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## THE TYPE-VARIETY CONCEPT: A POSSIBLE INDICATOR OF DIFFUSION AND CULTURE AREAS

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For the last 30 years there has been an effort on the part of archeologists to demonstrate the process of diffusion and localization of prehistoric culture groups within the North American Gulf Coast. By investigating one pottery type, French Fork Incised, which has been assumed to have diffused from east to west, the process of diffusion can be demonstrated. This pottery can be shown to be composed of many varieties and, if any diffusion is to have taken place, it will have occurred and can be demonstrated along the 300 miles (approximately) of Coastal Louisiana. There are many varieties of French Fork Incised. If there are any cultural factors operating to select certain stylistic elements of the overall pottery design concept, it can be assumed that if differential selection took place there are different cultures selecting them. That is, it is highly unlikely that two cultures will select the same set of varieties at the same period in time, although some overlapping should be expected which would allow for the more or less continuum of diffusion.

The conceptual framework for this paper will be the Wheat-Gifford-Wasley "Type Variety" taxonomic system (1958) as modified by Phillips (1958) for Eastern Ceramics. Simply, this system can be explained as follows: A mode is the smallest discernable attribute of pottery; modes cluster to yield varieties; the varieties, in turn, make up the type clusters or, as Phillips terms them, types; and types or type clusters form ceramic systems. It should be noted that each level or stage is more temporally and spatially restricted than the next higher level. Thus, if the varieties of French Fork Incised can be established, it can be deduced that there was, in a specific area at a unique time, a culture or group of people who, while still sharing ideas with the mainstream of cultural thought, were at least partially distinct. This distinction would be, of course, on the local level both temporal and spatial.

The widespread relationships of French Fork Incised to similar types in adjoining areas have been pointed out by Ford and Willey (1939), Newell and Krieger (1949), and Ford (1951 and 1952) and others. These types would be: French Fork Incised in the Lower Mississippi Valley, Weeden Island Punctated and Incised in the Florida Gulf Coast and Crockett Curvilinear Incised and Crockett-Pennington from the Caddoan area. All of these types have a common design motif in which the technique is to decorate the background or negative area in order to bring out the undecorated positive design in much the same way as the well-known negative painting is ren-Published by Arkansas Academy of Science, 1969

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dered. These types fit the definition of a ceramic system and I have proposed that the term Gulf Coast Negative Design Ceramic System be introduced to include all of the above mentioned types and any other types of the plastic negative design motif that may become established.

French Fork Incised is defined by abstracting Ford's 1951 description so that it may include any and all of the varieties. The definition is, therefore, any pottery type of the Troyville-Coles Creek Period of the Lower Mississippi Valley whose design is composed of "Meander and wavy patterns formed by the smooth, unroughened surface of the vessel, which were made to stand out by roughening the background" (1951: 62-67). By this definition, the number of varieties of French Fork Incised could theoretically be determined by finding the set of all possible combinations of the modes present.

Since a variety is both more local in space and more restricted temporally, both of these factors must be accounted for. The aboriginal inhabitants of Coastal Louisiana were restricted to certain geomorphic features which provided them with relatively dry land. These features are natural levees, piercement-type salt domes, and chenieres, or relict beach ridges, and they vary in frequency of occurrence in each of the three natural areas of Coastal Louisiana. These natural areas are: the Chenieres to the west, the Mississippi River Delta in the center, and the Lake Pontchartrain Basin to the east. Being relatively isolated from one another by the physical environment, each of the natural areas could thus create areas in which cultural groups could become somewhat independent of their neighbors. The natural areas which correspond to these culture areas are: the Chenieres, the Belle River Area, and the South Lake Pontchartrain-Bayou Cutler area. In addition, a fourth area, the Amite River which is along the north shore of Lake Pontchartrain. was added as a check on the method since any diffusion that would have occurred from east to west would, by necessity, go around Lake Pontchartrain. By dividing Coastal Louisiana in such a manner, the basis for the spatial differentiation of the varieties of French Fork Incised was established.

