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(NOT) SEE THE WOOD FOR THE TREES? 19,700+ SHERDS OF SIGILLATA AND WHAT WE CAN DO WITH THEM…

Introduction

In its first stage, the ICRATES Project (Inventory of Crafts and Trade in the Roman East), of the Katholieke Universiteit Leuven and supported by the Fund for Scientific Research, Flanders-Belgium (G.0152.04), aims at collecting the published evidence on tablewares for the Eastern Mediterranean between ca. 150 BC and AD 700, in order to investigate and interpret distribution and social patterns of consumption. Apart from reconstructing patterns of exchange, the Project also wishes to examine what role these artefacts played in economic and socio-cultural spheres. The basic methodology to do so is by collecting the available published evidence in a database, quantifying this evidence per region to detect any similarities or differences that then require both further investigation and interpretation. In this paper, in order to illustrate our aims and the opportunities, we will focus on the period of Late Antiquity, specifically the distribution of major tablewares of the period.

Over recent years, several articles and monographs have been published wherein the main focus had been on the production and distribution of the major tablewares of Late Antiquity, especially the Eastern Mediterranean. Most prominent is African Red Slip Ware (hereafter referred to as ARSW), whose production and distribution frameworks are increasingly better understood. Considering the provenance of ARSW, it should not come as a surprise that the ware was prolific in the Western Mediterranean[1], and was shipped to Rome, for example, in great quantities. ARSW is however also common in the Eastern Mediterranean from the early 3rd century AD onward right through the first half of the 7th century AD, although in changing quantities. Albeit the chronological, geographical and quantitative distribution deserves much more detailed study, much *has* been done enabling scholars to hypothetically observe several patterns. When one considers the distribution of ARSW in the Eastern Mediterranean and works towards an interpretation of the evidence, one cannot ignore the available evidence for the other two major tablewares of Late Antiquity: Cypriot and Phocaean Red Slip Wares (hereafter CRSW and PRSW respectively).

When we bear in mind that tablewares were, in principal, transported as secondary cargoes, along with main cargoes such as agricultural products (attested by amphorae), marbles, minerals, and other perishable products as papyri, textiles, wood, and so on, across the Roman Mediterranean, the chronological, geographical and quantitative distribution of tablewares may be used as a criterion for the intensity of more general economic activity[2]. All this economic activity took place by means of political, military, religious and other driving forces. To a certain extent, economic activity may have been institutionalised, for example: the system of the *annona civica* and *annona militaris*[3], or may have been (partly) left to more commercial factors. It appears that exchange mechanisms formed a complicated and interlocking pattern of sea and land-routes, motivations, attitudes towards goods, etc., which is difficult to untangle, especially since archaeological artefacts cannot always reveal the underlying motive or drive responsible for the presence of an artefact at a site[4]. It is by considering the ceramic evidence on a broader scale that patterns may more clearly emerge, and hopefully shed light on this particular artefact and its role in the Roman world. The tableware evidence should under no condition be taken at face value, but rather be used as an indirect guide to clarify certain aspects of the Roman economy. For example, translating a nadir in tableware quantity at a particular period into 'decline' is a misconception. Rather, it indicates that a set of factors, rather than one, were at work and exerted influence on human activity, including economic, and thus also on the distribution of tablewares.

A regional and supra-regional scope appears to join hands with a growing awareness that large-scale perspectives are increasingly required to explain, or at least to improve the understanding of, certain political, economic, and other phenomena. In other words, it reflects a changing attitude towards the aims and methodology of Roman pottery studies.

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1 Reynolds 1995, 6–34.

2 M.G. Fulford, Economic interdependence among urban communities of the Roman Mediterranean. World Arch. 19, 1987, 58–75.

3 Peacock/Williams 1986, 54–66.

4 B. Ward-Perkins, Specialisation, trade, and prosperity: an overview of the economy of the Late Antique Eastern Mediterranean. In: S.A. Kingsley/M.J. Decker (eds.), Economy and exchange in the East Mediterranean during Late Antiquity. Proceedings of a conference at Somerville College, Oxford, May 29th, 1999 (Oxford 2001) 167–178 esp. 172–174; Tomber 2004, 161; for the West, see e.g. C.R. Whittaker, Late Roman trade and traders. In: P. Garnsey/K. Hopkins/C.R. Whittaker (eds.), Trade in the ancient economy (London 1983) 163–180.

What can the ICRATES-Project contribute to these discussions? Considering the potential of a regional and supra-regional scope[5], the first aim here is to illustrate the published evidence collected thus far pertaining to the distribution of ARSW, CRSW and PRSW in the Late Roman Eastern Mediterranean, and to observe and describe certain characteristics of their geographical, chronological and quantitative patterns. Secondly, to compare them to the main observations in the key literature and thirdly, to present some preliminary thoughts on the economic character of the regional distribution of tablewares, and what this may mean within a wider (Eastern) Mediterranean framework.

The collected published evidence

From the late 4th century AD onwards, ARSW, CRSW and PRSW were the three major tablewares circulating in the economic traffic of the Roman East, among which only ARSW was not manufactured in the East[6]. Egyptian Red Slip Ware can perhaps be considered as a fourth, and although its distribution pattern is largely confined to Egypt, it is found in small numbers at sites in modern-day Libya, the south coast of Asia Minor, Cyprus, and at Levantine sites. However, both this ware and the published evidence from the Western Mediterranean are not considered in this paper[7].

Despite a certain number of studies, John Hayes' typochronologies still provide the basic frameworks to categorize these wares and are therefore used by the ICRATES Project[8]. In order to quantify and visualize the collected evidence, a well-known method of distribution developed by E. Fentress and Ph. Perkins enables us to process the data. The quantification and visualization of the collected evidence allows studying chronological and geographical developments[9]. We are fully aware of the fact that at present not all the available published evidence has been studied and included in the database. Nevertheless, the study of the material collected thus far merit some preliminary observations. Nevertheless, the evidence roughly runs parallel to general observed trends (and sometimes not, see below) which strengthens our belief in the approach.

