Sarah A. James, Corinth. Results of Excavations conducted by the American School of Classical Studies at Athens, volume VII 7. Hellenistic Pottery. The Fine Wares. American School of Classical Studies at Athens, Princeton 2018. 240 pages, 45 black and white illustrations within the text and 95 black and white plates.

The 44th volume of the series on the American excavations in Corinth, is dedicated to the study of Corinthian Hellenistic fine pottery production and its dating. The first chronology of this material was established by G. Roger Edwards in 1975 (Corinth VII 3), mainly on the assumption that Corinth was completely deserted after its destruction by Lucius Mummius in 146 B. C. Further studies by Charles K. Williams and Pamela Russell (Hesperia 50, 1981, 1–44) and also by Irene B. Romano (Hesperia 63, 1994, 57–104), however, have revealed an interim occupation period that lasted until the foundation of the Caesarian colony in 44 B. C. Moreover, Edwards linked the pottery from the lower fills of South Stoa wells with its construction around 338 until 323 B. C., a date now revised to the late fourth or early third century by Elizabeth G. Pemberton and Ian McPhee (Corinth XVIII 1, 3; VII 6, 17–19). In addition, a framework of closed deposits dated between the late fourth century and 146 B. C. is lacking in Edwards' work. All of the above urge a substantial re-evaluation of Corinthian chronology, and one that is long overdue. Indeed, errors are perpetuated as scholars use Edwards' chronology as a dating tool for the pottery production of other sites, mainly in the Peloponnese but also in central, western and northern Greece. This revision was the main goal of Sarah A. James' dissertation at the University of Texas at Austin, now revised for publication in this volume. The discovery of six large deposits in the recent excavations conducted southeast of the Forum in an area known as the

Panayia Field enabled the project of a new absolute chronology of local pottery production. The author focuses on the tableware shapes produced in Corinth throughout the Hellenistic period, from the late fourth to the mid of the first century B. C.

The analysis consists of eight sections. The first chapter (pp. 1–18) is a general introduction dealing with chronological issues. After a short but very useful presentation of Corinthian history in the Hellenistic period, Edwards' chronology is challenged (cf. supra). A discussion of the famous »146 dilemma« and the interimperiod occupation of the city follows. The destruction by Roman troops seems to be limited to some public buildings, and the population occupied the site continuously in the Late Hellenistic period. Besides, there is clear evidence for the survival of local pottery production at that time.

The second section (pp. 19–27) outlines the methodology used to establish the new chronology. The core of the study is formed by six deposits from the Panayia Field and twelve other »primary deposits« from other areas of the city (catalogue A–S). The author chose frequency seriation based on quantification by weight as an analytical method.

The third chapter (pp. 29–64) presents the arguments for the chronological range assigned to each »primary deposit« (A–S), namely stratigraphic and depositional data, imported fine wares, amphoras and coins. This section provides a detailed description of context and composition of the assemblage for each deposit. It also illustrates the development of the Corinthian fine-ware pottery production from the early third to the early first century B. C. with examples drawn from seven of the deposits.

The fourth chapter (pp. 65–74) describes the decorative techniques and designs, along with five fabric groups of the fine-ware assemblage. It also explores the spatial organization of pottery production in Hellenistic Corinth.

The three following sections form the typology of fine-ware pottery. The fifth chapter (pp. 75–97) presents the drinking vessels (cups, kotylai, skyphoi, kantharoi and mould-made bowls), the sixth (pp. 99-130) the serving vessels (bowls, saucers, plates, and kraters) and the seventh (pp. 131–140) the pouring vessels (oinochoai, olpai, juglets, kyathoi and filter vases) and miscellaneous shapes (pyxides, lekanides, aryballoi, unguentaria and miniatures). Each shape is carefully described and its production period discussed. Charts showing a percentage of the functional group on the vertical axis and the eighteen deposits in chronological order on the horizontal axis help the author to determine the dates of appearance, peak and end of production of almost every shape.

The final chapter (pp. 151–154) is far from a simple conclusion. It summarizes the evolution of the Corinthian Hellenistic fine ware assemblage, but also addresses challenging questions regarding society and culture. According to the revised chronology, the transition of material culture between the Classical and Hellenistic periods only starts in the second quarter of the third century and comes to fruition by about 225 B. C., hence very late compared to Athens and other regions of the Greek world. This observation highlights the remarkable conservatism of Corinthian potters and their customers. Athenian imports were very popular in Early Hellenistic Corinth and strongly affected the development of local production in terms of both shapes and decorative choices. Unlike at Athens, the krater did not vanish but remained a common shape at Corinth, witnessing the communitarian practice of symposium-style drinking until the mid-second century B. C. The introduction of the mould-made bowl that slowly took the place of earlier drinking vessels led to the definitive integration of the Corinthian fine ware pottery assemblage into the Hellenistic koine of the Late Hellenistic period. Local production circulated in the northeast Peloponnese, the Corinthian Gulf, Ionian Islands and along the eastern Adriatic coast, testifying to a »regional ceramic koine« and Corinthian cultural influence in the West during the third and the first half of the second century B. C. In counterpart, Italian imports reached Corinth earlier than most of the sites in the Aegean and eastern Mediterranean.

