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Introduction

The word ὄστρακον, ‘ostrakon’, seems to have originally designated the shell of a shell-animal, be it a turtle or a clam;¹ from the apparently related word ὄστρεον (for ‘oyster’), the English ‘oyster’, German ‘Auster’, Dutch ‘oester’, and Russian ‘устрица’ ultimately derive. Eventually, ὄστρακον came to mean any shell or sherd, in particular a sherd of a ceramic vessel.² In Aristophanes’ *Frogs* the poet Aeschylus mocks the music in the plays of Euripides by saying that in place of a lyre the Muse of Euripides “is striking pottery sherds”, ἢ τοῖς ὄστράκοις / αὐτῇ κροτοῦσα (ll. 1305–1306). The word could also mean the ceramic vessel itself: annotations on jars from the Athenian Agora feature the genitive ὄστράκου in combination with a weight or volume designation,³ while in the same Aristophanic play Aeschylus narrates a story of the wretched Oedipus, who as a baby was exposed ‘in a pot’, ἐν ὄστράκῳ (*Frogs*, l. 1190). In modern languages, however, ‘ostrakon’ usually refers not just to a potsherd, but to an inscribed sherd. Thus, the Oxford English Dictionary states under ‘ostrakon’: “A potsherd (or occasionally: a piece of limestone) used in the ancient world as a writing surface, esp. for votive or hieratic purposes or (in Greek cities) for voting in an ostracism. Frequently in *plural*.”

The practice of using sherds in the procedure of ostracism in Classical Athens of the fifth century BCE is of course what made the word ‘ostrakon’ famous. There, when a man of standing was perceived as potentially dangerous for the democracy, he could be voted into a ten-year exile through a procedure in which pottery sherds with the names of such individuals scratched on them were used as ballots. The material used for the ballots, the ostraca, gave the name to the voting process, *ostracophoria*, literally ‘carrying of the sherds’, and to the practice of temporary banishment, ‘ostracism’.⁴ Thousands of such ballot-ostraca were discovered during excavations both in the Agora and especially in the Kerameikos in Athens, and they tend to be studied as a separate and peculiar category of inscribed objects associated exclusively with Classical Athens.⁵

1 Chantraine 1974, s. v. ὄστρακον et ὄστρεον.

2 For the meaning ‘shell’, cf., above all, numerous instances of the term in Oppian’s *Halieutica*, but also already the *Homeric Hymn to Hermes*, l. 33.

3 See, for example, Lang 1990, 65, for a discussion and list of references to twelve such items from the Agora, which date from the 2nd through the 6th c. CE.

4 There is a vast amount of scholarly literature on ostracism in Athens; for a brief description of the practice, cf. Kristensen 2013, with further references to major works.

5 For the finds from the Athenian Agora, cf. Lang 1990; for those in the Kerameikos, see now the spectacular edition of Brenne 2018.

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Using pieces of broken pottery for scratching a few words was not a novel idea in the Mediterranean brought to life by the practice of ostracism: sherds with short messages incised with a sharp object and dating from the sixth century BCE to late antiquity are known from Athens and elsewhere, even if not in great numbers.⁶ In order to avoid confusion with ‘classical’ ostraca used in ostracism, these inscribed sherds have been commonly, though rather misleadingly, called not ‘ostraca’, but graffiti.⁷ The latter term refers to the method of inscribing, by scratching, and is conventional in describing various marks made on complete vessels by scratching as opposed to those done in ink and known as *tituli picti* or *dipinti*. Since marks on complete vessels are much more numerous than messages on sherds in the Mediterranean outside Egypt, extending the terminology used for jar-marks to texts inscribed in the same way on sherds seemed unproblematic, especially for those scholars who dealt primarily with Aegean Greece.

