

II. THE UPPER MISSISSIPPI "PHASE"

If the as yet undefined Plains phase may be omitted without serious consequences to the purposes of the present study, the same may not be said of the better known Upper Mississippi phase. Although it is possible to regard the latter merely as a slightly attenuated marginal development of the more highly characterized culture of the Middle and Lower Valley, its consideration is a necessary preliminary to an attack on the archaeology of these more interesting regions. In the Upper Mississippi we are on familiar ground, dealing with cultural manifestations long known and abundantly documented. This is also the region most advanced from the classificatory point of view, where the McKern system has had the best opportunity to prove its utility. As an introduction to the Middle Mississippi, therefore, as well as an approach to the general problem of culture classification, it seems eminently worth while to review briefly the various aspects that have been brought together to form this Upper phase of the Mississippi pattern.

The classification of Upper Mississippi may be seen in Fig. 2. Of the four aspects given we shall consider only the first three, the fourth being as yet unnamed, its "floating foci" lacking

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published description. Of the three remaining aspects, Iroquois is undoubtedly the best known because of its identification with an historic and still (faintly) living culture. Classificatorily it is in poorer case, as we shall see. Fort Ancient is as well documented archaeologically and has the advantage (for us) of having been rigorously analysed in accordance with the McKern methodology. Its ethnographic position, however, is still in dispute. Oneota is the least satisfactory of the three owing to a publication lag that makes its description almost impossible without first-hand knowledge which the writer unluckily does not possess. Considering the Upper Mississippi solely as an introduction to Middle Mississippi, our real subject, it seems advisable to change this order somewhat. Since Iroquois is, from the point of view of Mississippi at least, an attenuation of Fort Ancient, it can be treated more readily on the basis of a previous description of that culture. Present state of documentation regarding

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(1) This is perhaps not the correct way of putting it. One of these foci at least, the Fisher site, has been excellently described (Langford, 1927), but not from the classificatory point of view. The Fisher site is an important stratified site with three distinct levels. One of them, the Middle level, is unquestionably Upper (or possibly Middle) Mississippi, but in respect to its precise relationships I can find no information except Deuel's remark at the Indianapolis meeting that "the Fisher site appears to be closely related to one of the components of the Madisonville (Ohio) Focus" (Indianapolis Conference Report, 1937, p. 11). If this is the case, one wonders why it was not placed, provisionally at least, into the Fort Ancient aspect? The Blue Island site, on the other hand, Deuel says, does not connect with Fort Ancient but "may be related to the Wisconsin aspect" (ibid.) By "Wisconsin" he means evidently Oneota. Of the Big Stone Lake focus I can find no published mention. It is apparent from the foregoing that Aspect IV and its "floating" foci are, for our present purposes at least, of no utility whatever.

Oneota enables us to do little more than mention it in passing. I shall therefore treat these three aspects as follows: Fort Ancient, Iroquois, Oneota, with diminishing allotments of space in that order. Such a proceeding makes little sense geographically or any other way, but is purely for the sake of convenience in description. It is scarcely necessary to point out that for the purpose in hand Fort Ancient far outweighs the others in importance. It is the real introduction to the Middle Mississippi. The others are thrown in for the sake of completeness, but also for the purpose of examining the concept of "phase", as I shall do at the conclusion of this section.

1. The Fort Ancient Aspect

At an early stage of archaeological investigation in southern Ohio it was recognized that the works of the so-called Mound Builders did not all pertain to the same peoples, and in 1903 Professor Mills suggested and used the names "Fort Ancient" and "Hopewell" to designate the two dominant cultures in the region. The former took its name from the great fortified site in Warren County, long known as Fort Ancient. It was assumed that the adjacent mounds and village site were associable with the Fort, which is no longer held to be the case. So we have the rather anomalous situation of an important archaeological culture named for a site which does not belong to it. The name is, however, so firmly fixed in the literature of the subject that it would be impossible to change it at this late date. The culture was for a long

time regarded as peculiarly local to southern Ohio, is now known to cover a large portion of southern and southwestern Ohio, northern and northeastern Kentucky and southeastern Indiana.

Griffin, the acknowledged authority on Fort Ancient, has published a brief preliminary analysis which is said to have pointed the way in which the McKern classifier must proceed to achieve valid results. It is soon to be replaced by a far more detailed study. He has satisfied himself that the old Fort Ancient "culture" corresponds precisely to an "aspect" in the McKern sense, made up of a number of distinct foci, which need not, I think, concern us here. He has also worked out a list of 106 determinant traits for the aspect as a whole. On the basis of this tabulation plus the published reports of the more

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(1) Griffin, 1935a. Perhaps this statement should be put into the past tense. It was held up as an exemplar of McKern methodology. There is now, I believe, a tendency to disparage the use of mathematics in the comparison of determinants. Cf. McKern, 1939, p. 311. "Experience seems to demonstrate that absolute mathematical percentages in trait similarity can not be successfully employed to establish the class relationship between two compared manifestations. This is largely due to the fact that a completed list of culture-indicative data for any culture group can never be made available, and that such lists as are available will be more inclusive for one community than for another with which it is compared. Moreover, the different character of the culture elements employed for determining separate classes, i.e., the generalized traits of a pattern as contrasted to the detailed trait units of a focus, serves to complicate any mathematical treatment of the problem; it is difficult to add apples and bushels of apples."

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important Fort Ancient sites, the following summarization is based.

General site characteristics: Sites are preeminently large unfortified village sites with mounds. The mounds vary considerably in size and shape, but are in the main circular or oval in plan and conical in elevation. With few exceptions they appear to have been mortuary in purpose. The rectangular truncated pyramidal type of mound, domiciliary or whatever one chooses to call it, is not a pronounced Fort Ancient characteristic, though not absent altogether. (2)

The possibility of association of geometric earthworks with Fort Ancient village sites is regarded as a closed question. I am the last person qualified to open it and am innocent of any desire to do so, but there is something very queer nevertheless about the situation on certain of the important Fort Ancient sites, or at any rate in the reports of their investigation. There seem to be a number of instances in which geometric earthworks of typical Hopewell

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- (1) Madisonville -- Hooton, 1920.
- Gartner -- Mills, 1904.
- Baum - Mills, 1906.
- Feurt -- Mills, 1917.
- Fox Farm -- Smith, H.I., 1910.

(2) Such a mound formerly existed at the Baum site and was described in the 12th Ann. Rep. of the B. A. E. (listed in the Bibliography as Thomas, 1894.

In this connection attention should be called to the fact that small rectangular pyramidal mounds become circular and conical in shape under erosion and cultivation. Perhaps the seeming lack of this type of mound in Fort Ancient must be taken with reservations.

form lie (or lay) cheek by jowl with Fort Ancient village sites, the latter being thoroughly excavated without any effort being made to determine their relationship with the former. One has heard the statement frequently made that no Hopewell village site has ever been found, or at any rate excavated. Village sites in Southern Ohio, however close their proximity to Hopewell earthworks invariably turn out to be Fort Ancient or some other low class culture. This curious situation has contributed no end of difficulty to the Hopewell problem. I merely call attention to it here because of the possibility that it may have a bearing on the Fort Ancient problem as well.

