructions of ‘modernist’ time, and explores the analytical potential for a historical science premised upon multiple, complex, and heterogeneous temporalities.

This new approach to time also dovetails with the postcolonial approaches interwoven throughout the dissertation, as it considers how modernist concepts of time have served to construct and reinforce colonial and imperial ideologies across the globe. Of particular interest are the multiple and often paradoxical ways in which the temporal category of ‘medieval’ has been appropriated by modern political and disciplinary discourses. It is argued that the ‘medieval’ plays an important but ambiguous role in the historical imagination of the modern West. On the one hand, it is sometimes nostalgically envisioned as an idyllic, prelapsarian ‘golden age’ before the onset of the perceived modern malaise of caused by industrialization, disenchantment, and social alienation. It is within this romantic medievalism that many ethno-nationalist groups have sought to trace their (typically mythical) ancestry.

However the ‘medieval’ has also served the opposite role in the modern imagination: as a period typified by economic stagnation, religious superstition, ethnocentrism, and political absolutism. This pre-modern dystopia often functions as a cultural mirror in which the modern West can gaze in self-satisfaction, and with a sense of cultural superiority. Interestingly, this primitivization of the medieval has striking parallels with the construction of a non-Western

colonial ‘Other’, who is also viewed by the modern West with a combination of disdain and naïve romantic longing (Li 2006). Therefore, the purpose of these final chapters is to explode the linear and progressive conception of time (and *History*) that undergirds this primitivization of the past, by revealing a messy and polytemporal world that resists the construction of spatio-temporal hierarchies. This is seen as a logical extension of the postcolonial and cultural relativist programme initiated in anthropology over a generation ago.

This effort begins in Chapter 8, which illuminates the significance of the medieval past within a pan-German imperial fascination with East Central Europe in the early 20<sup>th</sup> century. From the Habsburg through National Socialist periods, German historians, geographers, ethnographers, and archaeologists – through the geopolitical concepts of *Volk* and *Raum* – sought to fashion a medieval past that demonstrated the necessity of Germanic rule in this region. Germanic and Slavic-speaking communities which coexisted throughout this region beginning in the Early Middle Ages were understood as the direct ancestors of modern ethno-linguistic groups, and were therefore riddled with the same modern cultural and racial stereotypes. For example, it was argued that indigenous Slovene communities (both modern and medieval) lacked the necessary cultural ‘repertoire’ to legitimate their political autonomy, and required the structure and efficiency provided by German political authority. After much of the southeastern Alps were placed under Slavic control after Austria-Hungary’s defeat in the First World War, the medieval past was further used to illustrate the ‘historical injustice’ of severing this land from rightful German political authority.

This chapter focuses on role key played by medieval archaeologists in fashioning a medieval past that was suitable for German imperial interest in East Central Europe. A close reading of the work of two German archaeologists, Paul Reinecke and Karl Dinklage, is used to illustrate the

major narratives forwarded by German archaeologists from the 1920s – 1940s. During the interwar and National Socialist periods, German archaeologists increasingly focused on the question of ‘Early Germanic’ settlement throughout the southeastern Alps in the post-Roman period. Early medieval Germans were formulated as the ‘carriers of culture’ (*Kulturträger*) who brought civilization and order to these otherwise feral and dangerous lands. Therefore, great effort was undertaken to ‘prove’ the Germanic character of early medieval material culture assemblages, and any traces of ‘Slavic’ influence were dismissed as culturally derivative.

This historiographical investigation of early medieval archaeology during the early 20<sup>th</sup> century yields several significant insights. The first is the obvious continuity of German archaeological discourse from the interwar through the Nazi period. It reinforces the growing realization that the political influence on archaeological interpretation in German did not appear *ex nihilo* with the Nazi takeover in 1933, but was already largely in place in the first decades of the 20<sup>th</sup> century, if not earlier. This chapter also reveals the surprising similarities that such interpretations had with those archaeologies that supported European colonial and imperial interests across the globe. In some sense, East Central Europe was considered to be Germany’s India or Algeria (Blackbourn 2004), where imperial authority was justified by racial hierarchy and technological or cultural ‘superiority’. Therefore, it is important to recognize that while most of the scholarly work on National Socialist archaeology emphasizes its connection to fascist racial purity and/or European hyper-nationalism, it must also be understood as a variation on Western colonial ideologies.

Chapter 9 continues to explore the intersection of colonialism, temporality, and identity by tracing the place of the ‘medieval’ in modern anthropological thought. It begins by demonstrating how the stereotyped conception of the medieval outlined above has its roots in the periodization of Italian Renaissance humanists, who sought to emphasize the historical

significant of their own intellectual undertaking—the supposed ‘revival’ of Classical thought. Despite the questionable legitimacy of an absolute distinction between medieval and modern Europe, this division came to play an important role in how the modern West came to define itself. Not coincidentally, the creation of a primitive and foreign medieval arose nearly simultaneously with a primitive and foreign non-Western Other, each filling the ‘savage slot’ in the racial/cultural hierarchy of Western colonialism.

Although anthropologists have long disavowed the racialized hierarchies that degraded non-Western peoples, they have been less cognizant of the parallel *temporal colonization* of the Middle Ages. Indeed, many anthropologists have continued to implicitly accept such stereotyped conceptions of the medieval, evident in the discipline’s own autobiographical narrative.

Although histories of anthropology have located the intellectual roots of the anthropological endeavor in variety of historical periods – from the Enlightenment to the Romantic Movement, Renaissance, and even Classical Antiquity – the Middle Ages remain conspicuously absent in this disciplinary genealogy, despite a growing literature within medieval studies focused on the ethnographic and anthropological writings of this period. With very few exceptions, historians of anthropology appear, at best, unconcerned with (and, at worst, dismissive of) this thousand year period of Western intellectual development.

Why should it matter whether the medieval is curiously absent from anthropological thought, other than perhaps encouraging a truncated disciplinary history? It is argued that the consequences of this medieval/modern periodization are more wide ranging than one might expect. Perhaps most significantly, glossing over the cultural complexities of the Middle Ages both mystifies and simplifies the multifaceted processes that led to the development of

modernity. If Europe was a truly primitive and backwards society before the advent of ‘modernity’, what then triggered this absolute transformation?

The answer to this question has not only significant historical implications, but also regarding how cultural anthropologists explore the complex issue of those ‘alternative’ or ‘multiple’ modernities that are continually emerging around the world. A primitive medieval reinforces the notion that modernity is an inevitable stage of historical progression that will (eventually) occur everywhere with the same particular package of secularism, rationalism, capitalism, empirical science, and plural democracy. On the other hand, recognizing that there was no simple, singular passage from pre-modern to modernity in the West places our discipline in a better position to appreciate how these processes unfold across the globe. One of anthropology’s great strengths – its broad and holistic approach to contemporary issues – is conceded if we do not consider the historical origins of our own socio-political context.

Chapter 10 is a wide-ranging investigation of the manifold means by which ‘time’ is conceptualized in archaeology, anthropology, and history. The ‘standard’ view of time in archaeology – as quantified, homogeneous, linear, and divided into discrete, regular, and measurable segments – has served archaeology well since its disciplinary origins in the 19<sup>th</sup> century, but an increasing number of scholars have highlighted its inherent tensions.

How is time conceptualized in archaeology? It is argued here that a useful point of departure is McTaggart’s division of time into the A-series and B-series. McTaggart argued that the former constitutes the psychological and phenomenological experience of time’s passing that every human experiences; it can be thought of as time’s ‘tenseness’ (past, present, future). The latter is the temporal understanding of succession (that is, order and direction), which is best observed as



points along a ‘timeline’. Disciplines that study living human groups (e.g. cultural anthropology) often focus on issues surrounding A-series time, while historical disciplines are generally more concerned with the B-series. Archaeologists have a foot in both of these worlds, and therefore must address the complexities of each of these temporal categories.

The chapter proceeds to consider problems with each of these categories of time in the context of anthropology, archaeology, and history. In the context of B-series time, the scalar paradox of ‘event’ and ‘process’ is analogous to the agency/structure binary explored in Chapter 6. In the A-series, the central problem is thinking about time as equivalent to space. The proposed solution to each of these cases is to break down the ontological barrier between subject and objects, humans and nonhumans, as well as between our normal conceptions of past and present.

An alternative model of time is forwarded that draws on the insights of three French philosophers: Henri Bergson, Gilles Deleuze, and Michel Serres. The key is to articulate a non-spatial understanding of time (what Bergson referred to as *durée*) where past and present are not understood to be successive moments, but rather as two coexisting elements. Time is not a homogeneous container in which all action and events occur; rather time itself is generated through the complex and dynamic interactions of humans and the material world. Time is neither wholly subjective nor entirely independent; it is a hybrid, a ‘monster’, which can often be flexible, multiple, nonlinear, and heterogeneous. As Walter Benjamin’s quote at the very beginning of the dissertation intimates, we must recognize that history—and the past more generally—is not an empty and homogeneous time, but rather is fulfilled by, and interpenetrates with, the “here-and-now” (*Jetztzeit*).

This new concept of time has important implications for archaeological research. First, it raises the distinct possibility that the 'past' is not gone forever, but rather continuously erupts onto the present in a variety of unexpected ways. Yet this seemingly contradictory understanding of temporality should not surprise archaeologists, who routinely deal with this 'paradox': artifacts come from the past, but belong to the present; they are the physical manifestation of past temporalities, but are mute (see Olivier 1999a:534). Moreover, archaeologists who deal with the politics of the past recognize the truth behind William Faulkner's (1951) famous aphorism: "The past isn't dead. In fact, it's not even past." A more sensitive and nuanced conception of temporality is critical to establishing a truly anti-colonial and analytically powerful archaeological analysis of both the past and present.

## APPENDIX A: PETROFABRIC DESCRIPTIONS AND PHOTOGRAPHS

### A. Tonovcov grad

#### Group TG – A

*Period:* Late Antique 1 and 1/2

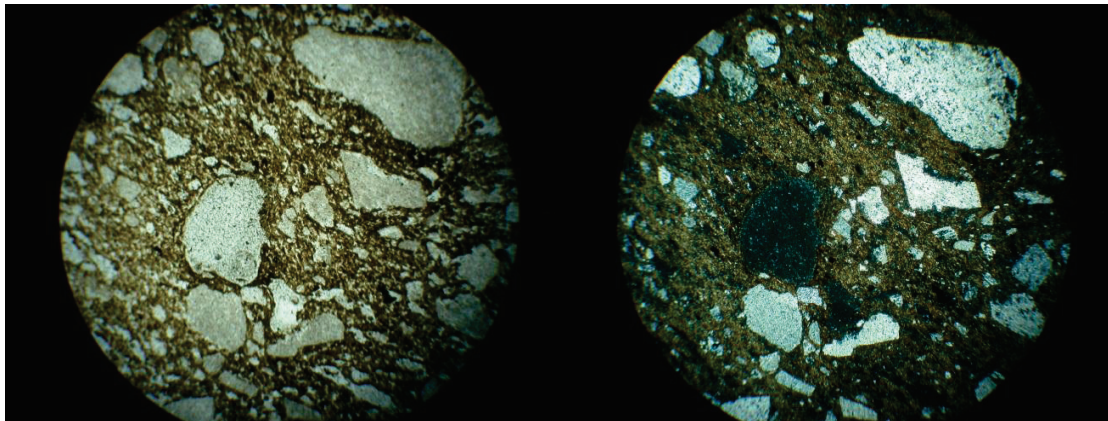
*Number of samples:* 3 (TG – 14, TG – 15, TG – 18)

*Macroscopic description:* Porous fired-clay body with numerous white inclusions (various sizes); Munsell: black core, black surface

*Petrographic description:* Fired-clay matrix, with trace to no quartz inclusions, mostly coarse<sup>1</sup>, well sorted, and rounded; 20 – 25 % carbonate<sup>2</sup> inclusions of both sparry and micritic character, partially disintegrating into lime mud, well sorted, rounded to sub-angular, which run up to c. 2.0 mm in length; 0 – 1 % small fibrous muscovite mica; 3 – 5 % black opaques; and 5 – 10 % thin, elongated voids that run E-W (drying cracks)

*Distinction:* This fabric is most easily identifiable by the very low (or completely absent) quartz component, which distinguishes it from all other fabric groups at Tonovcov grad.

*Micrograph*<sup>3</sup>:



**Example of Group TG – A in Thin Section (Sample TG – 14);  
Plane Polarized Light on Left, Cross-Polarized Light on Right**

<sup>1</sup> Quartz inclusions have been simply divided between 'fine' and 'coarse', with the former being smaller than 0.25 mm and the latter being larger.

<sup>2</sup> Some of the samples were stained in order to distinguish different carbonates, and all appear to be calcite.

<sup>3</sup> A note about scale: the approximate diameter of the field of view in the microphotographs is 4.25 mm

Group TG – B

*Period:* Late Antique 1/2 and Early Middle Ages

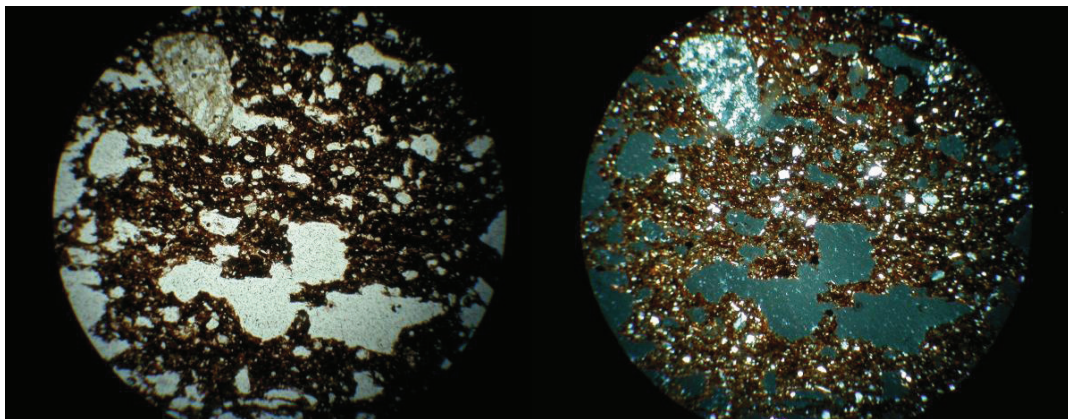
*Number of samples:* 4 (TG – 11, TG – 16, TG – 17, TG – 21)

*Macroscopic description:* Porous fired-clay body, some with moderate white inclusions. Munsell: brown, reddish brown, or pale brown core; brown, reddish brown, very dark grey brown, and black surface

*Petrographic description:* Fired-clay matrix, with 2 – 5 % quartz inclusions, mixture coarse and fine, well sorted and well-rounded to sub-rounded; 0 – 5 % rounded carbonate inclusions, which run up to 2.0 mm in length; 0 – 2 % small fibrous muscovite mica; 10 – 20 % large and circular and irregularly shaped voids

*Distinction:* This fabric is distinguished from the other groups by the complete or partial burning out of carbonate inclusions during the firing process (as evidenced by the shape of the voids).

