

CERAMIC ANALYSIS- Anthro 3CA3
McMaster University,
Winter 2009
Tuesdays 11:30 - 2:30 pm, KTH B122

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- Rye, O.W. 1981 Pottery Technology: Principles and Reconstruction, Taraxacum Press, Washington D.C.

**IT IS MANDATORY TO HAVE WHMIS TRAINING IN ORDER TO ENTER
THE LABORATORY.**

Please consult the following web link and arrange to attend the training session ASAP!!!
<http://www.workingatmcmaster.ca/link.php?link=eohss%3Aeohss-training>

Ceramics are one of the most ubiquitous remains from the past, provide one of the defining characteristics of whole periods, such as the Neolithic in Europe and the Near East, and are often used to characterize archaeological cultures chronologically and spatially. For a long time archaeologists focused on the ceramic products themselves, separating each product's functional, stylistic and technological attributes and examining each attribute separately. Technology referred to the raw materials (clay, inclusions etc). Function encompassed the utilitarian aspects of a vessel (its ability to hold liquids for example). Style was thought of as the most socially relevant, revealing the identity of its maker and his/her society. More recent work has shown that such a tripartite division was artificial and ignored the fact that each ceramic vessel is the outcome of a long process, which requires decision-making at each step. A new concept of technology as a socio-technical web argues that each step in the process of making a vessel is socially relevant and worthy of anthropological investigation. As a result, while some years ago students of ceramics had to be well versed in only the decorative particularities of the material they were studying, today they must be aware of a broad range of issues, from mineralogy and chemistry to social theory.

In this class we will focus on the ways in which archaeologists try to understand each step in the ceramic operational sequence and the decisions ancient potters had made. We will watch ethnographic videos and make pots so that you can experience the diverse kinds of knowledge and skill embedded in the process. We will also talk about mineralogical and physico-chemical techniques used to examine the effects that the actions of potters have on ceramic bodies and visit the labs on campus where such analyses take place. Finally, we will analyze ceramic material from the excavations at the Hamilton site (a historic Neutral Iroquoian town). By the end of the class you should be able to pick any sherd and talk about how the vessel it came from was made, and know how to approach and analyze a ceramic collection in order to answer socially relevant questions.

Course Format and Evaluation

Our class will meet for 3 hours every Tuesday. It will require your active and consistent involvement and participation because the main part of each class will involve your interaction with clay and archaeological ceramics. You will be assigned 40 sherds from the excavations at the Hamilton site that will be under your curation for the duration of the course. Each week you will be responsible for recording a different set of variables on the same sherds and for submitting a written report of your findings. At the end of the course you will work in groups of two or more people to present your finds in the form of a poster. It is to the benefit of each one of you and of the whole class that you are attentive to detail, consistent in your measurements and presentation of results and... present so that you can collect your data.

ASSIGNMENT	BRIEF DESCRIPTION	% GRADE	DUE DATE
Report on pot-making	5 page report on how you made your pot	10	January 27
Raw Materials Report	Part I: full description of the Hamilton raw material data	Part I: 10	February 24-Part I
	Part II: behavioural interpretation of the data	Part II: 10	March 3- Part II
Forming and Finishing Report	Full report (description and interpretation) on the Hamilton forming and finishing methods	10	March 17
Firing report	Full report (description and interpretation) on the Hamilton firing methods	10	March 24
Use Report	Full report (description and interpretation) on the intended use of the Hamilton vessels found.	10	March 31
Poster Presentation	Your results of the stage of the operational sequence that you were assigned	30	April 7
Class participation	Mini-quizzes and class involvement	10	Weekly evaluation

Participation

To be successful this class must be collaborative and interactive. Being prepared and eager to participate is fundamental not only in order to get a good grade, but for the class to be dynamic. **When you come to class it will be assumed that you have completed the readings assigned for that day.** Random mini-quizzes may be administered to check

that indeed you are prepared to undertake that week's analysis. This is not a class where you can afford to not do the readings or skip it for a week.