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(1) It is impossible to refrain from referring briefly to one or two of these instances. Immediately adjacent to the Baum village site was a large geometric earthwork of characteristic Hopewell type. Prof. Mills dug the village site intensively in the years 1899 to 1903. One would expect that the first problem to engage his attention would have been to establish the relationship, or lack of relationship, between the village site and earthwork. One searches his report in vain for any evidence whatever bearing on this question. The only reference to the earthwork at all is a quotation from Moorehead, who "does not think" that the villagers were the same people who erected the earthwork. (Mills, 1906, p. 12)

Similarly, in his report on the Gartner site excavation, we are told that less than half a mile away lies the Cedar Bank works described by Squier and Davis (Squier & Davis, 1848, Pl. XVIII). "We made a thorough search of this enclosure of 32 acres as well as the immediate surrounding territory, in search of a village, but found no evidences of a former habitat other than the Gartner village. Therefore, it seems reasonable to believe that the inhabitants of the Gartner village were the builders of the Cedar Bank works. However, no explorations have been made within the works to verify this statement." (Mills, 1904, p. 26 -- italics are mine.) Now the Cedar Bank Works, judging solely by the plan given by Squier & Davis, is a straight Hopewell assemblage. It consists of a large parallelogram with 60 ft. "gateways" within which is a large truncated pyramidal mound. Adjoining it is a long rectangle 780 by 70 ft. and a few hundred yards down the river a circular enclosure with single gateway and beside it another pyramidal mound. The astonishing thing is that Mills could make the statement quoted above without following out its logical implications. If the Cedar Bank Works were made by the villagers of the Gartner site, then we have a typical Hopewell site of the Fort Ancient culture.

I hesitate to labor this point, but perhaps may be permitted to

One finds a similar uncertainty in respect to the association of hill-top fortifications, so common in southern Ohio, with the Fort Ancient people. I find a statement by H. C. Shetrone which assumes (1) that association to be a fact. On the other hand, it is not listed by Griffin as a determinant for the culture, and I can find no instances where the authorship of these defensive works has been established by excavation. I have been told that the great Fort Ancient, which has given its name to the culture, is definitely not a Fort

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indulge myself since this is a foot-note. Just across the Sciota River from the Feurt village site, lies the Tremper mound, a famous Hopewell site dug by Mills in 1915. In this excavation certain "objects were found which seemed pertinent to a culture other than that of the occupants and builders; not many, to be sure, for being of the most advanced type of peoples resident in prehistoric Ohio, they doubtless were mainly self-sufficient (so much so that they did not even require villages to live in) and found but little among the treasures of their lowlier neighbors which they would deign to possess (that 'deign' is priceless). Still, there were a few things -- some flint arrowpoints, an object or two of stone and bone -- which apparently belonged to the so-called Fort Ancient peoples resident in most of southern Ohio." But if these fine Hopewellians despised the treasures of their "lowlier neighbors", such was not the feeling entertained by the latter for the elegant ornaments of the former. They valued them highly and consequently a good many of them came to light when the graves of the Feurt villagers were opened. In these circumstances Mills sees evidence that the two peoples were living contemporaneously, for a time at least. (Mills, 1917, p. 147-8). The astonishing thing is that one of them was living in a way that we find perfectly natural, in a village site, on the ground, whereas the other seemingly inhabited the more rarified regions of the upper air, or in some other fashion that left no traces whatever in the soil.

(1) Shetrone, 1920, p. 153. In a later publication ("The Mound Builders", 1930) Shetrone refers to the uncertainty regarding the origin of the great Fort, but does not touch on the subject of the authorship of hill-top fortifications in general.

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Ancient site, though there is a village of that culture nearby.

House types: The data on house types are not very satisfactory.

Griffin says merely that they were circular in plan with a centrally placed firepit, and that is about all the information that can be gleaned from the published reports. Size evidently varied considerably. Construction was of the simplest, a framework of upright poles, larger interior supporting posts in the larger structures, with a covering of bark or other perishable material. The evidence indicates that the floors of all structures were at the ground level or very slightly below it -- nothing that would qualify as even semi-subterranean in character. Interior arrangements were uniform and

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(1) Information by J. B. Griffin. I may be pardoned at this point for injecting another criticism of the McKern method, which it seems to me concerns itself too much with artifacts and not enough with general ethnologic traits. I should think that the presence or absence of hill-top refuges would be more significant than any number of types of bone awls and projectile points as cultural differentia, still more such things as general features of sites, plan and arrangement of houses, mounds, cemeteries, etc. Yet it appears that in his intensive analysis of Fort Ancient culture Griffin has neglected such points altogether. Such factors are undoubtedly significant, but difficult to deal with statistically, consequently in a quasi-scientific method like the McKern system tend to be overlooked in favor of traits that have a more positive objective character.

(2) At Madisonville diameters ranged between 40 and 60 ft., a size which suggests communal living. At other sites they were evidently a great deal smaller.

(3) One of the mounds on the Baum site was erected over a chamber of somewhat more respectable construction, with upright posts around the periphery supporting a roof of radiating timbers. (Thomas, 1894, p. 484).

simple in the extreme -- a centrally placed circular firepit of puddled clay, often carefully shaped and finished. Storage pits were located inside and outside the houses indiscriminately. As to the arrangement of houses, there seems to have been none. Altogether the evidence on village planning and house construction reveals an architecture that was rudimentary and impermanent.

Burials: The Fort Ancient people were not particularly consistent in their treatment of the dead. Burial practices furnish Griffin with 10 of his determinant traits for the culture as listed below.

- Mound burials
- Village site burials
- Stone graves
- Fully extended position -- most characteristic
- Flexed -- predominantly at Feurt
- No fixed orientation of body
- Group burial -- such as a family
- Double burials -- superimposed, or side by side
- Artifacts with burials (1)
- Pottery placed with burials

On looking over this list we are struck with certain peculiarities, not from the point of view of archaeology but from the point of view of the McKern methodology. While I am not attempting a critique of the McKern system, it is impossible to pass over this subject without comment. We have in mind McKern's dictum that culture determinants "must be characteristic for that (taxonomic) division which they serve to identify". Determinants for a Pattern will be general in character and few in number. As you go down the taxonomic scale the progress is from lesser to greater specialization. The determinants for each division become an "enriched edition of the determinants for the

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(1) Griffin, 1935a, p. 11.

preceding more general division, as altered to include greater detail plus a considerable number of specific traits peculiarly characteristic of the more specialized division." (1) How well does the above list of burial traits meet these conditions? Some of them are so generalized indeed that they could be used to define, not only Phases and Patterns, (2) but still larger divisions if such there are. "Artifacts with burials"; how can this conceivably be taken as a Fort Ancient characteristic? "Pottery with burials" is almost as bad. Mound burials are characteristic of all Mississippi cultures as well as certain non-Mississippi cultures. The predominance of extended burials is likewise a general trait of the Mississippi Pattern. Flexed burials are so general in North America as to have no particular significance whatever. Lack of orientation is so general in North America as to be practically universal. Group burial is a widespread Mississippi trait, though by no means confined to this Pattern. What is left for that "enrichment" of specialized determinants that characterize Fort Ancient in a particular way? Village site burials, perhaps, though certainly by no means an exclusive possession of the Fort Ancient people. Stone graves? But stone graves are peculiar to but one Focus of the culture, whereas they are diagnostic for one of the Aspects of the Middle Mississippi Phase, soon to be described. Double burials perhaps,

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(1) McKern, Appendix in Indianapolis Conference Report, 1935, p. 77-78.