*Micrograph:*



**Example of Group TG – B in Thin Section (Sample TG – 16);  
Plane Polarized Light on Left, Cross Polarized Light on Right**

Group TG – C

*Period:* Early Middle Ages

*Number of samples:* 2 (TG – 12, TG – 13)

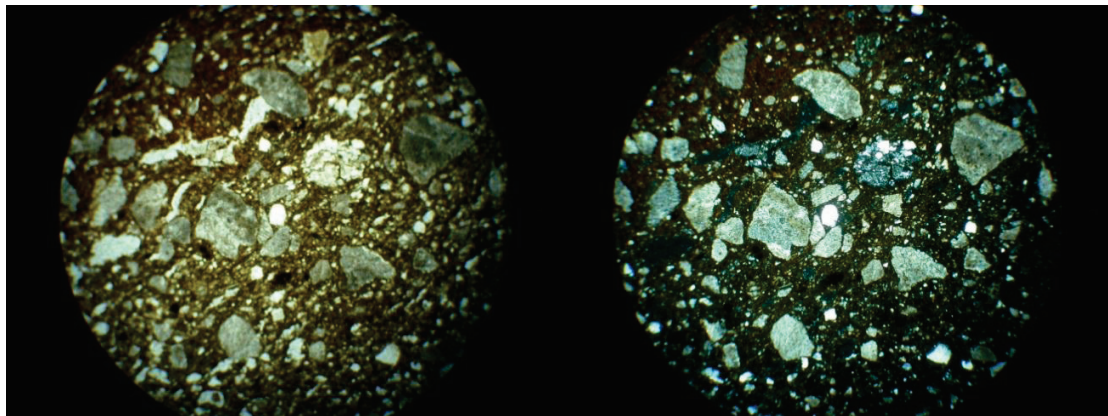
*Macroscopic Description:* Porous fired-clay body with numerous white inclusions; Munsell: brown core, yellowish red surface



*Petrographic description:* Fired-clay matrix, with 8 % quartz inclusions, mostly coarse, moderately sorted and well rounded to sub-rounded; 20 % rounded carbonates, micritic, and partially disintegrating into lime mud, poorly to moderately sorted, and rounded to sub-angular, up to c. 1.5 mm in length; trace to 2 % fine and fibrous muscovite mica; 2 % hematite inclusions; 10 % large and irregularly shaped voids

*Distinction:* This fabric is distinguished from others at Tonovcov grad by a relatively high level of quartz inclusions.

*Micrograph:*



**Example of Group TG – C in Thin Section (Sample TG – 12);  
Plane Polarized Light on Left, Cross Polarized Light on Right**

## Group TG – D1

*Period:* Late Antique 1, 2, 1/2

*Number of samples:* 3 (TG – 1, TG – 2, TG – 23)

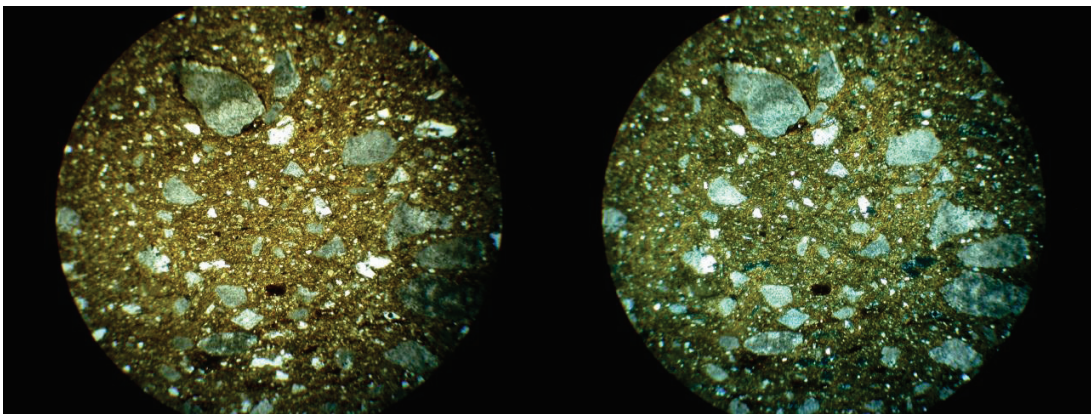
*Macroscopic description:* Slightly porous fired-clay body with numerous white inclusions (varied sizes); Munsell: pink to light brown core, pink to light brown surface

*Petrographic description:* Fired-clay matrix, with 3 – 5 % quartz inclusions, mostly fine, very well to moderately sorted and well rounded to sub-rounded; 15 – 20 % carbonates, well to poorly sorted, mostly micritic (showing mosaic extinction), rounded to well rounded, partially disintegrating into lime mud, and up to c. 2.0 mm in length; trace to 1 % fine and fibrous muscovite mica; 5 – 10 % voids, shaped like drying cracks



*Distinction:* Group TG – D is the most common fabric type at in the sample with moderate levels of quartz and carbonate, and low mica. D1 is distinguished from the other D groups primarily by the fabric color (light red to pink), which indicates firing in an oxidizing atmosphere without organic material.

*Micrograph:*



**Example of Group TG – D1 in Thin Section (Sample TG – 1);  
Plane Polarized Light on Left, Cross Polarized Light on Right**

## Group TG – D2

*Period:* Late Antique 1, 2, 1/2, Early Middle Ages

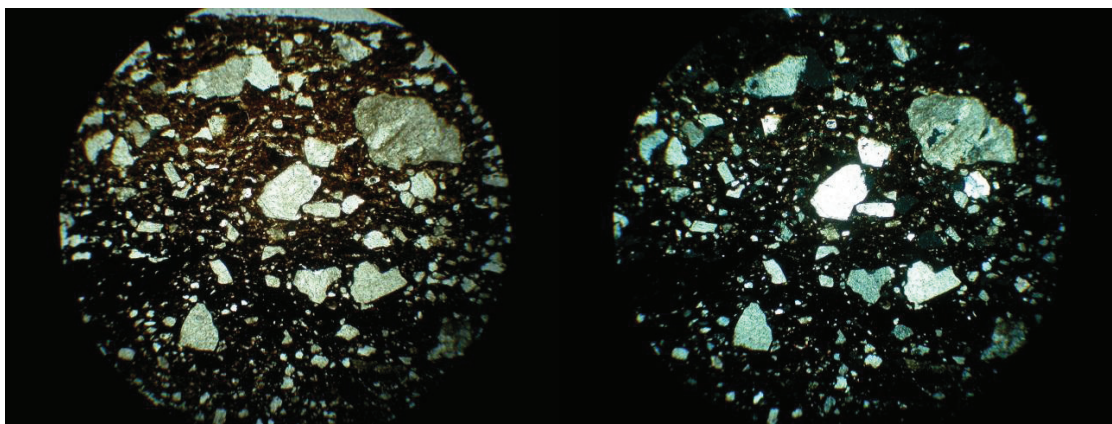
*Number of samples:* 6 (TG – 7, TG – 8, TG – 9, TG – 10, TG – 19, TG – 20)

*Macroscopic description:* Slightly porous fired-clay body with white inclusions (varied sizes); Munsell: very dark grey brown to dark grey to brown core, similar color on surfaces

*Petrographic description:* Fired-clay matrix, with 2 – 6 % quartz inclusions, mixture coarse and fine, moderate to well sorted, and well rounded to sub-rounded; 20 – 25 % carbonates, poorly sorted, well rounded to sub-angular, mostly of micritic or mixed character, most partially or fully disintegrating into lime mud, up to 2.0 mm in length; trace to 2 % fine and fibrous muscovite mica; trace plagioclase feldspar in some; 2 % black or reddish opaques (hematite) in some; 5 – 15 % voids, mostly oriented E/W like drying cracks

*Distinction:* Same as other TG – D groups, but uniform dark grey to brown fabric color, suggesting a reducing or neutral firing atmosphere with organic material present.

*Micrograph:*



**Example of Group TG – D2 in Thin Section (Sample TG – 10);  
Plane Polarized Light on Left, Cross Polarized Light on Right**

### Group TG – D3

*Period:* Late Antique 1/2, 2, Early Middle Ages

*Number of samples:* 4 (TG – 4, TG – 5, TG – 6, TG – 22)

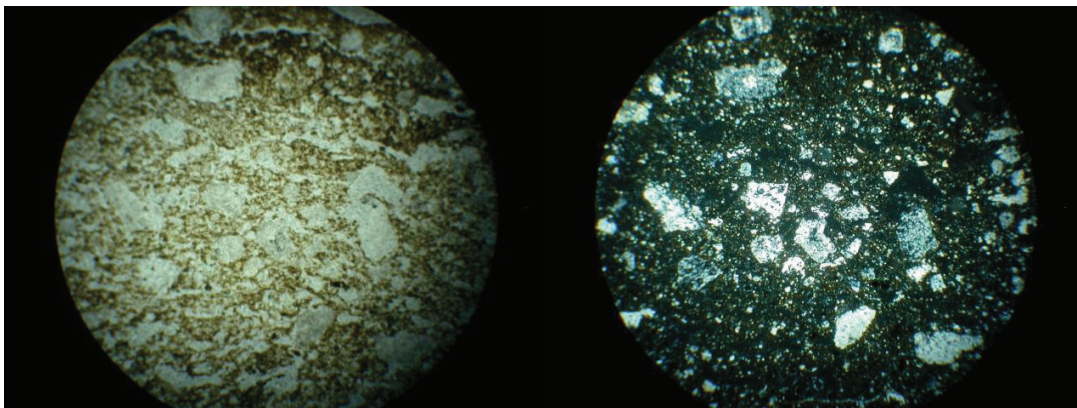
*Macroscopic description:* Slightly porous fired-clay body with numerous white inclusions (varied sizes); Munsell: dark grey to brown core, various color surfaces (strong brown, yellowish red, dark grey, light red)

*Petrographic description:* Fired-clay matrix, with 4 – 6 % quartz inclusions, mixture coarse and fine, well sorted, well rounded to sub-rounded; 20 – 30 % carbonates, poorly to well sorted, well rounded to sub-angular, mostly micritic and disintegrating into lime mud; 1 – 2 % fine muscovite mica; trace plagioclase feldspar in some; 10 – 15 % voids, mostly oriented E/W like drying cracks



*Distinction:* Same mineralogical content as TG – D1 and TG – D2, but different colors between core and surface reveal a different kind of firing atmosphere (oxidizing atmosphere with organic material present).

*Micrograph:*



**Example of Group TG – D3 in Thin Section (Sample TG – 4);  
Plane Polarized Light on Left, Cross Polarized Light on Right**



## B. Tinje

### Group TI – A

*Period:* Early Medieval (House 5)

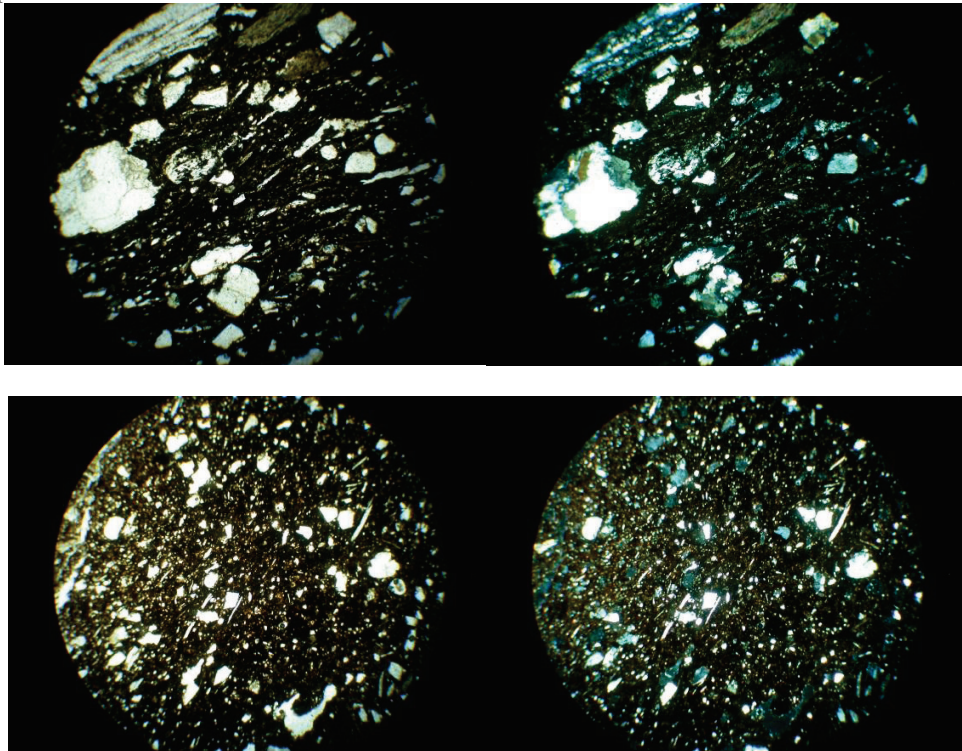
*Number of samples:* 3 (TI – 5, TI – 6, TI – 7)

*Macroscopic description:* Fired-clay body with few (very) small white inclusions; Munsell: very dark grey to dark grey core, very dark grey to pale brown surface

*Petrographic description:* Fired-clay matrix, with 10 – 15 % quartz inclusions, mixture coarse and fine, poorly sorted and rounded to sub-angular; 2 – 6 % muscovite and biotite mica, mostly fine and fibrous with a few larger inclusions (especially biotite); 5 % voids, very small or drying cracks

*Distinction:* This fabric is distinguished by a combination of high quartz, high mica, and the absence of carbonate inclusions.

*Micrograph*<sup>4</sup>:



**Two different examples of Group TI – A in Thin Section (TI – 7 above, TI – 6 below);  
Plane Polarized Light on Left, Cross Polarized Light on Right**

<sup>4</sup> Since these two samples were quite distinct, microphotos of both are provided.