In Egypt, however, sherds of broken pottery or pieces of limestone served as a writing surface for short-form writing or drawing since the Old Kingdom (ca. 2600–2200 BCE). Papyrologists dealing with such texts from Egypt became accustomed early on to calling them ‘ostraca’.⁸ Thousands were and continue to be found inscribed in the multitude of languages in use in Egypt over its long history, from Egyptian Hieratic, Demotic, and Coptic to Aramaic, Hebrew, Greek, Latin, Meroitic, Arabic, and more. Increasingly, however, short-form texts on sherds are coming to light outside Egypt, especially from such areas as North Africa or Palestine. Most of them are written in ink, but there are occasional examples of incised sherds; irrespective of the mode of their inscribing it has become common in modern scholarship to call them ostraca, as long as a sherd was used, or rather recycled, as a writing support for the text it bears.⁹

It is the relationship of the text to the ceramic support that distinguishes ostraca from jar inscriptions: While jar inscriptions, which are also often referred to as *dipinti*, *tituli picti*, or docketts, are directly connected to the production of the vessel or its content,¹⁰ texts on ostraca are secondary to the vessel’s original function. Material aspects of sherds used as ostraca, such as their source, context, or fabric can thus be relevant

⁶ E. g., Lang 1976, 8–11, B1–B21; Johnston 1985.

⁷ Thus, Mabel Lang’s 1976 catalogue is entitled “Graffiti and Dipinti” and includes both inscriptions on complete jars and short-form texts inscribed on sherds.

⁸ For the best surveys of the practice of using pottery sherds and limestone flakes as a writing material in Egypt, see Wilcken 1899, 3–19; Bülow-Jacobsen 2009, esp. 15–18; Bagnall 2011, 117–137.

⁹ Cf. P.Gascou 16 or O.Brit.Mus.Copt. 1, p. 17, pl. 13.3, just to give a few examples of incised ostraca from areas where the majority are written in ink. For the use of the term ‘ostraca’ in the papyrological sense for messages inscribed on sherds irrespective of their origin and method of inscribing, see, for example, Dana 2015; Kashaev/Pavlichenko 2015; Sarri 2018.

¹⁰ Scholarship on jar inscriptions, especially for those outside Egypt is vast; for brief general surveys, see, for example, Berdowski 2003 or Edmondson 2014; for material from Egypt, cf. foremost Fournet 2012 with further bibliography.

for elucidating the circumstances of inscribing the texts that they bear.¹¹ Complementing textual data with information derived from the material and the archaeological context of an ostrakon might allow a researcher to tell more about the person who chose the sherd, his or her writing skills, the purpose for which the ostrakon was produced, as well as about the wider social, cultural, and historical context in which it was used.

Recognizing the value of studying ostraca for understanding past societies and seeing it as a distinct subject requiring specific methodological approaches, we arranged an international conference in Heidelberg from 12–14 October 2017, *Using Ostraca in the Ancient World: New Discoveries and Methodologies*. Scholars with expertise in various areas of ancient studies— archaeology, papyrology, ceramology, Egyptology, Semitic studies, and imaging technologies—whose research involves working with ostraca were invited to share their experiences in dealing with this particular writing support and to explore the question of using ostraca as a cultural practice. This volume is the result of this meeting.

The book collects nine papers, in which various aspects of research related to ostraca come into focus and intertwine, from documentation and interpretation of the archaeological context to examination of their physical characteristics to investigation of the types of texts and peculiarities of their content. Most of the material discussed originates in Egypt, albeit from different historical periods; texts from North Africa, Greece, and the Near East receive only limited attention. Ostraca discussed in detail include those inscribed in Aramaic, Greek, and in Egyptian Hieratic, Demotic, and Coptic. Chronologically, they span the Pharaonic to Arabic period. Some papers give a glimpse into current excavations and discuss very recent discoveries, while others apply a modern interdisciplinary approach to long excavated material with the aim of contextualizing earlier findings. While all the papers explore specific features of ostraca as a writing material and of communication practices associated with them, they fall in terms of their focus and coverage into three sections.