(2) At the time of writing the "Base" had not come into existence. Actually, many of Griffin's burial traits are general enough to serve as determinants for this largest taxonomic grade.

particularly the superimposed variety. Here at length may be something that is specifically Fort Ancient, though I shouldn't like to examine it too closely. So, here are ten determinants, only one of which appears to have the appropriate degree of specific character for use in defining an Aspect. Yet in any mathematic or diagrammatic presentation these nine unsatisfactory determinants serve to weight the result quite as effectively as any nine peculiarly Fort Ancient characters you can name. There, it seems to me, lies the weakness of the whole scheme, the proverbial blackamoor. The selection of culture determinants is a subjective operation, and no amount of statistical or graphic treatment will conceal that fact from the eye of the discerning. My own feeling is that since in the last analysis our determinations are subjective, let us make no bones about it, and above all let us not attempt to smoke-screen the ugly truth by resorting to statistical and other jargon borrowed from the more exact sciences.

Having delivered myself of the foregoing splenetic outburst, I can now get back to the business in hand, the discussion of Fort Ancient burial practices. The evidence is, naturally, abundant, but the resulting picture is anything but clear. Inhumation either in mounds or flat graves is overwhelmingly the rule, but cremation is present in at least one site (Gartner). Burials are predominantly

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(1) Since writing the above I find that superimposed burials (flexed) are fairly common in the Effigy Mound Aspect of the Lake Michigan Phase of Woodland. (McKern, 1930, p. 461.)

(2) It is a satisfaction to note that McKern himself is evidently coming around to the same opinion. See McKern, 1939, p. 311.

extended, though various types of flexure are present in more than negligible quantities. Various kinds of secondary burial, "bundle", "bunched", etc. and multiple burials, both primary and secondary, are common. Stone slabs are used as grave covering in several sites, though infrequently; and in the Fox Farm Focus, on the Kentucky side of the river, regular stone graves are occasionally found. Griffin lists "artifacts in graves" as a determinant trait. Not a very remarkable circumstance, if true, but it seems to have been by no means the universal rule. Nor are the artifacts conspicuously in the form of pottery. In one site, the occurrence of pottery in graves is spoken of as a rarity. The tendency for burials to be grouped about house sites, particularly burials of infants and children, a sort of family segregation, seems to be fairly general in the various sites. This will appear, I think, even more pronouncedly as a Middle Mississippi trait, where in certain sites child burials are actually under the house floors. The only other trait that may be specifically Fort Ancient has already been touched on, the fairly frequent occurrence of double interments, either side by side or superimposed. The net conclusion, it seems to me, is that for the purposes of cultural definition (in the present instance at least) burial practices let us down completely. We emerge with a few broad generalizations which might be useful in characterizing a Pattern, are too vague for a Phase, and are quite useless for identifying an Aspect.

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(1) Mills, 1906, p. 19.

While on the subject it might be suggested that the difficulties just referred to lie perhaps in the effort to reduce a rather complex set of cultural data to a simple trait list, an "atomization" that destroys the all-important weighting of the different factors. It would seem to the writer that a descriptive statement that manages to include all factors, while emphasizing the importance of some, the lack of importance of others, will go farther toward a successful characterization of the culture as a whole, than a mere tabulation that reduces all traits to a dead level of uniformity. Such a statement, of course, will not lend itself to mathematical treatment, is therefore hopelessly "unscientific". It makes no effort to conceal the essentially subjective processes that enter into its formation. This is inexcusable. We must have objectivity at all costs, or at least the appearance of objectivity.

Artifacts - bone: Turning now to that small segment of material culture represented by archaeological materials, we are struck at once by the importance of bone, horn and shell, as materials for implements and ornaments, and the rather subordinate position of stone in the complex. It will not be possible to discuss these various categories of material objects in detail, nor is it necessary. I shall attempt merely to seize upon those factors which seem to best characterize the culture.

Shetrone was tempted to use the term "bone-age" people in reference to Fort Ancient. Indeed a rapid glance through published

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reports makes this seem not so far-fetched as one might think.

Apparently the bones of every creature used for food were utilized as material for a bewildering array of implements and ornaments.

The most prominent class of implements comprises awls and perforators, particularly those made from deer ulna and turkey metatarsals. To which may be added needles of various types, both perforated and unperforated. A long bodkin-like object often decoratively carved is sometimes called an awl, but is more probably a hair ornament, though a very similar blunt-ended affair may be some sort of eating stick. The functions of so many of these implements are uncertain as to render categories futile. So-called double-pointed awls, perhaps a rather special Fort Ancient feature, may also be some sort of hair ornament.

Various sorts of scrapers and beaming tools were made from bone, the commonest of all being a sort of draw-shave affair made from long bones of deer and other large animals, also from the long spinal processes of the buffalo. An index of the high development of bone working is seen, it seems to me, in the ease with which they turned out the same kind of implement from different sorts of bones, had achieved, in other words, a certain emancipation from the dictation of materials. Another type of scraper, celt-like, which may actually have been hafted and used as a hoe, was made of heavy deer or elk

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(1) ". . . implements were in proportion of about ten of those made from bone to one made from shell or stone. In fact many of stone were duplicated in bone or horn . . ." Mills, Gartner Mound and Village Site, 1904, p. 37.

antler. Related to these, no doubt, is a narrower chisel-like form, of like material. Cut jaws of deer and other mammals are very common and are thought to have been used as corn graters. Projectile points of bone and antler are very characteristic, are said to occur about as frequently as flint points on certain sites, perhaps more frequently. Commonest type is made from the tips of antler tines, is hafted by socketing. A single perforation near the base, in many of these points, suggests that they were harpoon heads. Longer points, pretty certainly harpoons, appeared (among the sites examined) only at Madisonville. An entirely different type of point, small and short, was made from the toe bones of the deer. A distinct class of antler objects is connected with flint working. Short cylindrical pieces of deer or elk horn, from $1\frac{1}{2}$ to $5\frac{1}{2}$ inches long, one end convex, the other squared off. The squared off end usually shows signs of battering and indicates its use in connection with a hammer-stone in chipping flint. Another type of flaker is simply a long unmodified piece of antler. Bone fishhooks without barbs are common on all Fort Ancient sites. The form of the finished product is fairly uniform, but there were two distinct methods of manufacture, to judge by unfinished examples figured in the reports. Whether there is any significance in the distinction I cannot say, and consequently will not discuss it further.

