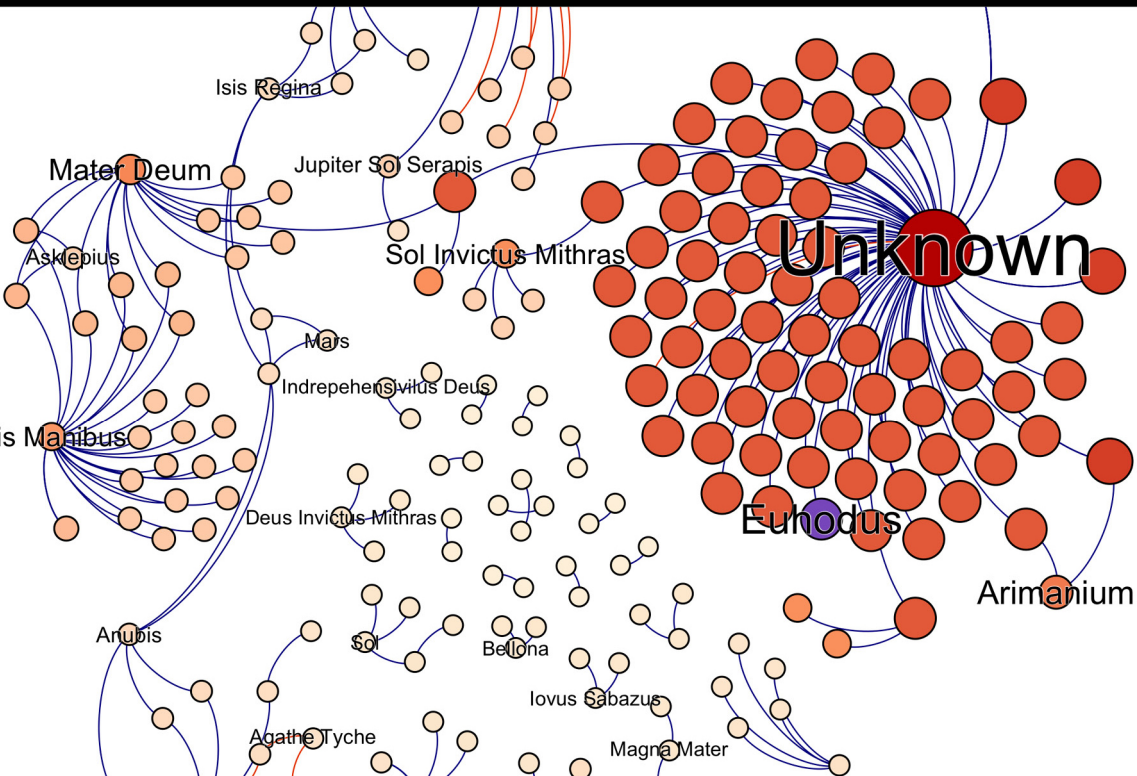


Sandra Blakely
and Megan Daniels (eds.)

Data Science, Human Science,
and Ancient Gods
Conversations in Theory and Method



Data Science, Human Science,
and Ancient Gods
Conversations in Theory and Method

 LOCKWOOD PRESS

Studies in Ancient Mediterranean Religions

Sandra Blakely, Series Editor

Number Three

Data Science, Human Science, and Ancient Gods

Data Science, Human Science,
and Ancient Gods
Conversations in Theory and Method

Edited by

Sandra Blakely and Megan Daniels



LOCKWOOD PRESS

Columbus, GA
2023

Data Science, Human Science, and Ancient Gods

Copyright © 2023 by Lockwood Press

All rights reserved. No part of this work may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or by means of any information storage or retrieval system, except as may be expressly permitted by the 1976 Copyright Act or in writing from the publisher. Requests for permission should be addressed in writing to Lockwood Press, PO Box 1080, Columbus, GA 31901 USA.

ISBN: 978-1-948488-51-8

Cover design by Susanne Wilhelm.

Cover image: Image from Lindsey A. Mazurek, Kathryn A. Langenfeld, and R. Benjamin Gorham, figure 7.5.

Library of Congress Cataloging-in-Publication Data

Names: Blakely, Sandra, 1959- editor. | Daniels, Megan, editor.

Title: Data science, human science, and ancient gods : conversations in theory and method / edited by Sandra Blakely and Megan Daniels.

