

SAS BULLETIN

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FROM THE EDITOR
CARMEN TING

Welcome back! I hope you all have had a great summer and feel well-rested to brave another challenging yet fruitful academic year. The beginning of the new academic year is also marked by some important changes to the editorial board of the SAS bulletin. It is with great sadness to announce that Rebecca Gibson is leaving us, and I would like to take this opportunity to thank Rebecca for her contribution of reporting the state-of-the-art research in bioarchaeology. Meanwhile, I am pleased to introduce the addition of three new associate editors, Agnese Benzonelli, Artemios Oikonomou, and Roxanne Radpour. They will cover topics related to archaeometallurgy, glass and vitreous materials, and pigment analysis. As many of you may have realised there has been an underrepresentation of research on glass and vitreous materials and pigments in the previous issues, we hope these latest appointments will allow for broadening the scope of the bulletin. Stay tuned as more changes to the editorial board are expected!

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In this issue, you will find the link to the interview I conducted with Professor Steven Shackley, who has been awarded with the prestigious Fryxell Award for Interdisciplinary Research at the past Society for American Archaeology annual conference. There is also the link to the extended abstract of the winners of the SAS student prize at the biennial meeting of the Groupe des Méthodes Pluridisciplinaires Contribuant à l'Archéologie (GMPCA). The link to the testimony of two participants of the Cyprus Institute Summer School on Archaeological Science is also included, in case you wonder how and where other archaeologists spent their summer. Excerpts of Charlie Kolb's contribution on archaeological ceramics are now available in our blog too, even though you can read the full version in the electronic bulletin.

INTRODUCTION TO OUR NEW ASSOCIATE EDITORS
OF THE SAS BULLETIN
CARMEN TING, Editor

In accordance to our effort to transform the format and content of the bulletin – which we have been working on slowly but surely – we are bringing in new faces to report on the state-of-the-art research, conference reviews, book reviews of a broad spectrum of topics. I proudly present to you – our new associate editors:



Agnese Benzonelli, *associate editor, archaeometallurgy*



Artemios Oikonomou, *associate editor, archaeological glass and vitreous materials*



Roxanne, Radpour, *associate editor, archaeological pigments*

You can know more about their research background and profile, as well as aspirations to become the associate editor of the bulletin here:

<http://socarchsci.blogspot.com/2019/09/meet-our-new-associate-editors.html>

UPCOMING CONFERENCES ALERT
ANDREW ZIPKIN, VP for Social Media and Outreach

This year SAS has resumed publishing a calendar of conferences, workshops, and other events relevant to the international archaeological science community.

Published twice per year, the calendar aggregates information about publicly announced events happening

all over the world in one place. We scour society websites, social media, and e-mail listservs for reputable events not associated with predatory conference organizers (e.g. <https://www.facebook.com/SocArchSci/posts/1969069953372475>). Did we miss an upcoming conference, symposium, or workshop? Did you notice details that are incorrect or have a complaint?

E-mail the event name, date, location, and a brief description with contact, submission, and registration information to sasgensecretary@gmail.com or make a comment on the blog post. The calendar will be updated through December 2019 and a new calendar for the first half of 2020 will be available in late December or early January.

The link to the calendar of the upcoming conferences in the next few months is below:

<https://socarchsci.blogspot.com/2019/06/conference-calendar-for-second-half-of.html>

**INTERVIEW WITH PROFESSOR STEVEN SHACKLEY,
THE RECIPIENT OF THE FRYXELL AWARD FOR
INTERDISCIPLINARY RESEARCH**
CARMEN TING, Editor

Professor M. Steven Shackley has recently been awarded with the prestigious Fryxell Award for Interdisciplinary Research. A symposium was held accordingly in his honour at the past Society for American Archaeology (SAA) meeting in Albuquerque.



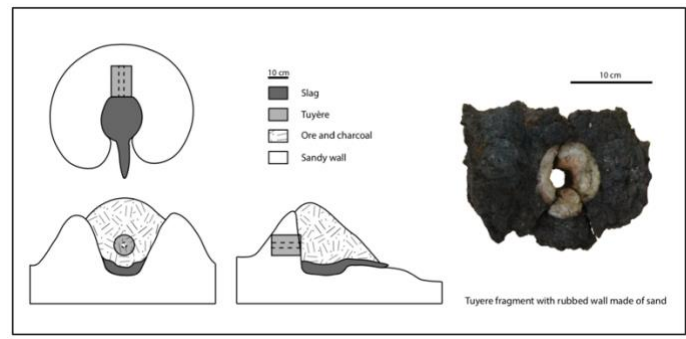
Steve and all participants (except Bruce Huckell) of the SAA session (Photo courtesy of Steve Shackley).

The interview is uploaded to the following link, where you will not only learn about his prolific research, but also what Steve does for fun:

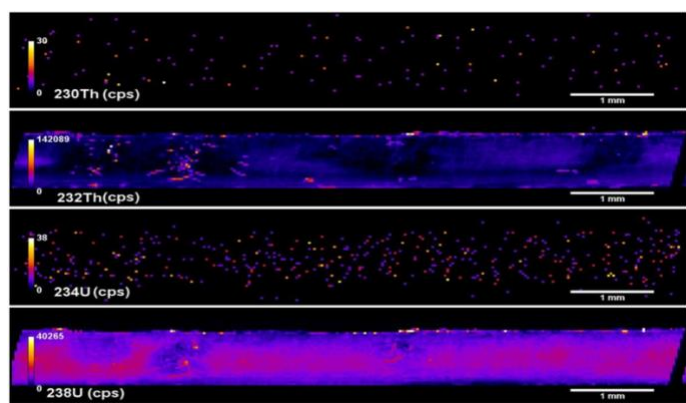
<http://socarchsci.blogspot.com/2019/07/interview-with-professor-steven.html>

EXTENDED ABSTRACT OF THE WINNERS OF THE SAS STUDENT PRIZE AT THE GROUPE DES MÉTHODES PLURIDICLINAIRES CONTRIBUANT À L'ARCHÉOLOGIE (GMPCA)

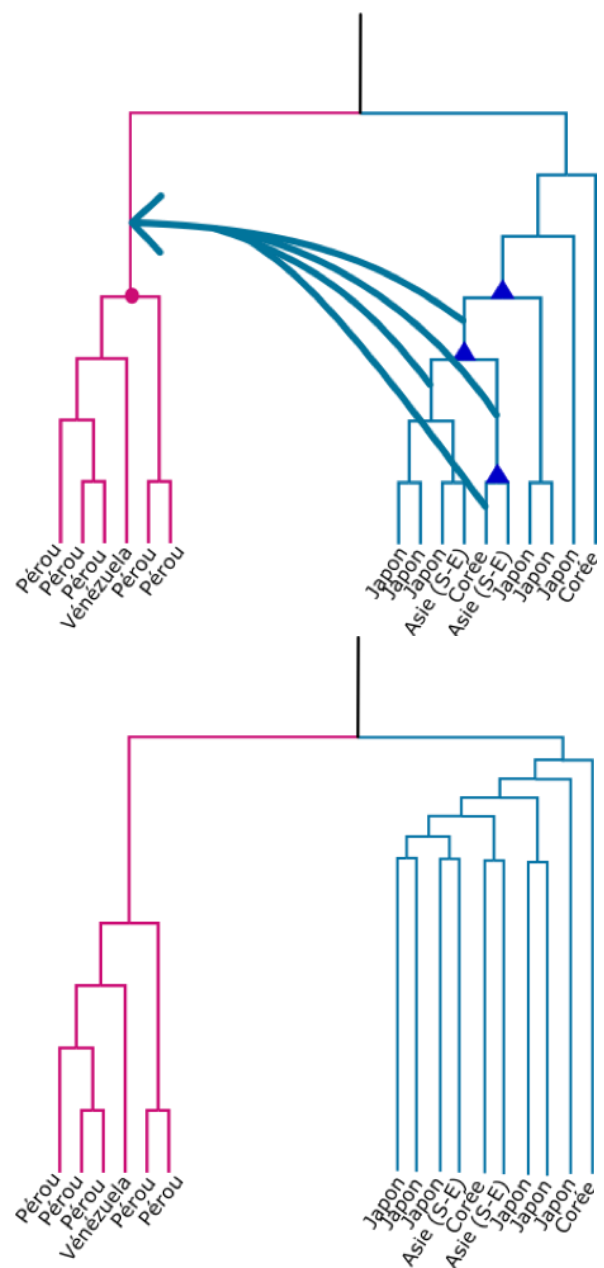
Mélissa Morel (Université de Fribourg), Asmodée Galy (Université Bordeaux Montaigne), and Alexia Nguyen Trung (Université Claude Bernard Lyon 1) were the winners of our student prize at the past GMPCA, which took place at the University of Montreal between the 9th and 12th May 2019. Morel's research investigates the technological variability that existed in the iron metallurgy along the northeast coast of Madagascar during the 7th to 17th centuries CE. Galy sought to develop new methods of U-series dating, which focused on micro-sampling using femtosecond laser ablation coupled with ICP-MS spectrometry. Nguyen Trung's research centred on tracing human ancestral migrations using symbiotic bacteria. Here is a glimpse of some of the images related to their respective research:



Reconstruction of a medieval smelting structure in Madagascar (Image courtesy of Mélissa Morel).



Isotopic mappings made on the slice of an ostrich eggshell fragment (DRS 10) from Diepkloof Rock Shelter, South Africa (Image courtesy of Asmodée Galy).



The figure above shows that ALE has detected gene transfers from East-Asian clade (in blue) to the American clade (in fuchsia). These transfers attest that the donor's ancestors (represented by a triangle) are older than the recipient's sons (represented by a circle). The figure below shows from the constraints of the figure above, the phylogenetic tree should then be represented in this way: the East-Asian ancestors are older than the American (Images courtesy of Alexia Nguyen Trung).

You can find out more about their award-winning research, in following links:

<http://socarchsci.blogspot.com/2019/09/winners-of-sas-students-prize-at-gmpca.html>

REVIEW OF THE CYPRUS INSTITUTE
ARCHAEOLOGICAL SCIENCE SUMMER SCHOOL
COSIMA CARNEGIE

Some of our fellow archaeologists spent their summer attending a summer school on archaeological science in Cyprus. The summer school was organised by The Science and Technology in Archaeology and Culture Research Centre (STARC) of the Cyprus Institute, in collaboration with the Cypriot American Archaeological Research Institute (CAARI). The summer school was held between the 21st and 27th July in the Paphos region, Cyprus. The theme of this year's summer school was 'From Natural Resources to Material Culture: Transdisciplinary Approaches in Archaeological Science'. We have the pleasure to talk to Cosima Carnegie, who participated in the summer school. You can read more about her testimony from the following link:

<http://socarchsci.blogspot.com/2019/09/review-of-cyprus-institute-summer.html>



(Photos courtesy of Cosima Carnegie)

ARCHAEOLOGICAL CERAMICS
CHARLES C. KOLB, Associate Editor

This issue contains four topics: 1) Miscellaneous: Archaeological Ceramic Thin Section; 2) Previous Professional Meeting; 3) Forthcoming Professional Meeting; and 4) Book Reviews on Ceramics.

You can find the first three topics in the following links:

1) Miscellaneous: Archaeological Ceramic Thin Section
<http://socarchsci.blogspot.com/2019/09/archaeological-ceramic-thin-section.html>

2) Previous Professional Meeting
<http://socarchsci.blogspot.com/2019/09/previous-meeting-on-topics-related-to.html>

3) Forthcoming Professional Meeting
<http://socarchsci.blogspot.com/2019/09/upcoming-conference-alert-ceramic.html>

4) Book Reviews

Mobility and Pottery Production: Archaeological and Anthropological Perspectives.
Caroline Heitz and Regine Stapfer (eds.), Leiden: Slidestone Press, 2017. 320 pp., figures, footnotes, references. ISBN 978-90-8890-460-8 (paperback) €39.95 / \$60.00 + free PDF, ISBN 978-90-8890-461-5 (hardcover) €120.00 / \$180.00 + free PDF, ISBN



978-90-8890-46 (PDF e-book) €9.95, and read online for free:

https://www.academia.edu/33374330/2017_Mobility_and_Pottery_Production_Archaeological_and_Anthropological_Perspectives.

This important and thought-provoking volume resulted from an interdisciplinary workshop, “Mobilities and pottery productions: archaeological and anthropological perspectives,” held at the Institute of Archaeological Sciences (University of Bern) in 2015, and funded by the Swiss National Science Foundation (SNSF). The volume contains a “Foreword” by Albert Hafner, three sections with a total of 12 chapters, and an “Afterword” by Philipp Stockhammer. Each chapter has its own set of references and information on the authors’ affiliations as well as mail and email addresses. There is no list of illustrations or figures and no index. This is essentially a Continental “Eurocentric” volume with citations to the work of some UK authors; notably, there are few citations to any American-authored literature (and none to Dean Arnold, Ron Bishop, Alice Hunt, Hector Neff, Mary Ownby, and Prudence Rice, among others) and one to Mike Glasscock. Petrographic analysis is mentioned in two papers, one contribution employs a now common archaeometric tool: pXRF), and another (Albero) employs a variety of archaeometric methods.

The goal of the workshop was not to promote a single epistemic approach or any elaborated empirical findings but to stimulate thoughts and foster further discussions. In this regard, it is a very successful publication. The first part of the book (three chapters) contains introductory texts, which explore the relationship between anthropology and archaeology and their different takes on ‘culture’, ‘mobility’ and ‘things’ throughout their research histories’ paradigmatic shifts. There is much material on the history of anthropological and archaeological theory related to material culture, the production of ceramics, and ‘mobility’ related to the distribution of finished products rather than the procurement of raw materials (clay and temper). These three chapters focus on the history of theories of culture and mobility up to the present (Heitz and Stapfer) prehistoric archaeology and material culture (Hafner), and material culture and mobility (Van Oyen). The contributions would be

useful for classes on archaeological method and theory.

The second part (five chapters) includes archaeological contributions that address mobility and social ties by focusing on variability in pottery production within, as well as between, settlements and regions. The authors take a more object-centered perspective, and focus on attempts to think beyond established concepts of archaeological cultures and chronological issues. The third part (four chapters and an “Afterword”) is comprised of anthropological and archaeological texts that take actor-centered perspectives involving making, distributing, and using pottery. These authors examine how humans and things are intertwined through practices and various rhythms of movement and mobility. Therefore, cultural forms are reproduced but also transformed by humans and things, such as pots, potters, pottery sellers/distributors, and pottery users that are intermittently mobile. The “Foreword” is by Albert Hafner (pp. 7-8), University of Bern, Institute of Archaeological Sciences, a mentor to several of the contributors. He comments that mobility and migration are amongst the most important sociopolitical topics of our time and that the workshop presentations combined the topics of prehistoric archaeology with perspectives of cultural and social anthropological research which were “once sister disciplines that have since unfortunately grown apart.”

Part 1. “Changing perspectives, changing insights” (3 chapters), “‘Mobility and pottery production’, what for? Introductory remarks” by Caroline Heitz and Regine Stapfer (pp. 11-38, 104 references). This narrative establishes the framework for the presentations. The editors discuss the current shortcomings of pottery studies and spatial mobility – moving from place to place – which has experienced a noticeable upturn as a field of research in recent years. They provide background to 2015 workshop and four objectives of the published volume https://www.academia.edu/12438368/2015_International_Workshop_Mobilities_and_Pottery_Production_Archaeological_and_Anthropological_Perspectives. In addition, they review the history of concepts of culture (Tylor, Frobenius, Childe, and Boas), the cultural-historical approach (Malinowski, Radcliffe-Brown, Leroi-Gourhan, Bourdieu, Giddens, and

Robb), and recent thoughts on mobility from “migration” to “movement” and “mobilities” (Leary, Salazar, Oka and Kusimba, Kopytoff, Schier and E. Kaiser) as well as the material turn from “material culture” to “materiality” and the “agency of things” (Hicks, Hahn, Knappett, Latour, and Stockhammer). Lastly, they summarize the content of the book.

“Prehistoric archaeology, anthropology and material culture studies: aspects of their origins and common roots” by Albert Hafner (pp. 39-51, 1 figure, 46 references, 3 Internet links). Hafner reviews in depth the aspects of the origins and common roots of prehistoric archaeology, anthropology and material culture studies, then focuses on concepts from prehistoric archaeology (Keller, Ankermann, Graebner, Schmidt, Childe, Malinowski, Radcliffe-Brown, and Mead) and materiality and prehistoric cultures (Schwab and Kissinna -- predating Childe). He also considers anthropology and early prehistoric archaeology (Virchow and de Morillet) and material culture studies (Rorty, Levi-Strauss, Geertz, Hodder, Willey and Rowlands, and Knappett). The third essay “Material culture and mobility: A brief history of archaeological thought” by Astrid Van Oyen (pp. 53-65, 2 figures, 45 reference) examines in greater detail how ‘material culture and mobility’ has been addressed in the history of archaeological thought’ by alluding to examples from her research in the field of Roman archaeology (mostly *terra sigillata*) concluding that, thanks to the “material turn,” the mobility of humans and things can be addressed in a new way. She argues that paying attention to the shifting perspectives on material culture is critical in understanding the role that mobility can play in archaeological narratives. Finally, the article proposes that recent refinements of the material turn may open important new avenues for studying the movement in time and space of objects, knowledge, and people. Summaries of diffusionism and the culture-historical model (Haverfield and Sørensen), the post-processual model or “mobility muddled” (Binford, Trigger, Hodder, Eckardt, Appadurai, Kopytoff, Brughmans *et al.*, Miyazaki, and Knappett), and mobility after the material turn (Ihde, Ingold, D. Miller, and Knappett) are presented.

