

Program

Ceramic Petrology Group Annual Meeting

Thursday November 10th, 2016

Faculty of Archaeology, Van Steenis Building, Room E0.04

Time	Author	Title	Abstract	Location
9:30		Registration / Reception / Coffee Welcome		Lobby
10:00	Patrick S. Quinn (Institute of Archaeology, UCL) patrick.quinn@ucl.ac.uk	Introduction to the Ceramic Petrology Group		Room E0.04
10:05	Filmo Verhagen (University of Groningen) f.verhagen@student.rug.nl	Linking top-down theories with bottom-up approaches: the difficult but valuable marriage between theory and fabric analysis	The link between top-down theoretical approaches and bottom-up petrographic research is very valuable but also problematic. Linking broad theories, which are often based on excavation data and large datasets, to something as small as pottery sherds is necessary to embed petrographic research in larger archaeological debates and can increase the impact of petrographic studies. This paper will present a case-study which shows how the study of production, distribution and consumption based on pottery fabrics can alter our general understanding of these elements. Roman coarse and fine ware fabrics from the Pontine Plain (Central Italy) were taken as a case-study to provide new insights on the local scale of production, distribution and consumption. While theoretically it is assumed that production and distribution are connected to each other by the scale and organisation of production, the fabrics possibly tell a different story in which the functional quality of the pottery plays an important role. Furthermore, the potential for fabric analysis for not only the study of production (reconstruction of the chaîne opératoire, standardisation) and distribution (provenance) but also for consumption is shown by this study. Petrography might be the way forward for not only production and distribution studies but also for consumption studies, especially for periods and regions with seemingly homogenous ceramic assemblages.	Room E0.04
10:25	Natalia Donner (Leiden University) n.r.donner@arch.leidenuniv.nl Simone Casale (Leiden University) s.casale@umail.leidenuniv.nl Dennis Braekmans (Leiden University, TU Delft) Braekmans, D.J.G. d.j.g.braekmans@arch.leidenuniv.nl Alexander Geurds (Leiden University, University of Oxford) a.geurds@arch.leidenuniv.nl	Dialogues Between Petrography and Macroscopic Analysis: the Case of Aguas Buenas, Chontales, Nicaragua	Aguas Buenas (AD 500 – 1522), Nicaragua, is a unique archaeological site comprised of at least 379 man-made stone and sediment mounds spread in an area of 25 ha. These planned and built structures defy the local topography with a design of 6 partial concentric circles and a central quadrangular plaza. Intra and inter community practices associated to the site, located in the Mayales River sub-basin (East of Lake Cocibolca in the contemporary department of Chontales), are unclear. To begin to address these practices, ten field seasons were conducted in the Aguas Buenas hinterland (2009-2016) by the <i>Proyecto Arqueológico Centro de Nicaragua</i> (PACEN), directed by Alexander Geurds (Leiden University / University of Oxford). Surface survey, mapping and on and off-mound excavations now enable a material culture analysis, primarily focused on pottery. This paper presents the preliminary results of macroscopic examination using a technological approach of 834 sherds excavated in Mound 1 (M1). Of this sample, 46 sherds were further selected for petrographic analysis. The challenges related to the combination of macro and microscopic analysis to identify technological traces are discussed here. Also, based on paste observations, we compare and contrast the macro groups with the petrographic groups. This study was conceived as both a pilot approach previous to further pottery analysis in the region, and as a reference collection for future provenance research.	Room E0.04
10:45	Hannah B. Page (Institute of Archaeology, UCL) h.page@ucl.ac.uk Patrick S. Quinn (Institute of Archaeology, UCL) patrick.quinn@ucl.ac.uk Andrew Reid (Institute of Archaeology, UCL) a.reid@ucl.ac.uk	Society and Ceramics at Ntuusi, Western Uganda	The early 2nd millennium AD site of Ntuusi in western Uganda represents the first centralised settlement in Great Lakes East Africa, recording tantalising evidence for large-scale social and political organisation. Recent research suggests that this important social change took place via internal development, rather than through an external Nilotic influence. A drastically different ceramic style emerges at the site but, to date, this rich resource has been recorded from only a typological standpoint, with little attention given to technology and the potential for answering questions about the site's development, and its relationship to other settlements in the region. Ethnographic studies in the wider region (Grosselain 2000) have shown the significance of technological style in the representation of cultural identity. Therefore there is a high potential for using technology as the key cultural indicator on material from the East African Past to interpret complex social and cultural systems such as social stratification, definition of identity and political development. As part of a doctoral research project at the UCL Institute of Archaeology, a selection of ceramics from Ntuusi are being analysed by a combination of thin-section petrography, pXRF and SEM. Material sampled across both temporal and spatial dimensions at the site is being used to investigate external contacts, craft traditions, and the evolution of pottery technology. This presentation will outline the background to the on-going research and the preliminary findings, including the potential of using technological analysis in a sub-Saharan African context.	Room E0.04