The book ends with a catalogue of 383 vases (pp. 155–199), an appendix presenting and discussing the chronology of the forty-one »secondary contexts« (S–1 to S–41, pp. 201–227), a second on the seriation and the use of similarity coefficients (cf. infra, pp. 229 s.), a very useful chart with the production periods of each shape according to Edwards and the new chronology (pp. 231 s.), a concordance of inventory and catalogue numbers (pp. 233–238) and a general index (pp. 239 s.). The ninety-five final plates consist of three plans (1) of the Panayia Field, (2) the centre of the city, and (3) the entire town, followed by forty-eight figures with drawings and forty-four plates with black and white photographs.

A first criticism must be addressed to the editor regarding the separation of the drawings and the photographs, compelling the reader to move back and forth from figures to plates. If, decades ago, the different paper quality required this impractical division, it has lost all its sense today.

This study poses some methodological issues, regarding five topics: (1) the catalogue of deposits, (2) the dating of the deposits and the residual material, (3) the quantification by weight, (4) the definition of the »similarity coefficient« and (5) the form and use of the line graphs.

(1) Some deposits comprise two or three fills with different dates (deposits C, E, H, J, L, N, ●, P, Q, R and S). It would have been clearer and more intelligible for the reader to divide these into distinct deposits. The incorporation of some contexts in the catalogue of »primary deposits« is also questionable: deposits N and ● contain a large amount of Late Hellenistic pottery but were deposited in the Imperial period. Furthermore, the author includes the last four deposits (P, Q, R and S) only for the study of their drinking vessels. These contexts date back to the first half of the second century B. C., but appear curiously enough after the post-146 context (K, L and M) in the catalogue of »primary deposits« (chapter 3).

(2) The dating of certain »primary deposits« in the third chapter raises some problems. For each context, the author carefully defines a depositional date by means of a terminus post quem provided by coins, amphora stamps or imported pottery. This »context date«, namely the approximate time when a deposit is closed, seems to be frequently confused with the chronological range represented by all the archaeological material discovered. For example, deposit B contains four Attic imports and a coin providing a terminus post quem of circa 300 B. C. This cistern was therefore filled some years after this date. In contrast to the author's conclusion, this does not mean that all the objects from this deposit necessarily date to the early third century. A significant portion of the pots could or even should belong to the last quarter or the second half of the fourth century. The author sometimes mentions the presence of residual material, but she underestimates this extremely significant factor in the next steps of her chronological analysis, namely in the typology (chapters 5–7, cf. infra). In this manner, very short chronological ranges are assigned to the deposits, usually no longer than a quarter-century. Every ceramic specialist dreams of such a heaven, but depositional processes rarely match it. The filling of a well or cistern can obviously happen in a very short time, but in most cases the waste material reflects decades of production, as it usually consists of a mix of recently broken pots and old scraps. Corinth could be seen as a unique paradise for Hellenistic chronology, but recurring mentions of earlier sherds dating back to the previous periods in the »primary deposits« raise doubts about this ideal picture.

(3) James' use of quantification is almost a novelty for Hellenistic pottery studies and should be acknowledged as a bold initiative. To my surprise, however, the author criticizes two well accepted quantification methods (counting by MNV – minimum number of vessels – and by EVE – estimated vessel equivalent) and chooses to weigh separately all the fragments of each shape. This short review is not the place to discuss the accuracy and validity of this approach, but it does present some problems that the author concedes and manages to offset. The overestimation of heaviest shapes is hence compensated for by using proportions by weight within seven functional categories of fine-ware pottery.