Part 2. “Object-centered perspectives: From ‘cultures’ and chronology to relations and mobility” (five chapters). “The Munzingen culture in the southern

Upper Rhine Plain (3950–3600 BC)” by Loïc Jammet-Reynal (pp. 69-88, 9 figures, 40 references) provides an example of how Neolithic pottery served as a chronological tool in central European archaeology by demonstrating how two typo-chronologically separated groups of the so-called Munzingen pottery were actually two different practices of making and using pottery. The author provides a geographical and chronological framework, the present state of research, background on the Upper Rhine Valley (4300-3600 BC) and Munzingen A in Upper Alsace (southern area) and its relations to adjacent regions, and Munzingen B-style formation from Michelsberg in Lower Alsace (northern area). MZ A-style arises out of a cultural background only lightly connected with the Michelsberg. In the far south, relations with the Cortailod pottery of the Swiss Plateau have been repeatedly highlighted but new overviews of the Upper Rhine sequence have been undertaken and published in local journals but have frequently remained unnoticed. Likewise, there are possible relations to other pottery styles in neighboring regions, especially the Swiss Plateau. Taking a spatially and temporally broad overview, the culture-historical approach allows the author trace influences between neighboring stylistic groups and the resulting long-term transformations that lead to new regional pottery styles – all ultimately referable to the mobility and encounters of people. The next chapter, “From typo-chronology to inter- and intra-site variety: the ‘Michelsberg’ pottery of South Germany (4300–3600 BC)” by Ute Seidel (pp. 89-114, 10 figures, 51 references), assesses the method behind the typo-chronological system that has dominated studies on the Neolithic Michelsberg pottery for decades. By shifting the perspective from typo-chronology to inter- and intra-site variety she shows how the ‘Michelsberg’ pottery of South Germany (4300-3600 BC) cannot be perceived as an indication of a homogeneous cultural or even social entity any longer. Seidel reveals a complex picture of multidirectional ties based on pottery features, which might indicate intertwined economic, social and cultural practices reaching beyond settlements and regions. The typology of Michelsberg ceramics (classical version by J. Lüning 1967); basic shapes, types and variations, chronological systems, and refinements of that typology (essayistic mode) are reviewed. The shifting percentages of the respective

pot types in the repertoire through time, as well as the changing proportions of ceramic profiles, could be traced back to a probable change of economic behaviors and a change of function of special ceramic shapes like the “Tulpenbecher (tulip beakers).” Attempts at interpretation demonstrate a need for future studies.

“Social dynamics and mobility: Discussing ‘households’ in Linear Pottery Culture research (6 ML BC)” by Isabel Hohle (pp. 115-140, 6 figures, 71 references) details another presupposition of stability, homogeneity, and congruence that underlay many notions of past societies, the basic equation: one house = one household = one family = one kinship. Six basic assumptions and foci in most LBK research have been rarely questioned prior to this research. She examined the pottery of the LBK settlement of Schkeuditz-Altscherbitz in northwest Saxony (DE) which was *completely excavated* along with corresponding graves, dated by dendrochronology, and provided a corpus of nearly complete pots. In addition, the author studied ceramic and chronological data from ca. 10,000 LBK houses in order to demonstrate that the settlement structure, social organization and therefore pottery practices were entangled beyond the formerly alleged spatial and social boundaries of the “one house represents one family” paradigm. “Households” as well as settlement structure and social organization, likely were complex, dynamic and, unsteady. The attempt to deconstruct models that are informed by underlying notions of stability, homogeneity and correspondence – as between houses, households and families – is taken here as a first step to open the path for investigating more dynamic phenomena: e.g. intra-site activities, or supra-regional networks that might have existed in those societies and which were linked to different forms of spatial mobility.

“Special pottery in ‘Cortailod’ settlements of Neolithic western Switzerland (3900–3500 BC)” by Regine Stapfer (pp. 141-167, 11 figures, 48 references). “Special” or “foreign” pottery, which stylistically stands out from the predominant local / regional pottery style, was discovered in many lakeside settlements of western Switzerland. Six settlements of Concise are situated on the northern shore of Lake Neuchâtel and were excavated between 1995 and 2000; these are stratigraphically separated

and absolutely-dated by dendrochronology. The author examines the phenomena of migrations and triggered mixtures in pottery styles, especially the phenomenon of NMB pottery in so-called “Cortailod” settlements challenging notions of homogenous cultural entities from an empirical perspective. By studying different aspects of these vessels, such as shape and raw material used, e.g. temper, it is possible to detect a variety of different phenomena related to entanglements and mobility between different societies. The aim of this article is to provide insights into the everyday life and entanglements of the settlements’ societies in western Switzerland. Difficulties in the interpretation of pottery as indications of such cultural phenomena are addressed. Central for these reflections are the Neolithic settlements of Concise, which show a unique situation in comparison to others in western Switzerland. The distribution and proportions of NMB pottery style and an examination of the raw material using pXRF suggest that two pottery traditions were combined, producing a new one. She concludes that entanglements with different regions versus ‘waves of newcomers’ provide evidence that the idea of homogenous “pottery cultures” suggested by previous research is increasingly unlikely.

“Cultural and chronological attribution of pottery on the move: from rigid time-space schemata towards flexible microarchaeological ‘messworks’” by Eda Gross (pp. 169-186, 5 figures, 41 references, 1 Internet source). Gross examines the history of Neolithic research and reveals the conceptual relationship between Neolithic cultures and time-space schemata. Four empirical examples are reviewed to unmask shortcomings of this former research practice and illustrate how persistently traditional time-space schemata influence the specific Neolithic topics. She is convinced that rigid space-time models are typological relics from a time when the storing, mapping, and publishing of big data were still a technical problem or too expensive. As these models had to be easy to produce and understand, they tended to be simplistic and meaningless. Some archaeologists still argue that schemata and the names for cultures and periods facilitate the communication with lay people and improve the understanding between archaeologists. However, remembering discussions between archaeologists about chrono-spatial questions and schemata, I doubt that these concepts

have value, and as an alternative suggests the adoption of Fahlander's microarchaeological perspective as a new approach to structuring the time and space of Neolithic remains in Switzerland and adjacent regions. Rather than trying to fit pottery into clearly defined entities – like the allegedly homogeneous cultures – archaeologists should accept their ambiguity, e.g. “messwork,” emerging from multiple factors that led to the preserved remains of the past.

Part 3. “Actor-centered perspectives: Movements of making – mobilities of pots, potters, skills and ideas” (five chapters). “Movement in making: ‘Women working with clay’ in northern Côte d’Ivoire” by Iris Köhler (pp. 189-211, 15 figures, 6 references). Köhler explores an ethnographic example of the entanglements of materials, potters, and pots in the process of making and selling pottery in the village of Sangopari. A major part of the village's female population is able to make pottery which they produce with simple tools in their free time, in addition to their domestic and farming tasks. She also focuses on the decisions in and reasons for pottery making. She initially describes the research area and notes that in this patrilocal society pottery-making is considered as women's work and that there are both mobile and stationery work areas in the village, locations of clay sources are described (these follow Arnold's 1985 distance to source paradigm but this isn't mentioned), and firing places described. Fabrication processes, shaping (potters move around stationery pots), surface treatment, firing, organization of production, and uses of vessels within the village are reviewed. Notably, “the spectrum of pots produced in Sangopari does not necessarily correspond to the inventory existing in the village. The pots found in the houses and compounds are of different origins – in time and space” (p. 204). Additionally, there are three loci within 30 km of the village for selling pots. This research was conducted 1996-2000 and the author tries to show what people have ‘written’ in the pots and what may have been materialized. Hence, she demonstrates that potters and pots are mobile while making and selling pottery, but not all of these practices are visible in the materiality of the pots themselves. From a temporal perspective, she documents how pottery-making is transforming. “Form follows fingers: Roman pottery, the producer's perspective and the mobility of ideas” by Nadja Melko (pp. 213-228, 10 figures, 18 references). Roman wheel-thrown common wear

pottery made in the second century AD at the *vicus* Kempratzen in present-day Canton of Saint-Gall, Switzerland, provides the evidence for past people's value systems in crafts production. Melko conducted ethnoarchaeological observations in a present-day pottery workshop in order to devise a methodology to describe the ‘mutuality between potters and pots’ in the creation process. Value systems influenced the potters' technique during the course of apprenticeship and the acquired memory is then reflected in the finished vessels' materiality. This embodied knowledge is why a *chaîne opératoire* is just the beginning of describing pottery-making. The archaeologist and the potter have two distinct perceptions of fabrication, hence, potters know much more than they are able to tell investigators because the “verbal description, however detailed, can hardly capture the phenomenological perturbations of real activity and the reciprocity [sic.] between the crafted and the crafter” (Malafouris 2008). Melko states that this is an initial methodological step toward understanding the transformative impact of potters' and pots' mobility. Note that Louana Lackey, a professional pottery and ethnoarchaeologist, pointed this out in *Pottery of Acatlán: A Changing Mexican Tradition* (1983).

“Practice, social cohesion and identity in pottery production in the Balearic Islands (1500–500 BC)” by Daniel Albero Santacreu (pp. 229-256, 6 figures, 69 references). The author's research on pots and potters from the Balearic Islands during the Bronze Age and the Early Iron Age employ's Bourdieu's (1977) theory of practice (*habitus*) with archaeological and archaeometric analyses of pottery sherds. Albero argues that during this period different ‘communities of practice’ existed on the Balearic Islands and suggests that these shared practices – once internalized by the individuals and giving place to a certain technological *habitus* “promoted the social cohesion of the islander groups” (p. 250). Hence, he contends that it is highly likely that pottery production practices were also linked with shared identities of potters. Albero conducted archaeometric analyses of 89 handmade pottery samples of different shapes and sizes recovered from diverse archaeological sites of the Balearic Islands (Spain) that were occupied during the ‘Naviform’ period (Middle-Late Bronze Age, c.1550-850 BCE) and / or the ‘Talayotic’ period (Early Iron Age, c. 850-500 BCE). Methodologies

included the analysis of pottery thin sections by petrographic microscopy in combination with other techniques, usually X-ray powder diffraction (XRPD) or X-ray fluorescence (XRF) – previous scholars conducted calcimetric studies. Albero also used scanning electron microscopy (SEM) to study the microstructure of some pottery samples and the firing strategy. He documents paste recipes, firing strategies, potters' skills and the degree of variability associated with the pottery produced during the two periods. Observations of voids, inclusions and temper orientation by means of optical microscopy demonstrated a “clear index of the pressure applied by the potters when modelling and joining the coils.” These practices and technological choices can be associated with specific learning strategies, degrees of expertise, perception of the vessels, and the emergence of social cohesion strategies and a common identity among the potters, both within the members of each community and between the different communities of the Balearic archipelago. The maintenance of identity ties and a specific technological tradition through several centuries has to be explained by a shared *habitus* among the individuals and the existence of social strategies aimed at community cohesion. Cohesion strategies are also seen in other dimensions of material culture on the basis of fractal-like models.

“Making things, being mobile: pottery as intertwined histories of humans and materials” by Caroline Heitz (pp. 257-291, 10 figures, 78 references, 10 Internet links). In questioning current models of central European Neolithic societies that are informed by concepts of sedentarism and cultural homogeneity, Heitz combines Bourdieu's (1977) theory of practice and Ingold's (2007, 2011) concepts on the ‘making’ of things. By acknowledging the mutuality of human-things relations, she proposes the approach that pottery vessels are intertwined with the histories of humans and materials. Heitz argues that a pot's features reveal three itineraries: 1) the pot's geological materials, 2) the potter through chosen techniques and designs reveals cultural and social parameters, and 3) the pot itself by the place where the pot was used and found. Pottery from the Neolithic settlement of Hornstaad-Hörnle IA at Lake Constance (DE) (3918-3902 BC) is used to support her arguments about mobility. Materials, pots, and potters can be on the move, hence, she proposed a useful paradigm to differentiate

between locally made and used “local vessels,” traveled “translocal vessels” and “in-between vessels” that show creative material, stylistic and technical appropriations, resulting out of encounters with others. Some vessels are made and used at the same place (“local vessels”) others are transported over various distances (“translocal vessels”). When humans and things are on the move, encounters with otherness can trigger creative processes, which might also become materialized in pottery (“in-between vessels”): the appropriation of new materials, different techniques, styles, etc. To follow the itineraries of things thus offers an entry point to a deeper understanding of past peoples' mobilities and the negotiation and transformation of temporarily stable cultural forms

“Pots on the move become different: Emplacement and mobility of pottery, specific properties of pots and their contexts of use” by Hans Peter Hahn (pp. 293-314, 13 figures, 41 references. 1 Internet resource). By employing examples from contemporary pottery-making in Northern Togo, Hahn demonstrates that in a single settlement household can differ considerably regarding the sets of pottery they use. There are about a dozen ethnic groups in an area of about 400 x 100 km with different sizes of the settlement areas and demographics ranging from a few thousand to more than half a million. Hence, there is a complex spatial distribution giving the impression of a spatial “patchwork.” Inspired by Mary Helms' key argument in *Ulysses' Sail: An Ethnographic Odyssey of Power, Knowledge, and Geographical Distance* (1988), Hahn examines short-distance mobility of things, and about the dynamics of different meanings and usages in neighboring communities. The materiality of cultural relations and material links across cultural (and ethnic) boundaries, therefore, the pottery of different styles made in different places by different ethnic groups can and does co-exist. He contends that the transcultural material mobility of pots should be considered as a key to cultural exchange. The meanings and practices in which these travelling pots become relevant can change from one place to the other. In addition, he emphasizes that “although things carry traces of their mobility within them, people evaluate these objects differently -- for example by bluffing or negating the mobile object itineraries” (p. 296). General assumptions about congruent distribution areas are thereby questioned. It

is shown how meanings and modes of use of the very same form of a pot can change from one place to the other, very often without the users' knowledge about such differences.

Lastly, an “Afterword: The pot and the archaeologist – changing each other in an (un)happy marriage?” by Philipp Stockhammer (pp. 315-320, 18 references). The author praises, critiques, and offers salient comments on each of the dozen chapters preceding his own. In their introduction, Heitz and Stapfer argue for an innovative approach to the study of pottery that learns from, and at the same time goes beyond, past approaches and which should be inspired by current theories in material culture studies and the practice turn. Stockhammer discusses several aspects of the foregoing chapters, notably that there is still a lack of collaboration between archaeology and anthropology (at least in Central Europe, where both disciplines are clearly separated at universities (Hafner); the extensive borrowing from human-related concepts like “agency” or “biography” (Van Oyen); and the practice of potting as an integrated bodily and mental process (Melko, Heitz, Albero, and Hahn). “Materiality is defined by me [Stockhammer] as the physical presence of an object within the material world, which is perceived by a human individual at a particular moment. Therefore, materiality is inseparably connected to perception and, especially, our perception of things” (p. 316). Stockhammer defines three different changeabilities of objects: “first, based on the continuously changing perception of the objects; second, the change of objects through time without human interference; third, the transformations of objects due to human practices. All three changeabilities are entangled with each other because the relevant factors for their transformation – i.e. perception, time and practice – depend on each other. All three changeabilities can force humans to act. They constitute an object's effectancy [sic.]. Objects have an effect on us and we do not have to associate their potential with any kind of intentionality, which again is integral for agency” (p. 318). Pots are much more dynamic than archaeologists often think: the changeabilities reveal the potential of their effectancy, of which understanding is so necessary when thinking about human-thing entanglements.

Ceramics in Transition: Production and Exchange of Late Byzantine-Early Islamic Pottery in Southern Transjordan and the Negev. Elisabeth Holmqvist. Archaeopress Archaeology, Oxford: Archaeopress Publishing Ltd, 2019. vi + 196 pp., 61 figures, 4 tables, 8 illustrated appendices (121 line drawings and color images in 25 pp. and 7 tables). ISBN 9781789692242, paperback, £35.00; ISBN 9781789692259, eBook gratis download. <http://www.archaeopress.com/ArchaeopressShop/Public/download.asp?id={B94DC294-A9A0-4A77-A5CC-3E926C9B8966}>. Elisabeth Holmqvist received her doctorate in Archaeological Science from the Institute of Archaeology, University College London in 2010, and MA and BA degrees in Archaeology from the University of Helsinki. She works as a post-doctoral researcher at the Helsinki Collegium for Advanced Studies, University of Helsinki, Finland. Her research interests include archaeological science, ancient craft technologies and identifying mobility of objects and people using archaeological data. She conducts archaeological fieldwork in Finland, Israel, and Jordan. The monograph under review here is based upon her dissertation of the same title completed in November 2010 under the direction of Marcos Martín-Torres, Thilo Rehren, and Steven A. Rosen. The bibliography includes citations through early 2019; hence, this monograph is an updated version of the dissertation. This volume should not be confused with another excellent book with a nearly similar title: Karen S. Rubinson and Anthony Sagona (eds.), *Ceramics in Transitions: Chalcolithic Through Iron Age in the Highlands of the Southern Caucasus and Anatolia*, 2008, Ancient Near Eastern Studies Supplement Series 27, Leuven, Belgium: Peeters Publishing; reviewed by me in the *SAS Bulletin* 33(4):7-10: <http://www.socarchsci.org/bulletin/SAS3304.pdf>.