Contributions in the first section, “Documentation and Interpretation of Ostraca as Archaeological Objects”, are devoted to the methodology of studying and documenting ostraca in general. It opens with the paper by Paola Davoli “Papyri and Ostraca as Archaeological Objects: The Importance of the Context”, in which she discusses the very principle of viewing papyri and ostraca as archaeological objects, a seemingly obvious approach that, however, has been only recently developed as more scientific and collaborative methods of excavations have become widespread. Since most ostraca finds occur in secondary contexts, frequently dumps, and only in rare

¹¹ Cf. Caputo 2019 on the systematic study of material aspects of sherds used as ostraca and on the question of the possible relationship between the type of sherd chosen and the text written on it. See also The Heidelberg Ostraca Project (HOP) database, which aims to collect and make available information on material aspects of ostraca, <https://ostraka.materiale-textkulturen.de/index.php> (last accessed: 14.2.2020).

cases in primary contexts, the work of an archaeologist in documenting their location is crucial. On several examples, Davoli elucidates the process of understanding the depositional context of ostraca, in which distinct human and non-human actions, positive and negative, need to be determined in order to produce meaningful archaeological stratification, within the matrix of which individual objects could be located.

The insights from Davoli, a field archaeologist, are followed by a ceramological contribution by Clementina Caputo, “Pottery Sherds for Writing: An Overview of the Practice”. Caputo turns her attention to the analysis of types of sherds used as writing supports. Ceramological analysis of inscribed sherds against the background of pottery production and circulation in a given area does not only help identify the vessels from which ostraca originate, but also sheds light on questions of their provenance, chronology and technical production. Caputo surveys the practice of writing on ostraca in different areas of Greco-Roman and Late Roman Egypt (332 BCE–642 CE), while taking into account their physical properties, types of texts inscribed and languages used, as well as the social and historical circumstances in which they originated. This comprehensive approach allows her to make progress in understanding the technology of production of some ostraca as artifacts and to define its characteristics and evolution.

The last paper in the section, “Photography of Papyri and Ostraca”, by Adam Bülow-Jacobsen, provides an overview of the whole range of modern imaging techniques for recording and studying ancient texts on different writing supports (papyri, ostraca, wood, parchment, wax-tablet). While describing a variety of methods that have given good results for documenting and deciphering ancient writing, such as Multispectral Imaging (MSI) or Reflectance Transformation Imaging (RTI), Bülow-Jacobsen devotes particular attention to infra-red photography, a comparatively cheap and easy method that has proved exceptionally fruitful in imaging ostraca. In the space of just a few pages, he manages to explain in a language comprehensible to non-initiated the physics of the discussed methods and to provide guidelines for photographing ostraca in various conditions, including less ideal ones such as those found in archaeological excavations.

Contributions in the next section, “Cultural Contexts and Practices”, look at contexts and practices in association with which ostraca were used as writing material. In “The Survival of Pharaonic Ostraca: Coincidence or Meaningful Patterns?” Ben Haring first gives a bird’s-eye view of limestone and ceramic ostraca and their typology from pre-Hellenistic Egypt. Starting with the first known specimens of pictorial Predynastic and Hieratic ostraca from the Old Kingdom, he discusses the geographical distribution of the finds as well as the relation of their texts to those on papyri, and then focuses on ostraca from New Kingdom Thebes (ca. 1550–1070 BCE). While from most periods of Pharaonic history fewer texts survive on ostraca than on papyrus, many thousands of New Kingdom ostraca produced by both the administrators and the workmen of the royal necropolis have been found in Western Thebes. Haring ponders possible factors that may account for this spike in the evidence while also mapping

the apparent increase and subsequent decrease in production of ostraca within the Ramesside Period (the 19th and 20th Dynasties).

Julia Lougovaya's contribution "Greek Literary Ostraca Revisited" offers an updated survey of the somewhat unexpected use of sherds for literary texts from the Hellenistic to the early Byzantine period (ca. 3rd c. BCE–6th c. CE). It takes as its starting point an overview of such ostraca carried out by Paul Mertens 45 years earlier¹² and outlines rapid gains in the volume of Greek literary ostraca over recent decades as well as changes in scholarly views on what kind of texts could be inscribed on a sherd. It then reviews various cultural contexts in which ostraca inscribed with non-documentary texts are attested, from magic rituals to educational settings to possible theatrical performances. In conclusion and as an example of a type of text that has emerged only recently, an edition of a literary ostrakon from the military fort at Didymoi in the Eastern Desert of Egypt is given. Such texts offer us insight into literary tastes and activities of a wider strata of population than those preserved in the literature transmitted by the manuscript tradition.