## Group TI – B

*Period:* Early Medieval (House 5)

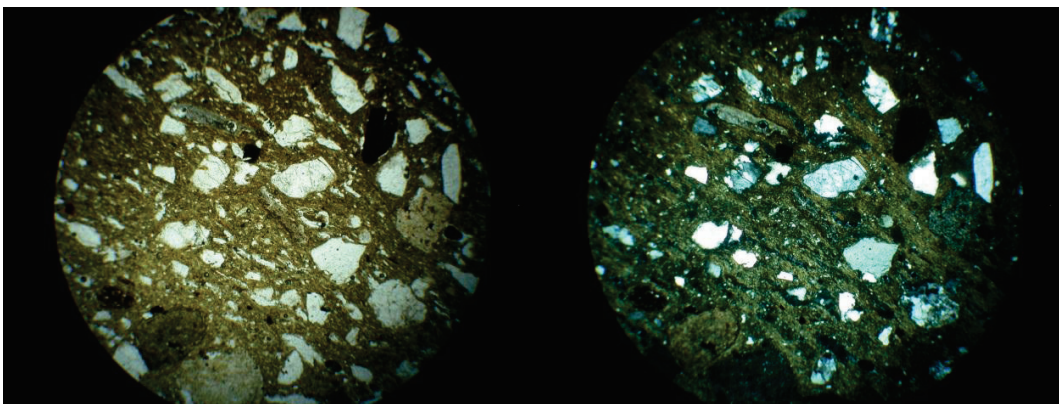
*Number of samples:* 4 (TI – 1, TI – 2, TI – 3, TI – 16)

*Macroscopic description:* Slightly porous fired-clay body with moderate density white inclusions (various sizes); Munsell: dark grey core, pale brown surface

*Petrographic description:* Fired-clay matrix, with optically active groundmass; 10 – 15 % quartz inclusions, mixture coarse and fine, moderately sorted, rounded to sub-angular; 5 – 10 % micritic carbonates, poorly sorted and well rounded to sub-rounded, up to 1.0 mm in length; trace to 2 % fine and fibrous muscovite and biotite mica; 2 – 5 % red to dark red opaques; 5 – 10 % voids, very small or drying cracks

*Distinction:* This group is distinguished from other fabrics at Tinje by a combination of high levels of quartz inclusions and low levels of rounded and micritic carbonates.

*Micrograph:*



**Example of Group TI – B in Thin Section (Sample TI – 3);  
Plane Polarized Light on Left, Cross Polarized Light on Right**

## Group TI – C1

*Period:* Late Antique (House 4)

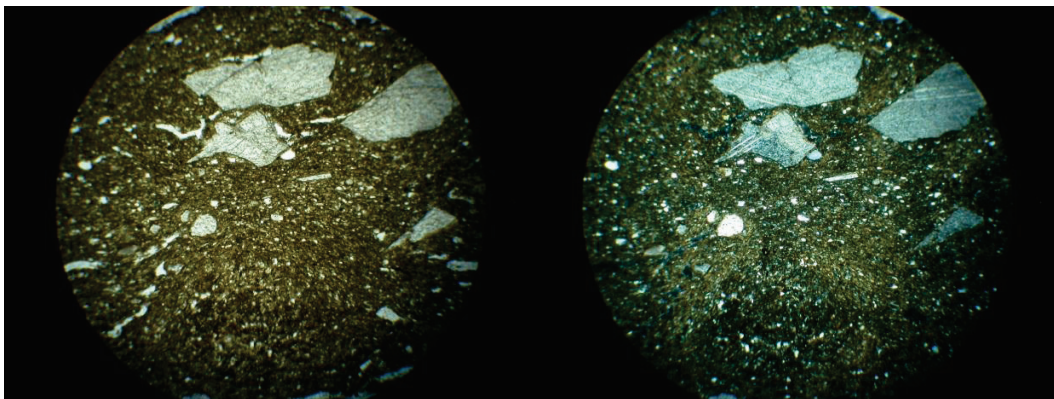
*Number of samples:* 5 (TI – 8, TI – 9, TI – 10, TI – 11, TI – 13)

*Macroscopic description:* Slightly porous fired-clay body with numerous white inclusions (varied sizes); Munsell: grey core, grey to light brown grey surface

*Petrographic description:* Fired-clay matrix, with optically active groundmass; 5 – 6 % quartz inclusions, mostly fine, with some veins in corners, well sorted, well rounded to rounded; 10 – 15 % carbonate inclusions, mostly sparry and angular, some with partial disintegration into lime mud, poorly sorted, angular to sub-rounded, and up to 2.0 mm in length; 1 – 2 % fine and fibrous muscovite mica; 5 – 15 % voids, mostly small rounded or drying cracks

*Distinction:* This group is distinguished from other fabric groups at Tinje by moderate, mostly fine quartz and moderate levels of angular, sparry carbonates.

*Micrograph:*



**Example of Group TI – C1 in Thin Section (Sample TI – 9);  
Plane Polarized Light on Left, Cross Polarized Light on Right**

## Group TI – C2

*Period:* Late Antique (House 4) and Early Medieval (House 5)

*Number of samples:* 4 (TI – 4, TI – 12, TI – 14, TI – 15)

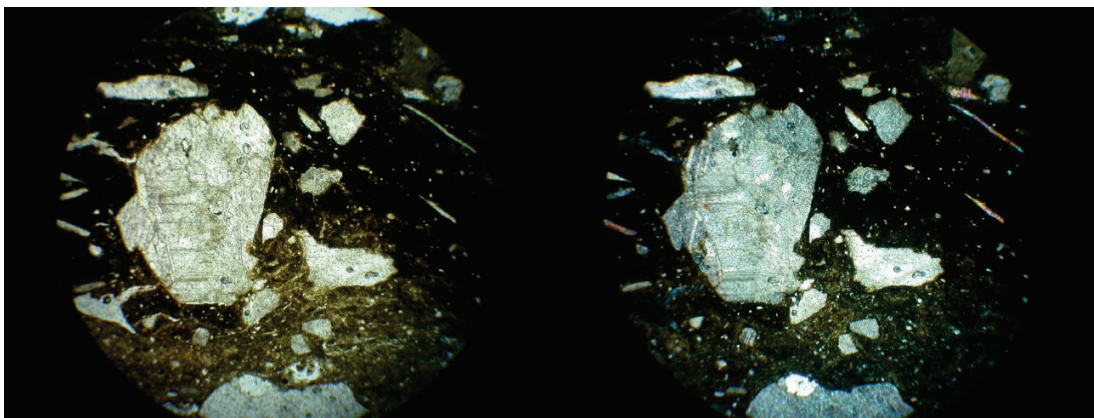
*Macroscopic description:* Slightly porous fired-clay body with numerous white inclusions (varied sizes); Munsell: very dark grey to grey core, grey to very pale brown surface

*Petrographic description:* Fired-clay matrix, with optically active groundmass; 6 – 8 % quartz inclusions, mostly fine, moderately sorted and well rounded to rounded; 15 – 30 % sparry carbonates, with some partial disintegration into lime mud, poorly sorted, and angular to sub-rounded, up to 3.0 mm in length; trace feldspars in some; 5 – 10 % voids, mostly drying cracks, few larger and irregularly shaped

*Distinction:* This group is mineralogically very similar to TI – C1, but can be distinguished by slightly higher levels of quartz, mica, and carbonate inclusions.



*Micrograph:*



**Example of Group TI – C2 in Thin Section (Sample TI – 14);  
Plane Polarized Light on Left, Cross Polarized Light on Right**

## C. Rifnik

### Group RF – A

*Period:* Late Roman/Late Antique

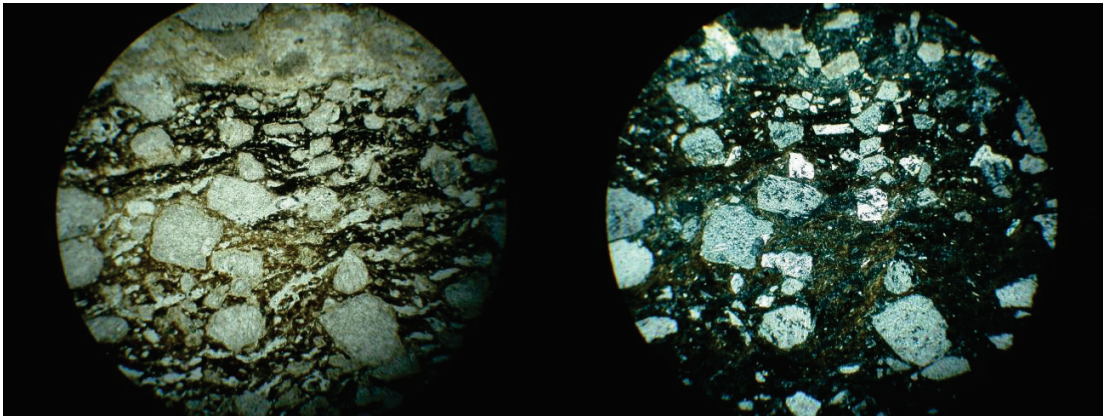
*Number of samples:* 4 (RF – 1, RF – 8, RF – 10, RF – 11)

*Macroscopic description:* Slightly porous fired-clay body with numerous white inclusions (varied sizes); Munsell: very dark grey to light red brown core, very dark grey to very pale brown surface

*Petrographic description:* Fired-clay matrix, with 5 – 6 % quartz inclusions, mostly coarse, moderately to well sorted, and well rounded to rounded; 20 – 30 % carbonates, mostly sparry, some disintegrating into lime mud, angular to rounded, up to 1.0 mm in length; 1 – 3 % muscovite mica, mostly fine with some larger inclusions up to 0.5 mm in length; trace orthoclase in some; 5 – 15 % voids, drying cracks or large and irregularly shaped

*Distinction:* This group is distinguished from other fabrics at Rifnik by high levels of carbonates and moderate levels of coarse quartz.

*Micrograph:*



**Example of Group RF – A in Thin Section (Sample RF – 8);  
Plane Polarized Light on Left, Cross Polarized Light on Right**

Group RF – B

*Period:* Late Roman/Late Antique

*Number of samples:* 2 (RF – 2, RF – 9)

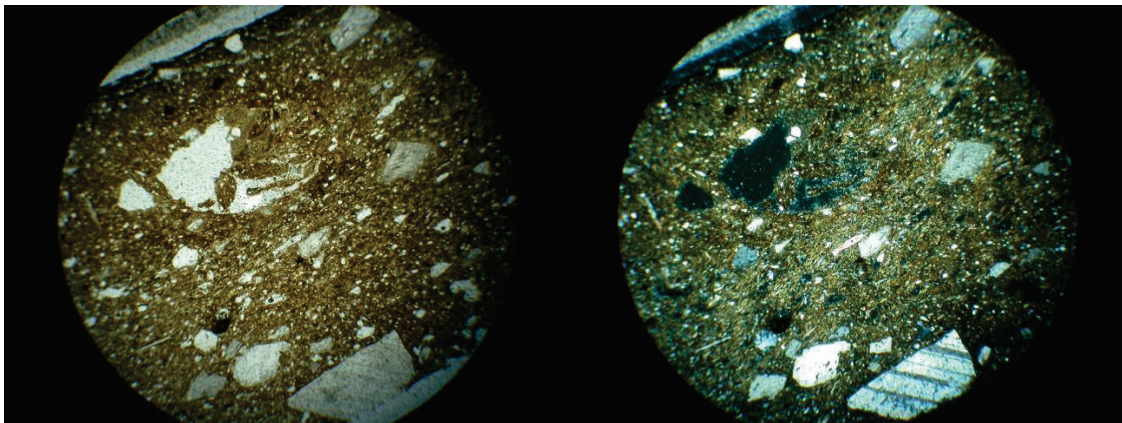
*Macroscopic description:* Slightly porous fired-clay body with moderate white inclusions (varied sizes); Munsell: grey core, grey surface

*Petrographic description:* Fired-clay matrix, with optically active groundmass; 6 – 9 % quartz inclusions, mostly fine, very well to well sorted and very rounded; 10 – 15 % carbonates, mostly sparry with some disintegration into lime mud, poorly sorted and rounded to sub-angular, up to 2.0 mm in length; 1 % fine and fibrous muscovite mica; 1 – 2 % dark red opaques; 5 – 10 % large, irregular voids



*Distinction:* This group is distinguished from other fabrics at Rifnik by high levels of fine quartz.

*Micrograph:*



**Example of Group RF – B in Thin Section (Sample RF – 2);  
Plane Polarized Light on Left, Cross Polarized Light on Right**

## Group RF – C

*Period:* Late Roman/Late Antique

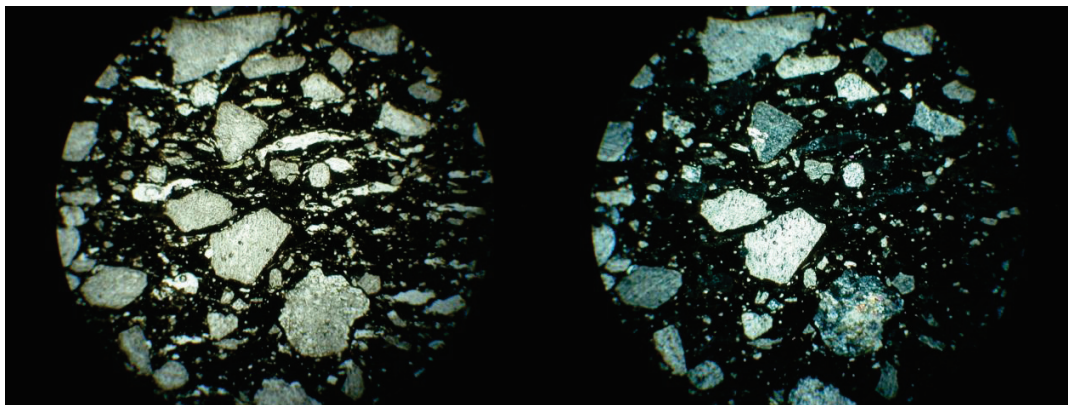
*Number of samples:* 4 (RF – 3, RF – 5, RF – 6, RF – 7)

*Macroscopic description:* Slightly porous fired-clay body with numerous white inclusions (varied sizes); Munsell: very dark grey core, very dark grey to pale brown surface

*Petrographic description:* Fired-clay matrix, with 3 – 4 % quartz inclusions, mixture coarse and fine, poorly to well sorted, well rounded to rounded, perhaps in a bimodal distribution; 20 % carbonates, sparry, mostly disintegrating into lime mud, poorly to moderately sorted, angular to rounded, up to 1.5 mm in length; 1 – 2 % chert inclusions in carbonates; 1 – 2 % fine and fibrous muscovite mica; trace plagioclase; 2 % dark red opaques; 10 – 15 % voids, drying cracks

*Distinction:* This group is distinguished from others at Rifnik by the size of the quartz inclusions and also the type of carbonates (very small and fibrous)

*Micrograph:*



**Example of Group RF – C in Thin Section (Sample RF – 7);  
Plane Polarized Light on Left, Cross Polarized Light on Right**

## D. Koper

### Group KP – A1

*Period:* Late Antique and Early Middle Ages

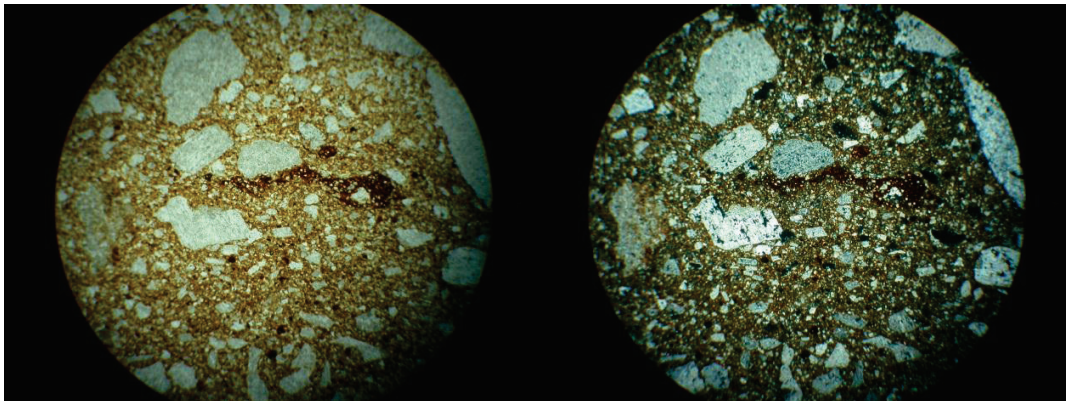
*Number of samples:* 5 (KP – 2, KP – 8, KP – 12, KP – 16, KP – 21)

*Macroscopic description:* Slightly porous fired-clay body with numerous white inclusions (varied sizes); Munsell: red to light red to red brown core, surface same color

*Petrographic description:* Fired-clay matrix, with 2 – 5 % fine quartz inclusions, moderately to well sorted, rounded to sub-rounded; 20 – 25 % carbonate inclusions, mostly sparry, some with significant disintegration into lime mud, poorly sorted, and rounded to sub-angular, up to 2.0 mm in length; trace to 1 % fine and fibrous muscovite mica; 3 – 4 % dark red opaques (hematite); 3 – 5 % voids, mostly drying cracks, with few larger and irregularly shaped

*Distinction:* This group is mineralogically similar to the other KP – A groups, but is distinguished by the fabric color (red to light red), indicating an oxidizing atmosphere without organic materials.