11:05	Jean-Sébastien Pourcelot (University of Massachusetts, Boston) JeanSebastien.Pou001@umb.edu	Clay ordinances—New perspectives on 16 th and 17 th century ceramic production at Panama la Vieja's workshops through petrographic analysis	In this paper, I will present part of the preliminary results of an ongoing investigation into ceramics production at the site of Panama la Vieja, Panama during the 16th and 17th centuries through petrographic analysis. The sample is composed of 34 locally-produced sherds (from 30 tin-glazed and 4 unglazed vessels) whose typological attributes indicate they were manufactured in the workshops located a short distance away from the city's center. I will evaluate the implications of the resulting mineralogical and microstructural characterizations and subsequent sorting into fabric groups, and discuss their shared compositional and technological traits as well as their variances. Subsequently, I will focus on the variations that exist between and within fabric groups and suggest that temporality and distinct production sequences account for the observed microscopic differences. Finally, I will conclude with a reflection of the new perspectives on Colonial ceramic production at Panama la Vieja that were obtained through petrographic analysis particularly as they relate to the organization, norms, and degree of industrialization that existed in these workshops, and emphasize the importance of carrying out this type of research in sites where historic documents related to this activity are largely absent.	Room E0.04
11:25		Coffee Break		E0.04 Hallway
11:40	Michael Lewis (Institute of Archaeology, UCL) michael.lewis@ucl.ac.uk	Petrographic Investigations into the Middle Uruk Ceramic from Gurga Çiya, Iraqi Kurdistan	Petrography has been used sporadically within the study of Mesopotamia ceramics. Primarily this is due to the problems with the application of this technique in alluvial environs. With the recent influx of archaeological investigation into Iraqi Kurdistan, the once "terra incognita" is now an intensely surveyed and excavated region, yet petrography is still very much in its infancy, despite the highly active, geological nature of the region. The proximity of Gurga Çiya, a small tell site in the Shahrizor Plain, to the Zagros Mountains and major geological formations surrounding the Shahrizor improve the outlook for future petrographic research in the region. A selection of Middle Uruk (4th millennium BCE) ceramic from Gurga Çiya has been selected for petrographic research: Through a multidisciplinary approach utilising macroscopic analysis, thin section petrography, geochemistry and nannopalaentology, it is hoped to highlight how these techniques can help understand the Uruk expansion in the Shahrizor. This paper will also investigate what petrography can tell us regarding ceramic manufacturing traditions, raw material procurement, mass production and standardisation as well as trade and exchange during the Middle Uruk at Gurga Çiya.	Room E0.04
12:00	Marlieke Ernst (Leiden University) m.ernst@arch.leidenuniv.nl	Colonial interactions and ceramic transformations; continuity and change of ceramic repertoires in early colonial Hispaniola (1494-1562)	The initial Amerindian-European-African intercultural encounters in colonial Hispaniola led to the creation of entirely new social identities and changing material culture repertoires. In this research I will investigate transformation processes in the manufacture of non-European ceramics. I will do so by examining the archaeological collections recovered at the early Spanish colonial sites of Cotuí and Concepción de la Vega through the low-tech study of patterns of continuity and change in the chaîne opératoire of ceramic manufacture. The