

CERAMIC WEAR PATTERN ANALYSIS

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## INTRODUCTION

This chapter presents a brief analysis of wear patterns on 19th-century ceramics recovered during 1979 excavations in Sacramento, California. Because scratches and abrasions marking ceramic vessels can reveal patterns of use and storage, a sample of vessels from the Golden Eagle site was studied with this objective in mind. The vessels selected came from two features representing 1860s deposits associated with the Golden Eagle Hotel. Over 50 pieces of porcelain and white improved earthenware of several types were examined.

Distinctive features of various types of scratches and marks have been fully described in Dorothy Griffiths' paper, "Use Marks on Historic Ceramics: A Preliminary Study " (1978), which provided the inspiration for this study. Griffiths, who worked with 18th-century materials, rubbed the ceramic surfaces with a soft lead pencil to highlight scratches caused by wear. Perhaps due to the harder surfaces of 19th-century porcelain and earthenware, during the present analysis it was necessary to dust ceramic surfaces with graphite to produce the same result.

Analysis of use marks is made in an attempt to go beyond identification and dating of artifacts to look at the behavioral context in which they were used. In the case of use-mark, or wear-pattern, analysis of ceramics, the behaviors are the foodways, or cooking and eating habits of the group which ate from, washed, and stored the dishes.

Contemporary documents, such as mail order catalogues, shop inventories, and etiquette books, identify ceramic vessels as to their intended function, but their use in reality may have been different, especially among differing social and ethnic groups. Marks on vessels should indicate whether objects were used for their intended purpose, had multiple functions, or were used as substitutes for other vessels. Substitution of one vessel shape for another could be due to unavailability of some types of ceramics on the market or to individual choice. Knowledge of actual use of vessel shapes is potentially very useful to the archaeologist attempting to distinguish between the "ideal culture" people were said to have aspired toward and the "real culture." In a frontier society, which was inhabited by diverse groups and may have lacked some of the comforts of home, the differences between the real and the ideal culture may have been considerable.

In addition to disparities between object shape and object function, wear-pattern analysis can be used to determine styles of eating, or how knives, forks, and spoons were actually used. It would be expected, for example, that different types of marks would result on vessels used by left-handed people than on those used by right-handed people. It would also be expected, and of more interest to a student of ethnic or class differences, that the American pattern of eating, in which the knife is only picked up to cut meat, would leave a separate wear pattern than would the Continental eating style.

## METHODS

One drawback to this study was the relative hardness of the glazes used on the ceramics from the Golden Eagle site. As previously noted, 19th-century ceramics have harder surfaces than do 18th-century fine earthenwares; they therefore show fewer scratches by cutlery. During the 19th century, earthenware manufacturers strove to produce a leadless glaze; the glazes produced after 1850 were harder than the pure lead variety and less vulnerable to abrasion and scratching (Griffiths 1978:80). Because of the hardness of the glaze in the present collection, such subtle distinctions as type of cutlery (i.e., horn, silver, bone) and the manner of holding cutlery were not analyzed. Instead, the patterns of wear on the ceramics were compared with those on an assemblage of very soft modern dishes to determine their probable function.

Patterns of scratches were divided into three categories. The first category of marks considered are those scratches in the glaze caused by contact with eating and cooking implements. Diagnostic patterns of scratches can reveal the object's actual function, which is often different from what the maker intended; an example of this is a saucer used under a flower pot. Three types of use marks are considered: knife cuts, fork or spoon scratches, and stirring or beating marks.

The second category of marks consists of those that result from the care and treatment of ceramics. Abrasion of footring and scratches from scouring or storage are indicative of social and economic values placed upon the ceramics. Valued ceramics, which were carefully washed and stored and used on a tablecloth, show minimal storage wear, whereas ordinary or institutional dishes characteristically exhibit signs of rougher treatment.

A third category of marks, those resulting from excavation, and washing and cataloging, were easily differentiated from the above two categories and will not be discussed in this paper.

## RESULTS

Wear patterns caused by implements were quite consistent with expectations (table 8.1). Plates usually exhibited deep knife and fork-type scratches, whereas soup plates were characterized by a circular pattern of sweeping marks caused by a fork or spoon. Small plates and saucers tended to be generally abraded, having few specific scratches. Large oval platters were marred by scratches from both knives and forks, probably as a result of carving.

The oval dishes, referred to here as "au gratins," are of unknown use. Although some of them showed deep scratches which could be attributed to knife cuts, others exhibited short, circular scratches. This pattern suggests that they were small serving dishes.

Virtually all the vessels studied in this analysis exhibit signs of long use and careless treatment. Footrings are chipped and abraded, and surfaces are scratched from contact with other vessels. Many ves-

sels appear to have been chipped before they were broken and discarded. This pattern of rough use is expected from the discards of a restaurant, even one associated with the "best hotel on the coast" (St. Helena Star 16 October 1874).

There were no obvious and uniform differences in wear patterns between the two features. The porcelain vessels studied show fewer scratches than do the white improved earthenware ceramics. Porcelain has a harder glaze which is less easily scratched than that of earthenware, making it a less suitable material for this type of analysis. Creamware, which Griffiths used in her study, is probably still more suitable than earthenware, being a less dense material that would scratch more deeply.

The method of analysis using patterns of wear on ceramics could be useful in identifying functions of a vessel or group of vessels. Whole wear patterns should be studied, however, rather than individual scratches, and a collection of vessels, rather than a single specimen, should be analyzed. As a means of identifying sherds as having been parts of, for example, soup plates or chamber pots, this method would be highly speculative. Vessels acquire all manner of scratches and marks throughout their lifespans; only by studying the developed pattern can one identify the day-to-day function of a piece.

#### REFERENCE

- Griffiths, Dorothy M.  
1978 Use-Marks on Historic Ceramics: A Preliminary Study  
Historical Archaeology 12:68-81.

TABLE 8.1

## Results of Ceramic Wear Analysis

Feature	Fabric	Form	Number	Types of Scratches				
				Fork and knife	Stacking/ footrim wear	Fork or spoon	General abrasion	Stirring marks
8	W.I.E.*	Plate	3	1	3	1	1	0
8	W.I.E.	Deep plate	8	0	7	4	3	0
8	W.I.E.	Small plate	6	0	6	3	1	0
8	W.I.E.	Saucer	2	0	1	1	2	0
8	W.I.E.	Cup	1	0	0	0	0	1
8	W.I.E.	"Au gratin"	4	0	4	2	0	0
20	W.I.E.	Plate	4	3	4	1	0	0
20	W.I.E.	Small plate	1	0	1	0	1	0
20	W.I.E.	Saucer	2	0	2	1	1	0
20	W.I.E.	"Au gratin"	1	0	1	0	1	0
20	W.I.E.	Oval platter	2	1	1	1	0	0
8	Porcelain	Plate	2	2	2	0	0	0
8	Porcelain	Small plate	1	1	1	0	0	0
8	Porcelain	Cup	1	0	1	0	0	0
8	Porcelain	"Au gratin"	9	0	8	6	1	0
8	Porcelain	Oval platter	1	1	1	1	0	0
20	Porcelain	Plate	4	3	4	2	0	0
20	Porcelain	"Au gratin"	1	0	1	1	0	0
20	Porcelain	Oval platter	1	1	0	1	0	0

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\*White Improved Earthenware