A great many ornaments were made of bone, some of which have already been touched upon. Tubular beads made from hollow wing bones of various large birds are very common, likewise bear, elk and wolf

teeth perforated and used as beads. Small fragments of bone carved into rude effigies were used as pendants. At one site (Madisonville) very neatly made armlets made from deer ribs were found. Madisonville also yielded nicely carved combs of antler. Bone flutes seem to have been typical. Most commonly mentioned is a type with 3 holes, though at Madisonville the number of stops ranged from 5 to 9. There were also notched rib-bones used as friction rattles. With the mention of gaming pieces of worked deer astragali the inventory of bone artifacts is substantially complete.

Just what can we get out of this long catalogue of bone and antler objects? Not very much I am afraid. Without some general knowledge of the role played by these materials in cultures other than Fort Ancient, it is impossible to evaluate the significance of individual traits in defining the culture. The fact that the Fort Ancient people relied strongly on these materials is in itself a determinant of some value. Beyond that we can only guess that certain specific factors are definitive. In doing so we are bound to let our guesses fall along the lines of our preconceptions. That is to say, having already accepted the current notion that Fort Ancient is a Mississippi culture, it is impossible not to hit upon such factors as antler flakers and projectile points, which are pronounced Mississippi features, as determinants for the culture. Another difficulty which the McKern classifier has to wrestle with.

Stone: With bone and horn playing such an important part as materials for implements and ornaments it is not surprising to find

the stone working industries somewhat poorly developed, or at any rate less varied and interesting. The characteristic arrow point is a longish triangular form, unnotched and with a flat base. Edges are frequently serrated, a rather important factor from the point of view of Mississippi relationships. Otherwise there is nothing in the chipped category that is particularly definitive. This is, of course, an incorrect way of putting it. There are no doubt many types of chipped artifacts that are definitive, but until we know more about the distribution and significance of stone techniques in North America, these artifacts can be of little use in comparative archaeological studies.

The principal large tool is the celt, oval or squarish in section. The grooved ax, on the other hand, is practically nonexistent. Adze blades, for some unexplained reason appear to be very rare. The grooved maul, or club head, appears to be fairly common. From Madisonville comes a distinctive type of muller with flat expanded base.

Highly characteristic of all Fort Ancient sites is the presence of sandstone abraiders, which are nothing more than natural cleavage fragments of fine-grained sandstone, into which grooves have been worn in the process of manufacturing implements of bone. This would not be worth mentioning but for the fact that it is frequently cited as a general Mississippi determinant.

Discoidals are very common, and of course, significant of southern contacts. They run rather small in size and show a consistent

tendency to be bi-concave with a central perforation. It is said that they occur very much more frequently on sites along the Ohio, fading out rapidly to the northward.

Stone was much used for pipes, particularly in the lower Scioto region where a local brand of pipestone, not unlike the famous Catlinite, was available. While there is a good deal of variety in form, there are certain general characteristics. The commonest type is a blocky, oval or squarish stemless form, frequently carved to represent some sort of bird or other creature. The crudeness of the workmanship, when compared with the famous platform pipes of the Hopewellians, is one of the best arguments perhaps for the separation of the two cultures. Furthermore, the Hopewellian platform type is conspicuously absent. The elbow type is also present, reminiscent in a general way of the so-called equal-arm pottery pipes of the Middle Mississippi section.

There remain only to mention one or two specialized factors, found on specific sites, but not general to the entire culture. For example, the use of cannel coal for implements (that couldn't conceivably be used for any practical purpose) and ornaments is reported from the Feurt and Fox Farm sites. This is, I believe, a pronounced Middle Mississippi trait occurring particularly in the Cumberland Aspect. Also peculiar to Feurt, because, no doubt, of a local supply of material, are a number of objects of polished hematite, small celts, plummets, hemispheres, cones, paint cups, etc. Off hand this seems entirely out of place in a Fort Ancient manifestation. The same

series of artifacts in hematite occur in great quantity in the western portions of the lower Mississippi region.

Stone work in general reveals, far better than work in bone, the relationship of Fort Ancient to other Mississippi cultures. When we come to discuss certain Middle Mississippi manifestations, we shall be obliged to repeat the foregoing description with very little change. It is hardly necessary to call attention to the fact that the negative aspects of the subject are more significant than the positive. The complete absence of the grooved ax in all its variants, of the bell-shaped pestle, of the multitudinous problematical forms in stone, boat-stones, banner-stones, bird-stones, gorgets, plummetts (here we have to make an exception in the case of the hematite objects from Feurt), etc., not to mention the comparative scarcity of notched and stemmed arrow points, all these things are surely significant of a marked separation of Fort Ancient from all manifestations of the Woodland Pattern. Taking these negative factors in combination with the positive affiliations looking to the southward, we need hardly go any farther in order to be convinced of the justice of placing Fort Ancient among the cultures making up the Mississippi Pattern.

Shell: From the standpoint of Mississippi affiliations a special importance attaches to the use of shell both for implements and ornaments, since in a general way this is one of the primary determinant complexes of the Mississippi Pattern. We find, as might be expected, the Fort Ancient people using a great deal of shell, both fresh-water and

marine, but nowhere with a degree of skill comparable to that of the peoples further south. It is indeed difficult not to make the supposition that their efforts in this material reflect a marginal, not to say degenerative, phase of this important Southeastern trait-complex.

Two common domestic implements of shell are found in abundance on all Fort Ancient sites, hoes and spoons. The first, made from the *Unio plicatus*, a very thick and heavy mussel shell, with a single large perforation presumably for hafting, is usually referred to as an agricultural tool, though Willoughby is of the opinion that it was some sort of skin-dressing implement. Spoons are simply smaller mussel shells, unmodified or embellished with serrated edges. In Madisonville -- and elsewhere perhaps, the reports are not explicit on this point -- it was the usual thing to find one of these spoons in each of the mortuary vessels placed in the graves. This, as we shall see, is a very pronounced Mississippi trait.

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(1) Willoughby, in Hooton, 1920, p. 66.

(2) While on the subject of utensils, it may not be amiss to call attention to the absence of any sort of vessels made from large marine shells, such as are characteristic of most Southeastern cultures. This, in conjunction with another circumstance, the frequent occurrence of ornaments reworked from fragments of older artifacts, testifies to the high value placed upon shell material imported from the Gulf region. The Fort Ancient people were so to speak on the end of the ocean shell route, and the price, as is usual in such cases, no doubt mounted rapidly with each tribal exchange along the way. Small wonder that by the time the shells reached Ohio they were too expensive to be used for objects of every-day use.