Holmqvist's *Ceramics in Transition* begins with a “List of Figures” (pp. iii-iv), n = 61; a “List of Tables” (p. v), four all in Chapter 6; and a “Preface” (p. vii) which provides information on her academic background and acknowledges her mentors, family (parents, husband, and children), and financial support. Eight chapters, “Bibliography” (pp. 133-158) with 695 entries, and eight appendices complete the volume; there is no index. The splendid “Bibliography” is an extremely valuable resource on Israeli-Jordanian regional Byzantine and early Islamic

history and, especially, on archaeological ceramic studies. “Chapter 1: Introduction” (pp. 1-5, 1 figure) includes essential background and a schematic map of the region. She focuses on the utilitarian ceramic traditions during the sociopolitical transition from the late Byzantine into the early Islamic Umayyad and ‘Abbasid periods, c. 6th-9th centuries CE in southern Transjordan and the Negev. These regions were part of the Byzantine province of Palaestina Tertia prior to the Islamic administrative reorganization in the mid-7th century. Cooking ware and ceramic containers were examined from five archaeological sites representing different socioeconomic contexts, the Jabal Harûn monastery, the village of Khirbet edh-Dharih, the port city of ‘Aqaba/Aila, the town of Elusa in the Negev, and the suburban farmstead of Abu Matar. The ceramics were typo-chronologically categorized and subjected to geochemical and microstructural characterization using X-ray fluorescence spectrometry (ED-XRF) and scanning electron microscopy (SEM-EDS) to document the geochemistry of the sampled ceramics and to identify production clusters, manufacturing techniques, ceramic distribution patterns, and material links between rural and urban communities as well as religious-secular communities. The book builds on ceramic data to examine the continuity, survival mechanisms, innovation and change in the southern economies and their ceramic craft traditions in particular during the transitional period. The ceramic data demonstrate economic wealth continuing into the early Islamic periods in the southern regions, ceramic exchange systems, specialized manufacture and inter-regional, long-distance ceramic transport. The potters who produced wares in the southern areas during the formative stages of the Islamic period revised their products to follow new influences that diffused from the Islamic centers further north. There are no known ceramic production centers in southern Transjordan and the Negev that operated in the post-Byzantine period (excluding kilns at ‘Aqaba).

“Chapter 2: Southern Transjordan and the Negev in the late Byzantine and early Islamic periods” (pp. 6-16, 2 figures). The author discusses the historical background of the region, focusing on aspects affecting local industries and exchange networks; a detailed map provides the locations of the archaeological sites documented in the narrative. Holmqvist examines the rural and urban contexts in

Byzantine Palaestina Tertia, the southern parts of modern Israel and Jordan, notably the most important road, the Via Nova Traiana, running through the province of Arabia, and Petra, the capital city of Palaestina Tertia, a central point on the route from ‘Aqaba/Aila to Amman (Roman Philadelphia) and Bostra in modern southern Syria. Another identified east-west road is the Petra-Gaza route leading from Petra through Wadi ‘Arabah and the Negev, probably passing through Elusa and other locations in the Negev. The region experienced an “explosive” demographic growth and sustainable agriculture with the trade of agricultural products likely a defining factor in the success of the rural economies. Byzantine military presence was weakened from the mid-5th century but the impact of Sasanian military activities (614-628 CE) on the southern area is uncertain. The changing sociopolitical reality of the 7th century resulted in an administrative and military reorganization. Mosques replaced churches during the early Islamic period, caliph-sponsored building projects were instituted, and, under the Byzantine administration, urban trade and pilgrimage continued to play an important role in the local economies in many areas under Muslim rule. There is a paucity of evidence about Islamic roads, and particularly those of the Umayyad period. Christian communities under Muslim rule early Islamic agriculture, written sources from the 10th century onwards refer to new crops introduced in the course of the early Islamic period: an increase in rice cultivation, sugar cane, and bananas. Umayyad rulers were tolerant towards Christians and many Christian tribes eventually converted to Islam, especially following economic and political contacts. There was an extensive ceramic industry in Jerash during the Umayyad period (first half of the 8th century) with several kilns constructed in Roman period structures. Very few written sources mention tableware pottery or cooking wares, but the majority of the traded ceramic objects were likely containers exported as byproducts of other goods. The importance of wheeled transportation apparently decreased during the early Islamic period. Fine wares and amphorae are the primary ceramic categories recovered from excavations.

“Chapter 3: Archaeological sites” (pp. 17-27, 5 figures). A comparative compositional study is essential in order to define ceramic provenance and possible exchange patterns between the sites, since

hypotheses on ceramic transportation and common origin for the period have most often been based on typological constructs. Byzantine workshops have been identified near Petra and in Elusa, and ceramic production in 'Aqaba/Aila continued at least into the mid-8th century. However, there is sparse evidence for ceramic manufacture in the southern areas, particularly in the early Islamic period. The author discusses the excavations, settlement research, ceramic assemblages, and sampled loci from five archaeological sites. The monastery and the pilgrimage center at Jabal Harûn ("Mountain of Aaron," the burial place of Aaron in Jewish, Christian, and Muslim traditions) situated ca. 5 km southwest of Petra which likely had an important role in the local economy of the Petra region, because its community and the pilgrims increased the demand for foodstuffs and also ceramic utensils. Trenches J and Z, excavated during the Finnish campaigns of 2000 and 2005, provided the majority of the specimens selected for analysis. The village of Khirbet edh-Dharih in southern Jordan had an agriculture-based economy in the vicinity of an ancient sanctuary, Khirbet Tannur. The village had an excellent location with regard to trade routes and the Hajj route, and was excavated by a Franco-Jordanian team in 1984 and 2007. The excavations provided a wide repertoire of common ware pottery, mostly jars and cooking pots, many of which are stylistically and morphologically parallel with the Jabal Harûn ceramic finds. There are no indications of late Byzantine or early Islamic ceramic production at Khirbet edh-Dharih, or in its immediate environs. The city of Elusa (Halusa al-Khalasa) in the Negev was first settled in the Nabataean period (3rd century BCE), when it evidently served as a station on the caravan route from Petra to Gaza. The importance of Elusa increased during the late Roman and Byzantine periods – it was the only Negev town that gained the status of a polis. It gradually became a major Christian settlement although there was possibly a pagan majority until the early 5th century. Elusa also was the administrative center of the Negev, with historical references to its bishops. The site was originally excavated by the Colt expedition in the 1930s and by A. Negev in the 1970s. Area K, the ceramic workshops, was situated ca. 50 m southeast of the theatre, built during the 2nd-3rd centuries CE, on the edge of the Byzantine city. Unfired vessels and wasters were recovered, and both common ware sherds and wasters from the kilns were sampled. The

farmhouse of Abu Matar located in Beersheva was also selected; the latter is a large, multi-period site located in the northern Negev. The Roman, Byzantine and early Islamic city centers were located in the area of the modern city established by the Ottomans in 1900. Byzantine and Islamic period structures were recovered constructed on the remains of a Chalcolithic a settlement excavated by Jean Perrot in the 1950s. The Islamic period settlement, identified as a farmstead, was built partly on the Byzantine structures near the end of the 7th century; the excavation of Area B provided most of the ceramics sampled for this project. Lastly, specimens were selected from the Roman 'Aqaba Project excavations (1994-2003), directed by S. Thomas Parker from North Carolina State University at the port city of 'Aqaba/Aila/Ayla on the Red Sea coast. 'Aqaba/Aila amphorae, a specific type of transport vessel locally produced at 'Aqaba, were apparently used to repack land-transported goods for sea trade. Specimens came from Area s J and M.

"Chapter 4: Ceramic technologies, provenance and exchange" (pp. 28-35). In this very important essay, Holmqvist reviews the key concepts of her book, ceramic traditions, technologies, style, provenance and exchange, and aspects such as technological variation, change and potters' *chaîne opératoire*. She writes that "The applications of archaeological science methods continues to grow, but this tendency is perhaps not well reflected in classical and Near Eastern archaeology and particularly in the ceramic studies of these fields. There is still an apparent disparity between 'classical' ceramic studies (and indeed, even more so, in classical archaeology) concentrating on stylistic aspects and typochronologies and techno-compositional studies of ceramics. The latter is often seen as completely separate from traditional ceramic research: (p. 28). Holmqvist also states that in preparing specimens for bulk chemical analysis, the sample size should correlate with the coarseness of the ceramics, i.e., larger samples should be used in cases of coarser materials, in order to provide a representative and homogeneous sample of the ceramic sherd, and to allow elements that tend to distribute heterogeneously, such as manganese, to be represented. A non-homogeneous sample can lead to elemental variation that is *not representative* of the original sherd. In addition, the chemical elements that

are meaningful for provenance analysis can vary depending on the analyzed ceramic materials. In some cases, variation in one element can be considered adequate to identify a difference in the raw material utilized, but generally several elements should be considered, preferably showing clear differences of concentrations in different ceramic types, and relatively small differences in ceramics of the same type.

“Chapter 5: Catalogue of the analysed ceramic artefacts” (pp. 36-60, 21 figures). The total of 141 ceramic specimens sampled for this study includes 38 sherds from the Finnish Jabal Harûn Project excavations (sample code JH), 43 from the Khirbet edh-Dharih (sample code DH), 20 from the Roman ‘Aqaba Project excavations (sample code A), 20 from Elusa (sample code E) and 20 from the Abu Matar excavations (sample code AM). Appendix I: is a tabulation of 121 ceramic specimens, by site accompanied by line drawings and color images (pp. 159-172); *the 20 specimens from the Roman ‘Aqaba Project excavations are not included.* Ceramic samples were selected primarily from well-stratified deposits that contained stylistically and chronologically consistent ceramic corpora. However, the lack of securely datable objects affects all of the archaeological contexts under analysis in this study, limiting the possibilities for an intra-site absolute chronology for the deposits and finds. Available stratigraphic data were employed to sample ceramics primarily from late Byzantine and early Islamic period contexts with some earlier or later exceptions to examine chronological variation. The author discusses the pros and cons of the selection methodologies in relation to the excavators’ records, historical evidence for the region, the chronological periods under study, and concepts of “regionalism” in southern parts of modern Israel and Jordan. Traditionally, the southern and northern ceramic traditions have been seen as separate, with strong regional features and few shared characteristics, culture contact or material exchange. However, evidence for north-south contacts can be drawn from more recent research and this interpretation no longer seems reliable. There are few changes in Late Byzantine and early Islamic ceramic traditions which have contributed to the chronological complexity of the ceramics. An additional problem is the lack of provenance studies for the region and for the

chronological periods being assessed in this monograph. The basic ceramic categories are described and illustrated by line drawings and color images and the locations of sites with these specimens located on maps: Cooking vessels (pp. 41-44), basins and bowls (pp. 44-47), and food and liquid containers (pp. 47-54). Likewise, Elusa kiln wasters (pp. 54-55), and “Other forms” -- coarse bowls and cups, greenish ware with engraved motifs, and glazed sherds are discussed and depicted (pp. 55-56). Lastly, there is a detailed tabulation of the ceramic samples in terms of manufacture (wheel-made versus hand-made or technique unclear), vessel forms, rim forms, appendages, etc.: Jabal Harûn ceramic samples (pp. 56-57); Khirbet edh-Dharih ceramic samples (pp. 57-59); Elusa ceramic samples (p. 59); Abu Matar ceramic samples (pp. 59-60); and ‘Aqaba/Aila ceramic samples (p. 60).

“Chapter 6: Geochemical and microstructural ED-XRF and SEM-EDS data” (pp. 61-108, 26 figures, 4 tables). In this study, bulk chemical analysis by energy dispersive X-ray fluorescence spectrometry (ED-XRF) was selected to determine chemical compositions of the ceramics. The compositional group assignments of certain samples were further examined by scanning electron microscopy analysis (SEM-EDS) in which the chemical composition of the ceramic paste and mineralogical inclusions in the ceramic fabric were assessed. In addition, scanning electron microscopy was used to examine other technological aspects of the ceramics including production techniques, microstructures, surface treatments, and firing temperature. Both methods require invasive sampling of the sherd specimens; no whole vessels were compromised for this research project. Sample selection protocols are discussed followed by longer essays on the two analytical methods selected: 1) Energy dispersive X-ray fluorescence spectrometry (ED-XRF), sample preparation, precision and accuracy, and the statistical processing of data (pp. 63-78, 2 tables): Table 1: ED-XRF compositional data obtained from the ceramic samples; results have been normalized to 100% and taken from the average of three XRF runs (pp. 69-73) Table 2: Compositional groups based on the cluster analysis of the ED-XRF data (pp. 76-78). 2) Scanning electron microscopy with energy dispersive spectrometry (SEM-EDS), sample preparation, compositional groups, and technological aspects and

firing temperatures (pp. 65-83, 2 tables: Table 3: Mineral identifications of the compositional groups (Groups 1–15), based on SEM-EDS analysis (pp. 81-82); and Table 4: SEM-EDS microchemical analysis of the ceramic matrices' results given are mean values ($n = 4$), normalized to 100% (p. 83).

Fifteen main compositional groups are verbally detailed accompanied by SEM-BSE micrographs, bivariate plots, and dendrograms: Groups 1 (a-c) (pp. 75-84); Group 2 (pp. 84-85); Group 3 (pp. 85-88); Group 4 (p. 88); Group 5 (pp. 88-90); Group 6 (a-c) (pp. 90-91); Group 7 (pp. 91-93); Group 8 (1-f) (pp. 93-97); Group 9 (pp. 97-98); Group 10 (a-b) (pp. 98-100); Group 11 (p. 100); Group 12 (pp. 100-101); Group 13 (pp. 101-102); Group 14 (pp. 102-103); and Group 15 (pp. 104). Technological aspects and firing temperatures were determined by SEM. According to the macroscopic examination and scanning electron microscopy, the majority of the sherds appear wheel-made, and the hand-made technique appears linked to only a few specific ceramic forms and types, such as the red-painted and leaf-pattern vessels and glazed vessels. Three sherds were glazed, two of which represent very similar lead-glazing technology (JH035 and AM020), while the third appeared to be coated with an alkaline glaze. In general, the ceramic fabrics seem to regularly contain natural inclusions, relatively poorly sorted quartz, other minerals and clay pellets, while indications of artificial, added tempers were very few. All of the sampled ceramics were fired at relatively low temperatures, $<800^{\circ}\text{C}$. Calcite and plagioclase inclusions were present in many of the ceramic fabrics also confirming the relatively low firing temperatures; calcite would decompose at temperatures above ca. 700°C and plagioclase at temperatures rising above 900°C . There are five large groups in the data set (groups 1, 3, 6, 8 and 10), which are also archaeologically the most significant. Samples assigned to these five groups were further categorized into subgroups on the basis of the cluster analysis of the ED-XRF data (e.g., 1a-c); see Appendix I. In most cases, the minor compositional variations within a compositional group are variants occurring in the same ceramic recipe or production.

“Chapter 7: From production centres to regional and inter-regional ceramic transport” (pp. 109-124, 6 tables). In this chapter, she assesses the compositional

groups and technological ceramic data in correlation with the archaeological, typo-chronological record. The analytical results and the compositional groups, particularly the five largest main groups that can be referred to as the ‘primary groups’ on the basis of their dominance and archaeological significance, are discussed further with an emphasis on the typo-chronological aspects of the ceramics. In addition, inter-site relationships as demonstrated by the ceramic analysis are characterized. Holmqvist discusses the related ceramic economies of Khirbet edh-Dharih and Jabal Harûn (Groups 1 and 3), the shared relationships between Elusa and Abu Matar cooking pots (Group 6), the ceramic production at ‘Aqaba/Aila Group 8), and the Elusa workshop production (Group 10), as well as glazed vessels (Groups 5, 12, 15), and shared ceramic traditions and sociocultural implications.

“Chapter 8: Ceramic data in context: analytical, archaeological and historical evidence” (pp. 125-132). The primary focus of Holmqvist’s monograph was a typo-chronological and techno-compositional examination of ca. 6th-9th century utilitarian ceramics from southern Transjordan and the Negev, and the associated ceramic production and exchange patterns. Chronologically, she examined ceramics produced during the sociopolitical transformation from the late Byzantine into the formative stages of Islamic culture (the Umayyad and ‘Abbasid periods). Until the mid-7th century, the southern areas were a part of the Byzantine province of Palaestina Tertia, but following Islamic administrative reorganization the region was divided into three separate provincial units. Ceramic production patterns changed as did distribution patterns. She concludes that “regional characteristics and traditions restricted to certain areas notwithstanding, there are evidently shared patterns in the ceramic cultures and economies between the northern and southern areas. While regionalism was clearly the dominant pattern in raw material exploited, in light of the evidence presented here, it is no longer viable to consider the ceramic assemblages of the southern sites as having no parallels with those of other regions. Hence, it is necessary to reassess the interpretations of the ceramic traditions in southern Transjordan and the Negev to avoid contributing to the negative image of the sociocultural situation” (p. 132).