– ARSW. Thus far, 2,070 published sherds of ARSW are collected in the database. It would seem that the production of ARSW started in the first half of the 1st century AD[10], although the earliest of Hayes' Forms date to the second half of the 1st century AD and presumably concern the first forms that were exported. In the Eastern Mediterranean however, the ware only appears in some quantities from the first half of the 3rd century AD onwards. The period between ca. AD 50/75 and 200/225 concerns only a small part of the collected published total. This total collection has been visualized (**fig. 1**) using the method of distribution mentioned above[11].

From the early 3rd century AD onwards ARSW gradually increases until the second quarter of the 4th century AD, after which a strong rise sets in that lasts to the end of that century. After the early 5th century AD, ARSW remains at a fairly even level till the early 6th century AD, but it is around the late 5th century AD that the ware reaches its lowest point. From the early 6th century AD the ware starts to rise steeply, with a slight slump in the third quarter of this century, and reaches a second, apparently even higher peak in the first quarter of the 7th century AD, after which the ware relatively quickly disappears during the second half of that century.

– CRSW. The collected evidence for CRSW has been visualized using the same manner (**fig. 1**), which amounts to 807 sherds. According to Hayes, CRSW appeared towards the late 4th century AD, and in our graph the ware only increases toward the end of the 5th century AD. During the second quarter of the 6th century AD it drops steeply, only to increase quickly afterwards, and the ware reaches its highest peak towards the late 6th–early 7th century AD. After this the ware gradually disappears, and Hayes does not postdate any of his Forms beyond ca. AD 700.

– PRSW. Hayes places the production of his first forms of PRSW in the second half of the 4th century AD. Here, PRSW is represented by a total of 2,302 published sherds collected in the database[12]. From the late 4th century AD the ware strongly increases toward the second quarter of the 6th century AD where it reaches its peak (**fig. 1**). After this, the quantity of the ware plummets and arrives at its lowest point during the third quarter of the 6th century AD PRSW 'immediately' increases again reaching a second, albeit lower, peak during the first quarter of the 7th century AD. As per the other wares, PRSW disappears in the course of this century, and Hayes did not postdate any of his Forms beyond the mid-7th century AD.

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5 Tomber 2004, 160–161.

6 Hayes 1972, 1980.

7 Reynolds 1995, chapter 2.

8 Hayes 1972, 1980.

9 E. Fentress/Ph. Perkins, Counting African Red Slip Ware. In: A. Mastino (ed.), L'Africa Romana. Atti del V Convegno di studio Sassari, 11–13 dicembre 1987 (Sassari 1988) 205–214; E. Fentress/S. Fontana/R. Bruce Hitchner/Ph. Perkins, Accounting for ARSW: fineware and sites in Sicily and Africa. In: S.E. Alcock/J.F. Cherry (eds.), Side-by-side survey. Comparative regional studies in the Mediterranean World (Oxford 2004) 147–162.

10 J. Freed, Pottery report. In: C. M. Wells/M. Carroll/J. Freed/D. Godden, The construction of decumanus VI N and the economy of the early colony of Carthage. In: J.T. Peña/J.J. Rossiter/ A.I. Wilson/C. Wells/M. Carroll/J. Freed/D. Godden, Carthage Papers. The early colony's economy, water supply, a public bath, and the mobilization of state olive oil. Journal Roman Arch. Suppl. Ser. 28 (Portsmouth 1998) 18–63.

11 The decision to illustrate the evidence for ARSW including and excluding Tunisia stems from the idea that the development of a ware within its region of production may have followed different tracks, which is for example proposed by McCormick 2002, p. 55 n. 57. The fact that the two graphs closely follow one another may well result from the fact that only part of the Tunisian evidence is included in our database, as the region falls outside the current scope of the Project. The incorporation of the remaining evidence may or may not force us to interpret the evidence otherwise. It would be equally interesting to compare the evidence on the distribution of ARSW in the Roman East with the admittedly much larger numbers collected, presented and discussed by Fentress et al. 1988 and 2004 (see note 9), which pertains to a number of sites and regions in the Western Mediterranean.

12 The quantity of PRSW includes the large number published from Emporio on Samos (see J. Boardman, The finds. In: M. Ballance/J. Boardman/S. Corbett/S. Hood, Excavations in Chios 1952–1955. Byzantine emporio. Annu. British School Athens Suppl. 20 (London 1989) 86–142. The large numbers of PRSW might skew the graph.

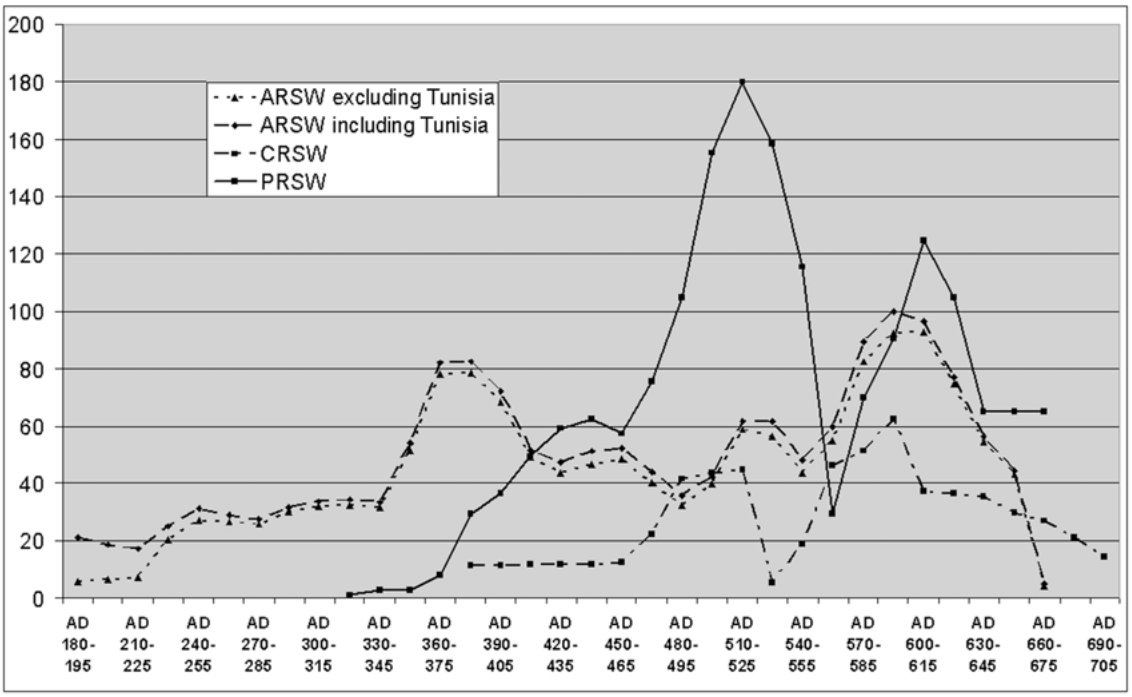

Fig. 1. The distribution of African, Cypriot and Phocaean Red Slip Wares in the Eastern Mediterranean (all graphs in absolute numbers)