The importance of the archaeological context and the find location as well as of the juxtaposition of texts of similar typology but inscribed on different supports are at the center of the contributions in the final section of the volume, "Ostraca in Context: Case Studies", which comprises four papers devoted to ostraca from particular areas or archaeological sites.

Margaretha Folmer's contribution "Hi Aḥuṭab: Aramaic Letter Ostraca from Elephantine", examines the body of ostraca that were found, along with numerous papyri, inscribed in Aramaic and dating mostly to the fifth century BCE on the island of Elephantine at the beginning of the last century. Unlike the papyri, however, ostraca waited a century to be studied and published, a situation that reflects well the long-standing underprivileged position of ostraca in scholarship, further aggravated here by the fact that the Elephantine ostraca are fragmentary and difficult to read. Most of the ostraca concern private matters and served communication between those on the island and on the mainland. Building upon detailed analysis of a few examples, Folmer outlines epistolary characteristics of the letters inscribed on ostraca and compares them with those of letters preserved on papyri. She concludes that letters on ostraca were used between people who appear to know each other well and demonstrates that the messages were concerned mostly with immediate affairs, somewhat akin to modern WhatsApp messages.

Moving on to the Ptolemaic period, the contribution of Marie Pierre Chaufray and Bérangère Redon "Ostraca and *Tituli Picti* of Samut North and Bi'r Samut (Eastern Desert of Egypt). Some Reflections on Find Location" offers an example of scientific collaboration during the excavation and publication of written material. The paper presents ostraca and *tituli picti*, inscribed in Greek and Demotic, from two Ptolemaic

¹² Mertens 1975/1976.

sites in the Eastern Desert. One is a short-lived gold mine in Samut North dated to the late fourth century BCE, very beginning of the Hellenistic period, and the other is the large fortress of Bi'r Samut, located on the road leading from Edfu on the Nile to the Red Sea port of Berenike and occupied until the end of the third century BCE. Through more detailed case studies Chaufray and Redon show that analysis of the connection between the findspots and the content of ostraca or *tituli picti* may bring tangible results by helping not only to determine a date for the texts but also to identify the functions of the rooms where they were found. Yet, as they also demonstrate, in other instances even a well-preserved archaeological context may fail to yield any conclusive stratigraphic information.

Comparison of the types and possible usages of ostraca from two Egyptian temple complexes of the Greco-Roman period form the subject of Sandra Lippert and Maren Schentuleit's contribution "Demotic Ostraca and Their Use in Egyptian Temple Context from the Greco-Roman Period: Soknopaiou Nesos and Hut-Repit." While most of the ostraca from Soknopaiou Nesos in the Fayum come from century-old excavations, recent archaeological exploration of the site has shed some light on possible contexts of the earlier findings; ostraca from the temple complex of Hut-Repit in Middle Egypt, on the other hand, originate in excavations that are still ongoing. The two roughly contemporary sets of material allow the scholars to investigate the forms and types of texts for which ostraca were used and to draw meaningful comparison with the texts inscribed on other writing supports. This leads to some conclusions about the reasons for using ostraca for certain types of texts and about the function of these texts.

The last contribution in the volume, "'Forgive Me, Because I Could Not Find Papyrus': The Use and Distribution of Ostraca in Late Antique Western Thebes", by Jennifer Cromwell, brings us back to the area of Western Thebes investigated in Haring's paper, but focuses on the late antique ostraca inscribed mostly in Coptic. The Theban area provides an excellent opportunity to examine the distribution and use of ostraca from a clearly defined region and chronological period. Yet, as Cromwell points out, despite the wealth of material, the study of ostraca from Thebes is not unproblematic. Many items are given a broad 'Theban' provenance, and one aim of her study is to refine such provenances, with the help of the material properties and content of the ostraca. She examines tendencies in the distribution and use of ostraca by sites and in relation to the text types, with particular consideration given to school texts and specific writers. The contribution concludes with an edition of three Coptic ostraca found at Deir el-Bahri during the Metropolitan Museum of Art's excavations in the early part of the last century, which reflects some of the methodological problems involved in determining the provenance of texts in Western Thebes and in understanding how they circulated.

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