Pottery Ethnoarchaeology in the Michoacán Sierra. Michael J. Shott. Foundations of Archaeological Inquiry, Salt Lake City: University of Utah Press, 2018. 336 pp., 89 figures, 43 tables, 328 references. ISBN-10: 1607816229, ISBN-13: 978-1607816225. Listed at \$45.00 but available for less online. Shott is a professor in the Department of Anthropology at the University of Akron (Ohio) having earned a B.A. at the University of Massachusetts and his M.A. and doctorate at the University of Michigan. His dissertation was *Settlement Mobility and Technological Organization among Great Lakes Paleo-Indian Foragers* (1986) and his research interests include the anthropology of hunter-gatherers, assemblage formation, New World Paleoindian societies, and lithic analysis. He is a well-known specialist on stone tools having published more than 100 peer-reviewed articles, 35 book chapters, four edited volumes, and four edited journal issues as well as several dozen other publications including solicited articles, book reviews, and other works. He recently edited *Works in Stone: Contemporary Perspectives on Lithic Analysis* (Salt Lake City: University of Utah Press, 2015). Among his studies are several notable contributions to ceramic studies such as “Purépecha Pottery Ethnoarchaeology” in the Wendy Ashmore *et al.* volume *The Diversity of 21st Century Anthropology: The Life and Intellectual Legacies of Susan Kent* (Archeological Papers of the American Anthropological Association 16, Berkeley: University of California Press, pp. 47-56, 2006) coauthored with Eduardo Williams, Professor of Anthropology at El Colegio de Michoacán, Instituto Michoacano de Cultura, Michoacán, México. Williams, whose doctorate is from the University College London, is a highly regarded ceramic ethnoarchaeologist and prolific author (and longtime friend of your reviewer) who has written: *Estudios cerámicos en Occidente y Norte de México* (Eduardo Williams and Phil C. Weigand, eds.; Zamora, Michoacán, México: El Colegio de Michoacán, Instituto Michoacano de Cultura, 2001) reviewed by me in *Old Potter's Almanack: Joint Newsletter of the Prehistoric Ceramics Research Group and The Ceramic Petrology Group* (British Museum, London) 11(1):8-9 (March 2003); *Etnoarqueología: Ex contexto dinámico de la cultura material a través del tiempo* (Eduardo Williams, ed.; Zamora, Michoacán, México: El Colegio de Michoacán, 2005) reviewed by

me in *SAS Bulletin* 29(4):23-24 (Winter 2006); and *Tarascan Pottery Production in Michoacán, Mexico An Ethnoarchaeological Perspective* (Eduardo Williams; Archaeopress Archaeology, Oxford: Archaeopress Publishing Ltd, 2017) reviewed in *SAS Bulletin* 41(1):15-17 (Spring 2018).

Shott's *Pottery Ethnoarchaeology in the Michoacán Sierra* focuses on his research over a five-year period during which he inventoried the household pottery of two dozen homes in five towns in the Estado de Michoacán, recording age and types of use. This scholarly investigation is reported in nine chapters accompanied by 89 black-and-white figures and 43 tables. “References Cited” (pp. 175-189) with 328 citations included 19 by Shott on lithic tool assemblages and formation theory as well as pottery, and there is a useful “Index” (pp. 191-196). double-column with topical and proper noun entries. The volume begins with “List of Figures” (pp. vii-viii), “List of Tables” (pp. ix-x), and “Acknowledgments.” From the latter we learn that this ceramic ethnoarchaeological project was conceived in 1996 and launched the following year with fieldwork completed in 2001. Shott thanks George Foster and Eduardo Williams, as well as Warren DeBoer, Nicolas David, and William Longacre, his former and current academic institutions (University of Northern Iowa and University of Akron), his wife Elizabeth Bacus for assistance, and Dean E. Arnold who is quoted 1993:248 (*Ecology and Ceramic Production in an Andean Community*, Cambridge: Cambridge University Press, 1993).

“1. The Burden of Ceramics” (pp. 1-11). Shott notes that pottery “carries a heavy burden of archaeological inference” in three ways: 1) manufacture, design and decoration, and ceramic norms and styles that changed as a function of time. 2) past cultures made pots in various sizes for various purposes such as cooking, storage, and display, 2) pottery is a clue to the size of ancient populations or the occupation span of ancient settlements. He mentions that ceramics are abundant and imperishable prior to a review of ceramic ethnoarchaeology (Michael Schiffer 1976, Warren DeBoer 1982, and Prudence Rice 1987), pioneering studies (George Foster 1960, Nicholas David 1972), vessel use-life (Michael Schiffer 1976, Michael Deal 1998, but not James Skibo), and ceramic technology (Dean E. Arnold 1985, Warren

DeBoer 1983, Ben Nelson *et al.* 1994, William Longacre 1985, and Skibo and Schiffer 1995). Shott also considers the importance of the ethnoarchaeological approach citing his own work (1989, 1996, 2006) and notes postmodern critiques (Scott MacEachern 1996, Olivier Gosselain 2016, and Valentine Roux's 2017 rebuttal of the latter). Regarding cross-cultural datasets he states that there are four conditions that cases should meet to justify inclusion in datasets: 1) sedentism, 2) considerable persistent use of Traditional ceramics, 3) salience of size measurements, and 4) analytical distinctions between functional classes: cooking versus storage vessels. Brief summaries of the chapter contents are also presented. "2. Ceramic Assemblages and Archaeological Inference" (pp. 12-24, 2 figures, 1 table). Assemblages are defined and related to context and composition and formation theory, while a discard algebraic equation by Schiffer (1976, 1987) is reviewed along with comments by DeBoer (1983), Orton (1993), and David (1972). A lithic model by Ammerman and Feldman (1974) is also appraised as is DeBoer and Lathrap's (1979) conclusion that the promise of assemblage models is "unfulfilled." Shott discusses issues related to chronology and seriation following Dunnell (1970) and assesses the issue of population and occupation span citing the work of William Sanders in the Basin of Mexico where sherds provided both chronology and demographic estimates. He likewise examines pottery as related to function and activity. Lastly, there are sections devoted to ceramic ecology, evolutionary process, and variation in vessel size and form, noting that principles of lithic analysis are similar to those used in ceramic assessment.

"3. The Michoacán Study Area (pp. 25-50, 13 figures, 3 tables) maps 3.1 and 3.2 (pp. 26-27). The author reviews the rationale for selecting the Estado de Michoacán as a study site and prerequisites for examining pottery use-life and discard. The background to his study includes a summary of the work by George Foster documented in *Empire's Children* (1948) and research published by Eduardo Williams (1994a, 1994b, 1995 2014, and 2017). Schott's own fieldwork 1997-2002 involved 24 households and he sketches briefly the physiography, climate, and environmental changes of the region which is the heartland of the Precolumbian and contemporary Purépecha. Summarizing the local

ethnohistory and pottery tradition, he reports that there are 552 pottery workshops in Michoacán, many of which are seasonal and that the Prehispanic and modern pottery are not identical due to the adoption of Hispanic production methods. Prehispanic pottery production for the purpose of tribute is also recorded. Five study communities are defined: Erongarícuaro, Huáncita, Santa Fe, Tzintzuntzan, and Zipiajo. The locations, demographics, history of production, and processes of pottery production are reviewed. Pottery production in the towns of Zipiajo, Tzintzuntzan, and Huáncita is further detailed beginning with clay mining, clay mixing, forming, vessel types, and kiln firing techniques. Pottery distribution in the study communities was not a focus of the research design. Emic size classes (Table 3.1) are detailed in terms of vessel names and dimensions for four pottery types: ollas, cántaros, cazuelas, and comales. Notably, there has been a trend toward the use of industrial replacements in plastics, commercial dishware, and metal and enameled cookware although pottery has an enduring value and advantages. He reports that the abundance of metal cookware made it impractical to census that type of cookware while conducting an ongoing census of the pottery types and sizes. The pottery made in Tzintzuntzan is produced in a system of sizes grounded in colonial-era practice and currency. "4. Data Collection" (pp. 51-69, 2 figures, 2 tables). Shott summarizes research on the longevity of pottery in ethnographic contexts beginning with Foster (1942, 1960) and the use of detailed ceramic censuses conducted by Longacre and his students (1981, 1985). The rural study communities consisted of both mestizo and native Purépecha towns. He next details the conditions of fieldwork, sample quantities and sizes, limitations on sampling, the interview and census procedures, and fieldwork protocol. The household pottery inventory form is reproduced (Figure 4.1). Censuses were conducted monthly and the issues of informant accuracy, mobility of pots, and the informants' views on the causes of vessel failure (production failures and use failures) are carefully documented and Shott provides a useful discussion of the literature for comparative purposes, including research accomplished in two towns, Atzompa, Mexico and Wanka, Peru, as well as among the Kalinga of the Philippines, and Gamo of Ethiopia.

"5. Data Analysis: Contextual Factors" (pp.70-110, 23 figures, 12 tables). The chapter begins with a

discussion of analytical size classes (vessel types and vessel sizes) which are important factors contributing to use life. The four vessel types are further detailed: 1) Ollas for cooking or storage: height of vessel, size, function, and weight (Table 5.1, and Figures 5.1 through 5.5); 2) Cazuelas for cooking or serving: greater variation in maximum diameters than height; Figures 5.6 and 5.7; 3) comales for grilling: the distribution of maximum diameters is multimodal, weight variations (thick versus thin) relate to heating conditions and durability; Figures 5.8 through 5.10; and cántaros for water storage: thickness and vessel diameters variations; Figures 5.11 and 5.12. Cross-cultural data on function is reviewed as is use-life /age at death, central tendencies (mean or median values) and engineering and product reliability studies (R. W. Davidge 1980). There is a focus on the Weibull model, and Peruvian data assembled by Hildebrand and Hagstrum (1999) on distribution and mechanical behavior, and DeBoer's (1985) Reductionism model with data from the Shipibo-Conibo (Tables 5.1 and 5.3, Figure 5.16. The analysis of the Michoacán data takes into account the differences between the towns, use-frequency, household size and inventory size, issues about the numbers and kinds of people in a household, living patterns, and correlations of household size and vessel volumes, inventory sizes, and presence of young children and vessel breakage. "6. Use Life and Vessel Size" (pp. 111-139, 18 figures, 17 tables). There is a detailed report on the Weibull model and an evaluation of the Hildebrand and Hagstrum method for assessing failure risk. Shott also considers hypothetical scenarios of use-life with a cohort of 100 vessels and age-range of 0-20 years. Over five years, 606 vessels failed (303 ollas, 217 cazuelas, and 86 comales) and a correlation of use-life and size measurements (sizes and weights) indicated that size for ollas and cazuelas was a key factor while for comales the thickness of the griddles was the primary factor for failure. Hazard plots and problems with comal calculations are discerned; failed versus surviving vessels comparisons indicated that failure was not equally distributed across the vessel types. Issues of annual versus monthly censuses are also addressed and he demonstrates that the early failure of the smaller vessels is a factor in the calculations.

"7. Michoacán Data in Cross-Cultural Perspective" (pp. 140-161, 9 figures, 6 tables). Shott's assessment of DeBoer's (1985) approach using reductionism

notes that it engages many cases rather than one (Shott 1996) and he then reports on the value of comparative data. Chapter 1 illustrated that contextual factors (household size and composition, inventory size and or vessel value) are determinants of use-life. Data from Chapter 5 revealed little correlation between vessel use-life and contextual factors (use frequency, household and household inventory sizes, and the presence versus the absence of children). In Chapter 6 there is a robust correlation between use-life and vessel size among Michoacán ollas and cazuelas; vessel size is more significant than context. He also reviews data sources and use-life, the limitations on Kalinga census data (use-life is underestimated by the informants), variances in sample sizes and vessel types, and contextual factors and cross-cultural data. Shott also looks at datasets and how they are treated and focuses on regression analysis: Table 7.3 documents 18 pottery datasets. One conclusion is that vessel heights correlate well with use-life and that heights and vessel maximum diameters (rather than rim/orifice diameters) are not always reported but *should be recorded*. He next examines formation theory among Neolithic Balkan and Mississippian data and suggests that Weibull α and β correlate closely and that the Hildebrand and Hagstrum HH \bar{x} method is "weaker." Another is that there is an imperfect relationship between longevity and size in the sources drawn from a wide geographic and cultural range and provides suggestions for future studies. "8. Pottery Quantification and the Michoacán Discard Assemblage" (pp. 162-170, 3 figures, 2 tables). The author examines what archaeologists count in ceramic assemblages and how the counts relate to the things that interest archaeologists and how best to count in order to infer what we wish to know. Sherds are merely the indirect access to the Integral whole (the vessels) that ultimately concern archaeologists. He notes the problems between use-life and frequency seriation, weight quantification and Orton's EVREPs and EVSs (Estimated Numbers of Vessels Represented and Estimated Vessel Equivalents), the need to redefine "brokenness" and its relationship to formation processes. The Huáncita households' dataset of failed vessels was examined: sherds were collected, vessels reassembled, and measurements of completeness taken the discards indicated that the vessels were relatively complete and not very broken at the time of discard. Vessel parts reuse was limited only by imagination but

postdeposition taphonomy demonstrated that sherd size distributions changed under the effects of scruffage and overburden (Nielsen 1991). The Michoacán discard sample showed a high degree of completeness and low brokenness but small ollas were typically subject to retention and reuse. However, there is no universal best answer on how to quantify.

“9. Conclusions” (pp. 171-174). Census age data did not correlate consistently or well with contextual factors such as household size, inventory size, and composition or use frequency. Vessel size does correlate with longer vessel use-life and height did correlate well with use-life. Some small pots failed over spans shorter than the annual census interval. Use-life and limited discard is complicated by recycling – bases were retained preferentially over vessel mouths (rims). Ceramic technology contributes to use-life variation in terms of the selection of clays, mixing, tempering, forming, drying, surface techniques, and firing procedures. Future research should include technical studies and problems of accumulation need to be considered. Sample sizes in the Michoacán study could certainly affect the results and corroboration of the Tani and Longacre (1999) judgment that failure rate can exceed the rate of census sampling should be further studied.

A majority of ceramic studies describe vessel production and use but the causes and rates of pottery discard are frequently neglected in archaeological studies. Shott demonstrates that use life should not be overlooked and provides analytical methods for recording this significant factor. The longitudinal assessment of village pottery use over a five year period using a sample of nearly 900 vessels from 24 households located in five distinct communities indicates that vessel size is a more important factor in use-life than vessel context. His ceramic ethnoarchaeological analysis is a pioneering study that is useful for archaeologists concerned with household pottery longevity and cultural formation processes. His suggestions for future research are also well founded.

Ceramics of Ancient America: Multidisciplinary Approaches. Yumi Park Huntington, Dean E. Arnold, and Johanna Minich (eds.). Gainesville: University Press of Florida, 2018.

ISBN-13: 978-0813056067, ISBN-10: 0813056063. \$110.00 reduced to \$65.00 (hardcopy) 9780813052410 (electronic bk.), 0813052416 (electronic book). Designed as a reader or textbook, the 14 contributors to this edited volume analyze ancient America ceramics by emphasizing new perspectives and a multidisciplinary approach from the fields of archaeology, anthropology, and art history. This volume, they propose, can benefit students and academics to better understand and appreciate ceramics as one of the vital forms of communication within small social units, and across cultural and political boundaries. The three editors include two young art historians who specialize in ceramic studies of extant museum collections, one of whom has also engaged in archaeological research, and a seasoned anthropologist whose long-term studies of ceramic production over five decades and archaeological studies have earned him the reputation as a founder of ceramic ethnoarchaeology.

Yumi Park Huntington, assistant professor of art history at Framingham State University (Framingham, MA) having taken a BFA at Dong-A University, her BA at Long Island University, an MA at City College of New York, and her doctorate at Virginia Commonwealth University. She is a scholar of Pre-Columbian and Native American art, focusing especially on the Andean civilization of South America, is the author of *Mirrors of Clay: Reflections of Ancient Andean Life in Ceramics from the Sam Olden Collection* (Jackson: University Press of Mississippi, 2012, 96 pp.), which centers on pottery from the Cupisnique, Chavín, Vicús, Nazca, Moche, Tiwanaku, Lambayeque, and Chimú cultures. Johanna Minich is assistant curator of Native American Art at the Virginia Museum of Fine Arts (VMFA) in Richmond, VA, having received both her BA and MA in art history from University of Georgia in Athens, and her doctorate in art history from Virginia Commonwealth University in Richmond. Minich is an adjunct professor of Art History at the University of Mary Washington, and teaches art history courses at several colleges and the VMFA. Dean E. Arnold, adjunct curator of anthropology at the Field Museum of Natural History in Chicago and professor emeritus of anthropology at Wheaton College having served on its faculty for 39 years. He is internationally known as a scholar in ceramic ethnoarchaeology, specifically the organization and

technology of ceramic production. He received his BA in anthropology from Wheaton College (Illinois) in 1964 and an MA in 1967 and doctorate in 1970, both from the University of Illinois-Urbana. He has published five books and more than 60 articles and book chapters covering topics ranging from the mineralogical analyses of ceramic materials and the ecology of production to the standardization of ceramic pastes and the social organization of potters. His most enduring volume is *Ceramic Theory and Cultural Process* (1985), foundational for ceramic ethnoarchaeology, followed by *Ecology of Ceramic Production in an Andean Community* (1993) and, based on more than four decades of fieldwork, three books on the pottery-making community of Ticul, Yucatan, Mexico: *Social Change and the Evolution of Ceramic Production and Distribution in a Maya Community* (2008), *The Evolution of Ceramic Production Organization in a Maya Community* (2015), and *Maya Potters' Indigenous Knowledge: Cognition, Engagement, and Practice* (2018). In 1996, he received the Society for American Archaeology's Award for "Excellence in Ceramic Studies." Arnold's biography will appear shortly in *The Encyclopedia of Global Archaeology*.

