

African Red Slip Ware on the move: the effects of Bonifay's *Études* for the Roman East

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Following a brief introduction, this paper is intended to assess the impact of Michel Bonifay's *Études sur la céramique romaine tardive d'Afrique* (2004) on ceramological studies in the Roman East and, more specifically, on the aims and methodology of the ICRATES Project housed at the Catholic University of Leuven.¹ His revision of part of the typo-chronological framework of African Red Slip Ware (hereafter ARS) as originally laid down by J. W. Hayes in 1972 and 1980, in particular, is prone to affect the interpretation of the collected evidence for ARS in the Roman East. This collected evidence for ARS will be presented and considered based on Hayes' original typo-chronological framework, on the one hand, and by combining those of Hayes and Bonifay,² on the other. we conclude by discussing some methodological and interpretative issues.

Roman red-slipped pottery

Red-slipped pottery of Roman date has attracted the attention of scholars since the late 19th c. Notwithstanding some early landmarks (e.g., F. O. Waagé's work on the material from Antioch on the Orontes³), it seems that the 1970s formed a turning point in the conceptual and thematic approaches toward Roman red-slipped pottery. They were significantly affected by J. W. Hayes' seminal *Late Roman pottery* (1972)⁴ and his *Supplement to Late Roman Pottery* (1980),⁵ which are still being widely used today; in Hayes' words, "the publication of *Late Roman Pottery* in 1972 may be said to have marked the close of the initial phase of the study of the later fine wares of the Roman Mediterranean, pioneered by scholars such as Lamboglia and Waagé".⁶ In fact, Tunisia (and especially Carthage) became the subject of intensive archaeological investigation not long after the publication of *Late Roman pottery*, a situation Hayes dealt with in the *Supplement*. Hayes himself studied much of the Roman pottery excavated at Carthage, as did J. A. Riley and M. Fulford, followed by R. Tomber⁷ and others. More recent investigations in Tunisia's non-coastal zones have examined the manufacture of ARS.⁸ Pottery studies over recent decades have resulted in a scholarly agreement that sees Tunisia (or *Africa Proconsularis/Byzacena* and adjoining regions) as one of the major pottery manufacturing areas of the Roman Mediterranean based on, at times integrated, archaeological and archaeometrical research. Bonifay's *Études*⁹ is the most recent landmark in this field.

The ICRATES Project

In addition to its rôle as a dating tool and, to a lesser extent, as a vehicle for illustrating the import-export 'balance' of a deposit, site, or area, Roman red-slipped pottery receives growing attention from a variety of other research angles, amongst which is the conviction that Roman pottery has the potential of contributing to our understanding of the workings of 'the' Roman

¹ The ICRATES (Inventory of Crafts and Trade in the Roman East) Project of the Katholieke Universiteit Leuven is directed by J. Poblome and supported by FWO Research Grant G.0788.09. All dates in this paper are A.D., unless otherwise mentioned. All graphs are presented show absolute numbers.

² Bonifay 2004, 87: "la nomenclature proposée en filigrane pour chaque grande catégorie de mobilier, [...] n'est pas une classification mais un simple index destiné à faciliter la liaison entre le texte et les figures."

³ Waagé 1948.

⁴ Hayes 1972.

⁵ Id. 1980.

⁶ Ibid. xiii.

⁷ E.g., Hayes 1976 and 1977; see also, e.g., Riley 1981, Fulford 1984 and 1994, Tomber 1988.

⁸ E.g., Peacock *et al.* 1990, Mackensen 1993, Slim *et al.* 2008.

⁹ Bonifay 2004.

economy.¹⁰ After all, the wide dispersion of a restricted number of red-slipped tablewares with generally well-known provenances and typo-chronological frameworks cannot but reflect something of a connected socio-economic and socio-cultural Mediterranean.¹¹

In light of the publication tradition of Roman tablewares developed during the 20th c., the time was deemed ripe for an evaluation of its strengths and weaknesses, as well as implicit scholarly paradigms. The general aims of the ICRATES Project are to study, analyse and explain patterns of production, distribution and consumption of Roman material culture. The first phase¹² of the project concentrated on the distribution and consumption of tablewares in the Roman East by collecting the majority of the published record for the E Mediterranean on a sherd-by-herd basis in a relational database-system. To this end, aspects such as fabric identification and recognition (including provenance) and a typo-chronological framework needed to be as accurate as possible. The publication tradition was thus deconstructed to yield a relational database that now includes over 25,000 records, with data collection and processing ongoing. The collected data contains most published excavation sites and survey regions and derives from all the modern countries of the E Mediterranean (Greece, Turkey, Syria, Lebanon, Israel, Jordan, Egypt and Libya).