*Micrograph:*



**Example of Group KP – A1 in Thin Section (Sample KP – 2);  
Plane Polarized Light on Left, Cross Polarized Light on Right**



## Group KP – A2

*Period:* Late Antique and Early Middle Ages

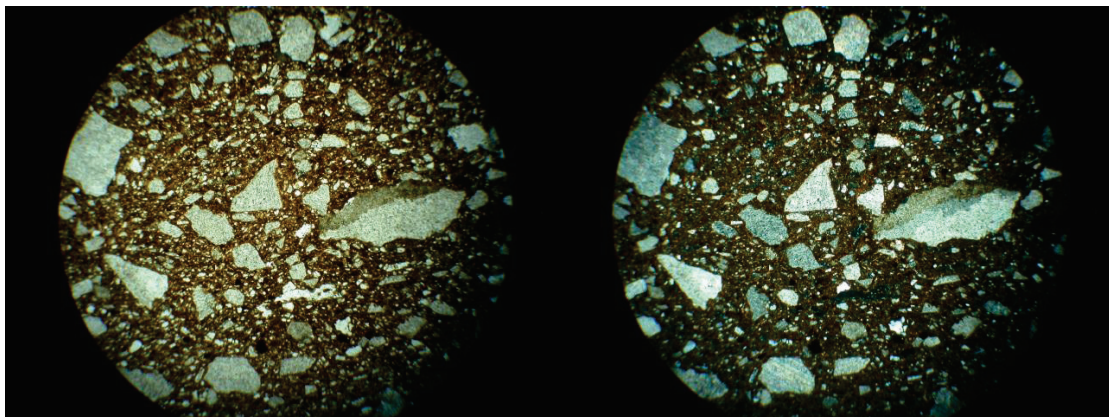
*Number of samples:* 9 (KP – 3, KP – 5, KP – 6, KP – 9, KP – 10, KP – 13, KP – 15, KP – 18, KP – 20)

*Macroscopic description:* Slightly porous fired-clay body with numerous white inclusions (varied sizes); Munsell: various combinations of red, light red, red brown, grey, etc.

*Petrographic description:* Fired-clay matrix, many with optically active groundmass, with 2 – 5 % fine quartz inclusions, moderately to well sorted, well rounded to rounded; 20 – 25 % carbonates, mostly sparry, some disintegrating into lime mud, poorly sorted, and rounded to sub-angular, up to c. 2.0 mm in length; trace to 2 % fine and fibrous muscovite mica; 3 % dark red opaques; 3 – 7 % voids, some drying cracks, and some large and irregularly shaped

*Distinction:* This is distinguished from the other group KP – A fabrics by the difference in the fabric color between the core and surface, indicating an oxidizing firing atmosphere with organic material present.

*Micrograph:*



**Example of Group KP – A2 in Thin Section (Sample KP – 20);  
Plane Polarized Light on Left, Cross Polarized Light on Right**

### Group KP – A3

*Period:* Late Antique and Early Middle Ages

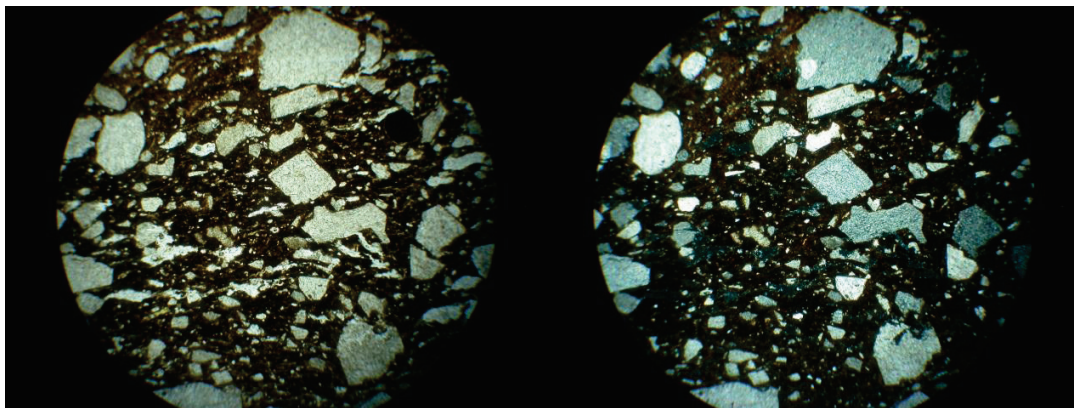
*Number of samples:* 5 (KP – 4, KP – 7, KP – 14, KP – 17, KP – 23)

*Macroscopic description:* Slightly porous fired-clay body with numerous white inclusions (varied sizes); Munsell: dark grey to very dark grey core, surface same color.

*Petrographic description:* Fired-clay matrix with optically active groundmass; trace to 5 % fine quartz inclusions, very well sorted and well rounded; 20 – 25 % sparry carbonates, some disintegrating into lime mud, poorly sorted and rounded to sub-angular, up to 1.0 mm in length; trace to 2 % fine and fibrous muscovite mica; 1 – 2 % dark red opaques; 5 – 7 % voids, drying cracks

*Distinction:* This group is distinguished from the others group KP – A fabrics by the color (grey), indicating a reducing or neutral firing atmosphere, with organic material present.

*Micrograph:*



**Example of Group KP – A3 in Thin Section (Sample KP – 7);  
Plane Polarized Light on Left, Cross Polarized Light on Right**

Group KP – B

*Period:* Early Middle Ages

*Number of samples:* 2 (KP – 19, KP – 22)

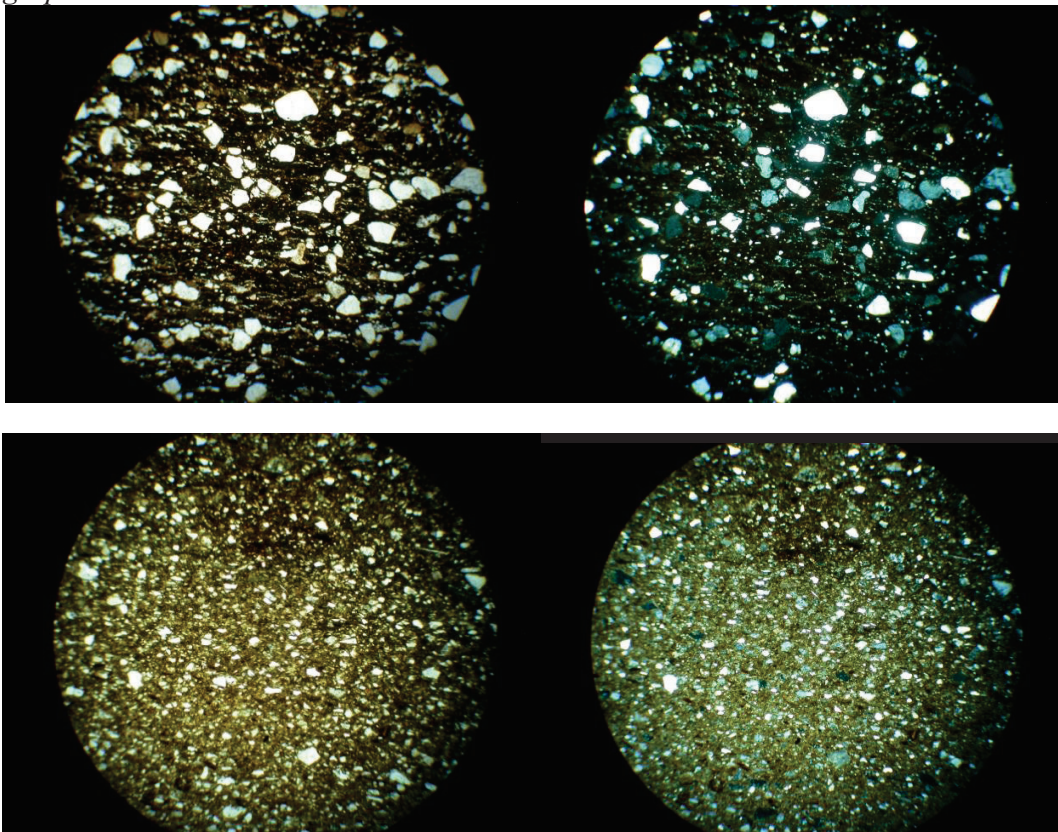
*Macroscopic description:* Fired-clay body with very small white inclusions; Munsell: red brown to grey core, red to reddish yellow surface

*Petrographic description:* Fired-clay matrix, with optically active groundmass; 10 % quartz inclusions, one fine, one coarse (see images below), moderately sorted, and well rounded to rounded; 2 % fine and fibrous muscovite mica; 2 % dark red opaques; 2 % voids, drying cracks



*Distinction:* This fabric is distinguished by a high level of quartz and the absence of carbonates.

*Micrograph*<sup>5</sup>:



**Example of Group KP – B in Thin Section (Sample KP – 19 above, KP – 22 below);  
Plane Polarized Light on Left, Cross Polarized Light on Right**

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<sup>5</sup> Since these two samples were quite distinct, microphotos of both are provided.

Group KP – C

*Period:* Late Antiquity

*Number of samples:* 2 (KP – 1, KP – 11)

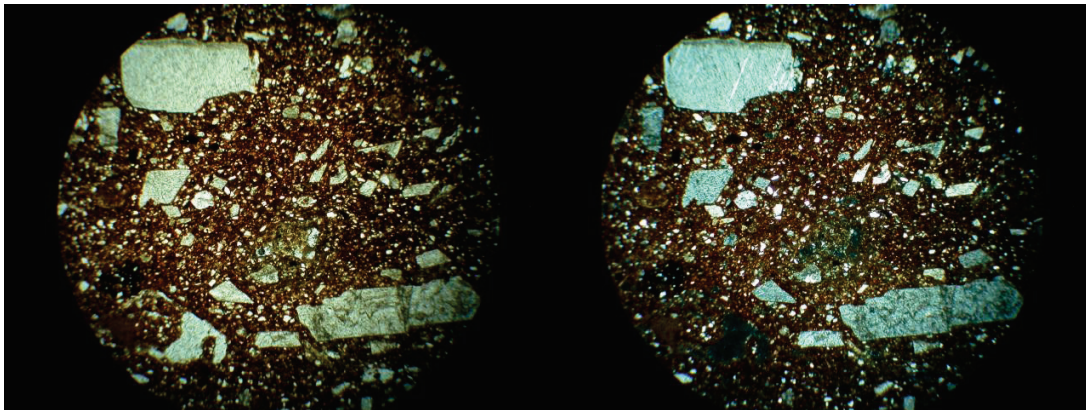
*Macroscopic description:* Slightly porous fired-clay body with numerous white inclusions (medium to small); Munsell: red to brown core, red to light brownish grey surface

*Petrographic description:* Fired-clay matrix, with 10 % fine quartz inclusions, well to moderately sorted and well rounded to rounded; 20 % sparry carbonates, some disintegrating into lime mud, poorly sorted and sub-rounded to sub-angular, up to 1.5 mm in length; 1 % chert inclusions in carbonates; 1 % fine and fibrous muscovite mica; 2 – 5 % dark red opaques; 5 % voids, some large and irregularly shaped or circular



*Distinction:* This fabric is distinguished from others at Koper by high levels of fine quartz inclusions and carbonates.

