

BROKEN DISHES REVEAL HISTORY OF PREHISTORIC DWELLERS IN SOUTHWEST

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In the Southwest a revival of pottery making has resulted in refuse piles around modern Indian pueblos similar to the dumps of abandoned prehistoric towns. The Hopis are making "classical" pottery again—more important, they often break it. The pieces of a broken bowl or pot, called sherds, are

terized by a peculiar combination of cultural traits. The Cliff Dwellers were recognized as a phase due to their distinctive custom of building pueblos in caves, and because they made a characteristic classical pottery known as "Mesa Verde ware."

The typological differentiation of phases has been corroborated by excavations revealing sherds scattered all over the surface of

phases of one root and those of others. Early Acoma was contemporaneous in time alone with the abandoned Hopi village of Sikyatki. Their methods of making pottery were entirely unassociated, and dependent upon cultural trends from widely separated areas.

The reconstruction of cultural history for the Southwest has been given a definite form. We know that each of the peoples of Acoma, of Zuni, and of the Hopi mesas boasts a separate ancestry. In latter days the rigorous, inexorable qualities of quantitative technique have been employed in archaeological research. Earlier it had been noted that "natural" levels of deposition, outlined by strata of ash or sterile soil, were not to be trusted. In one incident, it was found that upon dividing a "natural" level vertically at an arbitrary point the sherds on one side were 100 per cent of one phase, and the sherds on the other were 100 per cent of another phase. It was discovered also that, quite generally, all of the pottery types of all of the different phases present in a particular site would be found present through all of the fill. Quantitative technique counteracted this discrepancy. If a refuse mound is divided into squares, and the refuse removed in blocks of a given depth, a chronology of pottery types for each square and its respective blocks is established. These squares can later be compared and a single chronology for the entire site created. This does away with the contradictions of "natural" levels.

PROSPECTS FOR FUTURE STUDY

Also, although unassociated pottery types are often found from the top to the bottom of a mound, it has been noted that the types definitely "out of place" are present in a much smaller proportion than the bona fide wares of any particular level. Therefore, by making an arbitrary ruling that no pottery type under 10 per cent of the total number of sherds for a particular block may be considered as characteristic, it has been possible to remove this aberration of natural mixing of unassociated sherds.

This new technique lends itself to the recognition of subtle, transitional stages between phases that might contain the same pottery types, qualitatively, but with a wide variation in proportions. It is impossible to say how much more will be accomplished with such new evidence. From the pessimistic viewpoint, it should be mentioned that no one will ever fill in the gaps in the Southwestern chronology to the point where there will be nothing more to learn. Possibly it would be best to predict the unpredictable and to say that one day there may be an entirely new school of thought that will examine the findings of Southwestern archaeologists for the promulgation of natural laws of the ways and habits of mankind.



Reconstructing Pottery and History

Dr. Paul S. Martin, Chief Curator of the Department of Anthropology, and Miss Marjorie Kelly, studying jars rebuilt from fragments collected in Colorado by last summer's Field Museum Archaeological Expedition to the Southwest. At right is Mr. Tokumatsu Ito, Ceramic Restorer of the Department, whose special skill is reassembling as many as a hundred or more tiny bits of an ancient vessel so as to restore its original form.

of extreme importance to the archaeologist.

Sedentary people have lived in the Southwest for at least 2,000 years, and the correlation between agrarian habits and pottery production is high. Not only the Hopis, but the Indians at Santa Clara, San Ildefonso, Tesuque, Zuni, Jemez, Acoma and other villages, are now making pottery.

The ancient Hohokam, the Cliff Dwellers at Mesa Verde, and the Basket Maker Indians at White Dog Cave likewise all made pottery. Inevitably a large amount was broken, providing sherds. Archaeologists have discovered that, fortunately, a fair sized sherd with the design elements present is a satisfactory substitute for a whole jar or bowl. Examination of a number of sherds from one site affords a comprehensive picture of pottery-making activities.

DIFFERENTIATING CULTURAL PHASES

Originally it was fascinating enough to make a qualitative study of the sherds. There were gross differences between specimens from the pueblo of Acoma in New Mexico and those from the Oraibi pueblo in Arizona. Around these places one could discover site after site loaded with sherds similar to those produced in the present towns. It was possible to associate particular pottery-making habits with particular house types, and thus phases were recognized and differentiated. A phase is an arbitrary point or period in cultural change, charac-

a ruin, and refuse mounds saturated with broken bits of pottery from top to bottom. As early as 1911 remarkable differences were noted between sherds found in a top "cut" and those in the bottom. This differentiation, recognized as a natural phenomenon, is called stratigraphy.

A common sense principle is founded upon stratigraphy: given a dump heap or a room artificially filled and, providing there has been no disturbance of the fill (in either historic or prehistoric times), the bottom layer must be older than the top, and an overlying deposition must be more recent than any underlying it. It is safe to assume, until there is evidence to negate it, that the strata were contiguous and that the changes in ways of making pottery, as shown by the sherds from one stratum to the next, were natural, transitional steps.

Principally upon sherd evidence, the Southwest (from Chihuahua to Colorado, and from Texas to southern California) came to be viewed as an archaeological area in which the vicissitudes of a single, fundamental cultural pattern could be observed. Four original variations on the fundamental pattern were conjectured: a Yuman, a Hohokam, a Caddoan, and a Basket Maker. Each of these "roots" was composed of a myriad of phases differentiated from each other in time position. Yet there was an asymmetrical relationship between the



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