For processing and visualizing, the method devised by E. Fentress and P. Perkins¹³ is used; despite some methodological drawbacks, it still serves our purposes.¹⁴ The results were laid out in a Ph.D. dissertation, *A geographical and chronological study of the distribution and consumption of tablewares in the Roman East*, submitted by one of us to the Katholieke Universiteit Leuven in 2007. As categories of Roman tablewares are thought to reflect the direction and intensity of economic exchange, studying, analyzing and interpreting the variation (notably the geographical, chronological and quantitative changes) in these categories aimed to reconstruct patterns of exchange. More importantly, it focused on an understanding of the factors that shaped, influenced and altered the system and nature of economic exchange, as far as the collected evidence could be taken. The second leg of the ICRATES Project, which began in January 2009, moves within and beyond the ceramic dimension by focusing on the emic context of the typo-chronological evolution of tablewares in the Roman East.

The ICRATES database holds a substantial number of entries of ARSW, a category of tableware that was widely dispersed in the East from the 3rd but especially from the 4th until the 7th c. All the ARSW entered into the database thus far is classified (directly or indirectly) according to J. W. Hayes' typo-chronological framework. However, in light of Bonifay's study in which the date ranges of a number of Hayes' Forms are revised, we have an opportunity to make a comparison between the graph that was based on Hayes' classification, on the one hand, and a combination¹⁵ of Hayes' and Bonifay's classifications, on the other. Although the differences between the two graphs are not (except in one part) dramatic, it seems worthwhile to pay some attention to them as it touches upon certain issues of methodology, as well as aspects of Late Roman economic history.

¹⁰ E.g., Tomber 1993 and 2004; McCormick 2002.

¹¹ Horden and Purcell 2000.

¹² This research was supported by the Fund for Scientific Research–Flanders (FWO-Research Project G.0152.04). The ceramic focus was on the 4 main Eastern sigillatas, Italian sigillata, Çandarlı Ware, and the three major Late Roman Red Slip Wares (ARSW, CRSW, and PRSW). In addition, a wide variety of other categories of tablewares is collected in the database: e.g., Italian thin-walled wares, Gaulish sigillata, (early imperial) lead-glazed wares, Koan/Knidian bowls/cups, Egyptian and Tripolitanian Red Slip Wares, and so on.

¹³ Fentress and Perkins 1988; Fentress *et al.* 2004.

¹⁴ For a first survey of the aims, the methodology, and some preliminary results, see Bes and Poblome 2006.

¹⁵ Bonifay did include some forms of the 1st to 4th c. Although quantitatively these do not always appear to have played an important rôle in the E Mediterranean, their dispersion can be used as a tool in an attempt to reconstruct (major) lines of exchange. Bonifay did not redate *all* post-4th c. forms.

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African Red Slip Ware

ARSW is one of the better-known red-slipped tablewares of the Mediterranean. Despite its central Mediterranean origin, it is found in quantity at eastern sites, not only in large urban centres of the littoral but at interior regions, including sites that seem to have been of non-urban status.¹⁶

Despite important research having been carried out and certain exceptions notwithstanding,¹⁷ the general situation for the study of tableware in the E Mediterranean is far less developed than for ARSW. As also seems to be the case with Italian Sigillata,¹⁸ the picture for ARSW appears to grow ever more complex in light of new excavations and surveys, archaeometrical analyses, and other evidence. This growing complexity, however, enables scholars to map the regional manufacturing infrastructure with the agricultural and artisanal development of *Africa Proconsularis/Byzacena*, which offers, in theory, a better understanding of the dispersion of ARSW within a diachronic socio-economic and socio-cultural framework.¹⁹ Moving beyond stating that an object travelled from A and ended up at B in order to reconstruct the spheres of producers, distributors, merchants and consumers, and the ways in which these parties interacted, should contribute to a better understanding of the workings of the Roman economy (or economies?).