*Micrograph:*



**Example of Group KP – C in Thin Section (Sample KP – 1);  
Plane Polarized Light on Left, Cross Polarized Light on Right**

## APPENDIX B: PROVENIENCE OF CERAMIC SAMPLES FROM PETROGRAPHIC ANALYSIS

Sherd Name	Sherd Excavation #	Site	Group	Period	Provenience
TG-1	TG 2 (No. 20906)	Tonovcov grad	D1	LA 1/2	Building 1, SU 24
TG-2	TG 2 (No. 20409)	Tonovcov grad	D1	LA 2	Building 1, SU 29
TG-3	TG 3 (No. 20438)	Tonovcov grad	D3	LA 2	Building 1, SU 11
TG-4	TG 3 (No. 20438)	Tonovcov grad	D3	LA 2	Building 1, SU 11
TG-5	TG 5 (No. 20195)	Tonovcov grad	D3	EMA	Building 1, SU 10
TG-6	TG 6 (No. 21344)	Tonovcov grad	D3	LA 2	Building 1, SU 23
TG-7	TG 6 (No. 21705)	Tonovcov grad	D2	LA 1	Building 1, SU 29a
TG-8	TG 8 (No. 20540)	Tonovcov grad	D2	LA 2	Building 1, SU 23
TG-9	TG 8 (No. 21994)	Tonovcov grad	D2	LA 2?	Building 1, SU ? (bioturbation disturbance)
TG-10	TG 9 (No. 05/3)	Tonovcov grad	D2	EMA	Building 5 (Water Cistern), SU 44
TG-11	TG 9 (No. 20184)	Tonovcov grad	B	EMA	Building 1, SU 10
TG-12	TG 10 (No. 05/3/2)	Tonovcov grad	C	EMA	Building 5 (Water Cistern), SU 44
TG-13	TG 10 (No. 20020)	Tonovcov grad	C	EMA	Building 1, SU 9
TG-14	TG 13 (No. 21168)	Tonovcov grad	A	LA 1	Building 1, SU 68
TG-15	TG 13 (No. 20533)	Tonovcov grad	A	LA 2	Building 1, SU 29
TG-16	TG 9 (No. 21262)	Tonovcov grad	B	LA 1/2	Building 1, SU 63
TG-17	TG 10 (No. 20063)	Tonovcov grad	B	EMA	Building 1, SU 9
TG-18	TG 13 (No. 21137)	Tonovcov grad	A	LA 1/2	Building 1, SU 21
TG-19	TG 8 (No. 21415)	Tonovcov grad	D2	LA 1	Building 1, SU 30
TG-20	TG 5 (No. 20365)	Tonovcov grad	D2	EMA	Building 1, SU 10
TG-21	TG 6 (No. 20970)	Tonovcov grad	B	LA 1/2	Building 1, SU 24
TG-22	TG 3 (No. 20312)	Tonovcov grad	D3	LA 1/2	Building 1, SU 21
TG-23	TG 2 (No. 20947)	Tonovcov grad	D1	LA 1	Building 1, SU 30
KP-1		Koper	C	LA	IP 1, sektor 3, strat 2/3 (III/4/11); depth: -1.55 to -1.7 m; x: -2.8 to -2.5 m; y: 0 to -2.5 m)
KP-2		Koper	A1	LA	IP 1, sektor 3, strat 2/3 (III/4/11); depth: -1.55 to -1.7 m; x: -2.8 to -2.5 m; y: 0 to -2.5 m)
KP-3		Koper	A2	LA	IP 1, sektor 3, strat 2/3 (III/4/11); depth: -1.55 to -1.7 m; x: -2.8 to -2.5 m; y: 0 to -2.5 m)
KP-4		Koper	A3	LA	IP 1, sektor 3, strat 2/3 (III/4/11); depth: -1.55 to -1.7 m; x: -2.8 to -2.5 m; y: 0 to -2.5 m)
KP-5		Koper	A2	LA	IP 1, sektor 3, strat 2/3 (III/4/11)

**APPENDIX B: PROVENIENCE OF CERAMIC SAMPLES FROM PETROGRAPHIC ANALYSIS**

KP-6									
KP-7									profile/cable trench (XIII/2/9)
KP-8									profile/cable trench (XIII/2/9)
KP-9									IP 2, strat 1/2
KP-10									IP 2, strat 1/2
KP-11									IP 2, strat 1/2
KP-12									IP 2, strat 1/2
KP-13									IP 2, pr. (room) 11 (VII/3/13); depth: -1.76 to -1.96 m
KP-14									IP 2, pr. (room) 11 (VII/3/13); depth: -1.76 to -1.96 m
KP-15									IP 2, pr. (room) 11 (VII/3/13); depth: -1.76 to -1.96 m
KP-16									IP 2, pr. (room) 11 (VII/3/13); depth: -1.76 to -1.96 m
KP-17									profile/el. Kabel (middle trench) (VII/2/2); depth: -0.9 to -1.22 m
KP-18									profile/cable trench (VII/2/9); depth: -1.5 to -1.66 m
KP-19									IP 2, pr. (room) 11 (VII/3/10); depth: -2.05 m
KP-20									IP 2, pr. (room) 2 (IX/2/14)
KP-21									IP 1, sektor 2 (III/5/5)
KP-22									IP 2, pr. (room) 5 (VII/5/20); depth: -1.5 to -1.61 m
KP-23									IP 2, pr. (room) 5 (VII/5/20); depth: -1.5 to -1.61 m
TI-1							142	Tinje	Haus 5
TI-2							549	Tinje	Haus 5/1
TI-3							388	Tinje	Haus 5/2
TI-4							344	Tinje	Haus 5
TI-5							413	Tinje	Haus 5
TI-6							357	Tinje	Haus 5
TI-7							363	Tinje	Haus 5
TI-8							517	Tinje	Haus 4/2
TI-9							907	Tinje	Haus 4
TI-10							207	Tinje	Haus 4
TI-11							208	Tinje	Haus 4
TI-12							498	Tinje	Haus 4
TI-13							907	Tinje	Haus 4
TI-14							355	Tinje	Haus 5 east
TI-15							278	Tinje	Haus 5

## APPENDIX B: PROVENIENCE OF CERAMIC SAMPLES FROM PETROGRAPHIC ANALYSIS

TI-16	142A	Tinje	B	L/EMA	Haus 5 east
RF-1	PA-1971	Rifnik	A	LA	Excavation, year 1999, layer nr. 067 (ruins of late roman defensive wall), depth: 80-100 cm, location: LIV/9/45 - inner side (near) of the defensive wall (in the middle of the settlement platou, where house VI stood - between defensive tower 2 and 3)
RF-2	PA-1662	Rifnik	B	LA	Excavation, year 2002, layer nr. 104 (layer, which was made in late roman period for flattening the ground on the inner side of the defensive wall), depth: 80-90 cm, location: LIV/9/2 - inner side (near)of the defensive wall (near defensive tower 3).
RF-3	PA-1843	Rifnik	C	LA	Excavation, year 1994, layer nr. 048 (late roman burned sediment from the kiln), depth: 180 cm, location: LIV/9//68 (inner side of the defensive tower 2).
RF-4	PA-1953	Rifnik	?	?	Excavation (secondary excavation of the house 3 - for rebuilding the walls), year 1985, without layer nr., location: House 3.
RF-5	PA-2024	Rifnik	C	?	Excavation, year 1975, without layer nr., depth: 60 cm, location: between basilica and water cistern.
RF-6	PA-1997	Rifnik	C	?	Excavation, year 1992, without layer nr., depth: 30-60 cm, location: inner side (near)of the defensive wall (16m west from the defensive tower 1).
RF-7	PA-1909	Rifnik	C	LA	Excavation, year 1992, layer nr. 001 (layer, which was made in late roman period for flattening the ground on the inner side of the defensive wall), depth: 30-60 cm, location: inner side (near)of the defensive wall (15m west from the defensive tower 1).
RF-8	PA-1829	Rifnik	A	LA	Excavation, year 1999, layer nr. 066 (layer, which was made in late roman period for flattening the ground on the inner side of the defensive wall), depth: 30-40 cm, location: LIV/9//24 - in the middle of the settlement platou, where house VI stood (between defensive tower 2 and 3).

## APPENDIX B: PROVENIENCE OF CERAMIC SAMPLES FROM PETROGRAPHIC ANALYSIS

RF-9	PA-2115	Rifmik	B	LA	Excavation, year 2001, layer nr. 102 (layer, which was made in late roman period for flattening the ground on the inner side of the defensive wall), depth: 30-40 cm, location: LIV/3//100 - inner side (near)of the defensive wall (between defensive tower 3 and 4).
RF-10	PA-2025	Rifmik	A	?	Excavation, year 1976, without layer nr., location: near the house 4.
RF-11	PA-1674	Rifmik	A	LA	Excavation, year 2002, layer nr. 102 (layer, which was made in late roman period for flattening the ground on the inner side of the defensive wall), depth: 40-60 cm, location: LIV/3//28 - inner side (near)of the defensive wall (next to the entrance defensive tower).



**APPENDIX C: HISTORIC CERAMIC TYPOLOGY FROM SURVEY (BY TRANSECT)**

Rim Name	n/a		n/a	Rim 2		Rim 6a		Rim 10		Rim 3		Rim 4a		Rim 4b		Rim 4c		Rim 4a		Rim 5a		Rim 5b		Rim 1		Rim 8		Roman	
	Total	1200-1500		Total	1200-1500	1500-1700	1200-1500	1500-1700	1200-1600	1500-1600	1400-1600	1500-1700	1500-1700	1500-1700	1500-1700	1500-1700	1500-1700	1500-1700	1500-1700	1500-1700	1500-1700	1500-1700	1500-1700	1500-1700	1500-1700	1500-1700	1500-1700	AD 1 - 400	
ANEB2T4	1		13							x		xxx	x	x		x	xxx	x	xxx	x	x	x	xx	x					
ANEB2T1																													
ANEB2T10	2			xx																									
ANEB2T11			3																										
ANEB2T12			1																										
ANEB2T13			3																										
ANEB2T14																													
ANEB2T15			2																										
ANEB2T16																													
ANEB2T2																													
ANEB2T3	2		6																										
ANEB2T5	1		2																										
ANEB2T6	2		2																										
ANEB2T7																													
ANEB2T8			2																										
ANEB2T9	1																												
ANEB3T1																													
ANEB3T2			1																										
ANEB3T3																													
ANEB3T4																													
ANEB3T5																													
ECK1	3		1																										
ECK1T1																													
ECK1T2																													
ECK1T3																													
ECK1T4																													
ECK2	1		1																										











**APPENDIX C: HISTORIC CERAMIC TYPOLOGY FROM SURVEY (BY TRANSECT)**

FUCHIT41																				
FUCHIT42																				
FUCHIT43																				
FUCHIT44																				
FUCHIT45																				
FUCHIT46																				
FUCHIT47																				
FUCHIT48																				
FUCHIT49				1																
FUCHIT5																				
FUCHIT50																				
FUCHIT51																				
FUCHIT52																				
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FUCHIT58																				
FUCHIT59																				
FUCHIT6																				
FUCHIT60																				
FUCHIT7																				
FUCHIT8				1																
FUCHIT9																				
GLUD S1				1																
GLUD2 S1																				
GLUD2 S2																				
GLUD2T1																				
GLUD2T10																				













































**APPENDIX D: HISTORIC CERAMIC TYPOLOGY FROM SURVEYS  
(IMAGES)**

Historic Rim Style 1



Historic Rim Style 2



Historic Rim Style 3



Historic Rim Style 4a



Historic Rim Style 4b



Historic Rim Style 4c





Historic Rim Style 5a



Historic Rim Style 5b



Historic Rim Style 6a



Historic Rim Style 6b



Historic Rim Style 7



Historic Rim Style 8



Historic Rim Style 9



Historic Rim Style 10





Other Various Styles (Modern)



**APPENDIX E: TABULATED TEST UNIT NOTES**

TU Name	Level	Soil Lv	depth (cm) (top of level)	depth (cm) (bottom of level)	Soil description (level)	Soil description (floor)	Feature/anomaly soil	Other inclusions /anomaly	Grv/Pbl/Cbl %	Rts %	artefacts	comments	diagnostic?	phosphate
Leit 1	1	i	13-30	24-36	10YR 3/2 si lo				<5%		20 ceramic sherds (1 rim, mixture prehistoric and historic), charcoal, 1 very small bone frag, 1 green bottle glass, 3 metal frags		historic (rim 1500-1700)	1
Leit 1	2	i	24-36	32-40	10YR 3/2 si lo				<5%		1 ceramic (slipped), 4 ferrous concretion, coal, plastic (discarded)		historic	2
Leit 1	3	ii	32-40	41-50	10YR 3/4 cl lo				<5%		8 ceramic (1 rim, mixed prehistoric and historic), 4 brick/burned clay, charcoal, unid concretion		historic	3
Leit 1	4	ii	41-50	51-54	10YR 3/4 cl lo				<10%		5 ceramic (1 rim, 1 handle), 1 bone frag		historic	4
Leit 1	5	ii	51-54	53-60	10YR 3/4 cl lo		7.5YR 5/6 cl si	limestone			2 ceramic, burned clay, metal	Photo 1,2	historic	4
Leit 1	6	iii	53-60	63-86	7.5YR 5/6 si cl			limestone rocks in N half of unit, <20 cm in diameter			3 ceramic, charcoal, 2 burned clay, 1 bone frag	Photo 3-6 of limestone; limestone has opposite slope of ground surface	historic	4
Leit 1	7	iv	63-86	79-90	10YR 5/4 si cl		10YR 4/2 cl si				1 ceramic (prehistoric), charcoal, UFMO?	limestone rocks removed,	unid prehistoric	n/a

**APPENDIX E: TABULATED TEST UNIT NOTES**

Leit 2	1	3-20	29-35	10YR 4/2 si lo							29 ceramics (prehistoric and historic), metal: 3 nails, 3 frags, buckle (modern), charcoal, 5 burned clay, 1 wood	TU 2 opened directly adjacent to TU 1 (S)	historical	2
Leit 2	2	29-35	39-48	10YR 4/2 si cl					low density limestone		11 ceramic, med bone frag, charcoal, 1 glass			2
Leit 2	3	39-48	48-55	10YR 4/2 si cl							NCM	rodent burrow in NE corner	historical	3
Leit 2	4	48-55	58-65	2.5Y 4/3 cl si			10YR 5/4 si cl				NCM			4
Leit 2	5	58-65	62-75	2.5Y 4/3 cl si			10YR 4/4 cl si, 10YR 5/4 si cl				NCM	same as above		
Leit 2	6	62-75	62-93	10YR 4/6 cl, 10YR 4/3 cl si					high mica content		NCM	connected to TU 1; Photo 9-11; burned clay in "orange" soil		
Leit 2	7	62-93	87-94	10YR 4/4 cl si					ferrous inclusions (natural?)		NCM	removed "orange" clay in TU 2		
Leit 2	8	87-94	111	10YR 4/4 cl si							NCM	limestone deposit		

**APPENDIX E: TABULATED TEST UNIT NOTES**

Inn 1	1	i	10-19	15-27	10YR 3/2 silo					10%	14 ceramics (2 rim, 2 base, prehistoric and historic), 1 cut bone, polished stone?, brick, plastic (discarded)			underneath	historic rim 1500-1700	4
Inn 1	2	ii	15-27	31-37	10YR 4/2 silo						1 bone, 73 ceramics (mostly historic, some prehistoric), 13 metal frags (nails, staple, wire, JFMO), plastic (discarded), glass, burned nut	soil very compact with gravel		rim possible late medieval with recent ceramics	3	
Inn 1	3	ii	31-37	40-43	10YR 4/2 silo						4 bone, 1 metal, 17 ceramics (mostly historic)	soil very compact with gravel		rim possible late medieval with recent ceramics	3	
Inn 1	4	ii	40-43	50-53	10YR 4/2 silo						34 ceramic, tooth, charcoal	artifact density lower, but prehistoric?		historics with few v small possible prehistorics	2	
Inn 1	5	ii	50-53	59-71	10YR 4/2 silo				increasing soft limestone		22 ceramic (2 rim, 1 base, prehistoric and historic), 3 metal frags			historics rim 1400-1600	2	
Inn 1	6	iii	59-71	59-74	10YR 4/3 silo				decaying limestone		NCM	end unit			2	
Eck 1	1	i	0-18	18-31	mottled				some limestone	mod	31 ceramic (prehistoric and historic), 3 bone, 7 metal (bolt, nails), burned clay	plowzone		unid prehistoric and historic	3	