It is obvious that the development of each of these three wares is quite uneven; perhaps we may even use the word fickle. All three have their increases and decreases, and highs and lows. This becomes even more illustrative when one compares the developments per region. The developments described above may (slightly) vary with increasing quantities, but we gather that the basic trends as described above, such as the strong peak of PRSW during the second quarter of the 6th century AD, or the increase in ARSW during the late 6th–early 7th century AD, can be explained away. Of course, theoretical margins in the date ranges of the Forms need to be reckoned with and may alter the general outlook of the graph, but can hardly explain away the general trends.

The intention is to indicate, by means of the quantified data, that during certain periods of Late Antiquity, certain wares fared better compared to others. Bearing in mind the hypothesis that tablewares were carried in ships' hulls as secondary cargoes, consequently the distribution of tablewares can shed some light on the intensity and direction of economic activities, this seems to suggest that shifts in economic patterns occurred whereby certain regions became less or more actively involved in (supra-) regional exchange patterns. What does the available literature have to say about the chronological, geographical and quantitative developments of ARSW, CRSW and PRSW?

Comparing the collected evidence and key literature

The most recent and probably most in-depth study presently available is that by Michel Bonifay, and concerns pottery production and distribution in modern-day Tunisia during the Roman period[13]. Over the past few years he has drawn detailed attention to both artisanal and economic aspects, simultaneously pointing out lacunae and possible misconceptions persistent in the research, such as the traditional view that the production of a surplus of olive oil formed the main economic drive for Africa. Important elements for an interpretative framework have become available through his work and those of others. In this particular section the views of Bonifay and others will be briefly highlighted, specifically those pertaining to the distribution of ARSW.

Bonifay does not reject the economic relationship between tablewares and the cultivation, production and distribution of crops and goods. Yet he clearly indicates that these relationships are far from clear, exemplified through the dissimilar distribution patterns of ARSW and African amphorae in the Eastern Mediterranean, to which attention has been drawn already for the Aegean[14]. Provenancing pottery workshops, and the diachronic shifts of the productions that occurred within Africa proper also requires much more attention, together with the typo-chronological framework of the different categories of pottery. Since African cooking wares are also uncommon in the East, Bonifay wonders whether these may not have been shipped together with the amphorae[15]. As far as crops and goods are concerned, grain, rather than olive oil, may have been the main push and pull for the African economy. Bonifay wonders whether ARSW may not have been shipped along with grain cargoes, with grain unfortunately leaving no trace in the archaeological record

[13] BONIFAY 2002; 2003; 2004, esp. 445–486; 2005.
[14] BONIFAY 2003, 120–121; ABADIE-REYNAL 1989, 143–159.
[15] BONIFAY 2003, 128; ID. 2005, 571–572.

except in highly specific circumstances. But for whom was this grain intended? It appears generally accepted that grain for Rome came (in part) from Africa through commercial and institutional networks[16]. For the Late Roman period however, did the Empire rely on Egypt for its grain to provision Constantinople and other major cities and the armies, or did Africa also played a certain role during this period, which seems to be what Bonifay tentatively implies[17]? The economic and other ties between Africa and Italy remained in existence throughout the period of the 5th through 7th centuries AD, and perhaps the larger share of African products was directed to cities and regions in the Western Mediterranean. In general, the State could have played an important, if only directive role, as the main regulatory factor behind the distribution of grain and other produce from Africa, with which ARSW then could lift along.

In the Eastern Mediterranean, ARSW grows in importance geographically and quantitatively in the course of the 3rd century AD[18]. This pattern further condensed during the second half of the 4th and the early 5th century AD, and it is only in this period that the Eastern Mediterranean is considered to have formed part of a Mediterranean-wide *koinè* of tableware distribution[19]. During the second half of the 5th century AD, ARSW is much less common in the Eastern Mediterranean, although Egypt may have been an exception[20]. McCormick notes that this downward development already started during the first half of the 5th century AD, when a decreasing volume is coupled with '*contracting distribution*', a development that apparently set in before the arrival of Vandal tribes in AD 439[21]. Bonifay wonders whether the cause(s) for this decrease should be sought in more general economic activities, or the competition posed by the two Late Roman Red Wares 'indigenous' to the Eastern Mediterranean: CRSW and PRSW. Do we need to consider the role both factors played, or was the latter inherent in the former? The distribution of ARSW increases towards the late 5th and early 6th century AD, and Bonifay emphasizes that this increase was already taking place prior to AD 533, i.e. Justinian's reconquest of Africa[22]. Bonifay characterizes the late 6th and early 7th century AD as a period of '*relatif dynamisme économique*', despite the competition ARSW still faced from the continued production and distribution of CRSW and PRSW in the Eastern Mediterranean[23]? Perhaps the renewal of supplies of grain toward Constantinople and other cities played a role, and in addition Bonifay also draws attention to the wide distribution of African *spatheia* during this period[24]. Concerning this last phase of ARSW distribution, McCormick sees '*significant quantities*' arrive in the East early in the 6th century AD, and distribution continued '*for the rest of its production life*'. However, the second peak seen in our graph, as well as Bonifay's perception of the distribution of ARSW around ca. AD 575–625 (his '*relatif dynamisme économique*'), does not seem to form part of McCormick's discussion. Instead, he speaks of '*the long, drawn-out contraction in volume and geographic distribution that follows* [i.e. the early 6th century AD] *ends in a whisper in the decades after 650*' during which ARSW '*rarely moved inland*'[25]. The most common of Hayes' latest Forms (e.g. Forms 105, 107 and 109) however, appear in modest quantities not only at coastal cities in the Levant, but also at more inland sites in Syria and Israel, some of which appear to have had a military or controlling function[26]. The latest Form of PRSW, Form 10C (ca. AD 600–650/675), is also not uncommon in the Levant and is found on Cyprus. What could explain this difference?