ARSW in the ICRATES database

A total of 3,660 individual entries of ARSW has been collected in the database. Most entries could be identified by form, yet a fair number are (also) identified by stamped motif.²⁰ This figure, of course, is dwarfed by what the output of the manufactories of *Proconsularis/Byzacena* and the resulting distribution must have been. Yet although this realization is essential, the broad geographical and chronological scope of the ICRATES project can still offer good possibilities. Our approach plays down the impact of individual publications (a selective catalogue, for example, or one that is chronologically limited). The collected evidence from the 4th to the 7th c. reveals patterns on both regional and macro-regional scales that comply with published quantified pottery data, as well as general discussions about the evolution of exchange patterns and the economy, and it offers tentative clues for formulating modified or alternative hypotheses. The potential for interpretation derives not from the database alone, which is basically a static collection of data, but from a comparison of quantitative, geographical and chronological developments of the different categories of tablewares. In this paper, however, the focus will solely be on ARSW.²¹ The trends to be discussed are based on the evidence as it was used by P. Bes in his associated doctoral research, in addition to evidence collected since.²²

New chronologies: shaking hands?

This is the place neither to present a full overview of the published record that is included in the database²³ nor to discuss the evidence in detail by region. Instead, the data will be taken as a whole with, where appropriate, reference to observations made in the original research.

¹⁶ E.g., Orssaud 1980, Rossiter and Freed 1991, Harper 1995, Slane 1997, Rautman 2003, and Lund 2006.

¹⁷ E.g., Sagalassos Red Slip Ware: see Poblome 1999; id. *et al.* 1998.

¹⁸ E.g., Poblome *et al.* 2004; Oxé, Comfort and Kenrick 2000.

¹⁹ Unfortunately, few publications that pertain to the E Mediterranean have made use of the A-E fabric classification. For a synthesis and discussion of the regional production framework in *Proconsularis/Byzacena*, see Bonifay 2004, 45-65.

²⁰ When a vessel is identified by form and stamped motif, it is not counted twice. Both parameters are included in the ICRATES database.

²¹ For a discussion and interpretation of the distribution of the three major red slip wares of the Late Roman period in the E Mediterranean, see Bes and Poblome 2008.

²² This newly entered data was relatively small in quantity and did not alter the original conclusions.

²³ In addition to three unpublished collections of pottery (from Greece and Jordan), some 320 publications have been entered at the time of writing.

Fig. 1.

The collected evidence, which excludes entries west of a line drawn from Berenice to Nikopolis²⁴ and is based upon Hayes' classification, is represented in fig. 1. Such graphs (not commonly used by most other scholars²⁵) can capture major diachronic developments.

Although the following paragraphs will rely heavily on ARSW as a tool capable of explaining patterns of exchange, we need to add some perspective. Economically, *Proconsularis/Byzacena* had other 'cards up its sleeve' that were of much greater value to the area's economy proper. Olive oil, grain and, to a lesser extent, wine are regarded as its surplus products.²⁶ Yet if the 'secondary cargo hypothesis' is thought to be a structural element of Roman Mediterranean trade,²⁷ the distribution of ARSW could be considered as proxy evidence, mirroring the lines along which contacts took place diachronically. In reality, however, intra- and inter-regional trade will have been extremely complex structures.

Before we move to a comparison between this graph and the one that shows the evidence using Hayes' and Bonifay's classifications combined, we may point out some aspects which underlie the most important observations. First, the strong peak for the mid-3rd c. is largely accounted for by the evidence from Berenice.²⁸ By omitting the evidence from Berenice, a more 'realistic' picture is created for the East (Berenice might not be seen as truly 'eastern' geographically, but perhaps rather as an intermediary between West and East — see the uninterrupted line in fig. 1). Evidently, Berenice received ARSW earlier and in much greater quantities than anywhere else in the East. The reason for adding the evidence from Berenice is to draw attention to the following matter. It shows that an interpretation may be heavily influenced by a single publication regardless of the historical, political and economic significance of the site in question. It can be argued that the typo-chronological framework used, and perhaps even the methodology used, can equally shape our thoughts in ways that need not always be correct. The strong peak on the graph is followed by a strong decrease in the quantity of ARSW — also accounted for by the evidence from Berenice.²⁹ Perhaps Berenice (and possibly Cyrenaica as a whole) was the easternmost limit of the *core* dispersion of ARSW until after the earlier part of the 3rd c., when this limit shifted to incorporate the East more generally.³⁰ After all, some ARSW was already present in the East earlier in the 3rd c. and before (e.g., at Dura Europos).³¹ Perhaps Cyrenaica was able to market an acceptable surrogate for ARSW because outgoing trade from *Africa Proconsularis/Byzacena* (a trade that included ARSW) became more focused elsewhere, or obtained an acceptable surrogate from a source closer to Berenice that largely supplanted the arrival and consumption of ARSW.³² (not clear to me)