The temporal aspects of the French Fork Incised varieties present some problems, for there has been very little stratigraphic excavation in Coastal Louisiana. Since the Chenieres and the Amite River areas are relatively stable, geologically speaking, and French Fork Incised is generally restricted to the Troyville period (700-850 A.D.) in Coastal Louisiana, it is felt that the temporal aspects can be held constant.

The modes of French Fork Incised fall into two classes: those that are employed to render the background and those that form the http://scholarworks.uark.edu/jaas/vol23/iss1/12

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outline. Hypothetically, there are three methods of outlining the design: drag punctating, linear punctating, and incised lines. Drag punctating is defined as a series of punctates which have been formed into a line by "dragging" the tool. This is done when the craftsman fails to lift the implement completely when moving it from impression to impression. Linear punctating, on the other hand, is a row or series of rows of cleanly rendered individual punctates. Again, by supposition and definition, there is a possibility of eight methods of rendering the background. There are: drag punctatng, linear punctating, incised lines and overhanging incised lines that terminate in punctates, crosshatched incised lines, red filming, and those cases in which the background was not decorated or it would not be determined.

Groups of background modes cluster with only two of the three methods of outlining. There does not appear to be a large use of linear punctating as a method of outline. Drag punctating does not seem as popular as incised lines but both were employed for outlines. The background modes seem to cluster differentially with the method of outline. While these are not distinct or obvious clusterings, certain ones are of greater occurrence than others. The background modes which appear to cluster with a greater frequency with a drag punctated outline are: drag punctating, overhanging incised lines and incised lines. Those background motifs which cluster with an incised line outline more frequently are: incised lines, both those which terminate in punctates and those which do not; drag punctating; linear punctating, and overhanging incised lines which terminate in punctates.

The clustering of given background modes with given methods of outline simply represent the preferred method of behavior within a culture group and indicate that certain forms were more popular than others. This does not exclude the "minor" varieties, because in most cases they are represented, but, rather suggests that they were not necessarily in "vogue."

The locus of the aesthetic focus is not important for our purposes. If any patterning of conscious or unconscious behavior can be established, then an insight into cultural behavior and hence knowledge of human behavior is gleaned. When employing the typevariety concept, patterning can be established for both spatial and temporal distributions. In this case, both the locus of a variety and its quantity can establish the direction of diffusion and the centers of modification which in turn radiated to surrounding areas. It is obvious to the most casual observer that there are differences in the varieties of French Fork Incised among the geographical and native areas of Coastal Louisiana. The most apparent of these differences is the lack of any of the Drag Punctated Outline varieties, with one exception, in the Chenieres area. This could be due to a

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low sample, but I prefer to believe that it is the product of diffusion. Assuming that the Northern Gulf Coast of Florida is the origin of the Gulf Coast Negative Design Ceramic System, it would be logical to conclude that if the design concept is moving from east to west, the areas closest to the center would be more similar. The degree of similarity between Florida and Louisiana types is best illustrated by the method of outline. Since Weeden Island Punctated and Weeden Island Incised (Willey 1949: 411-422) originated in Florida, it would be logical to expect to find an equal distribution of French Fork Incised varieties outlined by drag punctating and those varieties outlined by incised lines. Then, any modification of the total design concept by the diffusion process would affect this distribution. This, in fact, is what occurs, for in the Amite River area the ratio of drag punctated outline to incised line outline is approximately 1:1. As the design moves from east to west there is a decline in the number of sherds which are outlined by drag punctating as compared to those outlined with an incised line. In the South Lake Pontchartrain-Bayou Cutler area the ratio becomes approximately 1:2. in the Belle River area it is approximately 2:3, and in the Chenieres, drag puntating as a method for outlining is almost non-existent. It then becomes apparent that each group, because of its relative isolation and lack of contact, failed to absorb the complete design complex or all of the methods employed or used to render the design from the group to the east. There are other possible indicators of this phenomenon such as the adaptation of a stylized design in French Fork Incised as opposed to the effigies of the Weeden Island types and increased stylization in the Caddoan area. Thus it can be said that as the Gulf Coast Negative Design Ceramic System diffused from east to west each group did not acquire the complete design complex, undoubtedly modified some of the design elements, and when the design complex was "passed on" the reciprocal group repeated a similar process.