**APPENDIX E: TABULATED TEST UNIT NOTES**

Eck 1	2	i	18-31	19-31				10YR 4/2 si cl, 7.5YR 4/6 cl, 10YR 4/6 si sa	possible plough scar				7 ceramic, 1 metal, burned clay	scraped back to expose floor	LBA/EIA and historic	3
Eck 1	3	ii	19-31	22-31			10YR 4/2 si cl						4 ceramic, 1 metal	removed plough scar	historic	
Eck 1	4	iii	22-31	40-46			10YR 4/4 si cl		Feature 2: 5YR 4/6 si cl				NCM	Feature may be old plough scar, oriented N/S rather than NE/SW; Photo 19- 20		
Eck 1	5		40-46	48-61			10R 4/4 si cl						NCM	NW side of unit appears to be at sterile sub, while SE contains feature and unusual soils (see notebook)		
Eck 1	6		48-61				2.5Y 5/4 si						NCM	removal of olive silt, Photo 21- 27 of Fea 2		
Eck 1a	1	i	8-26	24-40			10YR 4/2 si cl, 10YR 4/6 si cl			limestone and old corn husks			8 ceramic (1 rim), burned clay, 2 metal, shell?	expansion of TU 1 in order to find		

**APPENDIX E: TABULATED TEST UNIT NOTES**

											boundaries of Fea 2; this level was ploughzone removed plough zone	
Eck 1a	2		24-40	31-45		10YR 4/2 si cl, 10YR 4/6 si cl					5 ceramics	
Eck 1a	3		31-45	39-54		2.5Y 5/4 cl si, 7.5YR 5/6 si cl					2 ceramics (1 rim-historic)	
Eck 1a	4		39-54								1 ceramic, 1 metal object (iron fork?), seeds?	brought down to floor of TU 1; Fea 2 continues in this unit, Photo 28-29
Fea 2											see notes for more details	
Knopp 1	1		8-18	24-32		10YR 3/2 si lo					12 ceramic (2 rims, historic and prehistoric), burned clay, bone, teeth, wood, 4 possible beads, charcoal	recent and historic (rims look late medieval)
Knopp 1	2		24-32	27-46		10YR 3/2 si lo, 10YR 5/6 si lo			increasing decayed limestone		4 ceramic, burned clay, 3 possible beads	late medieval rims
Knopp 1	3		27-46	48-54		10YR 4/3 si cl, 7.5YR 4/6 si cl, 2.5Y 5/4 cl si					1 ceramic, burned clay	down into limestone layer; historic

**APPENDIX E: TABULATED TEST UNIT NOTES**

Knopp 2	1	i	13-17	30-31	10YR 3/2 cl lo			some limestone		ceramic, brick, burned clay, metal, plastic (discarded)	sterile; Photo 36- 38	historic	5
Knopp 2	2	i	30-31	33-46	10YR 3/2 cl lo			increasing limestone		5 ceramics, burned clay	ploughzone down into limestone layer; sterile; Photo 39- 41	historic	5
Knopp 3	1	i	11-27	29-39	10YR 4/2 si lo					14 ceramics, burned clay		historic	
Knopp 3	2	i	29-39	44-49	10YR 4/2 si lo					39 ceramic (prehistoric and historic), 3 metal, burned clay, charcoal, broken stones, 1 glass		historic and one prehistoric unid	
Knopp 3	3	i	44-49	53-61	10YR 4/2 si lo					31 ceramic (1 handle, mostly historic), brick, burned clay, 3 metal, charcoal	clearly disturbed; modern brick in floor	historic rim 1500-1700	
Knopp 3	4	i	53-61	60-71	10YR 4/2 si lo					21 ceramic (1 rim), 2 bone, burned clay, charcoal, 1 metal	slight decrease in artefact conc, same as above	historic rim 1500-1700 and few prehistorics	
Knopp 3	5	i	60-71	73-80	10YR 4/2 si lo					13 ceramic (1 rim), burned clay, charcoal, 1 bone, 1 weird rock	artefact density decreasing	historics	
Knopp 3	6	i	73-80	85-94	10YR 4/3 si cl					1 ceramic, burned clay	effectively sterile;		





## APPENDIX F: COMPLETE PHOSPHATE RESULTS

ID #	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	MAX P	AVG P
10M02	1	1								1	1.00
11G13	4	4	5	4	4					5	4.17
2E03	1	1	1	2	2	3				3	1.71
2E04	1	1	1	2	2	2	3	3	4	4	2.11
2E05	2	2	2	2	2	2	2	2	2	2	2.00
2E06	2	2	2	1	1	1	1	1	1	2	1.33
2E07	1	1	2	1	1	2	2	2	1	2	1.44
3E08	1	1	3	3	3					3	2.20
2E09	2	3	4	2	2	2				4	2.50
2E10	3	3	2	2	2	2	2	2	2	3	2.22
2E12	2	2	2	2	2	2	2	1		2	1.88
3E14	1	1	1	2						2	1.25
3E15	1	2	2	2	2	2	2	3	3	3	2.11
3E16	2	1	3	2	2	3	3	3	2	3	2.33
3E17	1	1	1	2	3	2	2	3		3	1.88
3E18	1	3	4	4	4	4	4	4	2	4	3.33
3E19	1	1	1	1	2	2	2	2	3	3	1.56
3E20	1	1	1	1	2	2	3	4		4	1.88
3E21	2	1	2	2	3	3				3	2.17
10K01	2	2								2	2.00
10L01	3	2	2							3	2.33
10L02	2									2	2.00
10M01	2									2	2.00
11A07	4	2	3	3	2	2	2			4	2.57
11A09	4	5	3	3	2	3				5	3.33
11B07	5	4	3	3	3	4	2			5	3.43
11B08	4	3	3	3	2					4	3.00
11B09	2	3	2	3	2	2				3	2.33
11C06	5	4	4	4	4	4	4	3		5	4.00

**APPENDIX F: COMPLETE PHOSPHATE RESULTS**

11C07	2	3	3	2								3	2.60
11C08	4	3										4	3.50
11D06	4	5	4	4								5	4.20
11D08	5	5	5	3								5	4.50
11G14	3	4	4									4	3.67
11H13	4	5	4	5								5	4.50
11H14	4	4	4	4	3							4	3.80
11H15	4	3	3	3	3	3						4	3.14
11I13	4	3	4	4								4	3.60
11I14	3	2	4	3								4	3.00
11J13	4	3	5	4	3							5	3.83
11J14	3	3	4	3	3							4	3.33
11K14	4	3										4	3.50
11OM1	5	3	5									5	4.33
11OM2	4	4	4	3	2	3				2		4	3.13
11OM3	4	3	4	4	3	3						4	3.43
11OM4	4	3	4	4	4	3						4	3.57
11OM5	3	3	4	4								4	3.50
1I17	2	2	1	2	1	2	1			1	1	2	1.56
1J16	5	4										5	4.50
1J17	5	5										5	5.00
1J18	1	1	1	1	1							1	1.00
1K12	4	3	4	3								4	3.50
1K13	2	2	2	3	2	2						3	2.14
1K14	2	2	2	2	2	2	2			2	2	2	2.00
1K15	3	2	2	4	3	2	2			2	2	4	2.44
1K17	2	2	2	2	2	3	2			2	2	3	2.13
1K18	2	2	2	2	2	2	2			3	4	4	2.33
1L13	2	2	3	2								3	2.25
1L14	2	2	2	2	2	2	1			2	2	2	1.78

**APPENDIX F: COMPLETE PHOSPHATE RESULTS**

1L15		2	1	1	2	3	2	2	2	2	3	2.00
1L18	4	5									5	4.50
1M14	2	1	1	1	1	1	1	1			2	1.14
1M15	3	2	2	2	2	2	2	2	2	2	3	2.00
1M17	4	2	2	3	2	2	2				4	2.50
1M18	2	2	1	1	2	2	2	2	1	1	2	1.56
1M20	3	3									3	3.00
1N17	2	2	1	3	1	1	1	1	1	1	3	1.44
1N18	3	2	2	1	1	1	1	1	1	2	3	1.56
1N21	1										1	1.00
1O17	1	1	1								1	1.00
1O18	1	1	1	1							1	1.00
1O19	4	3	3	3	3						4	3.20
1O20	3	2	2	2							3	2.25
1O21	1										1	1.00
2A03	4	4	4								4	4.00
2A04	1	2	2	2	2	2	2	2	2	2	2	1.88
2A05	1	1	1	1	2	2	2	4	2	2	4	1.78
2A06	2	2	2	2	2	2	2	2	2	2	2	2.00
2A07	1	2	2	1	1	1	1	1	2		2	1.38
2A08	1	1	1	1	1	1	1	1	1	1	1	1.00
2A10	1	2	1	2	2	2	2	1	2	2	2	1.67
2A11	2	1	1	2	2	2	2	2	2	1	2	1.67
2A12	1	1	1	1	1	1	1	1	3	2	3	1.33
2A13	1	2	2	2	2	1	2	2	2	2	2	1.78
2A14	1	2	1	2	2	1	1				2	1.33
2B04	4	5	4								5	4.33
2B05	1	1	1	1	1	1	1	1	1	1	1	1.00
2B06	5	5									5	5.00
2B08	2	2	2	2	2	2	2	2	2		2	2.00

**APPENDIX F: COMPLETE PHOSPHATE RESULTS**

2B10		3	4	4	4	3	2	2	2	2					4	2.86
2B12		2	2	3	2	2	2	2	2	2					3	2.14
2B13		1	1	1	2	2	2	2	2	2	1	2			2	1.56
2B14		1	1	1	2	1	1	2							2	1.33
2C03		4	4	3	3	3									4	3.40
2C04		2	4	3	2	4	4								4	3.17
2C05		3	3	3	3	2	2	2							3	2.67
2C06		2	3	3	3	4	4								4	3.17
2C07		3	3	3	2	2	2	2	3		3				3	2.63
2C08		1	1	1	1	1	1	2	1	1	1	1		2	1.11	
2C09		2	1	1	1	2	2	1	1	1	1	1		2	1.33	
2C11		1	2	2	1	3	2	2	2					3	1.86	
2C12		1	3	1	2	2	2	1	2	2				3	1.71	
2C13		2	1	2	1	2	2	2	2	2	2	2		2	1.78	
2D03		4	4	3	3	3								4	3.40	
2D04		2	2	2	2	2	2	3	3		3	3		3	2.44	
2D05		3	3	3	3	2	2	3						3	2.83	
2D06		4	4	5	2	3	1	1	2	2	2	1		5	2.67	
2D07		2												2	2.00	
2D07.2		3	3	3	2	2	2	2	2					3	2.43	
2D08		1	1	1	1	1	1	1	1	1	1	1		1	1.00	
2D09		2	2	2	2	2	2	2	2					2	2.00	
2D11		2	2	3	3	2	2	2						3	2.33	
2D12		1	1	1										1	1.00	
2D13		1	1	2	1	1	1	1						2	1.17	
2F04		2	2	2	2	2	2	2	2	2				2	2.00	
2F05		2	2	2	2	2	2	3						3	2.17	
2F06		2	1	1	1	2	2	1	1	1	1	2		2	1.44	
2F07		1	1	2	1	1	1	1						2	1.17	
2F08		2	5	1	1	1	1	1	1					5	1.83	

**APPENDIX F: COMPLETE PHOSPHATE RESULTS**

2F09	4																					4	2.60
2F10	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.11
2F12	2	1	1	1	2	2	1	1	2	1	2	1	2	1	2	1	2	1	2	1	2	2	1.57
2G04	2	2	1	1	1	1	2	1	2	3	3	3	3	3	3	3	3	3	3	3	3	3	2.00
2G05	2	2	2	2	2																	2	2.00
2G06	3	3																				3	3.00
2G07	1	1	1	1	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2	1.43	
2G08	2	3	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	3	1.78	
2G09	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.22	
2G10	2	2	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1.44	
2H05	3	2	2	3	3	3															3	2.80	
2H06	2	1	1	1	1	1	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	1.44	
2H08	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.38	
2H09	1	2																				2	1.50
2H10	3	3	3	3	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	2.00	
2H11	2																					2	2.00
2I05	1	2	1	1	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	3	1.78	
2I06	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.17	
2I07	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1.14
2I08	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
2I09	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
2I10	2	2																				2	2.00
2I11	2	1	1	1	2																	2	1.50
2J07	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
2J08	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	1	2	1.33
2J09	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.75
2J10	2	2	2	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.57
2K08	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1.22
3A10	1	1	1	1																		1	1.00
3A11	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1.11

**APPENDIX F: COMPLETE PHOSPHATE RESULTS**

3A12	1	1	1	1	1	1	1	1	1	1	2	1			2	1.14
3A13	1	1	1	1	1	1	1	1	1	1	2	1	1		2	1.13
3A14	2	2	3	2	2	3	3	2	2	3	3	2	3	3	3	2.56
3A15	1	1	1	1	1	1	1	1	1	1	2	3	2	2	3	1.78
3A17	1	1	1	1	1	1	1	1	1	1					1	1.00
3A18	1	1	1	1	1	1	1	1	1	1	1				1	1.00
3A19	1	1	1	1	1	1	1	1	1	1	1	1			1	1.00
3A20	1	1	1	1	1	1	1	1	1	2	1	2	2	3	3	1.56
3A21	1	1	2	2	1										2	1.25
3B10	1	1	1	1	2	2	2								2	1.40
3B11	1	3	2	3	3	3	3								3	2.50
3B13	2	2	3	2	2	2	2	1	1	3	3	1	1		3	2.00
3B14	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	1.56
3B15	2	2	3	2	3	3	3	2	2	3	2	3	3	3	3	2.56
3B17	1	1	1	1	2	2	2	2	2	2	2	2	2		2	1.63
3B18	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
3B19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
3B20	1	1	2	2	2	3	3	2	2	3	2				3	1.83
3B21	1	1	1	1	1	1	1	1	1	1	1	2	2		2	1.25
3C14	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2	1.11
3C15	3	2	1	1	1	1	1	1	1	1	1	1	2	2	3	1.56
3C16	2	2	2	2	2	3	3	2	2	3	2				3	2.17
3C17	1	1	1	1	1	2	2	1	2	2	2	3	2	3	3	1.78
3C18	1	2	1	1	2	1	1	2	2	2	2	2	2	2	2	1.67
3C19	2	1	2	2	2	2	2	2	2	2	2				2	1.83
3C20	1	1	3	4											4	2.25
3C21	1	1	1	2	2	2	2	2	2	2	2				2	1.67
3D14	1	2	1												2	1.33
3D15	1	2	1	1	2	2	2	2	2	2	2	2	2	2	2	1.78
3D16	1	1	1	1	1	1	1	2	2	1	2	1	1	1	2	1.13