If, from now on, the dotted line is considered (which means excluding Berenice), we find a strong surge of ARSW in the East around the mid-4th c., which is traditionally associated with the founding of Constantinople in 330.³³ Although the actual 'founding' of Constantinople probably did not contribute to the change in the distribution of ARSW in *direct* terms, it does designate a major shift in the orientation of economic and other patterns that had developed during the first two to three centuries A.D. With the empire's capital being located more centrally and at a great distance from Rome came a new pivotal point in administrative,

²⁴ Some 1,200 entries of the c.25,000 in the database derive from sites in the W Mediterranean (predominantly Carthage).

²⁵ J. Lund, however, makes ample use of such graphs: e.g., Lund 1995 and 2006; see also Malfitana 2002.

²⁶ Bonifay 2003, 2004, and 2005.

²⁷ Fulford 1987; Parker 1992.

²⁸ Kenrick 1985.

²⁹ Note, however, that at Berenice "finds attributable to the fourth and early fifth centuries were very limited and not a single coin of the fifth century was found": Kenrick 1985, 3.

³⁰ Reynolds 1995, 108-9. At Ostia, N African pottery "rose dramatically" between the early 2nd and early 3rd c., from c.20 to 85%, a trend that continued throughout the 4th c.

³¹ Cox 1949.

³² Tripolitanian Red Slip Ware may have partly fulfilled this rôle in Late Roman times: Kenrick 1985, 387.

³³ Cameron 2005.

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political, military, diplomatic, and economic terms. It is in this context that an explanation for a re-orientation in the distribution of ARSW during the second half of the 4th c. needs to be placed. The phenomenon, however, seems to be short-lived. Toward the end of the 4th c. quantities were dropping again,³⁴ a decrease which continued until the late 5th c., though with differing intensities. The Vandal incursions of the 430s (Carthage fell in 439) are quite often mentioned as the factor that caused a decline in ARSW moving around the (eastern) Mediterranean,³⁵ yet it seems as if this decrease began earlier by several decades, which suggests that the Vandals need not have been the sole factor. Perhaps they influenced the manufacture of ARSW only slightly. Yet if a shrinking quantity of ARSW flowed into the E Mediterranean (the distributional aspect), what about the actual production output? Another point to consider is that the manufacture of Phocaeian and Cypriot Red Slip Wares began by the late 4th c., according to present knowledge.³⁶ Perhaps these partly replaced ARSW on eastern markets, while the peak in the second half of the 4th c. was a unique phenomenon reflecting the new geo-political situation in which cultural and economic exchange could flourish. Factors influencing the dispersion of a category of Roman tableware could be functioning at different levels.

From the late 5th right into the early 7th c. we find a clear and strong upsurge of ARSW flowing into the E Mediterranean — much more pronounced than the peak which is (tentatively) linked to the effects of the foundation of Constantinople. This, the strongest peak, may have been a side-effect of Justinian's reconquest which brought certain areas (such as *Proconsularis/Byzacena*) within the sphere of control and under the umbrella of taxation (i.e., taxation in kind, for which N African grain is a possible candidate³⁷). This would mirror the shifting political-economic situation in the Mediterranean; but there is a dilemma, for the

Fig. 2.

graph leaves no doubt that several decades *prior* to Justinian's reconquest (which returned *Proconsularis/Byzacena* to the empire in 533-534) ARSW was on the rise again. Perhaps other factors were at play that promoted the renewed dispersion of ARSW, with Justinian's reconquest simply giving it another push in the 'right' direction. Finally, in the course of the 7th c. the dispersion of ARSW steadily dropped, although production seems to have continued into the 7th, possibly even into the early 8th c.³⁸