This edited volume is the first volume to bring together scholars from archaeology, ethnography, and art history in the analysis of selected examples of Pre-Columbian pottery. This hardcover book from the University Press of Florida, is well-edited and sturdily bound, and is, to your reviewer's knowledge, the first to assemble these three often disparate disciplines together in a single work. Little previous scholarship on pottery has attempted to integrate the methodological approaches employed by scholars from these three fields. The 16 contributors from a variety of backgrounds in these fields explore what ceramics are able to reveal about ancient social dynamics, trade, ritual, politics, innovation, iconography, and regional styles. The separate authors' essays identify supernatural and humanistic beliefs through formal analysis of Lower Mississippi Valley "great serpent" effigy vessels, costume and dress in Moche art, and Ecuadorian depictions of the human figure. Several discuss the cultural identity conveyed by imagery such as Andean head motifs, and they analyze symmetry in designs from locations including the American Southwest. Some writers

employ diachronic approaches but only one refers to the results of physicochemical analyses (INAA).

This volume has 22 chapters and does provide a much-needed multidisciplinary synthesis of current scholarship on Pre-Columbian ceramics by focusing on four macro-regions of the New World: North America, Chapters 2 and 9 (Tunica and Caddo); North America and Mesoamerica, Chapter 8 (Mesoamerica and American Southwest); Mesoamerica, Chapters 7, 10, 11, and 12 (Maya, Maya-Toltec, Oaxaca, and Tarascans); and Andean South America, Chapters 3, 4, 5, and 6 (Ecuador, Casma Valley, Cupisnique, and Moche). The real value of the of this book lies in the initial chapters coauthored by the editors in which this integrated approach is presented and contextualizes pottery studies by employing materials and examples from the 11 subsequent contributions. The editors provide a model of how different research perspectives can together illuminate the relationship between these material artifacts and their broader cultural contexts.

The book contains a "List of Figures" (pp. xvi-x), "List of Maps" (p. xi), "List of Tables" (p. xiii) and "List of Contributors" (pp. 355-358), as well as a splendid, detailed 12-pagedouble-column "Index" (pp. 359-370) including topics, proper nouns, figures, maps, and tables. Following the editors' essay, the contributions are organized in four parts each of which has an introductory essay: "Part I: Revealing natural and supernatural concepts through formal analysis," essay (pp. 25-28) and two contributions. Part II: Investigating identity and social narrative through iconographic analysis and intertextuality," essay (pp. 95-97) and four chapters. "Part III: Symmetry patterns and their social dimensions," essay (pp. 213-215) and two contributions. And "Part IV: Charting innovation through diachronic studies," essay (pp. 273-276) and three chapters.

Chapter 1. "A New Approach to Pre-Columbian Pottery: Introduction to the Volume" by Dean E. Arnold, Yumi Park Huntington, and Johanna Minich (pp. 1-24). Arnold's scholarship and editorial skills are evident here. The reader should remember that this volume is designed as a textbook or reader. The authors briefly review the 10,000-year prehistory of American ceramics, focusing on scholarship over the past fifty years: the significance of ceramics,

innovation, physical science techniques, new fieldwork strategies, the advent of ceramic ethnoarchaeology, advances in theory, and the goal of examining patterns of cultural continuity from the past and in the present. Archaeologists, anthropologists, and art historians all use ceramics in their goal of learning more about ancient peoples, hence, there is a shared interest and overlap in approaches to analyze this material culture and may describe their methods differently. The editors contend that this volume provides an opportunity for scholars in all three disciplines to learn from one another in pursuit of the Precolumbian past. The volume is organized around four kinds of methods (Parts I-VI noted above) and they admit that very few publications have attempted to combine these disciplines in a single volume to illustrate how such research diversity can produce a more *comprehensive* approach to the study of ceramics in antiquity. A series of themes run through the book's chapters: technological change, group identity, gender, political organization, economic relationships, social networks, and religious practices. The editors see value in examining multiple Precolumbian regions rather than focusing on a single region, culture, or time period.

Ethics, cultural heritage, and authenticity are factors art historians consider in studying ceramics. Art historians normally analyze whole vessels, but this approach has been changing. This discipline examines questions of style and symbolism, authenticity and attributes, museums and private collections, with little information regarding the historical circumstances of recovery, authenticity, commercial markets, lack of clear excavation records about context and provenience (the latter, uncited in this chapter, is noted discussed by Kolb in "Provenience Studies in Archaeology," in Claire Smith (ed.-in-chief) *Encyclopedia of Global Archaeology*, 2nd ed., Cham: Springer, 2018, https://doi.org/10.1007/978-3-319-51726-1_327-2).

Anthropologists tend to be concerned primarily about behaviors associated with pottery, such as social and economic patterns, style, social groups, culture change, cultural identity and social organization. Archaeologists like to study whole vessels when available but their analyses are focused on the examination of potsherds, and prioritize issues of origin including physicochemical and other

methodologies, physical contexts, and provenience, and have to deal with site destruction and the looting of the specimens being studied. Ethics statements regarding the publication of articles on ceramics appear in journals such as *American Antiquity*, *Latin American Antiquity*, and *Advances in Archaeological Practice* (all published by the Society for American Archaeology) but not *Ancient Mesoamerica*. Both art historians and archaeologists are aware of and adhere to the stipulations in the 1970 UNESCO convention and 1990 NAGPRA.

Methods of confirming authenticity are traced back to the organizer of Dumbarton Oaks Precolumbian conferences, Elizabeth Boone in 1982 and 1993. Different ways of confirming authenticity are reviewed: petrography (Ownby ed. 2017 and Quinn 2013) and chemical analysis: INAA, XRF, and LA-ICP-MS (Barclay 2001, Glowacki and Neff eds. 2002, Sharrat *et al.* 2015, Tompkins and Day 2001). The unique characteristics of ceramics are reviewed by the editors who note that this material culture is the product of human and natural agencies and that their creation reflects culture, environment, and technology. Ceramics can be used to discover political economy, group identity, ideology, social networks, and religious practices. The behavior chain of pottery production and operational *châin opératoire* (which is *chaine opératoire* borrowed originally from lithic studies) is also a part of Matson's (1965) concept of ceramic ecology. We are reminded that clay is plastic and used to create a variety of different forms and the potters are engaged in accessing its properties and feedback (see Ingold 2013 and Malafouris 2013).

The authors stipulate that we should not use studio potters to understand pottery production because they purchase prepared clays, dry newly formed vessels in a sheltered temperature-controlled environment, and fire vessels in gas or electric kilns. Archaeologist and ethnographer Louana Lackey† and Marcia Selsor, both studio potters, brought that knowledge to ethnographic studies: Louana M. Lackey (1991) *The Pottery of Acatlán: A Changing Mexican Tradition*, Norman: University of Oklahoma Press; B. M. Mossman and M. Selsor (1988) A utilitarian pottery tradition and the modern Spanish kitchen, in C. C. Kolb and L. M. and Lackey, eds., *A Pot for All Reasons: Ceramic Ecology Revisited*, Philadelphia:

Temple University, pp. 213-237: B. M. Mossman and M. Selsor (1989) The clay preparation tradition of Agost, Spain, in C. C. Kolb, ed., *Ceramic Ecology, 1988: Current Research on Ceramic Materials*, British Archaeological Reports International Series S513, Oxford: BAR, pp. 155-174. Analyses of distances to resources (clays and aplastics/tempers) have been examined previously by Arnold (1985), while the concept of “taskscape” proposed by Ingold (2000) is gaining use. The Mediterranean work by Kostalena Michelaki could be cited here: K. Michelaki, G.V. Braun, and R.G.V. Hancock (2014) Local clay sources as histories of human-landscape interactions: A ceramic taskscape perspective, *Journal of Archaeological Method and Theory* 22(3):783-827.

Compositional analyses are significant for defining communities of practice; Arnold has demonstrated this in his publications focusing on the Yucatan as has Ron Bishop and Hector Neff in Guatemala. The editors also point out that decoration in its infinite variability is not arbitrary but materializes the structural realities of a culture, both within and between cultures, notably in religious and cultural symbolism. They also point out that surface color variability is reflected in clay mineral content, forming, and firing atmosphere and is an important attribute for analysis. With these considerations in mind, the authors have arranged the content of the final chapters under the four parts noted above: Part I: applying formal analysis to understand the natural and supernatural worlds; Part II: using iconographic analysis and intertextuality to investigate identity and social narrative; Part III: using symmetry analysis to understand social dimensions such as communities of practice, social structure, and cross-cultural relationships; and Part IV: employing a diachronic approach to understand social and cultural change.

Part I: Revealing natural and supernatural concepts through formal analysis (pp. 25-28), two contributions. 2. “Ceramic wares and water spirits: identifying religious sodalities in the Lower Mississippi Valley” by David H. Dye (pp. 29-61, 6 figures, 1 map, 6 tables). Archaeologist Dye employs a formal ceramic analysis using French ethnographic accounts to differentiate cultural groups and define six religious sodalities on ceramics dating ca. 1550-1650. He reviews relevant literature, outlines his

methodology, and defines six spirit groups then defines three thematic variations. 3. “Naturalism and ‘contrapposto’ in the ceramics of ancient Ecuador: ideology and the humanistic trend in ancient American art” by James Farmer (pp. 62-98, 11 figures, 2 maps). Art historian Farmer employs formal analysis to argue that naturalism is a characteristic seen in Ecuadorian ceramic figurines 4500 BCE-CE 300. He reviews Valdivia, Developmental (with Machalilla), Chorrera, and Jamacoaque figurine traditions then employs the concept of *contrapposto* usually used in Greek and Renaissance art argue for increased naturalization in the Ecuadorian specimens.

He provides a useful comparative analysis using Teotihuacan and Maya examples.

Part II: Investigating identity and social narrative through iconographic analysis and intertextuality (pp. 62-97), 4 chapters. 4. “Exploring the technology and meaning behind early ceramic figurines from the Casma Valley, Peru” by Shelia Pozorski and Thomas Pozorski (pp. 99-130, 9 figures, 1 map, 1 table). These archaeologists discuss the context of their excavations at Sichen Alto’s Initial period and figurine characteristics beginning with unfired clay examples. All specimens are fragments from middens and wall fill with human representations dominating the assemblage. Two types are standing (n = 357 fragments) and seated (n = 46) forms are classified and details on manufacture: modeling burnishing, and firing (variable and uneven) provided; iconography and symbolism are discussed.

5. “Emblems of cultural identity in early Andean art: engraved head motifs on Cupisnique ceramics” by Yumi Park Huntington (pp. 131-155, 6 figures, 1 map). Art historian Park discusses iconography and analyzes design elements from 179 whole vessels from the Cupisnique culture 1200-300 BCE. The author discusses traditional art historical methods and prior research interpretations by Larco Hoyle and Burger. The origins of the stirrup-spout vessel form appropriated from other cultures and engraving techniques associated with symbolism and cultural identity are also reviewed. The latter are related to 39 adobe friezes at the site of Huaca de los Reyes and 11 common features are delineated. Lastly, she points out the need and value to assess social and cultural identities from material objects.

6. “Bodies in both worlds: a preliminary comparison of human and supernatural dress in Moche art” by Sarah E. H. Scher (pp. 156-182, 10 figures). Art historian Scher provides an iconographic and semiotic analysis and documents gender identities seen in individual human costumes from Late Moche (200-550 CE) focusing on head coverings, loincloths, and tunics. Female figurines are less adorned and gender cannot always be determined from the clothing as there are supernatural beings close in form to the anthropomorphic human figurines. Owl warriors are clearly masculine but feminine divinities are also found in her comparisons of costumes.

7 “Intertextuality in classic Maya ceramic art and writing: the interplay of myth and history on the Regal Rabbit Vase” by Michael D. Carrasco and Robert F. Wald (pp. 183-212, 8 figures). Art historian Carrasco and iconographer Wald the imagery on stone statue Naranjo 22. The authors point out the importance of examining iconography and text records, following Michael Coe’s *The Maya Scribe and His World* (1973). They examine a specific vessel classified and studied by Justin Kerr, namely K1398, a chocolate drinking cup adorned with Regal Rabbit mythology and historical events recorded on Stela 22 from the site of Naranjo. The vase has two major scenes with caption texts and column texts; the stela depicts the Sun God as Jaguar Throne and relates to city-state warfare cast within a mythological framework.

Part III: Symmetry patterns and their social dimensions (pp. 213-215), 2 contributions.

8. “Symmetry analysis of step fret patterns on ceramics and other media from Mesoamerica and the American Southwest: continuities and changes in a shared pattern system” by Dorothy K. Washburn (pp. 217-248, 8 figures, 5 tables). Washburn is a recognized expert in assessing symmetry patterns, having analyzed Anasazi pottery from the American Southwest since the 1940s, before Anna Shepard’s 1948 research; Washburn’s notable books established an analytical procedure (1977, Washburn and Crowe 1988). She became interested in the step-fret (also called step-terraced or hooked and scroll) motif pervasive in the American Southwest and traced its origins in textiles to ancient southern Mesoamerica through trade and migration. Symmetry patterns (using pattern mathematics) seeks to understand how elements of design are configured into prehistoric

patterns. She documents the motif from the Formative (1800-BCE-CE 200) into the Postclassic (1000-1697 CE) through the spread of village-oriented maize subsistence systems. Table 8.1 is a review of 223 symmetry patterns focusing on the step-fret and she reviews the symmetry patterns for the Formative through the Classic periods and separately for the Postclassic. Continuities and changes in design systems are delineated, some of which are related to cultural beliefs and activities.

9. “The importance of symmetry in defining Caddo relationships: a synthesis of perspective” by Johanna Minich and Jeff Price (pp. 249-272, 5 figures, 1 map, 2 tables). The authors (a former archaeologist and a curator of fine arts) assess the uniqueness of motifs that differentiate Caddo culture (800-1700 CE) from others in the Mississippian Cultural Sphere. Mississippian ceramics include Caddo but these ceramics are generally relegated to separate chapters or books because they follow little of what is considered the typical Mississippian iconographic complex. Caddo designs (motifs and symmetry), however, conform to religious principles. Initially, the authors trace Caddo history, settlement patterns, the semiotics of the sacred, the significance of this symmetry, and differentiate utilitarian and fine ceramic wares; data from three archaeological sites is examined and able 9.1 (pp. 261-264) summarizes the analysis. Social dynamics, and local site identities, and trade relations are reviewed.

Part IV: Charting innovation through diachronic studies (pp. 273-276), 3 chapters – all by experienced Mesoamerican archaeologists.

10. “‘Ceramic sets’ in Maya and Toltec ceramics: the search for innovation and competition in ancient Mesoamerican pottery system” by George J. Bey III (pp. 277-301, 8 figures, 1 map, 1 table). Bey moves beyond typological framework and provides an innovative approach to ceramic analysis and household ceramics by comparing central Mexican Postclassic Toltec (900-1150 CE) ceramics with Late and Terminal Classic Maya (700-1100 CE) pottery. He notes that Mesoamerican archaeologists overwhelmingly use the Type-Variety system and challenges them to go beyond and “analyze [their] data more deeply and discern changing consumer tastes and marketing practices.” Ancient households possess collections of multiple ceramic forms for different purposes and Bey

defines household tableware as a "ceramic set" and contends that ceramic sets might be considered as emic units – that is necessary to prepare and serve food. The Toltec and Maya pottery provide two case studies, with the Toltec assemblage based on Cobean's (1978) typology. Bey studied 1300 Tollan phase Toltec rim sherds and determined chronological variations, changes in vessel shapes and support forms, and shift from polychrome to monochrome decoration. The Maya ceramic sets were similar in forms and sizes to the Tollan but with a wider range of forms and almost the entire range of early household forms (sample size not given). Nonetheless, Ceramic sets in these examples provide more information on economic and social patterns.