## APPENDIX F: COMPLETE PHOSPHATE RESULTS

3D17	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2.11
3D18	2	2	2	2	2	2	2	2	2	3	2				3	2.13
3D19	3	3	2	2											3	2.50
3D20	3	3	2												3	2.67
3D21	1	2	2	2											2	1.75
3F08	3	2	2	2	2	2	2	2	2	2	3				3	2.25
3F10	1	1	1	1	2	2	1	2	2	2	2	2			2	1.56
3F13	1	1	1	1	1	1	1	1	2	2	1	3			3	1.33
3F14	1	1	1	1	1										1	1.00
3F15	3	3	4	4	3	3	3								4	3.17
3F17	3	2	4	4	5	4									5	3.67
3F18	2	1	2	2	3	2	2	2	2	2	2	2			3	2.00
3G04	2	2	2												2	2.00
3G05	2	2	3	2	2										3	2.20
3G06	2	1	2	2											2	1.75
3G07	2	1	2	2	2	2	2	1	1	1	1	1			2	1.56
3G08	1	2	2	2	2	1	2	2	2	2	1	2			2	1.67
3G09	4	3													4	3.50
3G10	1	1	2	2	2	1	2	2	2	2	2	2			2	1.67
3G11	2	1	2	2	1	1	1	1	1	1	1	2			2	1.33
3G12	1	1	1	1	1	2									2	1.20
3G13	1	2	2	2	2	2	2	2							2	1.83
3G14	3	1	2	2	1	1	2								3	1.67
3G15	1	2	1	1	2	2	2	1	2	1	2	1			2	1.56
3G16	2	1	1	1	2	3	2	2	3	2	2	2			3	2.00
3G17	2	2	3	2	2	2	2	2	2	2	2	2			3	2.13
3G18	2	2	2	2	2	1	2								2	1.83
3G19	1	2	1	2	2	3	4								4	2.17
3G20	1	1	2	2	1	2	2	2	2	2	2	2			2	1.67
3G21	1	1	1	1	2										2	1.25







## APPENDIX F: COMPLETE PHOSPHATE RESULTS

3L14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
3L14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
3L15	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
3L15	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
3M05	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.33
3M06	4	4	4	3	3	2	2	3	3	3	3	3	3	3	3	3	3.17
3M06.2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.22
3M07	4	4	4	3	2	2	2	2	2	2	2	2	2	2	2	2	2.63
3M08	2	3	3	2	2	3	2	2	2	2	2	2	2	2	2	2	2.29
3M10	2	1	1	2	3	2	2	2	2	2	2	2	2	2	2	2	2.00
3M11	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1.83
3M12	4	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2.75
3M13	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	1.83
3M14	5	4	4	2	1	2	2	2	2	2	2	2	2	2	2	2	2.57
3M15	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1.80
3N03	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
3N04	3	2	2	2	2	3	2	4	4	4	4	4	4	4	4	4	2.67
3N05	1	1	1	2	2	3	2	2	2	2	2	2	2	2	2	2	1.86
3N06	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.89
3N07	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.17
3N08	2	2	2	2	3	2	2	3	3	3	3	3	3	3	3	3	2.25
3N10	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1.75
3N11	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.89
3N12	2																2.00
3N13	2	1	1	3													2.00
3N14	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2.38
3N15	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	2.17
4K11	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
4K12	1	1	1	2	2	1	2	2	2	2	2	2	2	2	2	2	1.57
4K13	1	1	1	2	2	1	2	2	2	2	2	2	2	2	2	2	1.40



**APPENDIX F: COMPLETE PHOSPHATE RESULTS**

AF1M04	2	2	2	1	2	2	2	1	2	2	2	1.83
AF1M05	2	2	2	2	2	2	2	2	2	2	2	2.00
AF1M06	2	2	2	1	2	1	1	1	1	1	2	1.50
AF1M07	1	1	1	1	1	1	1	1	1	1	1	1.00
AF1M08	2	1	1	1	1	1	1	1	1	1	2	1.17
AF1M09	2	1	1	2	2	2	2	2	2	2	2	1.83
AF1N02	2	2	2	2	2	2	2	2	2	2	2	2.00
AF1N03	2	2	2	2	2	2	2	2	2	2	2	2.00
AF1N04	1	2	1	1	1	1	1	1	1	1	2	1.17
AF1N05	2	1	2	2	2	2	2	2	2	2	2	1.83
AF1N06	1	1	1	2	2	2	2	2	2	2	2	1.50
AF1N07	2	2	2	2	2	2	2	2	1	1	2	1.67
AF1N08	2.5	2.5	2	2	2	2	2	2	2	2	2.5	2.17
AF1N09	2.5	2.5	2.5	2	2	2	2	2	2	2	2.5	2.25
AF2A02	3	2	3	3	3	3	3	3	3	3	3	2.75
AF2A03	2	1	2	2	2	2	2	2	2	2	2	1.83
AF2A04	2	2	2	2	2	2	2	2	1	1	2	1.67
AF2A05	2	1	2	1	1	1	1	1	1	2	2	1.50
AF2A06	3	3	3	2.5	2	2	2	2	2	2	3	2.58
AF2A07	2.5	2	2	2	2	2	2	2	2	2	2.5	2.08
AF2A08	1	2	1	2	2	2	2	2	2	2	2	1.67
AF2A09	2	2.5	2.5	2	2	2	2	2	2	2	2.5	2.17
AF2B03	2	2	2	2	2	2	2	2	2	1	2	1.83
AF2B04	2	2	2	2	2	2	2	2	1	1	2	1.67
AF2B05	2	2	2	2	2	2	2	1	1	1	2	1.50
AF2B06	2	2	2	2	2	2	2	2	1	1	2	1.67
AF2B07	2.5	2.5	2.5	2	2	2	2	2	2	2	2.5	2.25
AF2B08	2	2	2	2	2	2	2	2	2	2	2	2.00
AF2C03	2	2.5	2.5	1	1	1	1	1	1	1	2.5	1.67
AF2C04	1	2	2	2	2	2	2	2	2	2	2	1.83

**APPENDIX F: COMPLETE PHOSPHATE RESULTS**

AF2C05	2.5	2	2	1	1	2												2.5	1.75
AF2C06	2.5	2	2	1	1	1												2.5	1.58
AF2C07	2.5	2.5	2.5	2	2	2												2.5	2.25
AF2C08	2.5	2.5	2.5	2	2	2												2.5	2.25
AF2D03	2.5	2	2	2	2	2												2.5	2.08
AF2D04	2	2	2	2	2	2												2	2.00
AF2D05	2	1	1	1	1	2												2	1.33
AF2D06	2	2	2	1	1	1												2	1.50
AF2D07	2	2	2	2	1	1												2	1.67
AF2E03	2.5	3	2	2	2	1												3	1.92
AF2E04	2	2	2	2	2	2												2	2.00
AF2E05	2	1	1	1	1	1				1								2	1.13
AF2E06	2.5	2	2	2	2	2												2.5	2.08
AF2E12	3	3	3	3	2	2												3	2.67
AF2E13	4	4	3.5	3.5	4	4				2								4	3.57
AF2F09	2	2	2	1	2	1												2	1.67
AF2F10	2.5	2	2	2	1	1												2.5	1.75
AF2F11	2	2	2	2	2	2												2	2.00
AF2F12	2	2	2	2	2	2												2	2.00
AF2F13	3	3	3	3	3	2												3	2.83
AF2G08	2	2	2	1	1	1												2	1.50
AF2G09	2	2	2	2	2	2												2	2.00
AF2G10	2	2	2	2	2	2												2	2.00
AF2G11	2	2	2	2	1	1												2	1.67
AF2G12	2	2	2	2	2	2												2	2.00
AF2G13	2	2	2	2	2	2												2	2.00
AF2G14	2	2	2	1	1	1												2	1.50
AF2G15	2	2	1	1	1	1												2	1.33
AF2G16	2	1	1	1	1	1												2	1.17
AF2G17	1	1	1	1	1	1												1	1.00

**APPENDIX F: COMPLETE PHOSPHATE RESULTS**

AF2G18	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
AF2G19	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
AF2G20	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
AF2H08	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.67
AF2H09	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
AF2H10	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.50
AF2H11	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.83
AF2H12	5	1	1	1	2	2	2	2	2	2	2	2	2	2	5	2	2.17
AF2H13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
AF2H14	3	3	2	2	3	2	2	2	2	2	2	2	2	2	3	2	2.50
AF2H15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
AF2H16	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.50
AF2H17	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	1.50
AF2H18	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
AF2H21	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
AF2I06	2	3.5	3	2	2	2	2	2	2	2	2	2	2	2	3.5	2	2.42
AF2I07	3	3	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1.83
AF2I08	3	3	3	2	2	2	2	2	2	2	2	2	2	2	3	2	2.29
AF2I09	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
AF2I10	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.83
AF2I11	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
AF2I12	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.50
AF2I13	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.67
AF2I14	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
AF2I15	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.33
AF2I19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
AF2I20	1	2	2	1	1	1	1	1	1	1	1	1	1	1	2	1	1.20
AF2I21	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2	1	1.40
AF2J06	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.60
AF2J07	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2	2	1.50

**APPENDIX F: COMPLETE PHOSPHATE RESULTS**

AF2J08	2	2	2	2	1	1	1	1	1	1	2	1.50
AF2J09	2	2	2	2	2	2	2	2	2	2	2	2.00
AF2J10	2	2	2	2	2	2	2	2	2	2	2	2.00
AF2J11	2	2	2	2	2	2	2	2	2	2	2	2.00
AF2J12	2	2	2	2	2	2	2	2	2	2	2	2.00
AF2J13	3.5	3	2.5	3	3	2	2	2	2	2	3.5	2.67
AF2J14	3	2	3	2	2	2	2	2	2	2	3	2.40
AF2J16	1	1	1	1	1	1	1	1	1	1	1	1.00
AF2J17	2	2	2	2	1	1	1	1	1	1	2	1.50
AF2J18	2	1	1	1	1	1	1	1	1	1	2	1.17
AF2J19	2	2	1	1	1	1	1	1	1	1	2	1.33
AF2K06	2	2	2	2	2	2	2	2	2	2	2	2.00
AF2K07	1	1	2	2	2	2	2	2	2	2	2	1.67
AF2K08	3.5	4	3	2	2	2	2	2	2	2	4	2.75
AF2K09	2	2	2	2	2	2	2	2	1	2	2	1.83
AF2K10	2	2	2.5	2	2	2	2	2	2	2	2.5	2.08
AF2K11	3	3	2	2	2	2	2	2	2	2	3	2.40
AF2K12					1	1	1	1	1	1	1	1.00
AF2K13				2	2	2	2	2	2	2	2	2.00
AF2K14	2	2	2	2	2	2	2	2	2	2	2	2.00
AF2K15	2	3	2	2	2	1	1	2	2	2	3	2.00
AF2K16	3	1	1	1	1	1	1	1	1	1	3	1.33
AF2L06	3	3	3	3	3	2	2	3	4	3	4	3.00
AF2L07	3	3	3	3	3.5	2	2	2	2	2	3.5	2.75
AF2L08	2	2	2	2	2	2	2	2	2	2	2	2.00
AF2L08	2	2	2	2	2	2	2	2	2	2	2	2.00
AF2L09	1	1	1	1	1	1	1	1	1	1	1	1.00
AF2L09	2.5	2.5	2	2	2	2	2	2	2	2	2.5	2.17
AF2L10	1	1	2	2	1	1	1	1	1	1	2	1.17
AF2L11	2	1	1	1	1	1	1	1	1	1	2	1.17

**APPENDIX F: COMPLETE PHOSPHATE RESULTS**

AF2L12	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
AF2L13	2	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2.33
AF2L14	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.17
AF2L15	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.17
AF2L19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
AF2L20	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
AF2M07	2.5	2.5	2.5	2.5	2	2	2	2	2	2	2	2	2	2	2	2	2.08
AF2M08	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1.17
AF2M09	2	2	1	1	1	1	1	1	1	2	2	2	2	2	2	2	1.78
AF2M10	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
AF2M11	2	2	1	1	1	1	1	1	1	2	2	2	2	2	2	2	1.67
AF2M12	2	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	1.83
AF2M13	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.33
AF2M14	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
AF2M15	2	2	2	2.5	2.5	2	2	2	2	2	2	2	2	2	2	2	2.17
AF2M16	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1.50
AF2M17	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1.50
AF2M18	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.17
AF2M19	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	1.17
AF2N06	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.00
AF2N07	2	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2.17
AF2N08	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	1.50
AF2N09	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.13
AF2N10	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2.17
AF2N11	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1.50
AF2N12	2	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2.17
AF2N13	2	2	2	5	2	2	2	2	2	2	2	2	2	2	2	2	2.50
AF2N14	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
AF2N15	2	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2.17
AF2N16	5	2.5	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2.75



**APPENDIX F: COMPLETE PHOSPHATE RESULTS**

AF3A08	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2	1.50
AF3A09	2	2	2												2	2.00
AF3A10	2	2	3	3	1	1	1	1	1	1	1	1	1	1	3	2.00
AF3A11	3	2	2	1	1	1	1	1	1	1	1	1	1	1	3	1.83
AF3A12	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2	1.50
AF3A13	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2	1.50
AF3A14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
AF3A15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
AF3A16	1	2	2	1	1	1	1	1	1	1	1	1	1	1	2	1.33
AF3B08	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.83
AF3B09	2	2	1												2	1.67
AF3B10	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2	1.50
AF3B11	1	1	2	1	1	1	1	1	1	1	1	1	1	1	2	1.17
AF3B12	1	1	1	1	2	1	1	1	1	1	1	1	1	1	2	1.20
AF3B13	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.17
AF3B14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
AF3B15	1	2	2	2	2	1	1	2	2	2	2	2	2	2	2	1.67
AF3B16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
AF3B17	1	1	1	1	2	2	2	1	1	1	1	1	1	1	2	1.33
AF3B18	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
AF3C08	2	3	3	4	3	3	3	3	3	3	3	3	3	3	4	3.00
AF3C09	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.88
AF3C10	1	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1.17
AF3C11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
AF3C12	1	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1.17
AF3C13	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1.33
AF3C14	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
AF3C15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
AF3D09	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2	1.33
AF3D10	1	1	2	1	1	1	1	1	1	1	1	1	1	1	2	1.20