Because of the long tradition and the different methodological approaches towards pottery processing and study, the collected evidence is liable to be skewed, but it seems unlikely that the pattern attested is to be explained solely by such irregularities in the published evidence. While the published record is uneven for certain areas of the East, the research admittedly did suggest that southern Greece, for example, received a broader range of forms, including some rare(r) ones. During the second and third peaks, as well as in the intervening period, a relatively larger share of ARSW flowed into the area. Probably this was the result of southern Greece's geographical location between *Proconsularis/Byzacena* and Constantinople, which allowed it to profit from these economic and other ties, even in 'bad' times.³⁹

Fig. 3.

³⁴ Fulford 1984, 113.

³⁵ Hayes 1972, 423; Waagé 1948, 56-57; Abadie-Reynal 1989, 150.

³⁶ Phocaeian Red Slip Ware: Hayes 1972, 323. Cypriot Red Slip Ware: Hayes 1972, 371; but see also Meyza 2007, 43-44, on the possible continuation between the earlier Cypriot Sigillata and the later Cypriot Red Slip Ware.

³⁷ Bonifay 2003, 2004, and 2005.

³⁸ For a more detailed discussion of the collected evidence, including that for Cypriot and Phocaeian Red Slip Wares, see Bes and Poblome 2008.

³⁹ This observation is supported by the collected evidence from the survey of ancient Tanagra, and possibly also that of Koroneia (Boeotia), directed by J. Bintliff (University of Leiden) and Bozidar Slapčak (University of Ljubljana), both of whom are involved in processing and studying the Late Hellenistic to Late Roman pottery. For preliminary results see, e.g., Bes, Poblome and Bintliff 2006; Poblome, Ceulemans and De Craen 2004-5.

It may be useful also to illustrate this regional evidence, again without Cyrenaica (fig. 2). Here the major trends of fig. 1 return. Again, one publication dominates the graph, in this case the recent overview for Cilicia by L. Zoroğ lu;⁴⁰ in addition, the quantities for a number of regions may be insufficient to compare on equal terms. Attention may be drawn to several differences. The first is the period around the mid-4th c., when ARSW increased overall (see fig. 1). On a regional basis, however, a distinction can be made between the Aegean-Southwest geographical classification (i.e. southern and central Greece) and the other regions, the latter displaying virtually no difference compared to the preceding decades. Second, in the period of the later 4th and early 5th c., Cyprus presents a slight increase, whereas the quantities of ARSW for all other regions decreases; however, we may need to keep in mind the relatively small quantities available for Cyprus. Thirdly, it can be observed that, in addition to the higher quantities published, the Aegean-Southwest displays an increase around the mid-6th c., whereas most, if not all, other regions remain the same or decrease slightly. We need to remain on the lookout for specific publications that may skew the data-set. Nevertheless, taken as a whole, the observed differences do appear significant enough not to be ignored.

The third graph (fig. 3), which shows the evidence both including and excluding Cyrenaica, is based on a combination of the typo-chronological frameworks of Hayes *and* Bonifay. Hayes' classification remains the basis, yet in cases in which Bonifay suggested new date ranges his new supplant those of Hayes (this is facilitated by the fact that Bonifay largely retained Hayes' classification).

It does not appear necessary to discuss fig. 3 at length since most of the general trends seen in fig. 1 are repeated here. Figure 4 integrates figs. 1 and 3, namely those lines presenting the developments of ARSW (excluding Cyrenaica) based on Hayes' classification, on the one hand, and those based on the combined classifications of Hayes and Bonifay, on the other.⁴¹ Two

Fig. 4.

important differences between figs. 4 and X, however, may be noted. First, the overall course of the graph is more fickle and the highs and lows are less pronounced. Second, the period of the second half of the 5th and the early 6th c. is worth remarking. The first difference concerns the generally more fickle course of the graph that combines Hayes and Bonifay (the dotted line in fig. 4): it shows several highs and lows that are much less pronounced compared to the evidence based solely on Hayes' classification (the uninterrupted line in fig. 3). This is the case for the later 4th c., and especially the later 6th and early 7th c. But the general trend remains: an increase in the quantity of ARSW. This is also the case (the second important difference) for the second half of the 5th and early 6th c. Here the two lines clearly diverge. This diversion is significant; more importantly, the two lines do not show the same development. If the Hayes line is followed, it shows a considerable decrease, whilst the Hayes-Bonifay line does not and (read with caution) shows a slight increase.⁴²