Description: Columbus, GA : Lockwood Press, 2023. | Series: Studies in Ancient Mediterranean religions ; 3 | Includes bibliographical references and index.

Identifiers: LCCN 2022057575 (print) | LCCN 2022057576 (ebook) | ISBN 9781948488518 (hardcover) | ISBN 9781948488525 (pdf)

Subjects: LCSH: Greece—Religion. | Rome—Religion. | Mythology, Classical. | Science.

Classification: LCC BL790 .D383 2023 (print) | LCC BL790 (ebook) | DDC 292.001/5—dc23/eng20230328

LC record available at <https://lcn.loc.gov/2022057575>

LC ebook record available at <https://lcn.loc.gov/2022057576>

Printed in the United States of America on acid-free paper.

Contents

Contributors	vii
Abbreviations	x
Introduction. New Sciences and Old Gods: A Brief History of the Human Sciences and Ancient Religion <i>Megan Daniels and Sandra Blakely</i>	1
HUMAN SCIENCE: FEASTING, COGNITION, MEMORY, AND PERFORMANCE	
Ritualizing Relations in Early Iron Age Greece: Feasting in Extraurban Sanctuaries <i>Megan Daniels</i>	31
Harnessing the Gods: Big Gods Theory and Moral Supervision in the Greek World <i>Jennifer Larson</i>	71
Festival Souvenirs from Roman Cologne: Connectivity, Memory, and Conceptions of Time <i>Maggie Popkin</i>	93
Roman Strategies of Ritualization and the Performance of the <i>Pompa Circensis</i> <i>Jacob Latham</i>	117
NETWORK MODELS: MATERIAL AND SOCIAL	
Nearness and Experience in a Network of Roman Amphitheaters <i>Sebastian Heath</i>	135
Reflexivity and Digital Praxis: Reconstructing Ostia's Social Networks <i>Lindsey A. Mazurek, Kathryn A. Langenfeld, and R. Benjamin Gorham</i>	175

DATA DRIVEN APPROACHES: QUANTIFYING, DIGITIZING, AND DESCRIBING

The Landscape of Early Greek Religion: GIS , Big Data, and the Complexity of the Archaeological Record <i>Sarah Murray</i>	205
Quantifying Thick Descriptions with the Database of Religious History <i>M. Willis Monroe</i>	223
The Reign of Janus: Signs, Data Science, and Image Worlds in Third-Century BCE Italy <i>Dan-el Padilla Peralta</i>	247
Agency, Affect, Games, and Gods: Archaeogaming and the Archaeology of Religion <i>Sandra Blakely</i>	283
Epilogue. Ancient Religion and Modern Science: A Coevolution <i>Ian Rutherford</i>	321
Subject Index	327
Index of Ancient Sources	340

Contributors

Sandra Blakely is associate professor of Classics at Emory University. Her research foci include religion and magic in the Greek and Roman worlds, digital humanities, maritime mobility, archaeometallurgy, and anthropological and comparative approaches to the ancient Mediterranean. Her current project explores the pragmatic realization of the promises of safe sailing associated with initiation into the mysteries of the Great Gods of Samothrace, positioning epigraphic, legendary, and literary data in social networks and ancient geospaces.

Megan Daniels is assistant professor of ancient Greek material culture at the University of British Columbia. Her interests revolve around several areas, including data science and social sciences approaches to ancient Mediterranean religions, the study of migration and mobility in antiquity, and the shared ideologies of divine kingship between Greece and the Near East. She is currently working on a monograph on this latter topic, and has edited a volume of papers on interdisciplinary approaches to ancient migration, which came out in 2022.

R. Benjamin Gorham is the research data specialist in the Kelvin Smith Library at Case Western Reserve University and the technical director of the Mediterranean Connectivity Initiative. He received his PhD in art history from the University of Virginia, where he was a Mr. and Mrs. John H. Birdsall III fellow. His work focuses on geospatial information recording, network analysis, and digital modeling of Italian sites, including photogrammetric recording. He contributed to the Via Consolare Project at Pompeii, served as the supervisor of geospatial studies at the American excavations at Morgantina: Contrada Agnese Project and provided technical consulting to Archimedes Digital.