Ornaments of shell are varied but not particularly abundant. Beads, both cylindrical and disk-shaped, and pendants of various shapes, all very rudimentary, are the commonest. Circular gorgets, often with a central perforation which appear to have been for the insertion of a fresh water pearl, are fairly frequent, and occasionally an engraved gorget appears. The last, however, are very crude and in comparison with similar ornaments from the Cumberland and (1) other Southeastern facies downright degenerative. Long shell pins and a curious disk-headed pin, likewise definitive Middle Mississippi traits, also appear.

Copper: The position of Fort Ancient in regard to the use of native copper is rather curious. Reasoning purely on a priori grounds, one would expect to find considerable use of the metal. The culture is admittedly late prehistoric or protohistoric. The distribution of metallurgical knowledge could not conceivably be too late to have touched these people. Their apparent affiliation with Mississippi cultures, that are uniformly characterized by a moderate use of copper conjoined with their more favorable geographic position with respect to the raw material, lead us to expect at least a moderate

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(1) Madisonville, in this as in many other respects somewhat atypical has yielded gorgets of the mask variety comparable to those from Tennessee, but miserably degenerative in size, one of them having the familiar eye treatment which is, I believe, one of the special diagnostics of Middle Mississippi culture (Hooton, 1920, pl. 16.)

showing of the metal in their archaeology. What do we actually find? On two important sites, Gartner and Fox Farm, no copper whatever. At the Baum site a few wretched rolled copper beads in one burial. At the Feurt site a somewhat better showing rendered uncertain, however, by the proximity of a Hopewell site and the possibility of contact (1) The situation at Madisonville, on the other hand, is complicated by the presence of both European and native copper and the uncertainty in many cases as to which is

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(1) It will be recalled that the Feurt village is just across the Scioto river from the Tremper mound, a celebrated Hopewell site, and that Mills was of the opinion that certain finds in both localities indicated a contemporaneous occupation, the great Hopewellians cheek by jowl with lowly Fort Ancientites. Not a little of this evidence was in the form of copper. It was found in two burials in one of the Feurt mounds in the form of imitation bear canines overlaid with sheet copper and the ordinary tubular beads. This is all the copper that Mills found in actual excavation. He sees in this evidence of a "friendly" contact with the lords across the river. On the surface of the Feurt site, however, collectors had been picking up scraps of copper for years. Mills illustrates some of this material. Besides the ever-present beads there are fragments of gorgets and reel-shaped ornaments "bent and hammered and their identity destroyed". Mills finds in this circumstance indication of an unfriendly period in the relations of the two peoples, a dispute perhaps over the control of the valuable pipestone quarries nearby. (Mills, 1917, p. 104).

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It appears from the foregoing that copper is more in the nature of a negative than a positive feature in Fort Ancient archaeology. The contrast with Hopewell scarcely needs pointing out. Since Fort Ancient is undoubtedly a Mississippi manifestation, is it possible that the use of copper is not, after all, a strong Mississippi characteristic?

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(1) Considerable difficulty at Madisonville is caused by the presence of European and native copper in the same archaeological context. In some cases both materials were used in making the same type of object. The various specimens have not been chemically analysed, so there is a large factor of uncertainty in the whole subject. Even so, there is not an abundance of copper, and the artifacts are rudimentarily simple. A few tubular beads, mostly of native, some undoubtedly of European, copper. "No single individual appears to have been the possessor of more than a few copper beads. In the graves they were usually found singly or in groups of only a few, sometimes in company with beads of shell."- eked out with a cheaper material. A few bell-shaped tinklers (small cones of rolled metal). Small rods were bent into rings, or undulated into miniature serpent effigies. A number of pieces of sheet copper with their edges clinched over fragments of buckskin were probably fragments of some sort of girdle, but Willoughby thinks very likely the copper was European. Only a few examples of copper overlay were encountered, two small pear-shaped objects of wood and several small disks of bone, probably earplugs. The most interesting objects were small pendants of sheet metal in form somewhat resembling the double crosses of silver obtained by the Indians from the Catholic missionaries. These deserve special emphasis owing to the fact that similar ornaments have been found in various Middle Mississippi contexts. Their occurrence at Madisonville may therefore have chronologic implications for the Middle Mississippi Phase. These objects are shown in Fig. 3. They were found in burials in a position that indicates their use as ear ornaments. The first specimen (a), I am quoting Willoughby, has the appearance of having been cut from European metal, the surfaces carefully trimmed off by grinding. The second (b) looks more like native copper. Neither, so far as I know, has been subjected to analysis.

Textiles: There is practically no evidence whatever of basketry, textiles, etc., which follows directly from the paucity of copper, since almost all our information concerning textiles in the mound area is from fragments adhering to copper objects and thus preserved by the copper salts. What little evidence there is, shows a very feeble development of the textile arts. Perforated disks of stone and pottery have been sometimes referred to as spindle

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The third (c) is cut from sheet brass, was found in a burial associated with copper beads, spirals of brass wire and typical Madisonville pottery. While there might be some question about the first two, the third specimen definitely fixes the time as the proto-historic period. This type of pendant, if encountered elsewhere, may thus constitute a valuable time indicator for the late prehistoric or early period. (Willoughby, in Hooton, 1920, pp. 69-72, Pl. 18.)

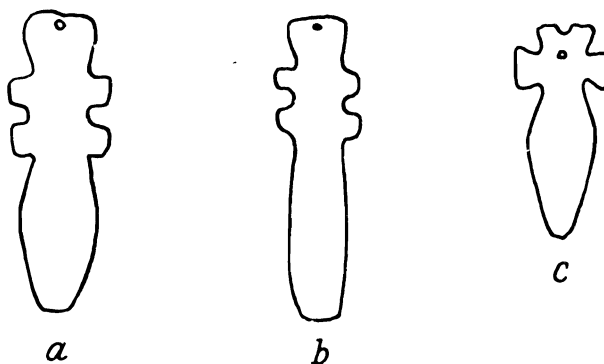


Fig. 3. Copper and brass pendants from Madisonville. (Hooton, 1920, Pl.18)

whorls, which seems very unlikely. Cord impressions on pottery show a coarse spinning that was more likely accomplished by the more primitive method of rolling the fibres between the hands, or between hand and thigh. The only material approaching the dignity of the term cloth is a loose twined-woven fabric, impressions of which are occasionally preserved on pottery. In short there seems to be nothing in the textile department of great use in defining Fort Ancient, or comparing it with other cultures.

Pottery: There is as yet no published description of Fort Ancient pottery as a whole, nor is it necessary to attempt one here. (1) A crude minimum definition is sufficient for the purpose in hand. Such is made possible by the fact that the pottery is relatively simple and homogeneous throughout all foci of the aspect. This is not to be taken as a disparagement of Fort Ancient pottery. Though qualitatively inferior perhaps to the pottery of Middle and Lower Mississippi cultures, it is scarcely behind them in quantitative importance. In other words, if the general importance of pottery in relation to other categories of archaeological materials is one of the major determinants of Mississippi culture, Fort Ancient unquestionably lives up to the mark.