11. "A diachronic perspective on the Prehispanic ceramic tradition of the Valley of Oaxaca" by Gary M. Feinman (pp. 302-334, 9 figures, a map a table). Feinman's research over 40 years in the Valley of Oaxaca spans the period 1600 BCE-CE 1520. He notes the importance of studying regional ceramic traditions over time and he has done just that. In this chapter he reviews principal raw material (clays etc.), the technology of manufacture (molds and molding), and the scale of production and points out that these varied very little during the Prehispanic era. In addition, most pottery is exceedingly plain. His focus is on basic ceramic wares and he advances three hypotheses regarding the lack of variation: 1) intercommunity connectivity and development of more permanent firing techniques (kilns rather than open air firing); 2) the advent of griddles (comals) revealing a change of food consumption in the form of tortillas, a "portable food" reflects the significance of maize cultivation; and 3) the development of a state religion focusing on the lightning deity. He reviews his conceptual frame, geography, and chronology and asks the question why did shifts in certain widely shared pottery traditions vary over time? Relationships between ceramic traditions and politico-economic shifts are reviewed and he summarizes published ceramic research since 1952. In a diachronic analysis he notes ceramic change during the period of early urbanization, increasing political integration (200-1200 CE) followed by political decentralization in an era of political reorganization with a decline in the production of figurines and effigies in the Late Postclassic – the latter correlates with the use of finer pastes and higher

firing temperatures. Feinman also discusses the advantages for producing transport vessels: "continuity is a better descriptor than change for describing the Prehispanic Valley of Oaxaca pottery tradition" (p. 327). Lastly, he confirms the importance of studying a ceramic tradition holistically over time and demonstrates that the examination of objects not solely from an aesthetic or symbolic frame but from a more encompassing societal/cultural context is valuable.

12. "Product continuity and change in persistent household ceramic production: the Tarascan case" Amy J. Hirshman (pp. 335-354, 1 figure, 2 maps, 2 tables). Hirshman notes that this chapter is an expanded version of a paper she presented at the 2013 Ceramic Ecology Symposium CE27 held in Chicago. She points out that finely decorated pottery is associated with the development of the Tarascan state in West Mexico during the Classic and Postclassic periods (350-1525 CE). There is a diachronic continuity of color and form over time and pottery became more uniform reflecting Tarascan sociopolitical structure. Local household potters used a cognitive model to judge the artistic merit of innovative design, hence, the ancient potters adopted designs that related to state ideology in response to local demand. There was no significant reorganization of the emergence of the state and household production of fineware ceramics continued without elite control. Hirshman, employing INAA and other data from the Urichu site which had a 1000-year chronology) provides details about the Late Preclassic to Late Postclassic periods (50 BCE-CE 1525) demonstrating that utilitarian wares remained a relative static vessel form. She also reviews how change can occur (following George Foster 1948, 1979) and the riskiness of pottery innovation (Dean Arnold 1985; Margaret Hardin 1977, 1983).

There are a number of books that contain archaeological and art historical contributions on ancient ceramics and other forms of material culture. However, these presentations are often disjointed and "stand-alone" with little correlation between the methodologies and research by scholars from these two major disciplines. *Ceramics of Ancient America: Multidisciplinary Approaches* differs in that the editors planned to have both art historians and anthropologists present their findings. The editors,

two from art history (Park and Minich) and an ethnoarchaeologist who has conducted ethnographic, archaeological, and archaeometric research (Arnold). In the first part, natural and supernatural concepts, there are an archaeologist and an art historian; in the second part, identity and social narrative through iconographic analysis and intertextuality, there are presentations by a husband and wife team of archaeologists, two chapters by art historians, and one coauthored essay by an archaeologist and art historian. In the third group dealing with symmetry patterns and their social dimensions, there is one chapter by anthropologist and another coauthored by an art curator and a former archaeologist; lastly in charting innovation through diachronic studies, there are three contributions by three archaeologists who specialize on different Mesoamerican areas and cultures. The subject matter spans the gamut from a single ceramic vessel to the pottery assemblage of a single archaeological site, and diachronic assessment of pottery from a polity. The “Introduction” contributed by the editors is a significant contribution by itself and provides the opportunity for scholars from various disciplines to understand the methodologies, analytical procedures, and ways in which data and results are reported.

This is apparently the first volume to bring together anthropology (archaeology and ethnography) and art history in the analysis of Pre-Columbian pottery. Previous research on ceramics has usually been divided among these disciplines, but this book demonstrates that integrating approaches provides new understandings of different aspects of ancient American societies. Contributors came from a variety of backgrounds in these fields to explore what ceramics can reveal about ancient social dynamics, trade, ritual, politics, innovation, iconography, and regional styles. The contributions identify supernatural and humanistic beliefs through formal analysis of Lower Mississippi Valley effigy vessels, costume and dress in Moche art, and Ecuadorian depictions of the human figure. Other essays consider the cultural identity conveyed by imagery such as Andean head motifs, and the analysis of design symmetry from locations including the American Southwest and Mississippi Basin. Chapters also take diachronic approaches to pottery analyses from Mexico’s Valley of Oaxaca and Tarascan State, as well as from Maya and Toltec societies.

Excavations in the Plain of Antioch III: Stratigraphy, Pottery, and Small Finds from Chatal Höyük in the Amuq Plain, Parts 1 and 2 [in two volumes]. Marina Pucci, Oriental Institute Publications 143, Parts 1 and 2. Chicago: Oriental Institute of the University of Chicago, 2019. ISBN-13 9781614910466, ISBN-10 1614910464, 984 total pp., 2 vol. 198 pls., 125 figs, 7 tables. \$99.95 (hardback) Publication Date: May 2019 Part 1: pp. lxiv + 336; Part 2: pp. xiv + 570 125 figures (many color); 198 plates (many color); 7 tables. Regular Price: \$99.95/ Special Offer Price: \$80.00. hardback; **gratis online.**

Part 1 [Volume 1]:

<https://oi.uchicago.edu/sites/oi.uchicago.edu/files/uploads/shared/docs/Publications/OIP/OIP143-1.pdf>

Part 2 [Volume 2]:

<https://oi.uchicago.edu/sites/oi.uchicago.edu/files/uploads/shared/docs/Publications/OIP/OIP143-2.pdf>

Marina Pucci completed her doctorate at the Freie Universität Berlin on Syro-Hittite architecture: M. Pucci, *Functional Analysis of Syro-Hittite Architecture*, British Archaeological Reports International Series S-1738, Oxford: BAR, 2008) and has a tenure track position in Near Eastern Archaeology at the Università degli studi di Firenze (Italy). She has worked at excavations (five campaigns at Tell Afis and seven at Tell Shech Hamad) in Syria from 1997 to 2009 and in Turkey from 2012 to the present (Tell Atchana/Alalakh, Zincirli). From 2007 to 2013 she conducted a project at the Oriental Institute to analyze and publish the materials from the site of Chatal Höyük, brought to light during the American excavations in the Amuq. Since 2013 she has been responsible for the Iron Age materials from the excavations at Atchana. Her research focuses on the material culture of Internal Western Syria, the Qoueiq plain (Syria and Turkey) and the Amuq plain (Turkey) from the Late Bronze Age I to Iron Age III.

The mound of Chatal Höyük (currently Hatay, Turkey) is located in the eastern part of the Amuq Plain on the left bank of the Afrin River at a crossroad that leads east and west to other major sites. Chatal Höyük is composed of a large acropolis (primarily investigated by the American team) and a lower town extending on the eastern side, opposite to the river. Excavations during three field seasons were

undertaken by Richard Martin in 1932, Claude Prost in 1933, and Ian McEwan and Robert Braidwood 1934-1936. The American team usually consisted of nine archaeologists and others and ca. 300 Syrian workers. This volume presents the final report of the archaeological campaigns carried out by the Oriental Institute at the site of Chatal Höyü more than eighty years after the field operations. Approximately 65% of the Acropolis was excavated and artifacts distributed to repositories in Turkey and the Oriental Institute; it is not clear when the small finds and pottery were allocated but it appears to have been over several years.

The review of this monograph will focus on the pottery analysis of the collection at the Oriental Institute. The study created a dataset that allowed Marina Pucci to reconstruct the life of a village which survived the political turmoil in the period from the Late Bronze Age to the end of the Iron Age (16th -6th centuries BC). If, during the Late Bronze Age, Chatal Höyü was a village in the provincial part of the Hittite Empire, it became a large independent town in a small but powerful new political entity (Walistin) during the Iron Age I and II, before being conquered by the Assyrian Empire. In this publication of small finds and pottery, many previously unpublished materials are now made available to both general readers and scholars for the first time. The material culture discussed and analyzed here offers the opportunity to trace changes and continuity in the site's domestic activities, to point out shifts in cultural contacts over a long period of time, and to monitor the construction of a new community identity. A complete architectural phasing of the stratigraphy and the phasing of the accompanying material culture was the project's goal. The monograph is divided into two parts discussed separately: *Part 1: The Text* ca. 400 pp and *Part 2: The Catalog and Plates* ca. 584 pp.

Part 1 provides a "List of Tables" (p. xiii), "List of Figures" (pp. xv-xiii), a "Preface" by James F. Osborne (pp. xix-xx), "Acknowledgments" (p. xxi), and the "Bibliography" (pp. xxiii-lxiii) with 672 entries. Sixteen chapters and four appendices complete the first volume. "Chapter 1: History of the Excavations, Research, and Materials" (pp. 1-11). Dr. Pucci describes the excavation system, daily routine at the excavation house, and how excavated materials were recorded. The excavation's documents (daily

journals, original drawings, photos, lists of objects, and letters) housed in the Oriental Institute Archives, as well as the approximately 16,000 small finds and pottery sherds from the site currently kept at the Oriental Institute Museum, provided the necessary dataset for the analysis presented here. Previous reports, theses, and the first two volumes of this series on Chatal Höyü are reviewed and the Amuq cultural phases defined. The history of research on the Amuq cultural phases M, N, and O which contained ceramics, (Table 2, pp. 7-8) are detailed as are the aims and structure of the monograph. The goals are to 1) present the excavation report on the stratigraphy, pottery, and small finds; 2) elaborate the further subdivisions of the phases which are based upon the stratigraphy and related ceramics; 3) to scientifically discuss the Amuq phase sequence in relation to the materials from the site; and 4) offer future researchers the opportunity to conduct further studies on the collection. "Chapter 2: Methods of Reanalysis" (pp. 13-28) initially presents a review of the materials and documentation available at the Oriental Institute to undertake this reanalysis. Original field notes were separated from the written materials created by later scholars; these documents were inventoried and ultimately placed in an archive (see Appendix 4 for details). The small finds had registration numbers assigned in the field while sherds were collected in buckets according to each locus and a museum number was written directly on the sherds' surfaces but the pottery was not inventoried in the field. Body sherds were generally discarded but all sherds brought to the Oriental Institute Museum were registered with a museum inventory number assigned during the early 2000s. Data processing and cataloging procedures are described and the reanalysis procedure for 13,300 sherds is explained. The criteria used to define fabrics (Munsell colors, grain sizes, etc.) and terminology for nine shapes, six surface treatments, and decoration (paint, incision, and application) are defined. The 6,900 sherds from "clear stratigraphic contexts" were indexed, and 1,306 were selected for drawing. The following pottery classes were identified: Imported Pottery (IMP), Painted Monochrome (PM), Painted Bichrome (PB), Red Burnished (RB), Simple Ware (SW), Cooking Ware (CW), and Storage (St). Also delineated for the small finds are a relative chronology and archaeological sequence, and eight functional classifications for understanding cultural features (Table 3, pp. 24-26).

Five subsequent chapters focus on site stratigraphy: “Chapter 3. Area I: Stratigraphy and Related Materials” (pp. 29-62); “Chapter 4. Area II: Stratigraphy and Related Materials” (pp. 63-116); “Chapter 5. Area IVa: Stratigraphy and Related Materials” (pp. 117-138); “Chapter 6. Area V: Stratigraphy and Related Materials” (pp. 139-156); and “Chapter 7. Caches and Specific Features in the Trenches (pp. 157-170). The latter also has a catalog of 31 Arab/Byzantine graves identified in the trenches and a section on separate caches of vessels and objects.

“Chapter 8. The Amuq Phases at Chatal Höyük: Pottery Classes and Chronology” (pp. 171-200). The connections between the areas and the trenches, *i.e.* the correspondences between each layer and the archaeological finds (mainly the pottery) are detailed for Phases M, N, and O. **Phase M:** A total of 2,107 sherds were analyzed. The production of Simple Ware and the “Drab Ware” question during Phase M are considered and there is a low percentage of painted pottery and two ceramic classes, Simple Gray Ware and Black Burnished, which disappear completely in later periods. Connections between homogeneous grit and extremely fine paste are discussed and the author reports that 38% of the sherds had straw temper. Plates (mostly conical with hooked rims) and shallow bowls (mostly hemispherical) are trademarks for the phase (Fig. 43), and connections to Anatolia are discussed citing publications by Goldman, Summers, Schoop, and Mileke. A continuity of shapes from the Late Bronze Age I Horizon and regional connections are also reviewed, notably deep bowls, biconical bowl, and kraters; pyriform storage jugs are also distinguished. The variety of classes during Phase M includes Gray Ware, Black Burnished, Red Burnished, Cooking Ware, Painted Ware, Painted Bichrome, and Comb-Decorated. Imports from Cyprus and pottery from Alalakh are also reported. The phase ends with the appearance of locally-made Late Helladic III middle pottery (mid-12th century BC).

Phase N: Monochrome painted pottery percentages increased during Phase N and at the beginning of the phase, imitations of Late Helladic IIIc pottery are noted. Little is mentioned about tempers. Shapes from Phase M continue with the addition of bell-shaped Mycenaean bowls, hemispherical handled bowls, and

angular bowls with painted rims and handles (Figs. 44, 46); however, there are only a few carinated cups while amphoroid kraters become extremely common during the phase. Arrow painted decorations in registers indicates a Mycenaean (East Aegean) influence. The painted decorated pottery during Phase N (Fig. 45) includes 12 patterns: hatched or plain triangles (13% of all sherds), bands, foliates, and chevrons are the most common, but birds, fish, and horned quadrupeds are also found. Wavy line and spiral patterns are rare, but very few vessel shapes were left unpainted. The production of local imitations of foreign shapes with fine grit temper increases while white slip never appears on local vessels. Small cups with carinated bodies are among the white slipped imports and bell-shaped bowls likewise appear during Phase N. Pucci provides a lengthy, detailed assessment of the development of the painted decorated pottery tradition related to vessel shapes, painted patterns, and diachronic changes. The dating for Phase N is related to the imports of Late Helladic IIIc pottery middle/late period (mid- to late 12th century BC).

Phase O: The beginning of Phase O marks the appearance of the “Red Slip” class and its progressive increase, as well as burnished pottery, and the progressive decrease of patterns in the monochrome painted ware. All red slipped vessels are burnished – wheel-made horizontal burnishing on open forms and handmade vertical on the closed forms. The most common vessel shapes (Figs. 48, 49) are plates with conical bodies and ring bases; biconical and carinated bowls Red Burnished and smaller flared rim bowls; hemispherical bowls; and S-shaped bowl. Tempers are not detailed. At the beginning of Phase O, the Painted Monochrome group continues from Phase N but diminished in the number of shapes and decoration (mechanically drawn concentric circles now appears). Imports of Bichrome (Philistine or Cypriot) pottery development of the painted decorated pottery seen in late Phase N continues but only as barrel-shaped jars, while the local production of Bichrome ceramics varies greatly. Phase O Mid and Late begins the development of the Red Burnished and decay of the painted tradition but Painted Monochrome and Bichrome assemblages enclosed shapes remain well represented. The phase also witnesses a trend toward standardization. Imports of Black on Red juglets (recovered from all levels),

Bichrome and Black on Red Cypriot vessels, polychromes, and other factors suggest the dating of Phase O to the 8th-6th century BC. The last section of the chapter focuses on the Amuq phases and archaeological periodization (pp. 193-200) and includes four colored pages (Table 5) correlating sites, chronologies, and regions (Amuq, Northern Levant, West [Cyprus, Greece, and Lefkandi], and Southern Levant).

“Chapter 9. Containers: Functional Classification and Morphology (pp. 201-229, Figs. 50-93). The vessel functions and morphological characteristics are discussed in detail accompanied by splendid illustrations which include the painted decorations previously reviewed. Four groups are documented: 1) Food and drink processing: cooking pots; mixing bowls; ovens and fireplaces; perforated vessels, strainers, and strainer jugs; bowls with a central spike; food and drink serving and consumption (tableware); eating bowls and plates; vessels for mixing liquid, drinking, and mid-sized closed containers for serving liquids, and feeding bottles (FS 162); and perforated open vessels. 2) Storage: containers for liquid storage (edibles?), dry storage, and storing precious liquids (miniatures). 3) Transport: Pilgrim flasks/barrel jugs. 4) Nonutilitarian function: Kernos rings (used in drinking in specific religious performances) and Red Lustrous spindle bottles (found in high-status burials). The final section of the chapter concerns habits and behaviors over time in terms of new specialty shapes (such as Kernos rings), and changes in common shapes during Phases M and N which are associated with the increased consumption of fluid foods.