Sebastian Heath is clinical associate professor of Roman Archaeology and Computational Humanities at the Institute for the Study of the Ancient World, New York University. His research and field work employ a variety of digital approaches, including data modeling, linked open data, and methods for the virtual recreation of ancient objects, spaces, and experiences.

Kathryn A. Langenfeld is an assistant professor in the Department of History and Geography at Clemson University. She received her PhD in classical studies from Duke University and later held an Andrew W. Mellon postdoctoral fellowship at Rice University. Her research uses history, epigraphy, and archae-

ology to investigate issues concerning political disillusionment, forgery, censorship, and espionage in the Late Roman Empire. Her work has appeared in *Studies in Late Antiquity*, as well as the volume *Beyond Deceit: Valuing Forgery and Longing for Antiquity* (Oxford University Press, 2023). Further epigraphic work on Ostia's Caserma dei Vigili will feature in an upcoming volume of Brill Studies in Greek and Roman Epigraphy.

Jennifer Larson is professor of Classics at Kent State University. Her research interests span the fields of ancient Mediterranean religions, Greek poetry, ancient sexualities, and the cognitive science of religion. She is the author of *Understanding Greek Religion: A Cognitive Approach* (Routledge, 2016), *Ancient Greek Cults: A Guide* (Routledge, 2007), *Greek Nymphs: Myth, Cult, Lore* (Oxford, 2001) and other books, journal articles, and chapters. She is a research affiliate of Oxford University's School of Anthropology and Museum Ethnography and a member of the board of Seshat: Global History Databank.

Jacob Latham is associate professor of history at the University of Tennessee, Knoxville. He is the author of *Performance, Memory, and Processions in Ancient Rome: The Pompa Circensis from the Late Republic to Late Antiquity* (Cambridge University Press, 2016) as well as articles in *Church History*, *History of Religions*, *Journal of Late Antiquity*, *Journal of Religion*, *Memoirs of the American Academy in Rome*, and a number of edited volumes.

Lindsey A. Mazurek is assistant professor in the Department of Classical Studies at Indiana University, Bloomington and codirector of the Mediterranean Connectivity Initiative. She received her PhD in art history from Duke University. Her work focuses on connectivity, transcultural exchange, and mobility in the Roman Mediterranean. Her first book, *Isis in a Global Empire: Greek Identity through Egyptian Religion in Roman Greece*, was published with Cambridge University Press in 2022. Together with Cavan Concannon, she edited *Across the Corrupting Sea: Post-Braudelian Approaches to the Ancient Eastern Mediterranean* (Routledge, 2016). Other work has appeared in *Hesperia*, *American Journal of Archaeology*, *Journal of Roman Archaeology*, and *Classical Review*, and has been supported by the Loeb Classical Library, the Archaeological Institute of America, the International Catacomb Society, and the National Endowment for the Humanities.

M. Willis Monroe is a research associate in the Department of Philosophy at the University of British Columbia and the Associate Director of the Database of Religious History. He received his PhD in Assyriology from Brown University. His work focuses on the history and transmission of science and religion in ancient contexts, with a focus on the Mesopotamian and cuneiform worlds.

In his role as associate director of the DRH he has written extensively on the difficult work of coding historical pasts for quantitative analysis.

Sarah Murray is assistant professor of Classics at the University of Toronto. Her research concerns the archaeology and economy of the Aegean Late Bronze and Early Iron Ages. She has published two books, *The Collapse of the Mycenaean Economy: Trade, Imports, and Institutions 1300–700 BCE* (Cambridge, 2017) and *Male Nudity in the Greek Iron Age: Representation and Ritual Context in Aegean Societies* (Cambridge, 2022), and coedited a third, *The Cultural History of Augustan Rome: Texts, Monuments, and Topography* (Cambridge, 2019). She has also authored or coauthored articles on various topics related to Aegean prehistoric archeology or archaeological methods in journals including the *Journal of Archaeological Research*, *American Journal of Archaeology*, *Journal of Field Archaeology*, *Hesperia*, and *Mouseion*. She presently codirects a survey based in Porto Rafti, Greece.