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(1) Based chiefly on pottery determinants as set forth by Griffin reinforced by the half dozen individual site reports already cited (p. 16) plus a very slight first-hand acquaintance with the large collections of Madisonville pottery in the Peabody Museum.

The pottery of Fort Ancient, with a very few exceptions hereinafter to be noted, may be defined in reference to a single fundamental type. A coarse drab ware, tempered with grit or shell, the surface either roughly smoothed or cord-marked. Color ranges through various shades of drab to reddish buffs and browns. A globular, round-bottomed jar with slight, "vague" constriction below the rim is the ubiquitous shape, almost invariably furnished with handles or lugs

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(1) Grit tempering apparently predominates in the northern portions of the Fort Ancient area, whereas the southern components (Madisonville, Fox Farm, etc.) show a preponderance of shell tempered ware. This is exactly in line with expectations since shell tempering is the normal Middle Mississippi type.

(2) Surfaces that are not cord-marked or otherwise embellished show some evidence of smoothing but nothing properly described as a polish.

(3) Cord-marking may be defined as an all-over texturing by means of a cord-wrapped paddle. Unfortunately there is little or no information in the published sources as to the extent or distribution of cord-marking in Fort Ancient pottery. Madisonville pottery is said to be about half cord-marked and half plain (Willoughby in Hooton, 1920, p. 78). In listing pottery determinants for the culture as a whole, Griffin says nothing about plain pottery, but lists "Body tooled with cord-wrapped paddle and smoothed", from which one is led to infer that cord-marking entered into the manufacture of all Fort Ancient pottery, some of it being subsequently smoothed. (Griffin, 1935a, p. iii).

(4) "Vague", as used by Vaillant to denote a change of direction of vessel contour without any sharp break. A very useful term in dealing with primitive pottery, in which sharp profiling is rarely in evidence.

of varied but simple form. There is a tendency in some cases, notably Madisonville, for shapes to assume a slightly elongated globular form, remotely suggestive of the Woodland conoidal jar or "amphora". Actual conoidal bottoms, however, are very rare. Size varies from miniature (of which more anon) to vessels of 20 inches diameter.

This common cooking jar, of which examples may be seen in Fig. 4, is of fundamental importance not only in Upper Mississippi (Fort Ancient and Oneota -- it is radically modified in Iroquois) but also in the Middle Mississippi as we shall see. Its importance warrants a designation, consequently it will be referred to hereinafter as the "Standard Mississippi jar" or simply "standard jar". It is, I believe, one of the most decisive of Mississippi traits, though not necessarily co-extensive in distribution with the Mississippi pattern.

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(1) Mills, 1906, Fig. 15.

(2) Whether or not vessels tend to group themselves around two distinct norms of size cannot be determined from the evidence in hand. We shall see that this is commonly the case in Middle Mississippi cultures, a very large size appearing as the utility vessel, a smaller counterpart occurring regularly as a funerary vessel. This tendency is not confined to the Mississippi valley. An excellent example is to be seen in the pottery of Pecos. See Kidder, 1936, p. 334.

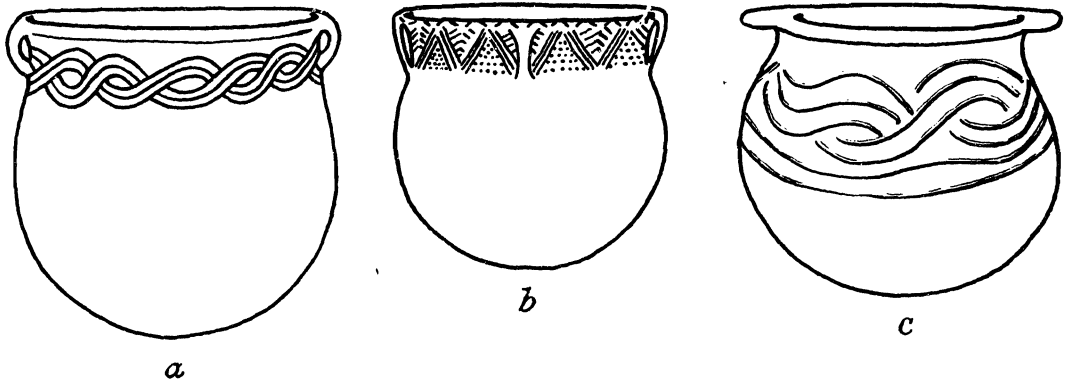


Fig. 4. "Standard" jar form, Fort Ancient aspect.
(a, b, Hooton, 1920, Pl. 24; c, Mills, 1904, Fig. 15)

The standard jar, as just described, is virtually the only shape in the northern and eastern ranges of the Fort Ancient distribution. In the southern sites (Madisonville-Fox Farm Focus), however, a number of additional shapes are present, though only as distinct minority elements. Most, if not all, of these subsidiary shapes are, I believe, attributable to Middle Mississippi influences, may therefore be referred to briefly here.

Simple hemispherical bowls with or without rim indentations are fairly common on these southern sites. A type of treatment in which the rim is reinforced by an indented or notched coil, (1) as seen in certain examples from Fox Farm is precisely that of a very common and definitive type in the Cumberland culture of

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(1) Smith, 1910, Pl. LVI, 5, 6.

central Tennessee (cf. Pl. III, C1-E4). Since the Cumberland, as I shall endeavor to show, is a typical Middle Mississippi manifestation, the presence of this specialized rim treatment is a significant evidence of Fort Ancient-Middle Mississippi relationship.

Bowls are occasionally embellished with effigy heads standing up from the rim, a flange on the opposite side serving as a tail. Most examples noted are bird-form, though animals and even human heads are not lacking. The modeling is in many cases so crude as (1) to render identification impossible. This type of vessel, which I shall call hereinafter "rim effigy bowls" is a well-known Middle Mississippi feature, but has a wide distribution that carries it far beyond the limits of that particular manifestation. It is also significant in a much wider sense, on account of the possibility of a remote origin in the Southwest or Middle America where comparable shapes are found. Its position here in Fort Ancient plainly suggests an attenuated trait intrusive from the south. (Cf. Pl. V, A1-B2; Pl. XX, D1-E4; Pls. XXI, LIII-LV).

Before leaving the subject of effigy vessels, it may be well to note the presence of another type, the so-called head-vessel, which appears just once, at Madisonville, in the form of an ordinary jar modified by the addition of facial features in relief, so that (2) the entire vessel may be conceived as a human head effigy. Whether this has any connection with the head vessel as found in Arkansas

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(1) Smith, 1910, Pl. LIV, 3-7.