It appears as if the chief literature and the collected evidence roughly run similar, perhaps not surprisingly, and that four main periods can be distilled concerning the distribution of ARSW in the Eastern Mediterranean:

[1] Growth during the 3rd century AD, with a first peak during the second half of the 4th century AD, perhaps into the early 5th century AD;

[2] A decrease after ca. AD 400, with a trough during the second half of the 5th century AD;

[3] An increase in the distribution during the period ca. AD 500–525; and

[4] An increased presence of ARSW during the second half of the 6th and early 7th century AD (although note the difference between the collected evidence and McCormick's observations!).

These decreases and increases in the quantitative and geographical distribution of ARSW, together with typological renewal of both amphorae and tablewares, do not (always?) appear to run parallel chronologically to political/historical events[27]. If indeed the quantitative distribution of ARSW started to decrease already before the Vandal conquest, the impact of the conquest on the artisanal and eco-

16 See ns. 1 & 7.

17 BONIFAY 2003, 115–116; 119–121; 128; ID. 2004, 479; ID. 2005, 576–577.

18 Ibid. 566; 568.

19 Ibid. 568; SODINI 2000, 181; HAYES 2001, 279; MCCORMICK 2002, 55; FULFORD 1984, 112.

20 BONIFAY 2003, 122; ID. 2004, 480–481; ID. 2005, 568–569; SODINI 2000, 181; MCCORMICK 2002, 55; HAYES 1972, 417–419; FULFORD 1984, 113; ABADIE-REYNAL 1989, 144–145.

21 MCCORMICK 2002, 55; FULFORD 1984, 113.

22 BONIFAY 2003, 123; ID. 2004, 482; ID. 2005, 569–570; MCCORMICK 2002, 55; FULFORD 1984, 114.

23 BONIFAY 2003, 123–124; ID. 2005, 571–572; SODINI 2000, 181–182; to a lesser extent see FULFORD 1984, 114.

24 BONIFAY 2003, 127–128.

25 MCCORMICK 2002, 55; FULFORD 1984, 114.

26 See for example R.P. HARPER, Athis – Neocaesareia – Qasrin – Dibsi Faraj. In: J.Cl. Margueron (ed.), Le moyen Euphrate. Zone de contacts et d'échanges. Actes du Colloque de Strasbourg 10–12 mars 1977. Travaux Centre Rech. Proche-Orient et Grèce Antiques 5 (Leiden 1980) 327–348; R.P. HARPER, The pottery in: R.P. Harper, Upper Zohar. An Early Byzantine fort in Palaestina Tertia. Final report of excavations in 1985–1986. British Acad. Monogr. Arch. 9 (Oxford 1995) 21–33 (for redating, see J. MAGNESS, Redating the forts at Ein Boqeq, Upper Zohar, and other sites in SE Judaea, and the implications for the nature of the Limes Palaestinae. In: J.H. Humphrey [ed.], The Roman and Byzantine Near East II [Portsmouth 1999] 189–206; D. ORSSAUD, Annexe. La céramique. In: J. Lauffray, Halabiyya-Zenobia. Place forte du limes oriental et la haute-Mésopotamie au VIe siècle II. L'architecture publique, religieuse, privée et funéraire. Inst. Français Arch. Proche-Orient 138 [Paris 1991] 260–275); C. ABADIE-REYNAL, Les sigillées africaines à Zeugma. In: F. Baratte/V. Déroche/C. Jolivet–Lévy/B. Pitarakis (eds.), Mélanges Jean-Pierre Sodini. Travaux et Mém. 15 (Paris 2005) 523–546.

27 BONIFAY 2003, 121–122; MCCORMICK 2002, 55–56; FULFORD 1984, 256–257.

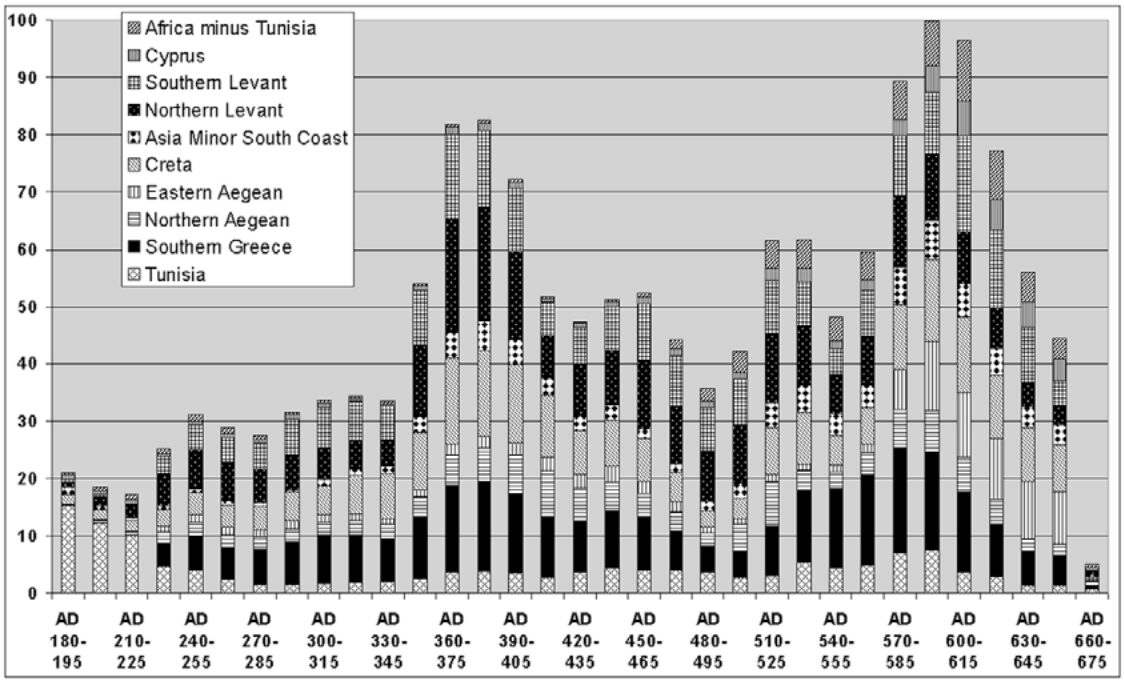

Fig. 2. The distribution of ARSW within the Eastern Mediterranean, separated per region.

nomic framework of Africa may not have been as profound as may be suggested[28]. Equally, if indeed the distribution of ARSW started to increase a generation or so before Justinian's reconquest, why did this happen? It does seem however that after the Vandal conquest and after Justinian's reconquest the quantities of ARSW further decreased and increased respectively, and it is tempting to suggest that these events did affect the economic role of Africa.