preliminary results of the analysis will be conceptualized using theories of transculturation, ceramic change and subaltern agency. This presentation will specifically focus on the typological ceramic groups that through the low-tech analysis has discerned among the ceramic assemblages of the sites. Current ongoing XRF and petrographic analysis conducted within the ERC-NEXUS1492 project will test whether the typology based on the low-tech, macroscopic analysis corresponds to the petrographic groups. This paper exemplifies how the study towards ceramic change can give new insights into the dynamics of Amerindian-European-African interaction during the first colonial encounters in the Americas.	Room E0.04
12:20	Silvia Amicone (Competence Center Archaeometry Baden-Württemberg, University of Tübingen, Institute of Archaeology, UCL) silvia-rita.amicone@mnf.uni-tuebingen.de Christoph Berthold (Competence Center Archaeometry Baden-Württemberg, University of Tübingen) christoph.berthold@uni-tuebingen.de	The Red and the Black: a Technological Study of 4th Century "Black" Gloss from Lasos (Turkey)	The study of fourth-century BC black gloss from lasos offers interesting insights into the appearance of Atticising pottery at this site alongside vessels imported from Attica. In order to evaluate the potential for undertaking a technological approach to answer the complex question of Attic black gloss importation and imitation in lasos during the fourth century BC, a pilot project was undertaken. This project involved the archaeometric analysis of a limited number of samples representative of the major fabrics recognised among the fourth-century BC assemblages. Some of these have surfaces partially or totally covered with red gloss. An integrated programme of archaeometric analysis was undertaken in order to explore provenance and technology of the selected samples, with a particular emphasis on the study of the red and black gloss. Specimens were analysed using petrographic analysis, Scanning Electron Microscopy with Energy Dispersive Spectrometry (SEM-EDS), micro X-ray diffraction (μ -XRD2), micro Raman spectroscopy and portable X-ray Fluorescence (pXRF). The results revealed an interesting scenario of technological relations between Attic and Atticising manufacturing traditions and important insight in the black/red gloss technique.	Room E0.04
12:40	Klaus Bente (Competence Center Archaeometry Baden-Württemberg, University of Tübingen) bente@server1.rz.uni-leipzig.de Christoph Berthold (Competence Center Archaeometry Baden-Württemberg, University of Tübingen) christoph.berthold@uni-tuebingen.de	Technological signatures of the transition from linear to stroked ornamented ware from Eythra (Central Germany)	Archaeometrical researches on neolithic ceramics with respect to the transition from linear to stroked ornamented ware were carried out using artefacts from Eythra (Central Germany). Due to technological signatures of these styles including questions of raw materials and firing parameters, representative sherds were studied using chemical analyses by XRF, texture, density and pores by CT and optical microscopy, phase analytics by optical microscopy and XRD and Moessbauer spectroscopy due to Fe ²⁺ /Fe ³⁺ ratios. The chemical data are processed using agglomerate hierarchical clustering and calculated to normative minerals by CIPW concerning temper chemistry and Fe oxidation states. The correlations of original and reduced chemical data as well as calculated CIPW mineral associations were statistically manipulated leading to raw material, treatment, fabric, temper and firing characteristics related to e.g. sherd forms, colors, grain sizes, wall thicknesses, caving and surface properties. While stylistic signatures	Room E0.04