Chapters 10-15 have occasional references to ceramic material culture as noted below: “Chapter 10. Armors and Weapons” (pp. 231-234): none. “Chapter 11. Dress and Personal Accessories” (pp. 235-248): some cosmetic containers and lids were of red slipped and burnished pottery. “Chapter 12. Furniture and Fittings” (pp. 249-252): 23 lamp fragments were crafted in stone but a few were ceramic (pp. 250-252). “Chapter 13. Toys and Games” (pp. 253-256): toy chariots and wheels (pp. 254-256). “Chapter 14. Tools and Equipment” (pp. 257-274): 797 spindle whorls were recovered, most in stone, but 25 in baked clay (pp. 253-259); loom weights in baked clay were only “generally” collected; 322 seals and seal impressions were collected, 26 were of faience; and unbaked clay

sealing were also reported. “Chapter 15. Miscellaneous (Unknown Function)” (pp. 275-283). Censers (pp. 275-276) 45 censers or censer fragments were reported, only three were made of baked clay; 18 “floral bowls” in baked clay were recovered (pp. 276-277); two ceramic “hand bowls” are noted (pp. 277-278); two ostraca are described (p. 280); and 52 figurines in fired clay are described in detail (pp. 281-284).

“Chapter 16. Urban Space and Material Culture as a Mirror for Social and Political Changes” (pp. 285-300). Pucci initially discusses topographic correlations of Haines’s original topographic plans of the mound and the CORONA images dating to 1969 and 1970 and the configuration of the mound and the citadel and lower town. Late Bronze Age (Phase M) (pp. 285-289) construction and features are reviewed including rooms, storage facilities, modifications, destruction, material culture and relationships to the Hittite Empire. With the beginning of the Iron Age (Phase N) (pp. 289-297) she focuses on the local production of painted Mycenaean-style pottery and the “construction of a new identity,” fortification, living in the town, and especially building a polity with the structuring of an urban landscape, pottery standardization or homogeneity, work specialization, establishing local workshops, and economic contact with Cypriots, Assyrians, Phoenicians, and Egyptians as seen through the ceramics. The final stages of the Iron Age period show a continuity of material culture, standardization, and the progressive abandonment of the town. Lastly, Pucci provides a brief but illuminating essay on the comparison of historical and archaeological contexts.

The final matter in the first volume includes: “Appendix 1. The Cuneiform Tablet” (written by John A. Brinkman) (pp. 301-302); “Appendix 2. The Neo-Babylonian Amulet” (Eva Götting) (pp. 303-304); “Appendix 3. Aegyptiaca from the Mound at Chatal Höyük” (Günther Hölbl) (pp. 305-308); “Appendix 4. Materials from the Oriental Institute Museum Archives” (pp. 319-328); a summary, “Türkçe Özet” (translated by Oya Topçuoglu) (pp. 329-331) and Arabic version (translated by Ibrahim Ahmad) (pp. 334-335).

Excavations in the Plain of Antioch III: Stratigraphy, Pottery, and Small Finds from Chatal Höyük in the

Amuq Plain, Part 2: Catalog and Plates. Marina Pucci, with appendices from J. A. Brinkman, E. Götting, and G. Hölbl. Oriental Institute Publications 143, Part 2. Chicago: Oriental Institute of the University of Chicago, 2019. The front matter to the second volume includes: “List of Plates” (pp. vi-xi), a list of the 198 plates, and an “Introduction” (pp. xiii-xiv). The latter provides information on the organization of the catalog, definitions; material, preservation, color (Munsell designations), dimensions, and description); details (bibliographical references); color images of the objects; and plate numbers. The “Catalog” (pp. 1-192) is in eight parts: “Chapters 3-9. Containers” (pp. 1-37): Ceramics Containers (pp. 1-30); Glass, Metal, and Stone Containers (pp. 31-36). “Chapter 10. Arms and Weapons” (pp. 37-41). “Chapter 11. Dress and Personal Accessories” (pp. 42-68). “Chapter 12. Furniture and Fittings” (pp. 69-82). “Chapter 13. Games” (pp. 83-86). “Chapter 14. Tools and Equipment” (pp. 87-149). “Chapter 15. Objects with Unknown Function” (pp. 150-179): Censers stone and ceramic (pp. 150-158), Figurative (pp. 159-179). “Appendix 3: Aegyptiaca” (pp. 180-192). Plates 1-198, mostly in monochrome, with tabular material, cross-sectional drawings, illustrations of decorations (painting, etc.), and images of complete vessels.

This incredibly detailed two-volume set is an achievement that completes the three-volume set on the University of Chicago Oriental Institute’s publication of *Excavations in the Plain of Antioch* that documents the excavation stratigraphy and artifact analysis of materials from the highly significant site of Chatal Höyük located in the Amuq Plain. The Braidwood’s and other scholars who excavated at the site over eight decades ago would applaud and take great pride in recognizing the meticulous work undertaken by Marina Pucci in resurrecting the artifacts, field notes, and photographs to create a masterful report on the ceramic assemblage and other material culture. The Chatal Höyük pottery was studied and reported using a traditional format that dates to the 1930s but with some updating that focuses on ceramic wares, vessel metrics, and descriptors such as vessel shapes, colors (thankfully Munsell), and decoration with an emphasis on the painted motifs. In addition, the report’s traditional, comprehensive catalog of the artifacts includes a more up-to-date format for illustrating ceramic profiles and color

imaging. Hence it is a substantially updated presentation on the ceramic materials including figurines, spindle whorls, loom weights, and other baked clay objects. Dr. Pucci has created a model that is comprehensive, illustrative, and informative regarding the material culture and is to be congratulated for her efforts to resurrect the site collection, document it, and report it for scholars everywhere.

Readers of this SAS “Archaeological Ceramics” column will recognize that little has been done regarding the documentation of the physicochemical characteristics of the ceramic wares now so carefully defined. With the corpus now meticulously documented and available at the Oriental Institute it seems time, as a next logical step, to examine the ceramic fabrics and their tempers and the painted pottery in order to further define and corroborate the classifications, and elaborate the locally-produced pottery and imitations from the imported ceramic wares. Such data provenance would be an important addition to our understanding of the dynamics of this important region. There are a number of potential MA theses to be derived from such studies.

Pottery Technologies and Sociocultural Connections between the Aegean and Anatolia during the 3rd Millennium BC. Eva Alram-Stern and Barbara Horejs (eds.). Institut für Orientalische und Europäische Archäologie, Oriental and European Archaeology 10. Wien, Austria: Verlag der Österreichischen Akademie der Wissenschaften / Austrian Academy of Sciences Press, 2018. 311 pp. ISBN: 978-3-7001-8127-9, € 129, 00. The editors are both at the Institute for Oriental and European Archaeology, Austrian Academy of Sciences. Alram-Stern is senior author of *Metaphysis: Ritual, myth and symbolism in the Aegean Bronze Age: Proceedings of the 15th International Aegean Conference, Vienna, Institute for Oriental and European Archaeology, Aegean and Anatolia Department, Austrian Academy of Sciences and Institute of Classical Archaeology, University of Vienna, 22-25 April 2014 Aigeira I, The Mycenaean Acropolis, fascicles 3: Vormykenische ceramics, Small finds, and Archaeozoological and Archaeobotanical legacies*, Archaeological Institute 43, Wien: Austrian Academy of Sciences, 2006, first in a series of publications on the Austrian Aegis in Achaea, presents all prehistoric and Mycenaean

findings (with the exception of the Mycenaean pottery) from the highest point of the settlement, the Acropolis. Pottery and small finds from the Final Neolithic and the Early and Middle Helladic periods provide the oldest evidence of human settlement. She is also author of *The Aegean Early Period: Volume 1: The Neolithic in Greece*, Publications of the Mycenaean Commission 16, Wien: Austrian Academy of Sciences, 1995, and coauthor of *The Roman lamps from Carnuntum*, Limes-Hefte 35, Wien: Verlag der österreichischen Akademie der Wissenschaften, 1989. Barbara Horejs wrote *Çukuriçi Höyü Anatolia and the Aegean from the 7th to the 3rd millennium BC*, *Oriental and European Archaeology* 5, Wien: Austrian Academy of Sciences, 2017, while Horejs, Reinhard Jung and Peter Pavúk edited *Analysing pottery: processing, classification, publication*, *Studia archaeologica et mediaevalia* 10, Bratislava: Comenius University, 2010. The latter volume was reviewed by me in *SAS Bulletin* 34(3):7-9 (2010).

Pottery Technologies and Sociocultural Connections derives from a workshop organized by Horejs and Alram-Stern in Vienna, 22-23 October 2015, which focused on pottery in the Aegean and in Western Anatolia from EH I–II / EB1–2 (ca. 3000 - ca. 2300 BCE). The aim was to bring together ongoing research in petrography, chemical analyses, and NAA with archaeological data for further interpretation of pottery of this period. Archaeometric analyses aim at identifying the clay deposits and potential pottery workshops. Large scale macroscopic identification of fabrics augmented by petrographic analysis was used to detect distribution patterns of pottery and technological changes and employed to characterize the fabrics. These methods are indispensable to better understand exchange patterns and the potential identification of regional and interregional ceramic groups or clusters. Horejs and Alram-Stern contend that conventional archaeological research on pottery is mostly based on identification and statistical recording of wares, shapes and decoration, which are closely connected with value and the potential use of items. In addition, microscopic and chemical analysis of pottery allows the characterization of the production process. Both methods aid in understanding the socioeconomic background of pottery manufacture and the people who produced them. The workshop had 17 presentations, five of

which are not included in the book these were by Tompkins, Lambrechts; Memelaou, Kouka, and Day; Day, Wilson, Kartolis, and Kilikogou; and Kirialze, Kordalzi, Psaraki, Bolleau, Tarlaron, and Serri. The workshop was funded by the Austrian Science Fund projects P 24798-G18, Y 528 and P 25825 as well as by the ERC project 263339. The book was peer-reviewed by anonymous international scholars prior to publication.

The volume begins with a “Preface” by the Series Editor Horejs (pp. 5-6) followed by Eva Alram-Stern and Barbara Horejs “Pottery Technologies in the Aegean and Anatolia During the 3rd Millennium BC: An Introduction” (pp.7-21, 2 figures, 59 references). The contents are organized around five topics: 1) Chronological and Geographical Framework; 2) Production, Function and Chaîne Opératoire; 3) Connectivity; 4) Regional Patterns (subdivided chronologically into: Early Bronze Age I, Early Bronze Age II, and Early Bronze Age II Late-III); and 5) Embedding the Conference Outcome into the Early Bronze Age. The authors reiterate the goal of bringing together archaeological and archaeometric research results and experts in order to create a holistic approach to broader Greek-Aegean region through sociocultural interpretations by focusing on an archaeometric assessment of regional pottery. They thank various research groups and their long term research findings leading to the development of a methodological and theoretical background. Their state-of-the-art interdisciplinary approach to Aegean ceramics produced a large amount of new and complex data, which are employed primarily by specialists in this field, but also leads to a multifaceted picture to be used by other investigators for sociocultural interpretations. There is a valuable “Index” (pp. 305-312) at the end of the book.

Chronological and Geographical Framework: Due to “current scientific requirements, projects and available data,” the Aegean and western Anatolia during the periods of Early Helladic I–II / Early Bronze Age 1–2 (c. 3000–2300 BC) have been selected as the general chronological and geographical frameworks. Ongoing research in petrographic and chemical analyses, specifically X-ray fluorescence (XRF) and Neutron Activation Analysis (NAA) were assembled with archaeological contextualization to review potential social and

economic patterns in the production and distribution of pottery within a trans-Aegean. The selected focus is closely related to the Institute for Oriental and European Archaeology (OREA) in Vienna research group Anatolian Aegean Prehistoric Phenomena, which connects Greek and Turkish parts of the Aegean within a holistic approach. Both of these regions are starting and intermediary points of formative cultural processes, which have been and continue to be studied by archaeological and interdisciplinary basic research methods – conducted in detail with highly specialized analyses as well as supra-regional studies. The research strategy includes excavations, archaeological and environmental surveys, material studies and analyses of all types of artifacts. A further approach deals with chronology and periodization, climate, subsistence, resources, technologies, rituals, networks, socio-cultural impact and theoretical issues. Recently generated data from the OREA fieldwork form a scientific basis and are linked with old data. A primary research focus concerns Early Bronze Age settlements, economies and technologies dating to Early Helladic (EH) I–II / Early Bronze (EB) 1–2 (3000–2300 BC) on both sides of the Aegean. Ongoing studies of pottery utilizing conventional archaeological methods were combined with petrographic and chemical analyses in micro-regional and trans-regional comparisons resulting in an abundance of new data. This multinational effort involved individual archaeologists and archaeometricians as well as European laboratories: Fitch Laboratory of the British School at Athens, the Department of Archaeology of the University of Sheffield, the University of Bonn and the Austrian Archaeological Institute. Alram-Stern and Horejs, who are both the workshop organizers and editors of this book, stress that the “the intense and fruitful discussions between the authors during the conference formulated new local, regional and interregional aspects ... led to some crucial outcomes, which are represented in the following overview of this volume.”

Production, Function and *Chaîne Opératoire*: A number of papers raised questions concerning the production of pottery and its *chaîne opératoire*, which require not only detailed scientific analyses of the ceramics themselves, but also their environmental contextualization are essential consideration. The clay composition used for the pottery fabrication is

examined by petrographers, who provide data on the selection of raw materials that can lead to the identification of production centers / work places. The contributors to the “Pottery Technologies in the Aegean and Anatolia reviewed clay compositions and the use of a specific temper – such as calcite, marble or grog – in the production of pots with a special use, i.e. cooking or storage; this temper choice could have been shared by people within wider areas. The various techniques of vessel fabrication are recognizable through macroscopic examination of the pottery, such as using coils, plaques or a throwing table. “According to ethnographic studies, these building techniques and their distribution are connected to special groups of people and offer information on potential communication networks, which are likely built upon kin affiliations.” Specialization may broadly be assessed on the basis of firing temperatures as well as the controlling mechanisms over the oxidation process, respectively pointing to open fire or a kiln-like construction. Experimental studies in refiring sherds have been shown to be a successful method for determining firing temperatures. Possible functions of vessel can be elucidated by residue and use-wear analyses. Additionally, an analysis of pottery fabrics and forms indicates that vessels with certain characteristics were possibly used for special purposes.

Connectivity: A significant topic is how pottery of a particular region can give us indications of connectivity between the areas under study. Traditional archaeological research in this respect is based on the identification and statistical recording of wares, forms and decoration, which are closely connected with use and importance in the household. Ethnographic studies demonstrate that those decorative techniques have sociocultural value and can illustrate networks of interaction, potential imitation, and conformity. Presupposing that potters used local clay deposits can assist in suggesting local production centers, while the archaeometric analyses of clay composition can give indications of the provenance of the clay and the distribution (or circulation) of pottery from the production loci. Large-scale macroscopic identification of fabrics correlated with petrographic analyses, assists in detecting distribution patterns of pottery in large assemblages. The papers from this conference cover the periods EB/EH I and II as well as its transition to

the final phase EB III (the predecessor of the Middle Bronze Age), therefore, it is essential that each period (and phases within?) should be characterized against the background of its specific cultural development. Local pottery production can reveal diachronic changes in fabrics and production techniques from period and assist in identifying technological and stylistic innovations and potential distribution, cultural contact, and imitation. These factors demonstrate aspects of cultural-ecological development in the 3rd millennium BC

Regional Patterns: Early Bronze Age I: Papers dealing with EB I create an interesting picture for sites of inland and coastal western Anatolia. The area around Pergamon is characterized by production and circulation of pottery within the region although the pottery is integrated into the pottery style of the northeastern Aegean and the Troad. At the same time, pottery production centres show no specialization. The very few imports from outside the region indicate that the region was excluded from the main routes of eastern Aegean and western Anatolian exchange networks. The coastal site of Çukuriçi Höyük situated in central western Anatolia is also characterized by local production, and the marble-tempered fabric (reminiscent of the fabric common in the Cyclades) most likely followed a local tradition mainly used for functional reasons. The specialized production and use of pots at the coastal site of Çukuriçi Höyük is supported by the contexts connected with on-site metal processing. Evidence from the Konya plain shows that Early Bronze Age pottery production has a long tradition dating back to the Late Chalcolithic/Final Neolithic, especially evident from the used of grog-tempering. A similar pottery tradition is known from eastern Crete as well as in other areas of the Aegean. On the western side of the Aegean, local production and consumption also characterizes the EM I period of Crete and the EH I period of the northeastern Peloponnese. This is also seen in the emergence of regional pottery styles. Firing pottery at low temperatures is ubiquitous but the temperatures were higher than in the previous period and the firing atmosphere was more controlled. Indication of initial trends in production specialization occur in EB I while in the later part of EB I, external contacts with more distant regions are observed. On Crete during EM IB Cycladic-style pottery of the Kampos group is attested at several

sites, and especially on the northern coast of Crete. These assemblages differ from site to site, each context showing different percentages of Cycladic-style pottery. Vessel form and surface treatments have a Cycladic character, hence, the pottery was most likely produced locally on Crete, following the typical Cycladic technological tradition of using calcite, along with the grog-tempering which is characteristic of Cretan pottery. In summary, EB I pottery of late EB I demonstrates interconnectivity not seen during the previous phase. This is evident primarily by the Cycladic Kampos Group on Crete, and likely a material expression of intensified contacts with the Aegean; a similar picture arises in Attica and Euboea. EH I fruitstands, made of a fabric characteristically produced in the area near Talioti in the Argolid, were circulated as far as Nemea in the Corinthia, indicating regular intensive interaction between these areas as well as special use.