There is no full consensus regarding these observations, and the available literature usually discusses these 'highs' and 'lows' in relative terms, occasionally aided by distribution maps that are in need of update every few years. A quantitative approach for the East is made possible through the ICRATES-database as well as by others for the Western Mediterranean[29], and allows the study of such developments in greater detail.

ARSW is, to use the words of M. McCormick, '*far and away the best-studied ceramic from late antiquity*'[30]. But what about the two main other Late Roman Red Wares? PRSW, according to Sodini, reached its '*apogée*' around the second quarter of the 5th century AD, and for Hayes' Form 10 (ca. AD 550–650/675) the phase of '*déclin progressif*' started at this time as well[31]. Sodini pays virtually no attention to CRSW, but rightly points out that the ware has been underestimated in discussions concerning the Late Roman economy[32].

ARSW is indeed the best studied of the three major Late Roman Red Wares, regarding its typo-chronology, production organisation, distribution patterns in both Western and Eastern Mediterranean spheres and its role in the economy of the Roman Mediterranean. The way CRSW and PRSW are included in the debate usually does not go beyond the presentation of numbers, percentages and a quantitative relation to ARSW, occasionally accompanied by a distribution map. But CRSW, and PRSW particularly considering its source area, can attain substantial percentages in the East, specifically in (parts of) the Levant. The distribution of CRSW and PRSW present their own characteristics, which need to be taken into account when one considers economic interaction in the Late Roman Eastern Mediterranean.

In addition to the Mediterranean-wide chronological development of these different wares, regional diversity appears to be a second element of importance to which attention needs to be paid in greater detail. It is also here that the ICRATES-Project hopes to shed some light. To continue this line, ARSW seems the best to start with. In our second graph (**fig. 2**) the collected evidence has been grouped according to region, a division that presently makes more sense than presenting the material per Byzantine *theme* or diocese.

As is to be expected, the general trends observed in the overall distribution for ARSW (**fig. 1**) recur here, although some observations can be refined. The strong increase during the second quarter of the 4th century AD, followed by a substantial decrease from the beginning of the 5th century AD onwards also appears here. This period of lessened distribution lasts until the end of the century, although developments during the 5th century AD do not seem similar. Then something interesting happens. Whereas ARSW increases from the early 6th century AD onwards, again apparently before the reconquest under Justinian, the quantities drop

[28] See e.g. M. RODZIEWICZ, Alexandrie I. La céramique romaine tardive d'Alexandrie (Warsaw 1976) esp. 29.
[29] See n. 9.
[30] MCCORMICK 2002, 53–54.
[31] SODINI 2000, 182.
[32] Ibid.

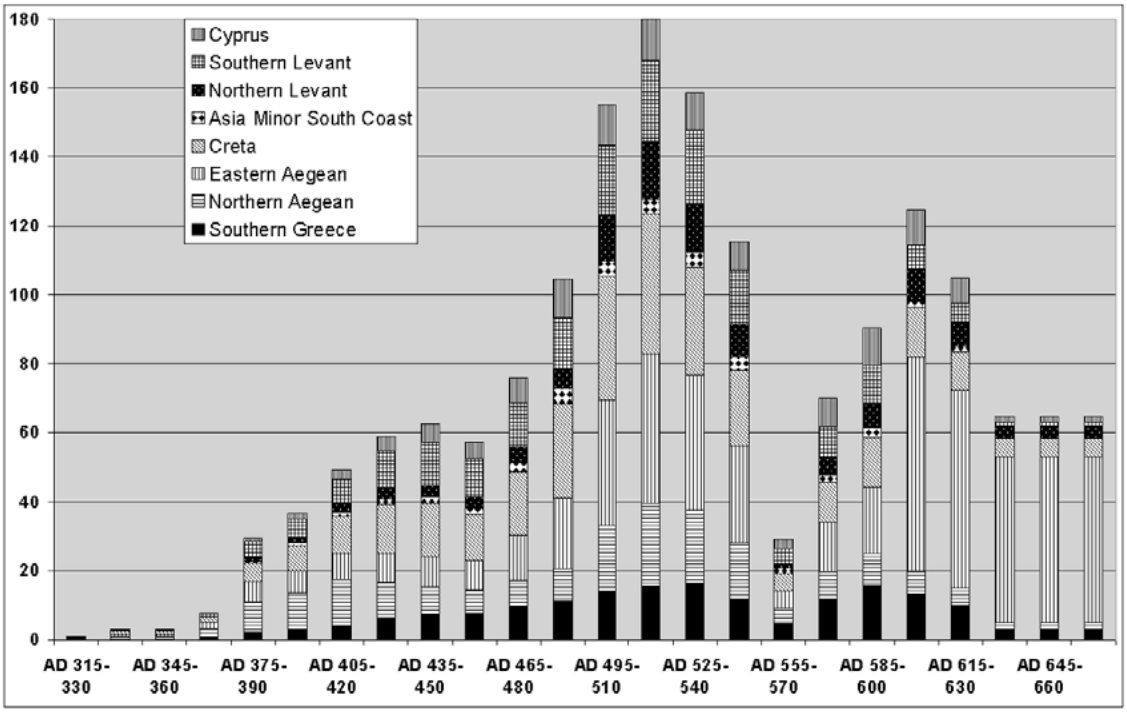

Fig. 3. The distribution of PRSW within the Eastern Mediterranean, separated per region.

considerably during the second and third quarters of the 6th century AD. Remarkably, southern Greece is the only region where ARSW increases during this period. If this reflects renewed economic contacts with Africa, one would expect the northern Aegean to run a parallel course. The small number of sites from this region for which material is available may be one cause; it appears however more likely that the published material available from Southern Greece is sufficient to account for this discrepancy between Southern Greece and the other regions of the Aegean, as PRSW may well have been the major supplier of tablewares in the northern Aegean[33]. In those regions where ARSW shows a drop in quantity during the mid-6th century AD, it increases towards the late 6th and early 7th century AD. Is it here where we may read Bonifay's '*relatif dynamisme économique*'? Concerning this last phase, the fact that the patterns of several of these regions run parallel, e.g. the northern and southern Levant, may actually mean that a reorientation, albeit temporary, took place in terms of the economic patterns.