**APPENDIX F: COMPLETE PHOSPHATE RESULTS**

AF3D11	2	2	1	1	1	1	1	1	1	1	1	2	1.33
AF3D12	1	2	1	1	1	1	1	1	1	1	1	2	1.17
AF3D13	2	1	1	2	1	1	1	1	1	1	1	2	1.33
AF3D14	1	2.5	2	1	1	1	1	1	1	1	1	2.5	1.42
AF3D15	2	1	2	4	1	1	1	1	1	1	1	4	1.83
AF3E10	3	1		1	1	2	2	1	2	2	2	3	1.80
AF3E11	2	2	2	2	2	2	2	1	2	2	1	2	1.83
AF3E12	1	1	2	1	1	1	1	1	1	1	1	2	1.17
AF3E13	2	1	1	1	1	1	1	1	1	1	1	2	1.17
AF3E14	2	1	2	1	1	2	2	1	2	2	1	2	1.50
AF3E15	2.5	2.5	2	1	1	1	1	1	1	1	1	2.5	1.67
AF3E17	1	2	2	1	1	1	1	1	1	1	1	2	1.33
AF3E18	2	2	1	1								2	1.50
AF3F10	2	2	2	2	2	1	1	1	1	1	1	2	1.67
AF3F11	2	2	2	2	2	1	1	1	1	1	1	2	1.67
AF3F12	2	2	1	1	2	2	2	2	2	2	2	2	1.67
AF3F13	2	2	3	2	2	2	2	1	2	2	1	3	2.00
AF3F14	3	3	2	2	2	2	2	2	2	2	2	3	2.33
AF3F15	1	1	1	1	1	1	1	1	1	1	1	1	1.00
AF3F16	1	1	1	1	1	1	1	1	1	1	1	1	1.00
AF3F17	2	2	2	1	1	1	1	1	1	1	1	2	1.50
AF3F18	1	2	2	1	1	1	1	1	1	1	1	2	1.33
AF3G08	3	3	3	3	3	2	2	2	2	2	2	3	2.67
AF3G09	3.5	3.5	3	1	1	1	1	1	1	1	1	3.5	2.17
AF3G10	3	3	3	2	2	2	2	2	2	2	2	3	2.50
AF3G11	3	3	3	3	3	2	2	2	2	2	2	3	2.67
AF3G12	1	1	2	1	1	1	1	1	1	1	1	2	1.17
AF3G13	1	1	2	1	2	2	2	1	2	2	1	2	1.33
AF3G14	1	1	1	1	1	1	1	1	1	1	1	1	1.00
AF3G15	2	2	2	1	1	1	1	1	1	1	1	2	1.50

**APPENDIX F: COMPLETE PHOSPHATE RESULTS**

AF3G16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
AF3G17	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.67
AF3H11	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.67
AF3H12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
AF3H13	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.67
AF3H14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
AF3H15	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
AF3I11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
AF3I12	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	1.17
AF3I13	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.33
AF3J16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
AF3J17	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
AF3J18	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.33
AF3K14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
AF3K15	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.80
AF3K16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
AF3K17	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
AF3K18	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1.17
AF3L14	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
AF3L15	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	1.83
AF3L16	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1.17
AF3L17	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
AF3L18	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
AF3M12	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.67
AF3M13	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.83
AF3M14	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.83
AF3M15	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2.40
AF3M16	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.50
AF3M17	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.17
AF3N12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00

**APPENDIX F: COMPLETE PHOSPHATE RESULTS**

ENZ1	1	1	1	1	1	1	1	1	1	1	2	1	2	1.11
ENZ10	1	1	1	1	1	2	2	1	2	1	2	1	2	1.25
ENZ11	1	1	1	1	1	2	2	2	2	1	2	2	2	1.44
ENZ12	1	2	2	1	2	2	2	2	2	2	2	2	2	1.78
ENZ13	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
ENZ14	1	1	1	2	2	2	2	2	2	2	2	2	2	1.63
ENZ15	1	1	1	2	2	2	2	2	2	2	2	2	2	1.67
ENZ16	2	1	2	2	2	2	2	2	2	2	2	2	2	1.89
ENZ2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
ENZ3	1	3	1	1	1	1	1	2	2	1	2	1	3	1.44
ENZ4	1	1	2	2	1	1	1	1	1	1	1	1	2	1.33
ENZ5	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
ENZ6	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
ENZ7	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
ENZ8	1	1	1	1	1	1	1	1	1	2	2	1	2	1.11
ENZ9	1	1	1	1	2	1	1	1	1	1	1	1	2	1.11
FER1	4	4	3	4	3	5	3	3	3	3	3	3	4	3.60
FER2	5	4	4	3	3	5	3	3	3	3	3	3	5	3.67
FER3	3	2	3	3	1	1	1	1	2	2	2	2	3	1.89
FER4	2	4	3	3	4	2	1	1	1	1	1	2	4	2.22
FER5	3	4	3	3	2	2	2	3	2	3	2	3	4	2.78
FER6	4	3	3	3	3	2	2	2	2	2	2	4	4	2.89
FER7	3	3	4	2	2	2	4	4	3	3	3	2	4	2.89
FER8	3	3	2	4	2	2	2	2	3	4	3	4	4	3.00
GTF16	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
GTF17	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
GTG16	1	2	2	2	2	2	2	2	2	2	2	2	2	1.80
GTG17	1	2	2	2	1	1	1	1	1	1	1	1	2	1.50
GTG18	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
GTH16	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00

**APPENDIX F: COMPLETE PHOSPHATE RESULTS**

GTH17	1	2	1	1	1	1	1	1	1	1	2	1.20
GTH18	1	1	1	1	1	1	1	1	1	1	1	1.00
GTH19	1	1	2	1	1	1	1	1	1	1	2	1.20
GTI16	2	2	1	2	2	2	2	2	2	2	2	1.75
GTI17	2	2	2	1	1	2	2	2	2	2	2	1.80
GTI18	2	2	2	2	2	2	2	2	2	2	2	2.00
GTI19	1	2	1	2	2	2	2	2	2	2	2	1.67
GTJ14	2	3.5	2	2	2	2	2	2	1	2	3.5	2.06
GTJ16	2.5	2	2	2	2	2	2	2	2	2	2.5	2.10
GTJ17	2	2	1	1	1	2	2	2	2	2	2	1.67
GTJ18	1	1	1	1	1	1	1	1	1	1	1	1.00
GTJ20	2	2	2	2	2	2	2	2	2	2	2	2.00
GTK12	2	1	2	1	1	1	1	1	1	1	2	1.25
GTK13	1	1	1	1	2	2	2	2	2	2	2	1.50
GTK15	2	2	2	2	2	2	2	2	2	2	2	2.00
GTK16	2.5	2	2.5	2.5	2	2	2	2	2	2	2.5	2.25
GTK18	2	2	2	1	1	2	2	2	2	2	2	1.80
GTK20	1	1	1	1	1	1	1	1	1	1	1	1.00
GTL11	1	2	2	1	1	2	2	1	1	1	2	1.50
GTL14	1	1	1	1	1	2	2	2	2	2	2	1.20
GTL15	2	2	1	1	1	1	1	2	2	2	2	1.50
GTL16	1	1	1	1	1	1	1	1	1	1	1	1.00
GTL18	2.5	1	1	1	1	1	1	1	1	1	2.5	1.25
GTL20	1	2	2	2	2	2	2	2	2	2	2	1.67
GTM09	1	1	1	1	2	2	2	2	2	2	2	1.50
GTM10	2	1	1	1	1	2	2	2	2	2	2	1.40
GTM13	2	2	2	2	2	2	2	2	2	2	2	2.00
GTM14	1	1	1	1	1	1	1	1	1	1	1	1.00
GTM15	1	1	1	1	2	2	2	2	1	1	2	1.17
GTM16	1	1	1	1	2	2	2	2	2	2	2	1.50

## APPENDIX F: COMPLETE PHOSPHATE RESULTS

GTM17	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
GTM19	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1.33
GTM20	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.86
GTN09	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
GTN12	2.5	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1.75
GTN13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
GTN14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
GTN15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
GTN16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
GTN19	1																		1.00
GTO11	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.38
GTO12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
GTO13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
GTO14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
GTO15	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1.17
GTO17	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
GTO18	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	2	2	1.13
GTO19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
GTP11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
GTP12	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1.20
GTP13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
GTP14	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1.67
GTP16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
GTP17	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
GTP18	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
GTQ12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
GTQ13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
GTQ14	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1.25
GTQ15	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1.50
GTQ16	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1.17

## APPENDIX F: COMPLETE PHOSPHATE RESULTS

GTQ17	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
GTQ18	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
GTR13	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1.22
GTR14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
GTR15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
GTR16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
HG1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
HG2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
HG3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
HG4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
HT1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
HT2	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	1.25
HT3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
HT4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
PSE03	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.75
PSE04	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2.00
PSE05	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1.75
PSE06	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2.00
PSE07	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	2	1.63
PSE08	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
PSE09	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
PSE10	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
PSE11	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
PSE12	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2.17
PSE13	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.83
PSE14	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.67
PSE15	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	2	2	1.50
PSE16	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.67
PSE17	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.80
PSE18	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00

**APPENDIX F: COMPLETE PHOSPHATE RESULTS**

PSF04	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
PSF05	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
PSF06	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
PSF07	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
PSF08	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
PSF09	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1.67
PSF10	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.25
PSF11	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
PSF12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
PSF13	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1.89
PSF14	2	1	1	3	2	2	2	2	2	2	2	2	2	3	2.00
PSF15	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
PSF16	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
PSF17	2	2	2	2	1	2	2	2	2	2	2	2	2	2	1.83
PSF18	2	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.33
SD1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
SD2	2	1	1	2	2	2	2	2	2	2	2	2	2	2	1.80
SD3	1	1	1	2	2	2	2.5	2	2	2	2	2	2	2.5	1.75
SD4	1	1	1	2	2	2	2	2	2	2	2	2	2	2	1.60
SD5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
SD6	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1.44
SD7	1	2	1	1	1	1	1	1	1	1	1	1	1	2	1.11
SD8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
SKA12	1	2	1	1	1	1	1	1	1	1	1	1	1	2	1.17
SKA13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
SKA14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
SKB11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
SKB12	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
SKB13	1	1	1	2	1	1	1	1	1	1	1	1	1	2	1.11
SKB14	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.13



**APPENDIX F: COMPLETE PHOSPHATE RESULTS**

SKC07	2.5	2	2	2	2	1	1	1						2.5	1.83
SKC08	2	2	2	1	1	1	1	1						2	1.43
SKC09	2	2	1	2.5	1	1	1	1						2.5	1.58
SKC10	1	1	1	2	1	1	1	1				1	1	2	1.11
SKC11	1	1	2	2	2	2	2	2						2	1.67
SKC12	2	1	2	2	2	2	2	2						2	1.83
SKC13	2	1	2	2	2	2	2	2						2	1.83
SKC14	1	1	1	1	1	1	1	1				1	1	1	1.00
SKC22	1	1	2	1	2	2								2	1.40
SKD06	1	1	1	1	1	1	1	1				2	2	2	1.25
SKD07	2	2	2	2	2	2	2	2						2	2.00
SKD08	2	2	2	2	2	2								2	2.00
SKD09	3	3	3											3	3.00
SKD10	2	2	2	1	2	1	1	1				1	1	2	1.33
SKD11	1	1	2	2	2	2								2	1.60
SKD12	1	1	1	2	1	1								2	1.20
SKD13	1	1	1	1	1	1	1	1						1	1.00
SKD14	2	2	1	1	1	1	1	1						2	1.33
SKD22	1	1	1	1	1	1	2							2	1.17
SKD23	2	1	1											2	1.33
SKE05	1	1	1	1	1	1	1	1						1	1.00
SKE06	2	2	2	2	2									2	2.00
SKE07	2	2	2	2	2	2								2	2.00
SKE08	2	1	1	2	2	2								2	1.60
SKE09	2.5	2	2	1	1	1	1	1						2.5	1.58
SKE10	1	2	2	2	2	2	2	2						2	1.83
SKE11	1	1	1	1	1	1	1	1						1	1.00
SKE12	1	2	2	1	1	1	1	1						2	1.33
SKE13	1	1	1	1	1	2	2	2				2	2	2	1.50
SKE14	2	2	2	2	2	2	2	2						2	2.00





**APPENDIX F: COMPLETE PHOSPHATE RESULTS**

SKI20	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
SKJ02	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
SKI03	1	1	2	2	2	2	2	2	2	2	2	2	2	2	1.71
SKJ04	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
SKI05	2	2	1	1	1	1	1	1	1	1	1	1	1	2	1.33
SKJ06	2	2	1	1	2	2	2	2	2	2	2	2	2	2	1.33
SKI07	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
SKJ12	2	2												2	2.00
SKK01	2	3.5	1	2	2	2	2	2	2	2	2	2	2	3.5	1.64
SKK02	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.44
SKK03	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.67
SKK04	2	2	2	2	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.25
SKK05	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
SKK06	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
SKK07	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
SKK12	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1.83
SKK13	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1.67
SKK14	2	1	1	1	2	2	2	2	2	2	2	2	2	2	1.25
SKL01	1	2	2	2	1	1	1	1	1	1	1	1	1	2	1.29
SKL02	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.67
SKL03	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
SKL04	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
SKL05	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
SKL12	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1.80
SKL13	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
SKM01	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1.50
SKM02	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.67
SKM03	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00
SKM04	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1.33
SKM11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.00

**APPENDIX F: COMPLETE PHOSPHATE RESULTS**

SKM12	1	2	1	1	1	1						2	1.20
SKM13	1	1	1	1	1	2						2	1.17
SKN01	1	1	1	1	1	1						1	1.00
SKN02	1	2	2	1	1	1						2	1.33
SKN10	2	1	1	2	2							2	1.60
SKN11	2	2	2	1								2	1.75
SKN12	1	1	1	1	1	1						1	1.00
SKO09	1	1	1									1	1.00
SKO10	2	2	1	1	1							2	1.40
SKO11	1	2	1	1	1	1						2	1.17
SKP10	1	1	1	1	1	1						1	1.00
SKP11	1	1	1	1	1							1	1.00

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## APPENDIX F: COMPLETE PHOSPHATE RESULTS

Recipes and Directions for Phosphate test solutions:

**Formula B:** 0.5 (1/2) grams of Ascorbic Acid in 100 ml distilled water

- turns grey when degraded (make new after a few days)

**Formula A:** 100 ml distilled water, 35 ml HCl 6 M, 5 grams Ammonium Molybdate

- add liquids first; immediately shake vigorously for 5 minutes or until completely dissolved
- may turn slightly blue if trace presence of phosphate in water; should not affect results
- make new after one month

**Stop bath:** 64.7 grams Sodium Citrate, 9.24 grams Sodium Bicarbonate, 1 L distilled water

- only need to make new when water is too dirty to use

**Directions:** place a small (pea-sized) amount of each soil sample on filter paper. Put two drops of Formula A on each soil sample, then after 30 seconds, two drops of Formula B. Then after 2 to 2.5 minutes, dip in stop bath, washing off dirt spots, and read.

**Ingredients/Equipment:** distilled water, hydrochloric acid (HCl) 6 molar, sodium citrate, ammonium molybdate tetrahydrate, sodium bicarbonate, ascorbic acid, scale that measures to .1 g, measuring beaker (250 ml), drop bottles, filter paper #4 (Whatman), basin for stop bath, notebooks

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