Regional Patterns: Early Bronze Age II: For the EB/EM/EH II all over the Aegean, local production continued to dominate imports from other regions. The majority of sites produced pottery locally and followed their own common potting traditions while participating in the same regional exchange network. Regional pottery styles with characteristic tablewares (saucers and sauceboats) are common throughout mainland Greece, the Peloponnese and the Cyclades. This is indicative of an intensification of social activities, especially feasting based on the same eating/drinking rituals. In the northeastern Peloponnese, certain fabric recipes common in the entire area suggest that larger groups shared a certain tradition of pottery making. During EB/EM/EH II imports of tablewares from neighboring regions demonstrates a higher degree of interconnectivity than seen previously. In the Konya plain, the non-local “Metallic Ware” with serpentine inclusions was most probably imported from Cappadocia. On Samos, imports from Amorgos/Cyclades are known from Heraion II, in the developed phase of EB II. In the northeastern Peloponnese, dark-slipped green-brown tableware, which is easily distinguished from Argive products, was being imported from the Corinthia to the Argolid. In Crete, high-quality tablewares were exchanged between south-central and north-central Crete, suggesting these regions were host to specialized potting centers. Fine, high-quality tablewares and transport jars were now imported from

the Cyclades, while western Crete had imports from Kythera and the Peloponnese. Therefore, the authors conclude that EB/EH/EM II was a period of prosperity and interaction characterized by the circulation of prestigious pottery, indicating an increase in connectivity.

Regional Patterns: Early Bronze Age II Late - III:

Pottery dating to EB/EH II Late shows clear changes in form and technology as seen in the Anatolianizing Lefkandi I/Kastri pottery group in the Aegean and the eastern Greek mainland. This development had already begun in EB II and developed on Samos (Heraion II) and interrupted with EB III (Heraion IV) when new pottery forms and decoration appear. While all Anatolianizing forms were already present in EB II developed (Heraion II), *depas amphikypellon* (a distinctive two-handled tankard or flagon), appears only in EB II Late (Heraion III). The Lefkandi I/Kastri complex is connected with a change in form, but also the use of the potter's wheel. On Samos these changes in technology and style are not connected with an increase in imports, which become common only with EB III Late (Samos V). In Eretria on Euboea during EH IIB, "Helladic" shapes (saucer and sauceboat) are used alongside the Anatolianizing forms, but *depas amphikypellon* is not present. As on Samos, the Anatolianizing forms were produced locally; in contrast, some pottery with Helladic shapes were imported so that, as in the Argolid, pottery imports indicate contacts. In addition, a significant group of coarse ware, among them a pithos, was imported from the Cyclades. This is interpreted as a reflection of intensified mobility (especially in coastal areas) during EH IIB. The use of Anatolianizing forms for eating/drinking in specific social contexts highlights potential changes in eating/drinking rituals during this period. During EH III, pottery forms and surface treatment changed in Eretria, perhaps reflecting reproduction and adaption of external influences. Local clay sources continued to be exploited, but – interestingly -- the potter's wheel fell out of use; no reasons are given for this significant development. At the site of Aegina-Kolonna in coastal Euboea, EH II pottery assemblages have various imports from the Cyclades, Attica, and the Peloponnese, which demonstrate the important role of Aegina in the exchange systems of the greater Aegean. In EH IIB, typological and technological changes also appear in Kolonna. In contrast to other sites, they produced

tankards and hybrid forms of the "Helladic" pottery repertoire (*sauceboats* and *askoi*). In addition, a pottery complex dating to the end of EH II, synchronous with the House of Tiles at Lerna, comes from Romanos near Pylos in Messenia. This assemblage was recovered from the fill of a well and consists of mostly entire vessels, some of them extraordinary in size and shape; the assemblage has been interpreted as the remnant of a special consumption practice, the deposition of pottery following communal feasting. This pottery shows a high degree of standardization and specialization, and is almost exclusively made from local clay resources and follows local potting traditions; however, some pots have strong affinities to the Attic-Cycladic and northeastern Peloponnesian pottery traditions. At Romanos, a site located far from areas characterized by Anatolianizing pottery, a rotating device was used for the production of shallow conical saucers. In contrast to the Aegean islands and the eastern Greek mainland, EM IIB Crete is not part of the Anatolianizing pottery exchange network. That appears only in Cretan Vasiliki Ware found in Akrotiri indicating a continuous contact of Crete with the southern Aegean. On Crete itself, the dense network of pottery exchange continues, although there is a shift towards products from eastern Crete, indicating a change in the mechanisms of interaction.

Embedding the Conference Outcome into the Early Bronze Age: Alram-Stern and Horejs also prepared a lengthy concluding essay in which they correlate information from the contributions presented at the workshop and the subsequent discussions of these presentations. Based on our current knowledge of the organization of cemeteries and settlements, small to medium scale community groups, probably connected to family groups, formed the foundations of Early Bronze Age societies around 3000 BC. The results of ceramic petrographic analyses indicates that production from the very beginning of the Bronze Age ceramic onwards was widespread and located close to raw material resources and consumer loci. Production strategies varied from small-scale to less common extensive production. Typological studies indicate that networks of interaction between the villages produced regional pottery styles and production areas had a range of distribution patterns. Distribution focused

initially on local consumption while some others developed wider distribution networks.

Imports of pottery are rare between 3000 and 2600 BC (EB I/1) in western Anatolia and the Aegean, and most probably found their way via communication networks built upon affiliations of communities. The exchange of goods in ceramic containers rarely appears during these centuries. The exchange patterns changed during EB II, when imports of transport jars became more common, indicative of an intensified exchange of goods likely based on a more stratified and economically differentiated society. In Cycladic cemeteries, specific sets of pottery vessels are connected to graves as burial goods from EB I onwards. The Kampos group has standardized sets of burial goods in graves located as far away as Crete. Locally produced pottery was probably linked with the high mobility of distinct groups within the larger Aegean, and suggests ties of communities creating specific burial rituals and sharing perceived value of certain pottery vessels. Western Anatolia during the 3rd millennium BC was different, with standardization in pottery burial goods exemplified by the Yortan graveyard, and patterns in that region differed in terms of scales of connectivity. Centrally located sites such as Troy or Liman Tepe are highly connected with the Aegean as well as inland Anatolia and beyond; the Bakırçay Valley (Pergamon) appears mostly isolated in this aspect.

From the later EB I (2900–2700 BC) onwards standardized serving, eating, and drinking sets in western Anatolia and the Aegean are characterized by uniform vessel shapes and related technological features, such as surface treatments. The EB I chalices or pedestalled bowls, which are common in the northern and central Aegean as well as on Crete, contained liquid for more than one person and point to their importance in social events. In contrast to the local production and consumption of chalices in the Aegean, the large, red-fired chalices, so-called “fruitstands” (pedestalled bowls) common in the northeastern Peloponnese, were produced in the Argolid, and also circulated in neighboring regions, such as Corinthia. These factors suggest shared dining practices among emerging elites of this period. Comparable patterns are probably detectable in western Anatolia as well, but require further detailed analyses. The evidence of huge shallow bowls with

highly polished surfaces across the region from at least 3000 BC onwards could represent a similar pattern. The typological evidence in EB II demonstrates a shared dining repertoire between communities all over the Aegean, based on individual eating and drinking vessels. Saucers and sauceboats were common in the entire area of the Greek mainland and the Aegean (including the western Anatolian coastal zones), and are rarely found on Crete. In late EB II, the appearance of an Anatolianizing dining set partly replaces these and indicates an intensification of mobility from western Anatolia and the eastern Aegean islands and spreading over the coastal Aegean. On Crete, individual dining vessel sets consisting of goblets and plates are common. Use contexts including storage and deposition of standardized dining sets indicate shared dining practices and an intensification of social activities. Imports of eating and drinking vessels point to the importance of such communal meetings for inter-settlement communication. A few comments on the contents of the individual workshop presentations follow.

Anatolia & Eastern Aegean

Barbara Horejs, Sarah Japp, and Hans Mommsen “Early Bronze Age Pottery Workshops around Pergamon: A Model for Pottery Production in the 3rd Millennium BC (pp. 25-62). The prehistoric period has never been the focus of research in the area of the famed city of Pergamon, including the greater Kaykos or Bakırçay Valley. Aside from day-trips by W. Dörpfeld in 1908 and K. Bittel in the 1940s, information about the prehistory of the region is based mostly on a single survey conducted by J. Driehaus, published as an article in 1957. The glory of Hellenistic Pergamon seems to have captured the attention of all archaeological research in this area over the past 50 years, and as a result the prehistory of western Anatolia is lacking. Lisa Peloschek “Marble-Tempered Ware in 3rd Millennium BC Anatolia” (pp. 63-76). In the third millennium BC, the coastal area of western Anatolia was subjected to novel cultural influences arising from intensifying contact with the nearby Aegean. Contributions centered on this time horizon continue to focus mainly upon socio-economic issues, in particular prestige goods exchange. Yet interaction between the Aegean and western Anatolia also involved the distribution and trade of ceramic vessels. By examining the

ceramic evidence, it may be possible to not only identify imported products, but at the same time closely investigate the integration of ‘foreign’ attributes into the prevailing cultural milieu. Maria Röcklinger and Barbara Horejs “Function and Technology: A Pottery Assemblage from an Early Bronze Age House at Çukuriçi Höyük” (pp. 77-104). The case study in this contribution derives from Early Bronze Age (EBA) Çukuriçi Höyük, a tell settlement in western Anatolia. The site is located in the direct vicinity of the ancient city of Ephesos on the central Aegean coast. It was occupied from the Early Neolithic to the Early Bronze Age period, the early 7th to the first quarter of the 3rd millennium BC. The site is therefore one of the oldest known sites of western Anatolia. John Gait, Noémi S. Müller, Evangelia Kiriati, and Douglas Baird “Examining the Dynamics of Early Bronze Age Pottery Production and Distribution in the Konya Plain of South Central Anatolia, Turkey” (pp. 105-118). The Konya Plain of central Anatolia represents an important region for investigating the origins of urban societies in southwestern Asia; as early as the Late Neolithic there is evidence of nucleated settlement on a large scale in the region, namely at Çatalhöyük. During the Neolithic period (c.7400– 6100 BC), Çatalhöyük witnessed the emergence of a large and densely occupied settlement that over time developed into a large tell-site, which has been considered as a precursor to urban settlements, although more recently it has been suggested instead that the earliest true urban settlement in this region dates even earlier. Ourania Kouka and Sergios Menelaou “Settlement and Society in the Early Bronze Age Heraion: Exploring Stratigraphy, Architecture and Ceramic Innovation after Mid-3rd Millennium BC” (pp. 119-142). Archaeological research on Samos from the last century onwards has so far revealed five pre historic sites located all in the only extensive fertile plain of the southern part of this extremely mountainous island. The earliest occupation of Samos dates to the Late (LN) and Final Neolithic (or Chalcolithic, FN/Ch) as displayed by stratified levels at Kastro-Tigani and recently also at Heraion. Only at Heraion has the Early Bronze Age (EB) habitation been documented extensively through rich architectural sequences in old and new excavations. The Middle Bronze Age (MB) is known through stray finds at Kastro-Tigani,

Greece

Clare Burke, Peter Day, Eva Alram-Stern. Katie Demakopoulou, and Anno Hein “Crafting and Consumption Choices: Neolithic – Early Helladic II Ceramic Production and Distribution, Midea and Tiryns, Mainland Greece (pp. 145-160). The study of the Aegean Bronze Age has been dominated by attempts to characterize and understand the rise of Middle and Late Bronze Age state organizations. Scholarship has focused on craft production and consumption as mechanisms for economic growth and elite control, utilizing concepts related to the organization of production and hierarchical social development. Within this framework, the Early Bronze Age (EBA) has commonly been viewed as a simpler prelude to later societies with ceramic production being considered as primarily subsistence-based for local consumption. This has largely been due to continued attempts to frame understandings of the EBA within models. Eva Alram-Stern “Early Helladic II Pottery from Midea in the Argolid: Forms and Fabrics Pointing to Special Use and Import” (pp. 161-182). Midea, a well-known citadel of the Mycenaean period, is situated at the Eastern border of the Argive Plain. Excavations by a joint Greek-Swedish excavation were begun in 1983 under the direction of Katie Demakopoulou and focused mainly on the Mycenaean period. It was only in 2004-2006 that while excavating two adjacent trenches A and Aa at the northwest terrace of the Upper Acropolis, she discovered stratified deposits with an abundant concentration of finds dating from the Neolithic to the Early Bronze Age. Lydia Berger “Social Change – Cultural Change – Technological Change: Archaeological Studies and Scientific Analyses of Early Aeginetan Pottery” (pp. 183-196). Aegina, the small island in the Saronic Gulf between Attica and the Peloponnese, is known as a major ceramic center of the Bronze Age Aegean. Researchers and pottery specialists classified specific ceramic groups as Aeginetan based on stylistic and archaeological arguments. First matt-painted pottery was called ‘Aeginetan Ware’. Large amounts of these characteristic MH sherds have been found especially at Kolonna, the main prehistoric settlement on the northwestern coast of Aegina. The fragments belong to storage vessels as well as various shapes of tableware; the fabric is mostly buff, sometimes greenish. Sylvie Müller-Celka, Evangelia Kiriati, Xenia Charalambidou, and Noémi S. Müller “Early

Helladic II–III Pottery Groups from Eretria (Euboea)” (pp. 197-214). Since the discovery of the Lefkandi I pottery assemblage and the excavations at Manika, Central Euboea has been a key area in archaeological discussions about connectivity and cultural transmission between the Aegean and Anatolia, and between the islands and the Greek mainland in the third millennium BC, mainly during the Early Helladic (EH) II, about 2800-2300 BC. Excavations at Eretria have recovered significant amounts of EH II and III pottery from levels underlying Classical-Hellenistic buildings in the Bouratza plot. This material, although very fragmentary, provides an interesting data set.

Jörg Rambach “Romanos-Navarino Dunes in the Pyliia: The Early Helladic II Settlement and the Case of the Early Helladic II Well” (pp. 215-248). Archaeological salvage excavations were conducted continuously during the construction of the Navarino-Dunes hotel complex from February 2007 through December 2011. The complex, positioned at the seaside and surrounded by an 18-hole golf course, is located northwest of the modern village of Romanos. The excavations were conducted under the supervision of the 38th Ephorate for Prehistoric and Classical Antiquities of Messenia. Significant discoveries of the project include a large Hellenistic farmstead, an Archaic temple, burials dated to the Geometric and Protogeometric periods, an early Mycenaean Tholos tomb, and the remains of an extended prehistoric settlement of the Early Helladic. Georgia Kordatzaki, Evangelia Kiriati, and Jörg Rambach “Ceramic Traditions in Southwestern Peloponnese during the Early Helladic II Period: The Romanos Pyliias Case Study” (pp. 249-266). The authors summarize the results of the integrated petrographic analysis of pottery from the site of Romanos Pyliias. The site is unique in terms of the extent of the excavated area, the large size and organised plan of the settlement, with blocks of buildings, streets, workshops, wells and an area probably related to ceremonial practices⁷ The pottery assemblage under study comprises part of the fill of a well that was reused after the collapse of half of its stone-built circular brim and lining of the upper shaft. Areti Pentedeka, Catherine Morgan, and Andreas Sotiriou “Early Helladic Pottery Traditions in Western Greece: The Case of Kephallonia and Ithaca” (pp. 267-286). Throughout antiquity, Kephallonia and

Ithaca were key stations on sea routes between the Peloponnese, central and northwestern Greece, the western Balkans and southern Italy. Habitation on both islands, excepting sporadic Palaeolithic finds, can be securely traced from the Late Neolithic onwards, continuing essentially unbroken into the Late Roman period. Early Bronze Age (EBA) settlement on Ithaca can be best understood at Pelikata, in the northern part of the island. Excavation by the British School at Athens in 1930/31, directed by Walter Heurtley, revealed parts of a fortified settlement. However, most habitation layers were highly disturbed. Yiannis Papadatos and Eleni Nodarou “Pottery Technology(ies) in Prepalatial Crete: Evidence from Archaeological and Archaeometric Study” (pp. 287-304). Technology and technical behavior are not static material phenomena concerned only with the means and procedures of artifact manufacture, but dynamic cultural and social practices characterized by the application of specific methodologies and techniques selected from a plethora of others available. Techniques, practices and technological traditions are “social productions” that exist only within their social milieus: the driving force behind technological choices, innovations and creativity is human agency. The material aspects of technology -- natural and technical parameters such as the properties of raw materials, and the resources and tools available -- should be considered in conjunction with non-material properties.

The editors are to be congratulated for bringing such a wealth of material together into a single key resource. The workshop and publication serve as a model that can and should be emulated in other regions. Kudos.

SAS BULLETIN

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