How do these observations relate to the other two Red Wares? The collected material for CRSW and PRSW has been processed using the same method, and visualized in **fig. 3** (PRSW) and **fig. 4** (CRSW).

The regional developments of PRSW do not differ substantially from the overall graph as seen in **fig. 1**, except for the last phase of its distribution. During the 4th and 5th centuries AD PRSW slowly increased, although several regions such as the northern Aegean show a slightly different development. From the last quarter of the 5th century AD the ware strongly increases, and reached peaks during the second quarter of the 6th century AD. Then a strong and swift decrease sets in, and during the third quarter of the 6th century AD PRSW is scarce in all regions[34]. It increases more or less 'immediately', yet in smaller numbers. The only exception is the Eastern Aegean, but as mentioned above this pattern may be somewhat skewed due to the large numbers published from Emporio on Chios (see n. 12). The drop in the third quarter of the 6th century AD appears somewhat mechanical, as it suggests that the existing range of Forms come to a halt suddenly, and perhaps the decrease may have been less abrupt. On the other hand, we cannot ignore this development, and as such it appears to indicate a decrease in the distribution of PRSW. It is around this time that ARSW increased in quantity (see **fig. 2**).

CRSW, the third major tableware of Late Antiquity, was produced from the late 4th century AD onwards[35]. From the end of the 5th century AD it increases throughout all regions of the Eastern Mediterranean where it is found. The distribution of CRSW peaks for the first time during the second quarter of the 6th century AD, but not long thereafter it plummets only to increase again in the third quarter of the 6th century AD. A second, even higher peak is then attained in the early 7th century AD especially in Cyprus and the Southern Levant, from which regions the largest quantities have

[33] See e.g. V. MALAMIDOU, Roman pottery in context. Fine and coarse wares from five sites in north-eastern Greece. BAR Internat. Ser. 1386 (Oxford 2005), which contains large catalogues of a.o. tablewares from five sites along the northern coasts of the Aegean; the quantity of Late Roman Red Wares is almost negligible.

[34] See however HAYES 2001, 279, who notes a difference in the patterns for the Northern and Southern Levant.

[35] HAYES 1972; ID. 2001, 279, noting the relative increase during the 5th century AD.

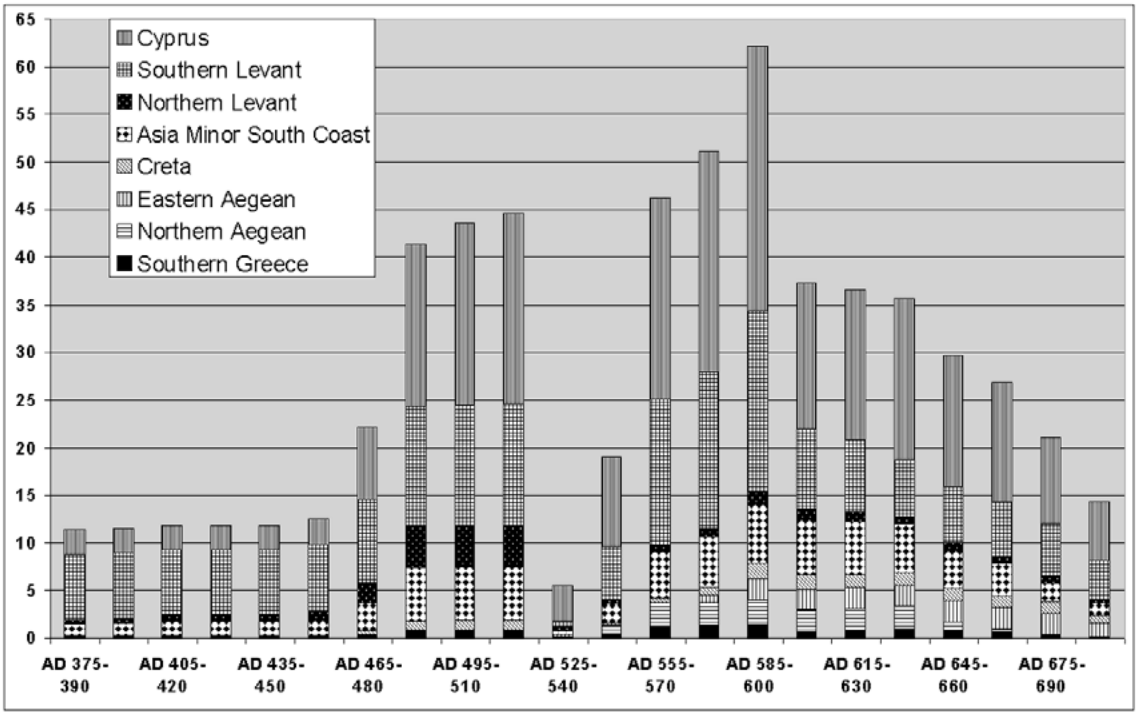

Fig. 4. The distribution of CRSW within the Eastern Mediterranean, separated per region.

thus far been collected. More westward the ware was much less common[36]. After this phase, the ware decreases for the last time and disappears from the Eastern Mediterranean markets toward the end of the 7th century AD. The strong decrease toward the mid-6th century AD is sharp and also appears somewhat mechanical. As for PRSW, this suggests that the end date of the Forms current at the time coincide. Despite taking into account a certain margin for the date range of Forms, it strongly suggests a decrease occurring at this time, indirectly suggesting a lessened exchange with Cyprus, at least as far as tablewares are concerned. What comes to mind is that CRSW appears particularly common in the southern Levant, next to Cyprus of course. To a lesser extent it is found in the northern Levant and the south coast of Asia Minor, whereas on Crete and in the Aegean it is rare. Was this because the geographical scope covered by PRSW (and to a lesser extent ARSW) of the Aegean was perceived by traders? Or did other factors contribute, in addition to natural factors (such as the directions of the wind) that imposed restrictions upon seafaring? Is it because in the Aegean, on Crete and further west CRSW is not commonly found, that Cypriot cargoes in general did not reach these areas, and were only consumed in those harbours with which Cyprus had contact as well as other coastal and inland sites[37]? In other words, are we allowed to sketch more general distribution patterns that are based mainly on tableware distribution? Interestingly however, the distribution of Eastern Sigillata D (or Cypriot Sigillata, ca. 100 BC–AD 200) shows similar characteristics[38].