Handing in Late Assignments

All late assignments must be put in the Anthropology Drop Box (opposite the elevator on the 5th floor of CNH). Assignments are collected and date-stamped at **4:00 pm** that day. If you drop your assignment in the box after 4:00 pm it will be dated the following day. **Each day (including weekends) your assignment is delayed will cost you 5% of your final grade!!!**

If you miss an assignment or turn it in late, because of medical or other legitimate reasons, you must provide the Dean's Office with a medical note to that effect. Unless I am notified by the Dean's office grade penalties will be applied.

Academic Dishonesty

Academic dishonesty consists of misrepresentation by deception or by fraudulent means and can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: "Grade of F assigned for academic dishonesty"), and/or suspension or expulsion from the university.

It is your responsibility to understand what constitutes academic dishonesty. For information on the various kinds of academic dishonesty please refer to the Academic Integrity Policy, specifically Appendix 3, located at:

http://www.mcmaster.ca/senate/academic/ac_integrity.htm

The following illustrates only three forms of academic dishonesty:

- Plagiarism, e.g. the submission of work that is not one's own or for which other credit has been obtained.
- Improper collaboration in group work.
- Copying or using unauthorized aids in tests and examinations.

Academic Skills Counselling and Services for Students with Disabilities are available through the Centre for Student Development:

tel: 905-525-9140 x24711,

e-mail: csd@mcmaster.ca,

website: <http://csd.mcmaster.ca>

Guides to effective writing are also available at the university bookstore.

TENTATIVE SCHEDULE

Date	Theme	Reading Assignment
January 6	Introduction: Goals and Theory	
January 13	Clay Water Fire	- Rye 1-5, 16-28 - Sillar and Tite 2000
January 20	Video Begin making a pot	- Lennox 1981
January 27	Finish making a pot	- Michelaki 2007
February 3	Raw materials	- Rye 29-57, 123-131 (Pot making report due)
February 10	Raw Materials	- Glascock et al. 2004 - Froh 2004 - Stanjer & Häusler 2004
February 17	READING WEEK	
February 24	LAB TOUR	- Gosselain 1998 (Raw materials report: Part I due)
March 3	Forming and Finishing methods	- Rye 58-95, 131-137 (Raw materials report: Part II due)
March 10	Forming and Finishing methods	- Van der Leeuw 1993 - Allen 2005
March 17	Firing and Use	- Rye 96-122, 134 - Livingstone-Smith 2001 (Form and finishing report due)
March 24	Firing and Use	- Braun 1983 - Michelaki 2006 - Morton and Schwarcz 2004 (Firing report due)
March 31	Talk about Posters	(Use report due)
April 7	Poster Presentation	

List of Required Readings in the Coursepack (to complement textbook by Rye 1981)

Sillar, B and M.S. Tite

- 2000 The Challenge of 'Technological Choices' for Materials Science Approaches in Archaeology. In *Archaeometry* 42 (1): 2-20.

Lennox, P.A.

- 1981 The Hamilton Site: A Late Historic Neutral Town. In Archaeological Survey of Canada Paper No. 103, National Museum of Man Mercury Series, Ottawa. (pages: xviii; 211-231; 256-290; 349-361).

Michelaki, K.

- 2007 More than Meets the Eye: Reconsidering Variability in Iroquoian Ceramics. In *Canadian Journal of Archaeology* 31:143-170.

Glascock, M.D., Neff, H. and Vaughn, K. J.

- 2004 Instrumental Neutron Activation Analysis and Multivariate Statistics for Pottery Provenance. In *Hyperfine Interactions* 154:95-105.

Stanjek, H. and Häusler, W.

- 2004 Basics of X-Ray Diffraction. In *Hyperfine Interactions* 154:107-119.

Froh, J.

- 2004 Archaeological Ceramics Studied by Scanning Electron Microscopy. In *Hyperfine Interactions* 154:159-176.

Gosselain, O. P.

- 1998 Social and Technical Identity in a Clay Crystal Ball. In *The Archaeology of Social Boundaries*, edited by M. T. Stark, pp. 78-106. Smithsonian Institution Press, Washington and London.

van der Leeuw, S.

- 1993 Giving the Potter a Choice: Conceptual Aspects of Pottery Techniques. In *Technological Choices: Transformation in Material Cultures since the Neolithic*, edited by P. Lemonnier, pp. 238-288. Routledge, London and New York.