			are unambiguous, the artefacts under consideration do not show any correlation between the style transition and technological signatures. Because temper compositions e.g. of SiO ₂ and also Fe ²⁺ /Fe ³⁺ ratios are both affecting cluster calculations significantly, they have to be considered for a realistic deduction of raw material provenance and firing parameters. It is shown, that acculturation and hybridization delivering arguments for autochthon or allochthon impulses need complex and statistically processed multi-methodical analytical data, especially if iconographical and technological correlations are required.	
13:00		Lunch		Cafeteria
14:00	<p>Natalia Lozada M. (<i>Institute of Archaeology, UCL</i>) natalia.mendieta.15@ucl.ac.uk</p> <p>Patrick S. Quinn (<i>Institute of Archaeology, UCL</i>) patrick.quinn@ucl.ac.uk</p> <p>Jose R. Oliver (<i>Institute of Archaeology, UCL</i>) j.oliver@ucl.ac.uk</p>	Preliminary Petrographic Study of Ceramics from El Saladero, Lower Orinoco-Venezuela from the Yale-Peabody Museum Collections	One of the most important archaeological sites of northern South America, El Saladero site (1050/600 BC-1500AD) is at centre of the discussion regarding chronological sequence models of the Lower and Middle Orinoco region. Originally excavated by Cruxent and Rouse in 1950 and 1955, it provided the first chronology for the region, which included five different ceramic complexes or styles, later classified as part of three different series. Analysis of each complex was made in terms of their forms and style, following a cultural historic approach. El Saladero collections are still used as reference for the analysis and classification of other archaeological assemblages in surrounding areas in the Orinoco Basin, such as Guyana and the Western Llanos. In order to contribute to the definition and characterization of the Saladero ceramic complexes, a petrographic analysis was performed on 13 sherds from the ceramic collection located at Yale Peabody Museum. The selected sample corresponds to rims and body sherds of Saladero, Barrancas, Los Barrancos and Guarguapo styles, obtained from excavation units 1 and 7 from the 1950 excavations. Preliminary results here presented explore differences and similarities of the technological choices made for the manufacturing of the different ceramic styles present at Saladero, as well as their relation to function and provenance.	Room E0.04
14:20	<p>Guest Speaker: Lisa Peloschek (<i>Austrian Archaeological Institute</i>) lisa.peloschek@oeai.at</p>	Human responses to natural diversity: documenting clay selectivity in post-pharaonic Aswan	<p>The region of Aswan in southern Upper Egypt is characterised by extensive deposits of kaolinitic clay; however, these clay resources have not been exploited before the second century BC, but pottery manufacture relied rather on locally available Nile silt and minor numbers of imported wares. A recent petrographic investigation of ceramics from Ptolemaic to late antique archaeological contexts from the settlement of Syene and the adjacent Nile Island of Elephantine aimed at a concise classification of artefacts fabricated of this local/regional "Aswan Pink Clay". Variability in this clay is discernible leading towards the differentiation of four individual and highly distinctive clay pastes.</p> <p>Two tendencies relating to clay selectivity can be recognised when comparing compositional and typological ceramic data: 1) Specific vessel shapes are made of particular clay paste recipes, and 2) symptomatic patterns emerge when tracing the chronological distribution of each Aswan Pink Clay-variant.</p> <p>Under consideration of results gained in the course of a geological field survey covering the extended landscape of Aswan, the presentation aims to clarify whether or not certain clay extraction areas providing raw material for local-regional pottery industries can be determined. It will be illustrated how the interplay of given natural factors and human involvement affected clay selection strategies in the micro-region of Aswan.</p>	Room E0.04
14:55	<p>Rebecca B. Scott (<i>Katholieke Universiteit Leuven, Leiden University</i>) becki.scott@kuleuven.be</p> <p>Bert Neyt (<i>Katholieke Universiteit Leuven</i>) bert.neyt@ees.kuleuven.be</p> <p>Corinne Hofman (<i>Leiden University</i>) c.l.hofman@arch.leidenuniv.nl</p> <p>Patrick Degryse (<i>Katholieke Universiteit Leuven</i>) patrick.degryse@kuleuven.be</p>	People, Pots, and Portable XRF: Reconstructing Patterns of Mobility and Exchange Based on the Analysis of Cayo Ceramics from Grenada, Lesser Antilles	Studies of ceramic material from the Caribbean are largely based upon stylistic analyses. Although a limited number of provenance studies combining petrographic and destructive chemical analyses have occurred, these studies are not suited to the vast amount of material held in museum and private collections. In order to use these valuable resources to help reconstruct patterns of mobility and exchange a portable, non-destructive approach is required. Initially, a comparative baseline of data representing three different islands (Grenada, St. Vincent, Trinidad) was created in the lab, by analysing with pXRF ceramic material which had previously been analysed both chemically and petrographically. The purpose of the baseline was two-fold: to assess the applicability of using pXRF to provenance ceramic material in the field on Grenada; and to provide a meaningful reference library with which to compare the subsequent field data. Portable XRF was then used to analyse the chemical composition of 52 indigenous Cayo ceramics from excavations and private collections on Grenada.	Room E0.04
15:15		Coffee Break		E0.04 Hallway
15:30		Lab Tour		MCS Labs (we meet at the E0.04 Hallway)
15:50	<p>Alessandro Ceccarelli (<i>University of Cambridge, Division of Archaeology</i>) ac2045@cam.ac.uk</p> <p>Cameron Andrew Petrie (<i>University of Cambridge, Division of Archaeology</i>) cap59@cam.ac.uk</p>	Urbanisation and Deurbanisation of the Indus Civilisation in North-Western India: A Technological and Compositional Study of Ceramic Industries as a Tool for Understanding Social Change and Continuity in the	The Indus Valley Civilisation (c. 2500-1600 BCE) was the only urban and technologically sophisticated civilisation of the South Asian Bronze Age, which is reflected in the development of its craft industries, including sophisticated jewellery, enigmatic statuary and decorated fine ceramics. Some time after the decline of Indus urbanism, new types of pottery such as Painted Grey Ware (PGW, c. 1300/1200-500 BC) emerged, and displayed distinctive approaches to form and production. Indus and post-Indus pottery is clearly of importance for studying this interesting period of Indian prehistory/proto-history, but has so far been defined only in terms of stylistic attributes, with comparatively little work carried out on	Room E0.04