It is not the aim, nor is there space, to discuss the three wares *per region* in the present context. However, it appears worthwhile to make some general observations on the combined evidence for the three wares. Of course, a comparison of the developments of the three wares is impossible prior to the late 4th century AD, as it is only from then onwards that the distribution of CRSW and PRSW is archaeologically attested.

The quantities of ARSW start to decrease from the early 5th century AD onward, after which PRSW increases whereas CRSW appears on the market but remains moderate and stable till the third quarter of the 5th century AD, its distribution being mainly restricted to Cyprus and the Southern Levant. Then, around the time when the quantitative distribution of ARSW in the Eastern Mediterranean further decreases and reaches a low around AD 500, CRSW but especially PRSW strongly increase in quantity from the third

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36 For instance its slight presence at Gortyn, compared to the large quantities of ARSW and PRSW published from that site: A. DELLO PREITE, Sigillata africana, Sigillata «Late Roman C» («Phocaean Red Slip Ware»), Sigillata cipriota tarda («Cypriot Red Slip Ware»), Altre ceramiche fini tarde. In: A. DiVita/A. Martin (eds.), Gortina II. Pretorio. Il materiale degli scavi colini 1970–1977. Monogr. Scuola Arch. ital. Atene e Missioni ital. Oriente 7 (Padova 1997) 132–200, and M.A. RIZZO, Terra Sigillata italica, Terra Sigillata cipriota («Cypriot Sigillata»), Terra Sigillata macedonica, Terra Sigillata africana, Terra Sigillata LRC, Terra Sigillata color crema, Ceramica cnidia a rilievo. In: A. DiVita (ed.), Gortina Volume V.3. Lo scavo del pretorio (1989–1995). I materiali. Monogr. Scuola Arch. ital. Atene e Missioni ital. Oriente 12 (Padova 2001) 36–67; 72–73; see also REYNOLDS 1995, 36.

37 M.L. RAUTMAN, Kopetra in late antiquity. In: M. L. Rautman, A Cypriot village of Late Antiquity. Kalavasos-Kopetra in the Vasilikos valley. Journal Roman Arch. Suppl. Ser. 52 (Ann Arbor 2003) 235–262 esp. 242.

38 J. LUND, On the circulation of goods in Hellenistic and Early Roman Cyprus: the ceramic evidence. In: L. Wriedt Sørensen/K. Winther-Jacobsen (eds.), Panayia Ematousa II. Political, cultural, ethnic and social relations in Cyprus. Approaches to regional studies. Monogr. Danish Inst. Athens 6,2 (Athens 2006) 31–49 esp. 36–37.

quarter of the 5th century AD onwards, and reach a peak during the second quarter of the 6th century AD. Both CRSW and PRSW start to decrease during the second quarter of the 6th century AD, the former reaching a low around AD 550, and PRSW reaching a low in the third quarter of the 6th century AD ARSW increases again from the late 5th and early 6th century AD onwards, showing a modest and brief drop around the middle of the 6th century AD, only to further increase to reach a second peak in the beginning of the 7th century AD. During the third quarter of the 6th century PRSW shows a substantial decrease in its quantities, around the time when ARSW appears in increasing quantities. Lastly, it is only during the late 6th and early 7th century AD that all three wares simultaneously increase, albeit in different quantities, at least based on the collected evidence at present.

Discussion

It is safe to state that the presence of the three main tablewares of Late Antiquity, ARSW, CRSW and PRSW, at sites often far away from their regions of production, provide sound evidence concerning long distance exchange patterns:

'*The distribution of African Red Slip ware also emphasizes the existence of lively east-west relations that, by way of Crete, directly united Africa with the urban centers of Syria-Palestine, Antioch and Caesarea.*'[39]

Following the hypothesis that tablewares (and other such items), in principal, travelled along with bulk agricultural produce and other foodstuffs (grain, olive oil, wine, fish sauces, etc.) as well as marbles, wood and so on, tablewares may thus serve as indicators of the relative intensity and connectedness of economic exchange between the different regions of the Roman Mediterranean. Despite the fact that evidence is only modestly available for certain regions, the collected evidence does not fail to show that the relative intensity of economic exchange altered on more than one occasion during this period. This incites the question: what factor(s), directly and/or indirectly, caused these developments and to what extent these factors influenced one another?

Sea routes that had been in existence for centuries may have, to a large degree, dictated the way in which goods were distributed. Cultural factors may have been playing a role as well, although natural factors such as prevailing winds were probably the most influential. Traders and alike depended upon such factors, but fluctuations in the quantities of goods distributed should be seen as the result of a more frequent use of certain shipping routes. These contacts took place on different geographical levels, and encompassed direct and/or indirect contacts between settlements and regions. Also, exchange took place with diverse motivations and within different frameworks, and it is the combination of these factors that allows us to construct preliminary explanations concerning the distribution of tablewares, in turn potentially suggestive of the relative intensity of the distribution of other goods, as well as the differing degree in which regions were connected to Mediterranean-wide exchange patterns.