Allen, K.S.

- 2005 Ceramic Variability and Social Identity: Applying Insights from Ethnoarchaeology to Iroquoian Pottery. Paper presented at the *Electronic Symposium: Across the Great Divide: Ethnoarchaeological and Archaeological Perspectives on Ceramic Assemblage Formation*, organized by James Skibo and Allan Sullivan at the 70th Annual Meeting of the Society for American Archaeology, Salt Lake City, Utah, March 30-April 3 2005.

Livingstone-Smith, A.

- 2001 Bonfire II: The Return of Pottery Firing Temperatures. In *Journal of Archaeological Science* 28: 991-1003.

Michelaki, K.

- 2006 *Household Economies: Production and Consumption of Household Ceramics among the Maros Villagers of Bronze Age Hungary*. B.A.R. International Series 1503, Oxford. (pages: 10-23).

Braun, D. P.

- 1982 Pots as Tools. In *Archaeological Hammers and Theories*, edited by J. A. Moore and A. S. Keene, pp. 107-134. Academic Press, New York.

Morton, J.D. and H.P. Schwarcz

- 2004 Palaeodietary Implications from Stable Isotopic Analysis on Prehistoric Ontario Ceramics. In *Journal of Archaeological Science* 31: 503-517.

List of a Few Recommended Readings

Iroquoian Background

Lennox, P. A. and W. R. Fitzgerald

- 1990 The Culture History and Archaeology of the Neutral Iroquoians. In *The Archaeology of Southern Ontario to A.D. 1650*, edited by C. J. Ellis and N. Ferris, pp. 405-456. vol. Publication Number 5. Occasional Publications of the London Chapter, Ontario Archaeological Society Inc., London, Ontario.

Warrick, G.

- 1999 The Precontact Iroquoian Occupation of Southern Ontario. In *Journal of World Prehistory* 14 (4): 415-466.

Theory

Jones, A.

- 2002 *Archaeological Theory and Scientific Practice*. Topics in Contemporary Archaeology. In Cambridge University Press, Cambridge.
- 2004 Archaeometry and Materiality: Materials-Based Analysis in Theory and Practice. In *Archaeometry* 46(3):327-338 and all the comments and his reply in *Archaeometry* 47(1):175-207.

Scientific Techniques

Glascocock, M., D.

- 1992 Characterization of Archaeological Ceramics at MURR by Neutron Activation Analysis and Multivariate Statistics. In *Chemical Characterization of Ceramic Pastes in Archaeology*, edited by H. Neff.

Monographs in World Archaeology No. 7. Prehistory Press, Madison, Wisconsin.

Maniatis, Y. and M. S. Tite

- 1981 Technological Examination of Neolithic-Bronze Age Pottery from Central and Southeast Europe and from the Near East. *Journal of Archaeological Science* 8:59-76.

Rice, P.

- 1987 *Pottery Analysis: A Sourcebook*. The University of Chicago Press, Chicago, Illinois.

Tite, M. S., V. Kilikoglou and G. Vekinis

- 2001 Review Article: Strength, Toughness and Thermal Shock Resistance of Ancient Ceramics, and their Influence on Technological Choice. *Archaeometry* 43(3):310-324 and all the comments and reply in *Archaeometry* 45(1).

Use

Fie, S. M., J. Fountain, E. D. Hunt, E. Zubrow, R. Jacobi, K. Bartalotta, J. Brennan, A. Kathleen and P. Bush

- 1990 Encrustations in Iroquois Ceramic Vessels and Food Resource Areas. In *Organic Contents of Ancient Vessels: Materials Analysis and Archaeological Investigation*, edited by W. R. Biers and P. E. McGovern, pp. 11-23. vol. 7. MASCA, The University Museum of Archaeology and Anthropology, University of Pennsylvania, Philadelphia.

Skibo, J.

- 1992 *Pottery Function: A Use-Alteration Perspective*. Plenum Press, New York.

Rice, P.

- 1987 *Pottery Analysis: A Sourcebook*. The University of Chicago Press, Chicago, Illinois.