What caused these differences? This is an important consideration both for methodological and interpretative purposes. The answer lies simply in Bonifay's redating of a number of Hayes' forms.⁴³ Bonifay uses much evidence from Tunisia itself, as well as from other sites in the W Mediterranean, the archaeological and stratigraphical details of which do not figure in his *Etudes* in detail. The element of redating can be clearly seen in the first part of the graph up to the later 4th c., where both lines virtually run parallel. The reason for this is that Hayes' forms of the 1st to 4th c. were either not redated by Bonifay or, when they were, they are quantitatively negligible. For example, Hayes Form 50 (variants A and B) is commonly found at eastern sites, yet Bonifay did not propose a new date (nor type). Other Hayes' forms

⁴⁰ Zoroğ lu 2005.

⁴¹ which? two graphs are based on the same data-set.

⁴² Fulford 1984, 114.

⁴³ Bonifay proposed new date ranges for Hayes' Forms 8A-B, 14A-C, 15, 16, 17B, 18, 26, 27, 31, 32, 58A-B, 61A-B, 67, 74, 79, 81, 83, 88, 90A, 91A-D, 99A-C, 104A-C, 105, 108, and 109.

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were redated, such as 3 (Sigillée Types 1 and 2),⁴⁴ 8 (Sigillée Type 3),⁴⁵ 14 (Sigillée Types 5 and 7),⁴⁶ 27 (Sigillée Type 13),⁴⁷ 31 (Sigillée Type 11),⁴⁸ and 32 (Sigillée Type 25),⁴⁹ but these are represented and recorded only in very small numbers and hence only have a modest impact on our data-set.

However, if the later 4th to 7th c. is observed in detail, the date ranges of a number of Hayes' forms that occur regularly at eastern sites were modified by Bonifay. More important, it appears, is the recognition that certain forms (Bonifay's Sigillée types) were subdivided. For example, the very common Hayes Form 67 (Sigillée Type 41), dated by Hayes between c.360 and 470, is thought to have occurred between c.350 and 500, an extension of roughly 3-4 decades.⁵⁰ Similarly, Hayes Form 91 (variants A-D) was originally dated from c.425 to c.650. Bonifay regards this quite common form (Sigillée Types 49-50, 52 and 54) as attributable to the 5th to 7th c., thus extending it by some 60-70 years.⁵¹ Another example is Hayes Form 99 (with variants A-C), one of the most common forms of ARSW in the E Mediterranean and originally datable between c.510 and 620. Bonifay considers a much lengthier period for his Sigillée Type 55A-C, from the late 5th to the late 7th c. — an extension of the date range by about a century.⁵² Also, Hayes Form 104 (with variants A-C), originally dated between c.530 and 625, is now thought to have a broader date range: c.475 to 675 (Sigillée Type 56A-C).⁵³ Finally, Hayes Form 105, another very common form dated between c.580 and 660, was subdivided by Bonifay and given a longer date range (Sigillée Type 57A-C, c.575-700).⁵⁴

The technicalities of the date ranges aside, the suggested longer ranges for some of the most common forms or Sigillée Types implies that, by using the method of Fentress and Perkins, their quantities are 'smeared' out over broader chronological intervals. This appears to explain the first difference in fig. 4.

The second difference, the divergence between the two lines during the second half of the 5th and earlier 6th c., also appears to relate to what is discussed in the above overview concerning Hayes' forms and their counterparts in Bonifay. The 5 forms (or Sigillée Types) mentioned above are not chosen without reason: these 5 are the most common forms included in the database, and it should be noted that the (extended) date ranges of Forms 67, 99 and 104⁵⁵ now include the later 5th c. — roughly the period when ARSW was at its lowest in Hayes' graph.⁵⁶ Methodologically this resulted in a quantitative shift of ARSW in the graph towards the second half of the 5th c., thereby downplaying the prominent decrease in the Hayes' pottery line.