(2) Hooton, 1920, Pl. 23, j.

is anybody's guess. My own feeling is that it is something that could so easily arise independently as to have no particular significance at all.

Another shape which has an enormous distribution, which may possibly be significant, is the double, or compound vessel (vertical). It consists of nothing more than the superposition of one vessel upon another. There is nothing very remarkable about the idea; it may be conceived to be readily susceptible of separate invention. Nevertheless, it is pretty definitely associated in the eastern part of North America with the Middle Mississippi phase, therefore, its presence in the Madisonville cemetery may be significant. (1)

Madisonville also furnishes several examples of a unique shape. An ordinary jar form with what looks like a high flaring annular base, but is described as solid. Being, as I think, a unique form, there is nothing further to be said about it. It is interesting, however, that no other type of basal support, either annular or tripod, appears, nor any form of basal treatment whatever, for that matter. Fort Ancient pottery adheres to its "primitive sphericalness" with this one single exception. (2)

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(1) Hooton, 1920, Pl. 24, j.

(2) Hooton, 1920, Pl. 24, k & j.

(3) Linné, 1925. Linné makes a great point of this. Has a distribution map of primitive spherical forms in South America, and finds a correlation with the regions of least ceramic development. One is not sure the same thing would hold for North America. The Southwest, for example, is a region of fairly high ceramic development, in which spherical forms are strongly predominant.

A specialized feature, whose nearest appearance elsewhere in North America is, I believe, the Southwest, is the colander. Here it is apparently nothing more than an ordinary jar with perforated bottom. It is, after all, a very simple expedient. One would hesitate to suppose that its occurrence here and in the Southwest, with no examples turning up in the enormous intervening area, has any significance of connection.

Secondary features: I have mentioned the fact that handles and/or lugs seem to have been de rigueur in Fort Ancient pottery-making circles. It is said that lugs are more frequent in the northeastern section (Baum-Gartner), handles in the southwestern (1) (Madisonville Fox Farm). One would like very much to be able to check this statement, because it may indicate that of the two, lugs represent the earlier form. In any case lugs and handles are both pronounced Middle Mississippi factors. It ought to be possible, one feels, to get some chronological aid from them. They both serve the same purpose, i. e. to hold in place a cord encircling the neck of the jar, therefore it is reasonable to expect that one will turn out to be older than the other. Probability favors the lug as the earlier form, and I think whatever evidence there is, in the Southwest and elsewhere, points the same way. The slightly more northerly distribution of the lug, here in the Fort Ancient area (since both

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(1) Griffin, 1935a, p. 3.

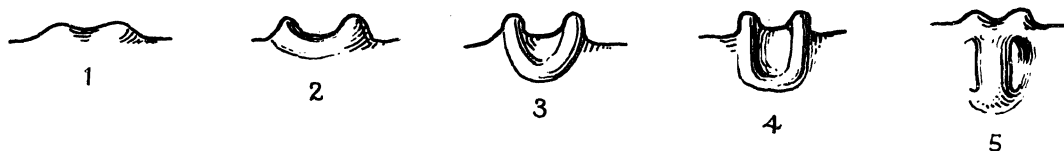


Fig. 5. Suggested evolution of handles in Fort Ancient pottery. (from examples illustrated by Mills, 1917 and Smith, 1910.)

factors presumably are southern) may be significant of an earlier (1) date.

The handle situation in the Southeast is unsatisfactory. Advantage has not been taken of these useful little adjuncts. They might be valuable as time indicators. The first thing needed, to be sure, is a rough-and-ready classification and some terminology. The only thing I have seen is a partial classification (unpublished) by Thorne Deuel, which I shall follow in part.

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(1) Another suggestion is offered in Fig. 5, based on handles illustrated by Mills in his report of the Feurt site. After completing these sketches and experiencing a mild glow of satisfaction over having made a minor discovery, I found that Smith in his Fox Farm report had called attention to the same thing, even going so far as to state that all loop handles encountered by him, regardless of type, have developed from a bi-nodular proto-type similar to Fig. 5 above. (Smith, 1910, p. 191). I am too well aware of the danger of constructing evolutionary sequences without proper stratigraphic control. There is always the possibility that the evolution went the other way.

He divides vertical loop handles into three categories, rounded, strap and decorative. Each of these in turn, can be broken down into sub-groups according to their shape in direct elevation, profile and section, and according to their decoration. Decorative handles, of course, refers to a class of vessels common in the Middle Mississippi wherein handles have been reduced in size and multiplied in number so that they have doubtless lost any functional significance they may formerly have possessed.

It is not easy to make any general statements from the scanty materials illustrated in the various reports. All handles are of the vertical loop variety, range all the way from those that are round in section to the broad flat handles characteristic of Madisonville, and perhaps to a lesser extent, Fox Farm. Here, then, is another indication that round handles have a more northerly distribution, and perhaps, represent an earlier form. In any case, here is Madisonville, a proto-historic site, showing a homogeneity that is apparently lacking elsewhere combined with a greater degree of workmanship, both circumstances suggesting strongly that the Madisonville type of handle is the culmination of the development. If there is an evolution, the strap handle is perforce at the end of the series.

An interesting type of handle that does not seem to be confined to any one site, or focus, is a zoomorphic handle which consists of a small animal or reptile with four legs outspread gripping the side

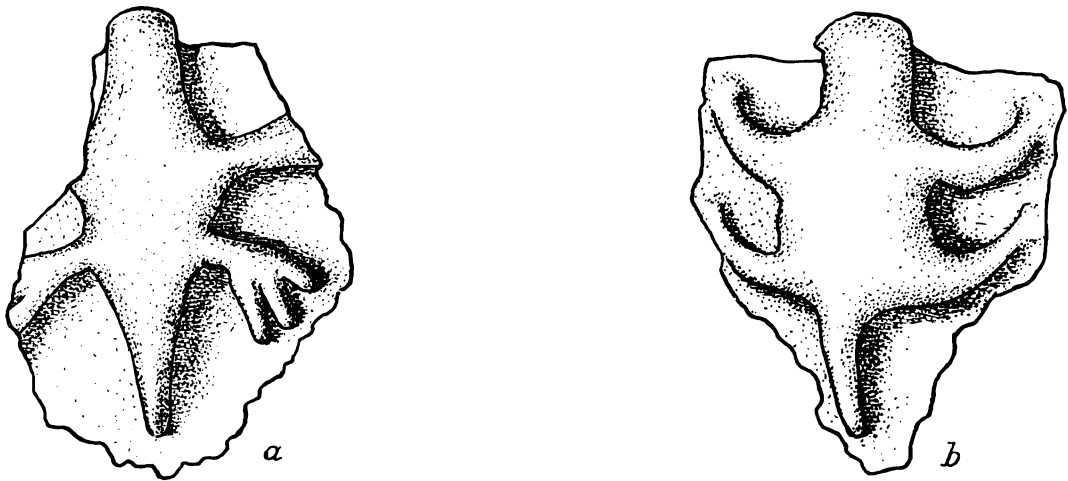


Fig. 6. Zoomorphic handles, Fort Ancient.