Dan-el Padilla Peralta is associate professor of Classics, and associated faculty in African American Studies, at Princeton University. He is the author of *Undocumented: A Dominican Boy's Odyssey from a Homeless Shelter to the Ivy League* (Penguin, 2015) and *Divine Institutions: Religions and Community in the Middle Roman Republic* (Princeton, 2020); and he has coedited *Rome, Empire of Plunder: The Dynamics of Cultural Appropriation* (Cambridge, 2017). His main lines of research are Roman Republican religious and cultural history, the history of slavery, and classicisms in the Afro-Atlantic diaspora.

Maggie L. Popkin is the Robson Junior Professor in the Humanities and associate professor of art history at Case Western Reserve University. She is the author of *The Architecture of the Roman Triumph: Monuments, Memory, and Identity* (Cambridge, 2016), *Souvenirs and the Experience of Empire in Ancient Rome* (Cambridge, 2022), and numerous articles on Greek and Roman art and architecture, and coeditor of *Future Thinking in Roman Culture: New Approaches to History, Memory, and Cognition* (Routledge, 2022).

Ian Rutherford is professor of Classics at the University of Reading, UK. His research tends to focus on Greek poetry, on ancient religions and on interactions between the Greek world and other cultures, especially those of Anatolia and Egypt. His most recent book is *Hittite Texts and Greek Religion: Contact, Interaction and Comparison* (Oxford, 2020).

Abbreviations

AA	<i>Archäologischer Anzeiger</i>
AΔ	<i>Αρχαιολογικόν Δελτίον</i>
<i>Adv. nat.</i>	Arnobius, <i>Adversus nationes</i>
<i>Aem.</i>	Plutarch, <i>Aemilius Paulus</i>
<i>Aen.</i>	<i>Aeneid</i>
Aesch.	Aeschylus
<i>Agr.</i>	Cato, <i>De agricultura</i>
AJA	<i>American Journal of Archaeology</i>
AJN	<i>American Journal of Numismatics</i>
AJP	<i>American Journal of Philology</i>
AJS	<i>American Journal of Sociology</i>
<i>An.</i>	Xenophon, <i>Anabasis</i>
<i>Ann.</i>	Tacitus, <i>Annales</i> ; Ennius, <i>Annales</i>
<i>Ant.</i>	Sophocles, <i>Antigone</i>
<i>Ant. Rom.</i>	Dionysius of Hallicarnassus, <i>Antiquitates Romanae</i>
AP	Anthologia Palatina
App.	Appian
Ap. Rhod.	Apollonius Rhodius
Apollod.	Apollodorus mythographus
Ar.	Aristophanes
AR	<i>Archiv für Religionsgeschichte</i>
Archil.	Archilochus
ARD	Varro, <i>Antiquitates rerum divinarum</i>
Argon	Apollonius Rhodius, <i>Argonautica</i>
Arn.	Arnobius
Aug.	Suetonius, <i>Divus Augustus</i>
August.	Augustine
BARIS	BAR International Series
BASOR	<i>Bulletin of the American Schools of Oriental Research</i>
BCH	<i>Bulletin de Correspondance Hellénique</i>
<i>B. Civ.</i>	Appian, <i>Bella civilia</i>
<i>Bibl.</i>	Apollodorus, <i>Bibliotheca</i>
BICS	<i>Bulletin of the Institute of Classical Studies</i>
BICSSup	Bulletin of the Institute of Classical Studies Supplement
BSA	<i>Annual of the British School at Athens</i>
BSAS	British School at Athens Studies