Implications and discussion

Bonifay's *Etudes* has wide implications for the way scholars look at the manufacture, dispersion and consumption of (later) Roman pottery from *Proconsularis/Byzacena*. As illustrated above, the methodological and interpretative implications for the ARSW evidence as collected within the ICRATES project are equally significant. To some extent the interpretation

⁴⁴ Bonifay 2004, 154 and 156, fig. 84.

⁴⁵ Ibid. 156, fig. 84.

⁴⁶ Ibid. 157-59, fig. 85.

⁴⁷ Ibid. 158-59 and 162, fig. 85.

⁴⁸ Ibid. 157-59, fig. 85.

⁴⁹ Ibid. 162-63, fig. 88.

⁵⁰ Ibid. 171-73, fig. 92.

⁵¹ Ibid. 177-79 and 181, fig. 95.

⁵² Ibid. 180-81, fig. 96.

⁵³ Ibid. 181-83, fig. 97.

⁵⁴ Ibid. 183-85, fig. 98.

⁵⁵ This goes for the early variants A of both Forms 99 and 104, and in case a fragment could only be identified to the general form.

⁵⁶ Fulford (1984, 109-10) already noted that Forms 104 and 105, amongst others, started earlier than suggested in *Late Roman pottery*.

of pottery stands or falls with a typo-chronological framework. Thus broader interpretations may need to be reconsidered following revision of a particular typo-chronological framework (or part thereof).

Given the considerable differences between the two lines in fig. 4, are we to rethink the economic history of Late Roman *Proconsularis/Byzacena* based on the collected evidence alone? Are we to move from full crisis to moderate quantitative output and distribution? As ARSW is only one part of the picture, the answer is surely no. Yet the differences noted do offer some points for discussion. First of all, the method of Fentress and Perkins used here, despite providing a general framework for our approach, has certain drawbacks. First, unidentified entries (i.e., those only identified by fabric and not by type or stamp) are omitted from the graph. A methodology has been developed to include such data for the Boeotia Survey, which offers opportunities to include all collected data.⁵⁷ Second, it does not take into account the fact that vessels may have been more popular within their date range. Although knowledge of this seems to be slight, if not largely absent, for tablewares in the Roman East, based on a general lack of well-defined, possibly closed deposits, we consider the production and distribution rate of a vessel during its date range to have been constant. Further, it is possible that the dispersion of ARSW was dissimilar in different parts of the East. Contextual analysis of well-defined deposits could contribute here,⁵⁸ as does seriation.⁵⁹ Well-defined and quantified deposits could also contribute to economic interpretations regarding the dispersion of pottery.

What was Bonifay *Etudes* really aimed at as far as the chronology of ARSW is concerned? Originally, Hayes, as well as his predecessors such as Waagé, tackled questions about typology and chronology (and provenance) using evidence from the 'consumer end' of the line:

Une des particularités de la céramique africaine est que sa typologie et son cadre chronologique ont été établis hors d'Afrique, sur des sites consommateurs souvent très éloignés des sites producteurs.⁶⁰

Part of the evidence also came from excavations that were conducted in different (scientific or stratigraphic) frameworks. In the words of Hayes:

It must be stressed at this point that the conclusions presented in this volume are of a provisional nature, and will no doubt require modifications as more evidence of a precise nature becomes available. [...] The forthcoming publications mentioned above, along with those of a number of excavations currently under way, should go far towards solving the many dating-problems which exist at present. One of the chief aims of this book is to provide a typological framework for these future studies.⁶¹

Bonifay's work is clearly one of those "future studies", and one that focuses on the heartland of ARSW.⁶² Here lies the first important yet chiefly theoretical consideration. There should be no doubt about the merit of Bonifay's approach (not a classification but "un simple index" of ARSW) or about the work in general. However, could the chronology of manufacture and the chronology of dispersion and consumption not have been (substantially) different? In other words, some time may have passed before vessels that were produced were actually sold and traded overseas; further, this may also have played out differently in differing regions. Though often regarded as a seasonal activity, pottery manufacture need not even have been a job carried out at an appointed time or with a similar output each year; these goods were not perishable, and could be stored until they could be 'marketed'. It does not necessarily imply direct supply on brisk demand. The exchange sequence itself provided further opportunities for vessels to be held in stock; and as far as the consumer is concerned, use and discard behaviour should be considered with regard to the recent model offered by J. T. Peña and its ramifications for the interpretation of the archaeological (pottery) record.⁶³ These and other issues need to be considered in future research.