(4) These data form the keystone for calculating »similarity coefficients« between the »primary deposits«, a mechanism for comparing their contents in order to refine their relative chronological positions (cf. chapter 3 and pp. 229 s.). The author explains that these coefficients are calculated by adding the average percentages of each shape by weight. The resulting amounts represent the degree of similarity in the assemblage between any two deposits. Her explanation is unfortunately mistaken: »When the proportion of the same shape in two deposits is compared, the smaller percentage is subtracted from the larger percentage to create a number that represents the average percentage of that shape in both deposits« (p. 229). »For example, if deposit 1 contains 10 % saucers and deposit 2 has 5 % saucers, then it is assumed that both deposits contain at least 5 % saucers. In this way, the minimum number or average number of saucers in both deposits is generated« (p. 229 note 3). However the five per cent that she cites could be either the result of subtracting the smaller percentage from the larger (10 % – 5 %), or the lower percentage of the two (cf. infra). Neither is the »average percentage« to which she refers (which would be 7,5 %). In accordance with James' explanation, if a deposit contains fifty per cent kantharoi and another one zero per cent, then the similarity coefficient would be 50 % (50 % – 0 %). With such a high coefficient, these two deposits should be very similar, which is absolutely contrary to reality: half of the vessels of the first are kantharoi and the second has no fragment of this shape. Three references in citation give no explanation of the similarity coefficient (note 2 p. 229). We must refer to another paper by Guy Sanders (New Relative and Absolute Chronologies for 9th to 13th Century Glazed Wares at Corinth: Methodology and Social Conclusions. In: K. Belke / F. Hild / P. Soustal (eds.), Byzanz als Raum [Vienna 2000] 153–173) to understand how it is calculated: Sanders explains that the smaller percentage of one shape in one deposit should not be subtracted from the larger one (James' explanation); rather just the smaller should be retained. In this way, the result is five per cent for the first example and zero per cent for the second.

(5) The twenty-five graphs supporting the dating of the shapes in the fifth to seventh chapters also provoke some criticism. In the typology, »individual shapes were analysed using frequency seriation, based on the percentage by weight of each

shape as a proportion of their functional category (e. g., serving vessels) present in each deposit. [...] By plotting the percentage of each shape in each deposit on the y-axis with the dates of the deposits on the x-axis, the resulting battleship curves showed (in most cases) a shape's initial period of production, peak of production, and end of production« (p. 19). This unfortunately is a case of circular reasoning. In the third chapter each »primary deposit« was assigned a depositional date and arranged from the earliest to the latest, precisely on the basis of »similarity coefficients« also calculated on the basis of quantification of different shapes by weight. These graphs, though, could also be misleading for inattentive readers. The lines going from left to right seem to show a continuous chronological evolution from 300 to 125 B. C. However, some deposits on the x-axis are almost contemporary, and some stages of the Hellenistic period are more elaborately represented than others, creating a time-scale deformation. Charts with bars of percentages for each deposit would have provided a more precise and accurate picture than line graphs.

The combination of these issues leads me to doubt some results regarding the chronology. In my opinion, and as already mentioned, the residual material is not sufficiently stressed. At the very least this factor should have been more systematically considered, not only while establishing the chronology (chapter 3), but also while discussing the end of production for each shape (chapters 5 to 7). It is quite easy to fix a starting point by looking for the earliest deposit where a shape is attested but, obviously, its latest context of discovery does not provide a date for its demise. Every pottery specialist is confronted with this very complex issue. The author does not always face it in a very compelling way. For example, according to her, Corinthian potters produced one-handled cups, kotylai, and Attic-type skyphoi until the third quarter of the third century B. C., which is extremely late in comparison with Athens, where the latest specimens go down to the early third century – even if Corinthian potters were arguably conservative. At Corinth, these shapes represent up to a quarter of the drinking vessels by weight after the middle of this century, but nothing irrevocably demonstrates that they should not be considered as residual material in these contexts. The same observations could be formulated for the one-piece and the Corinthian moulded-rim kantharoi. The limits of quantification by weight are well illustrated by the Hexamilia cups with their peak of less than six per cent of the drinking vessels in one deposit. It is difficult and risky to rely upon weight and line charts to determine the dating of such an uncommon shape, even more so when it leads to the suggestion of a very late peak of production, the last quarter of the third to the early second century B. C. According to weight quantification, trefoil olpai became the predominant pouring vessel in Late Hellenistic deposits, but paradoxically the author raises some doubts concerning their local production after 146 B. C.

My questions about the methodology and its application sadly prevent me from being convinced by some of this study's chronological results. My criticism, however, should not be regarded as calling into question this significant study as a whole, which every pottery specialist of the Hellenistic period and historians interested in Corinth, the Peloponnese and Greek society in general should read attentively. It offers a careful and comprehensive investigation into Corinthian chronology, a major topic whose revision has been awaited for decades, beginning almost immediately after Edwards' publication in 1975. We must be very thankful to the author for tackling this complex and time-consuming task. The outcome of her work is not restricted to pottery and chronology, but embraces many reflections on culture and society during the Hellenistic period. From a methodological point of view, this book should be considered as a challenge to future research on Greek pottery, particularly with regard to its quantitative approach. Another major contribution is the publication of almost sixty closed deposits and of a large number of so far unpublished Corinthian vessels, mainly from the recent excavations in Panayia Field. All that remains to expect is the forthcoming study of household wares and cooking vessels. The author announces it on the first page and I eagerly await it.

Athens Guy Ackermann