BSASup	British School at Athens Supplementary Volume
BzA	Beiträge zur Altertumskunde
CA	<i>Current Anthropology</i>
Caes.	Plutarch, <i>Caesar</i>
CAH	Cambridge Ancient History
Calig.	Suetonius, <i>Gaius Caligula</i>
CÉFR	Collection de l'École française de Rome
CGRN	<i>Collection of Greek Ritual Norms</i> . http://cgrn.ulg.ac.be/ .
ch(s).	chapter(s)
Cic.	Cicero
CIL	<i>Coprus Inscriptionum Latinarum</i> . Berlin, 1862–.
ClAnt	<i>Classical Antiquity</i>
Claud.	Claudianus
Clem.	Seneca, <i>De clementia</i>
Comp. hist.	<i>Historiarum Compendium</i>
Coriol.	Plutarch, <i>Coriolanus</i>
CP	<i>Classical Philology</i>
CSR	cognitive science of religion
De civ. D.	Augustine, <i>De civitate Dei</i>
Dem.	Demosthenes
De spect.	Terullian, <i>De spectaculis</i>
DHA	<i>Dialogues d'histoire ancienne</i>
Dio Cass.	Dio Cassius
Dion. Hal.	Dionysus of Halicarnassus
Div.	Cicero, <i>De divinatione</i>
Div. inst.	Lactantius, <i>Divinae institutiones</i>
DOP	<i>Dumbarton Oaks Papers</i>
Ep.	Horace, <i>Epodi</i> ; Seneca, <i>Epistulae</i>
EPRO	<i>Études préliminaires aux religions orientales dans l'empire romain</i>
ESR	evolutionary science of religion
ETCSL	<i>Electronic Text Corpus of Sumerian Literature</i> . http://etcsl.orinst.ox.ac.uk
Eum.	Aeschylus, <i>Eumenides</i>
Eur.	Euripides
Fast.	Ovid, <i>Fasti</i>
Fest.	Sextus Pompeius Festus
FGH	Jacoby, Felix. <i>Die Fragmente der griechischen Historiker</i> . Berlin: Weidmann; Leiden: Brill, 1923–1959.
frag(s).	fragment(s)
FRHist	Cornell, Timothy J., ed. <i>Fragments of the Roman Historians</i> . 3 vols. Oxford: Oxford University Press, 2014.
GRF	<i>Grammaticae Romanae fragmenta</i>

HCS	Hellenistic Culture and Society
HdO	Handbuch der Orientalistik
Hdt.	Herodotus
<i>Heliogab.</i>	Scriptores Historiae Augustae, <i>Heliogabalus</i>
<i>Hipp.</i>	Euripides, <i>Hippolytus</i>
<i>Hist. eccl.</i>	Eusebius, <i>Historia ecclesiastica</i>
HN	Pliny, <i>Naturalis historia</i>
HN ^p	Rutter, Keith, et al. <i>Historia Numorum</i> . 3rd ed. London: British Museum Press, 2001–.
Hom.	Homer
HTR	<i>Harvard Theological Review</i>
<i>Hymn. Hom. Ap.</i>	Phokis, <i>Homeric Hymn to Apollo</i>
IG	<i>Inscriptiones Graecae</i> . Berlin: de Gruyter, 1924–.
Il.	Homer, <i>Iliad</i>
ILLRP	Degrassi, Attilio, ed. <i>Inscriptiones Latinae Liberae Rei Publicae</i> . 2 vols. Rome: La Nuova Italia, 1963, 1965.
<i>Iul.</i>	Suetonius, <i>Divus Iulius</i>
JAAAR	<i>Journal of the American Academy of Religion</i>
JAJ	<i>Journal of Ancient Judaism</i>
JAR	<i>Journal of Archaeological Research</i>
JArS	<i>Journal of Archaeological Science</i>
JBL	<i>Journal of Biblical Literature</i>
JFA	<i>Journal of Field Archaeology</i>
JHS	<i>Journal of Hellenic Studies</i>
JMA	<i>Journal of Mediterranean Archaeology</i>
JNG	<i>Jahrbuch für Numismatik und Geldgeschichte</i>
JRA	<i>Journal of Roman Archaeology</i>
JRASup	Journal of Roman Archaeology Supplementary Series
JRS	<i>Journal of Roman Studies</i>
Lactant.	Lactantius
LCL	Loeb Classical Library
Leg.	Plato, <i>Leges</i>
LH	Late Helladic
LIMC	<i>Lexicon Iconographicum Mythologiae Classicae</i> . Düsseldorf: Artemis, 1981–.
Ling.	Varro, <i>De lingua Latina</i>
LTUR	Steinby, Margareta, ed. <i>Lexicon Topographicum Urbis Romae</i> . 6 vols. Rome: Quasar, 1993–2000.
Lyc.	Plutarch, <i>Lycurgus</i>
Lys.	Lysias
MAAR	<i>Memoirs of the American Academy in Rome</i>
Macrob.	Macrobius
Marc.	Plutarch, <i>Marcellus</i>