⁵⁷ Poblome, Ceulemans and De Craen 2004-5.

⁵⁸ Putzeys 2007. Deposits only or mainly dated by tablewares are less suited for such purposes.

⁵⁹ Orton, Tyers and Vince 1993, 189-96; Groenen and Poblome 2003.

⁶⁰ Bonifay 2004, 87.

⁶¹ Hayes 1972, 2.

⁶² Bonifay 2004, 1-2 and 87.

⁶³ Peña 2007.

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For the economic interpretation of ARSW, the collected data was (tentatively) framed by a political-historical framework focused, admittedly, on the major events and developments such as the *annona* between *Proconsularis/Byzacena* and Rome, the founding of Constantinople, the Vandal occupation of *Proconsularis/Byzacena*, and Justinian's reconquest. Probably these events shaped only some of the lines of exchange, though archaeological evidence from Monte Testaccio⁶⁴ and Ostia echo the growing importance to Rome of *Proconsularis/Byzacena* (and Tripolitania). In turn, Rome as well as other major harbours acted as centres of redistribution. The axis *Proconsularis/Byzacena*—Rome/Ostia—Alexandria may well have been one of the paths along which ARSW was dispersed in the E Mediterranean, later with Constantinople as a major pulling factor since, from 330 onwards, D. Pieri visualizes a major shift by which the Egyptian grain now supplied Constantinople, whilst N African grain was shipped to Rome; but in years of famine or crop failure Rome could call on Egypt, as well as other regions.⁶⁵ Under normal circumstances this division of the grain supply system would be institutional.⁶⁶ This has recently been challenged by Bonifay, who does not deny that “dès avant 330, le blé d'Égypte a été détourné de Rome pour alimenter la future ville de Constantinople”.⁶⁷ In explaining the substantial decrease of ARSW in the East following the Vandal conquest, he conjectures whether ARSW may not have been shipped along the supply lines of African grain. This premise is based on the scarcity of other African ceramic products besides ARSW during late antiquity (except for the so-called *spatheia*, which were not uncommon in the East between the late 5th and 7th c.). The important consequence of this hypothesis is that *Proconsularis/Byzacena* served next to Egypt as a supplier of a considerable quantity of grain up to the Vandal conquest, and probably also at later times.

The material needs to be looked at from different perspectives, for the context of manufacture (as well as that of dispersion) is crucial in understanding the regional framework of production, but it is also important to incorporate regional trajectories of the many eastern regions. In this regard, evidence is available concerning the growing of agricultural crops, diachronic patterns of rural and urban settlement, and the artisanal framework of the production of ARSW, amphorae, cooking wares and lamps — all the object of considerable attention from Bonifay.⁶⁸ With regards to dispersion, it is clear that improved methodologies, such as fabric identification and full quantification, have much to contribute. Furthermore, we need to accept the complexity of intra- and inter-regional exchange patterns and the fact that it may be possible to reconstruct and explain them only up to a certain level. Multi-pronged efforts that move beyond the traditional scope of archaeology can also contribute to understanding the economic position of *Proconsularis/Byzacena* in late antiquity. The ICRATES project provides other ways of looking at the meaning of Roman tablewares,⁶⁹ but it cannot be conducted in isolation: Bonifay's *Etudes* clearly forces us to rethink our data, both in the ways we approach it and in the ways we interpret it.

Acknowledgements

The research was carried out within the framework of FWO projects G.0421.06 and G.0788.09, the Belgian Programme on Interuniversity Poles of Attraction (P6/22), and the 2007/02 Concerted Action of the Flemish Government.

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⁶⁴ Ibid. 300-6.

⁶⁵ Pieri 2005, 148.

⁶⁶ Rickman 1980, 198-99.

⁶⁷ Bonifay 2003, 120.

⁶⁸ Id. 2003, 2004, and 2005.

⁶⁹ Adapting the ICRATES database so that it can contain quantified published data is in process. This serves not only to basically capture that information, but also as a methodological check for the individual approach that continues to be employed. The incorporation of amphorae on an individual level is also in process; although it creates more complexity, it offers new paths for (economic) interpretation.

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I think we need to add the data behind the graphs if this hasn't been published elsewhere