	<p>Patrick S. Quinn (<i>Institute of Archaeology, UCL</i>) patrick.quinn@ucl.ac.uk</p> <p>Ravindra Nath Singh (<i>Banaras Hindu University, AIHC & Archaeology</i>) rns24@cam.ac.uk</p>	Bronze Age of South Asia	its production, use, and distribution. These details are of key importance for the study of the cultural changes described above and form the starting point of a new doctoral research project at University of Cambridge. This aims to reconstruct production, technological choices and chaîne opératoire of Indus ceramics from in North-Western India during the Urban and Post-Urban phases, as well as the way in which they were distributed and consumed. In the present paper, initial results from thin-section ceramic petrography of a first group of Indus and post-Indus sherds from the sites of Alamgirpur (Uttar Pradesh) and Bahola (Haryana) will be presented.	
16:10	<p>Patrick S. Quinn (<i>Institute of Archaeology, UCL</i>) patrick.quinn@ucl.ac.uk</p> <p>Shangxin Zhang (<i>Emperor Qin Shihuang's Mausoleum Site Museum</i>) zhangshangxin@126.com</p> <p>Yin Xia2, (<i>Emperor Qin Shihuang's Mausoleum Site Museum</i>) xiayin2000@hotmail.com</p> <p>Xiuzhen Li (<i>Emperor Qin Shihuang's Mausoleum Site Museum</i>) xiuzhen.li@ucl.ac.uk</p>	Building the Terracotta Army: Ceramic Craft Technology and Organisation of Production at Emperor Qin Shihuang's Mausoleum Complex, China	Despite significant research into the Terracotta Army of Emperor Qin Shihuang's mausoleum, key questions remain about how, where and by whom the c. 7,000 life size ceramic statues were made. These have important implications for our understanding of the craft technology, logistics and labour organisation behind the construction of the enormous necropolis in Shaanxi Province, China. As part of a collaborative project between University College London, Institute of Archaeology and Emperor Qin Shihuang's Mausoleum Site Museum, we are tackling these issues through detailed macroscopic, compositional and spatial analysis of the terracotta statues and other ceramic artefacts excavated from the site. This paper presents the results of an initial dataset of warriors, acrobats, bronze casting material and architectural ceramics. These have been analysed by a combination of thin section petrography and instrumental geochemistry, focussing on the raw materials and manufacturing technology involved in the production of the artefacts, as well as their relationships to one another. Our findings point to a high level of control over the selection and treatment of the clay paste used to manufacture the ceramics recovered from the site, perhaps through a centralised system of raw material acquisition, processing and distribution. Compositional data has also been used to shed light on the the long-standing question of the production location of the terracotta warriors and as well as other ornate objects recovered from the mausoleum.	Room E0.04
16:30	<p>Suellem Dayane Moraes Esquerdo (<i>Universidade Federal do Oeste do Pará</i>) suellemesquerdo@gmail.com</p>	Experimental Archaeology as a tool for the study of pre-colonial archaeological ceramics in the Amazon	In Archaeology it is common to study the use of anti-plastics, or tempers added to the clay slurry. Renowned scholars in Amazonian Archeology have often used anti-plastics as defining components of styles of archaeological ceramics in the Amazon. But despite some recurrent choice tendency in the use of tempers in style classification of Amazonian ceramics, often we find associations of different anti-plastics within the same style. This work focuses on the study of cauxi as a ceramic anti-plastic, which use is recurrent in various styles of Amazonian ceramics. Investigating whether the use of certain anti-plastics in archaeological ceramics is accidental or a technological choice, we used experimental Archeology as a tool to expand the understanding of the precolonial technological choices for ceramic tempers. To that end, we tried to reproduce samples comparable to the archaeological ceramics, using them as tools in laboratory analyses. This study also comprises literature research, interview with potters in traditional Amazonian communities, collection of clay from various sources, and controlled reproduction of all the phases of ceramics production. As a result, we were able to reproduce possible models of manufacturing processes of archaeological ceramics, which enabled us to infer different perceptions of potters in their choices of tempers. Moreover, this study reaffirms the importance of experiment in Archaeology as a significant tool for more consistent archaeological research.	Room E0.04
16:50	<p>Patrick S. Quinn (<i>Institute of Archaeology, UCL</i>)</p> <p>Dennis Braekmans (<i>Leiden University, TU Delft</i>)</p>	Concluding Remarks		Room E0.04
17:00		Drinks		Cafeteria
19:30		Dinner		tba

Friday November 11th, 2016

Field-trip to the Keramiekmuseum Princessehof, where we will visit the "Sexy Ceramics" Temporal Exhibition and the Northern town of Leeuwarden.