The total number of varieties and sherds in any given area, however, does not agree with this statement. The largest number of both varieties and sherds are found in the Belle River Area which is one of the more westward areas. This statement is not disturbing when one realizes that the direction of design movement is not necessarily deterministic of the total amount of pottery produced or the amount of innovation within a culture group. In fact, it has already been demonstrated that there were centers of modification of the Gulf Coast Negative Design Ceramic System which could be called "type centers". The main requirement for a "type center" is a population which is relatively dense and at a similar cultural stage, for any center of population usually becomes a center of modification and adaptation. A group of sites in the Belle River area centered near Grand Lake appears to be a major center in Coastal Louisiana http://scitular.wordifignation/jag/v&Irs/sch/1Fork Incised pottery. In addition 70

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to the great number of varieties and sherds of French Fork Incised pottery, this location has several other features which reinforce it as a cultural center. Of all of the sites in Coastal Louisiana the sites centered near Grand Lake show the greatest degree of similarity with the Troyville-Coles Creek type site in cultural attainment and artifactual'similarities. It should be noted that the type site (Greenhouse) is located near the confluence of the Red and Mississippi Rivers. The majority of pottery decoration techniques of the Red River Mouth Ceramic Tradition are found at these sites, not only in the varieties of French Fork Incised but also in the other types of these periods as well. The sites of the Belle River area are built on natural levees of what was then the active Mississippi River, which would have had a twofold benefit. First, communications and hence diffusion between the Belle River center and other areas would have been easy and, second, the large natural levees could have supported agricultural peoples with a fairly dense population. It should be noted that the sites themselves are rather large when compared to the majority of sites in Coastal Louisiana. Assuming that this is the locus for modification and adapatation of the traditional techniques to a new stylistic concept, the newly modified design complex would then radiate or diffuse to surrounding areas. This would also indicate a temporal difference among varieties, which, unfortunately, cannot be demonstrated. The Bayou Cutler area seems to be rather homogeneous, for the few sites that appear to be possible centers have been collected fairly intensively. There also appears to be a slightly later shift in the discharge of the Mississippi River, and the Bayou Cutler "center" around Lake Salvador and New Orleans could be the result of this. The Chenieres on the other hand were probably marginal to the other parts of Coastal Louisiana and did not participate fully in any of the cultural stream except for the initial diffusion of the negative design motif. The Amite River area has most of its similarities with the Northern Gulf Coast area; however, it is marginal to the Mississippi Valley where the majority of cultural activity is believed to have taken place and would retain the original patterns longer than the other areas.

It appears, therefore, that the Gulf Coast Negative Design Ceramic System diffused into Coastal Louisiana from east to west, from culture area to culture area, losing its traditional styles which were retained in the marginal eastern areas. When the design concept reached the Belle River Area or Grand Lake center it was modified and adapted to the already existing ceramic tradition. From this point it radiated in its modified form to reoccupy the areas to the east while this westernmost area remained somewhat stagnant after the impetus from the initial diffusion.

Thus, it is indicated that both diffusion and culture areas can Published by Arkansas Academy of Science, 1969

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be determined by the application of the type-variety concept. It has been demonstrated that by examining one type of pottery and reducing it to its varieties, as indication of potential culture areas and diffusion "routes" can be established. Of course, it is recognized that the study of only one type of pottery cannot describe the complete culture nor its geographical extent.

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