Pertaining to the Roman Mediterranean, one of the Empire's concerns was the supply of its capital(s) and its armies with subsistence goods. Part of the required produce may have been supplied by the surrounding countryside, although the 'Empire' sought after agricultural sources in other regions. Africa was one of the regions appointed for the supply of agricultural produce already during the Early Empire[40], and the fact that the Vandals occupied the region in AD 439 may have influenced the political and economic role of the region, and forced the imperial authorities to turn to other sources. Whether this was one of the underlying motives for the reconquest in AD 533 under Justinian suggests economic policy, in any case in that or the following year the African *annona* was reinstalled[41]. We may suppose that ARSW came along with African cargoes, perhaps grain as Michel Bonifay recently suggested, which played an important role in the *annona*[42]. Do we see the Vandal occupation reflected in the archaeological record, testified by the modest distribution of ARSW during the second half of the 5th century AD? Interestingly, the collected evidence for ARSW seems to indicate that already prior to the Vandal conquest the quantities of ARSW in the Eastern Mediterranean decreased, and that quantities increased prior to the reconquest under Justinian. If the evidence is 'read' correctly, it appears as if other factors were at play that influenced economic exchange in the Eastern Mediterranean, while these *'évenements'* played only a minor or secondary role in economic exchange, specifically regarding Africa. On the other hand, it is interesting to observe that during the second quarter of the 6th century AD, it is only in Southern Greece that ARSW continued to increase in quantity, whereas it decreased in all other regions (**fig. 2**). Is this to be seen as the continuation of, or newly intensified, contacts between Africa and Constantinople, incited by fiscal regulations reflected in the evidence of Southern Greece whose harbours might have functioned as redistributative centres? (One also has apparent 'growth' in case the evidence for Southern Greece remains stable, whilst the evidence for the other regions decreases. Whereas the latter is reflected in **fig. 2**, the evidence for Southern Greece clearly increases which argues for quantitative growth). Perhaps a similar scenario explains the substantial increase in quantities of ARSW from the mid-4th century AD onwards, after the founding of Constantinople which must have meant, at least in part, a reorientation of economic exchange systems[43], and from then on the Eastern Mediterranean may have become a more unitary economic system centred on the Aegean.

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39 C. Morrisson/J.-P. Sodini, The sixth-century economy. In: A.E. Laiou (ed.), The economic history of Byzantium from the seventh through the fifteenth century 2 (Washington D.C. 2002) 171–220 esp. 210.

40 C.R. Whittaker, Africa. In: A.K. Bowman/P. Garnsey/D. Rathbone (eds.), The Cambridge Ancient History[2] 11. The High Empire, AD 70–192 (Cambridge 2000) 514–546 esp. 534–538.

41 See A.J.B. Sirks, Food for Rome. The legal structure of the transportation and processing of supplies for the imperial distributions in Rome and Constantinople. Studia Amstelodamensia A.D. Epigraphicam, ius Antiquum et Papyrologicam Pertinentia XXXI (Amsterdam 1991) chapter 12 esp. § 145; see also n. 4.

42 See ns. 16 & 17; Fulford 1984, 257.

43 Tomber 2004, 161.

The *annona* framework alone surely does not explain economic exchange, but at least claimed part of the volume of economic activity[44]. Perhaps this is echoed in the evidence from Southern Greece, but what do the substantial quantities of ARSW, as well PRSW, further East mean? Are we dealing with large-scale commercial spin-off activities? And why did CRSW, the only major tableware indigenous to the East not gain more ground in the Levant (the same question can be asked for Egyptian Red Slip Ware)? With the change in approach of Roman pottery studies comes the belief that pottery alone cannot, or not always, tell within what exchange mechanisms it circulated[45]. The large numbers of ARSW and PRSW in the Levant may be complementary to the large quantities of eastern amphorae in the Aegean and further west. After all, several regions in the Levant were the source of large quantities of olive oil and wine transported in the well known LR1, LR4, and LR5/6, of which part may have been destined for Constantinople[46]. We see that PRSW increased (**fig. 3**) in the Eastern Aegean and on Crete during the third quarter of the 5th century AD, as well as in other regions such as the Northern Aegean and the Southern Levant. Perhaps the Empire, after Africa was less able to supply the necessary subsistence goods to the Empire, increasingly looked to the East and fully relied on Egypt for its grain? Does this, and if so how, relate to Reynolds' conclusion, that '*the supply of LRC appears to have been continuous from c.AD 450-550*'[47]? In any case, as a result ample opportunities may have been created for institutional as well as commercial activities resulting in intensified contacts between the Aegean and the Levant, wherein Crete and Cyprus may have performed a role as intermediaries in these exchange patterns.

It also appears, partly, as if the different tablewares of Late Antiquity kept one another in balance, so to speak. When ARSW was much less available in the Eastern Mediterranean, it seems as if the distribution of both CRSW and PRSW increased, although not in all regions. Are we dealing with an increase in consumer demand for quality tablewares? And what role did locally made tablewares play: is it possible to observe an increase in such products when the quantity of imported tablewares decreases, or even disappears? Nevertheless, this is sometimes seen as competition between these different wares[48], and perhaps one kind of tableware was more favourable among customers than another on aesthetic grounds. However, taking into account that tablewares were not traded for their intrinsic value (which does not exclude customer preferences), the apparent relationships may, basically, reflect shifts in economic patterns instead of pan-Mediterranean consumer behaviour. Moreover, a general increase in economic exchange favourable to a certain kind of tableware may have been beneficial to other kinds of tablewares as well, and perhaps this is what is observed in **fig. 1**, when during the late 6th and early 7th century AD all three major wares enjoyed quantitative growth.

Conclusion

For obvious reasons, the collected published evidence and the preliminary ideas forwarded above could only be highlighted, and as a result both may appear somewhat general. This and other published evidence will be presented and discussed in greater detail in the doctoral thesis in progress.

In this paper, we have illustrated the aims and possibilities of the ICRATES Project through a case study, which focussed on the distribution of the main tablewares of Late Antiquity in the Eastern Mediterranean. Since it is assumed that tablewares were shipped along with bulk cargoes, the distribution of these tablewares may serve as a relative indicator of the intensity and direction of economic exchange patterns. Studying the distribution of artefacts, in this case tablewares tend to be positivistic in nature. However, much work remains to be done for a more detailed understanding of the workings of the economy, filling in lacunae of archaeological research, pottery studies of the Roman Mediterranean, as well as detailed mapping of regional diachronic production facilities as per example undertaken for Tunisia.

It is obvious that the exchange mechanisms of Late Antiquity were a complex mix of intentions, goods, ideas, and so on. This however should not prevent any attempt, through a detailed study of the published evidence, to unravel the complexities of these patterns and offer explanations for them.

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44 SODINI 2000, 193–196 esp. 196; PEACOCK/WILLIAMS 1986, 54–66.
45 See n. 4.
46 J. DURLIAT/A. GUILLOU, Le tarif d'Abydos. BCH 108, 1984, 581–598.
47 REYNOLDS 1995, 35.
48 See n. 23.

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