Mart.	Martial
<i>Med.</i>	Euripides, <i>Medea</i>
<i>MEFR</i>	<i>Mélanges de l'École française de Rome</i>
<i>Mem.</i>	Xenophon, <i>Memorabilia</i>
<i>Merc.</i>	Plautus, <i>Mercator</i>
Min. Fel	Minucius Felix
MnSup	Mnemosyne Supplements
<i>Mor.</i>	Plutarch, <i>Moralia</i>
<i>M TSR</i>	<i>Method & Theory in the Study of Religion</i>
<i>Nat. D.</i>	Cicero, <i>De natura deorum</i>
<i>NC</i>	<i>Numismatic Chronicle</i>
Nic. Dam.	Nicolaus of Damascus
NS	new series
NSA	<i>Notizie degli Scavi di antichità</i>
<i>Num.</i>	Plutarch, <i>Numa</i>
<i>Oct.</i>	Minucius Felix, <i>Octavius</i>
<i>Od.</i>	Homer, <i>Odyssey</i>
<i>OGR</i>	<i>Origo Gentis Romanae</i>
<i>Ol.</i>	Pindar, <i>Olympian Ode</i>
<i>Op.</i>	Hesiod, <i>Opera et dies</i>
<i>Ov.</i>	Ovid
<i>Pan. Ter. Hon.</i>	Claudianus, <i>Panegyricus de Tertio Consulatu Honorii Augusti</i>
Paus.	Pausanias
<i>PBSR</i>	<i>Papers of the British School at Rome</i>
<i>PCPS</i>	<i>Proceedings of the Cambridge Philological Society</i>
Petron.	Petronius
PG	Protogeometric
<i>Phil.</i>	Sophocles, <i>Philoctetes</i>
<i>Planc.</i>	Cicero, <i>Pro Plancio</i>
Plin.	Pliny (the Elder)
Plut.	Plutarch
<i>PNAS</i>	<i>Proceedings of the National Academy of Sciences</i>
<i>Poen.</i>	Plautus, <i>Poenulus</i>
<i>Pol.</i>	Aristotle, <i>Politica</i>
<i>Ran.</i>	Aristophanes, <i>Ranae</i>
<i>REL</i>	<i>Revue des études latines</i>
<i>Resp.</i>	Plato, <i>Respublica</i>
<i>RG</i>	Augustus, <i>Res Gestae Divi Augusti</i>
RGRW	Religions in the Graeco-Roman World
<i>RIC</i>	Sutherland, Carol H. V., and R. A. G. Carson. <i>Roman Imperial Coinage</i> . Rev. ed. London: Spink & Son, 1984.
<i>RIDA</i>	<i>Revue Internationale des Droits de l'Antiquité</i>
<i>Rom.</i>	Plutarch, <i>Romulus</i>

RRC	Crawford, Michael H. <i>Roman Republican Coinage</i> . 2 vols. London: Cambridge University Press, 1974.
Rust.	Columella, <i>De re rustica</i>
Sat.	Macrobius, <i>Saturnalia</i> ; Petronius, <i>Satyrica</i> ; Horace, <i>Satirae</i> ; Juvenal, <i>Satirae</i>
ScAnt	<i>Scienze dell'Antichità</i>
SCI	<i>Scripta Classica Israelica</i>
SCJud	Studies in Christianity and Judaism
SEG	Supplementum epigraphicum graecum
Sen.	Seneca
Serv.	Servius
SHA	Scriptores Historiae Augustae
SNG	<i>Sylloge Nummorum Graecorum</i>
Soph.	Sophocles
<i>De spect.</i>	Tertullian, <i>De spectaculis</i>
Suet.	Suetonius
<i>Supp.</i>	Aeschylus, <i>Supplices</i>
<i>Tab. Her.</i>	<i>Tabula Heracleensis</i>
Tac.	Tacitus
TAPA	<i>Transactions of the American Philological Association</i>
<i>Ti. Gracch.</i>	Plutarch, <i>Tiberius Gracchus</i>
Thgn.	Theognis
<i>Theog.</i>	<i>Theogonia</i>
Thuc.	Thucydides
trans.	translator
UET	Ur Excavations: Texts
Val. Max.	Valerius Maximus
Varr.	Varro
<i>Vesp.</i>	Suetonius, <i>Divus Vespasianus</i>
WAW	Writings of the Ancient World
WGRWSup	Writings from the Greco-Roman World Supplement
YCS	Yale Classical Studies
Xen.	Xenophon
ZPE	<i>Zeitschrift für Papyrologie und Epigraphik</i>