of the vessel, its head raised slightly above the rim, as though it were trying to have a look inside, but not quite succeeding. Whether this is a specialized Fort Ancient feature, I am not prepared to say. It is the sort of trait that will bear watching. (Fig. 6)

Decoration: I have already spoken of "texturing" with cord-wrapped paddle and agreed not to regard it as a form of decoration. What is it then? It has been suggested that it has a functional significance that in some way or other a surface so treated makes a more efficient utensil, particularly for use over the fire. Is it not also possible that it has some connection with the so-called paddle-and-anvil method of pottery manufacture? The question of the method of pottery making in the eastern United States is a very complicated one, and I have no wish to get entangled in it. Since, however, it has been pointed out in the Southwest that paddle-and-anvil is not a fundamental process, but merely a method of finishing a vessel that may actually have been built up by coiling, perhaps the question loses a great deal of its importance. So whether or not Fort Ancient pottery was coiled or made by some other process, and I think there is no evidence on this point, it may still have been finished by a paddle-and-anvil technique. It is not difficult to imagine wherein a cord-wrapped paddle might be superior to a plain wooden one. However, this is taking us too far afield. It is enough, to merely point this out as a possible line of

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- (1) Gifford, 1928.
- (2) Griffin (1935a) gives no information on the method of manufacture of Fort Ancient pottery. In another publication of the same year, however, in which he reviews all the available evidence on this subject for the entire eastern United States, Fort Ancient is again omitted, which is pretty good indication that at the time there was no information on this point (1935b, p. 22).
- (3) This suggestion is borne out perhaps by the fact that in certain Plains cultures a grooved paddle was used for the same purpose (Hill & Wedel, 1936, p. 41).

(1)
inquiry.

Besides cord-marking, which may or may not be decorative in intention, and occasional modeled features, Fort Ancient decoration is confined to rude patterns incised or punctate, or combinations of both. Incision may be fine-lined or "trailed" (a useless term which merely refers to incision with a blunt instrument). Punctuation seems to have been done with any sort of instrument that came handy, including the finger or thumb nail. The decorative field is usually confined to the rim and portion just below it, or at most the shoulder. Designs consist of very simple running motives, recti- or curvi-linear, based on rudimentary guilloche, chevron or herring-bone patterns. Rims are nicked, notched or otherwise indented.

Painted pottery is extremely rare but not quite absent altogether. A single instance from Madisonville is deserving of mention

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(1) Besides the ubiquitous cord-marked ware, there appears as a distinctly minor factor in the Madisonville-Fox Farm Focus, an entirely different kind of paddle marking, a check-stamp or, as Kelly calls it in Georgia, gridbar ware. Whether it is the same as Kelly's Gridbar, in which case it must have been introduced by trade, or whether it is merely an analogue, in either case its appearance here is interesting as indicating contact with a southern horizon that is not Mississippian. Kelly's present belief is that this type of stamping is very early and has a center of distribution somewhere along the south Atlantic coast. It appears on the Macon Plateau under auspices that Kelly regards as relatively early. Its presence here is, by inference, late. One would like, therefore, to know something about the exact nature of the relationship between the two occurrences.

owing to the possibility that the technique of "lost color" may be
(1)
involved. If so, it offers a tenuous but unmistakable evidence of
contact with Middle Mississippi cultures such as the Cumberland and
Cairo Lowland, in which this is the dominant type of pigmented
decoration (p.334).

Salt-pan ware: The only real exception to the statement that
Fort Ancient presents a one-type pottery situation is the presence
of salt-pan ware in the Madisonville-Fox Farm Focus. I can find no
reference to it in the reports covering the two type sites, but
Griffin lists it as a determinant for the Focus, so it must be
(2)
present in sufficient quantity to be regarded as characteristic.
No question, it seems to me, that salt-pan ware is a distinctive
pottery type, and one which should have a very important bearing on
cultural problems, because of its specialized function. A description
of the ware and a consideration of its distribution and classificatory
affiliations will be attempted later in this report. For the present
it is sufficient to note its presence as one more feature, added to the
many previously noted, indicating the infection of the southern
branches of Fort Ancient culture by influences from the region of the
Middle Mississippi.

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(1) Willoughby, in Hooton, 1920, p. 80. "The only example of a vessel
with painted decoration known to the writer from this site is in the
Cincinnati Museum The design is in black on an unpainted ground
and represents the primitive cosmic symbol, the cross within a circle,
and a dot for each quarter." Cf. Fig. 107 .

(2) Griffin, 1935a, p. iv. Perhaps the failure of earlier investiga-
tors to mention salt-pan pottery was due to their not recognizing the
distinct difference between cord-marked and textile-marked wares.

Miscellaneous pottery objects: One of the determinant characteristics of Mississippi culture (as opposed to Woodland for example) is the use of clay for the manufacture of various small objects of ornament and utility. They occur invariably as minority factors and usually receive scant consideration, loose ends that have to be tucked in at the end of a report. My own feeling is that they are the sort of specialized traits that may on occasion prove very useful in culture determination, that tedious as it may be to consider them individually, they do nevertheless warrant such treatment. Fort Ancient does not show many of these traits. Take away the southern Focus (Madisonville-Fox Farm) and they would scarcely be worth mentioning. This fact of distribution alone allows us to start with the blanket assumption that these small pottery objects, like so many other specialized pottery features showing up in this Focus, point to contact with the south, are intrusive so to speak, in the Fort Ancient area. These "miscellaneous pottery objects", as they are generally called, may be mentioned briefly in outline form:

Miniature vessels: Are found on practically all Fort Ancient sites. Soon or late we will have to come to grips with the question of their meaning or function. Are they toys, ex votos, funeral offerings especially designed for child burials, practice vessels? The problem can be considered more intelligently after we have followed their further distribution. In Fort Ancient they occur fairly frequently in village site excavations, whole and broken, which seems to indicate that they were in daily use. They are invariably described or figured as exceedingly rude and elementary in form and workmanship.

Ladles: In the Southwest the ladle attains sufficient development to be treated like any other form of vessel. In the Mississippi region, though fairly common, ladles seldom achieve that distinction, owing to the fact that they are usually very small rudimentary affairs, more like toys than practicable utensils. It is clearly a Mississippi feature, and one that may have considerable importance in relating that complex to the Southwest and Middle America. We shall watch for its appearance with considerable interest. Its occurrence at Fox Farm, in a single instance, marks this as an extreme northern outpost of its distribution.

Figurines: Human and animal figurines occur so infrequently and are so pitifully crude in execution as scarcely to deserve attention. The mere fact that they occur at all, however, may be not without interest.

Pottery disks: Discoidals of stone and other materials have long been recognized as a general southeastern feature. Consequently the occurrence in Fort Ancient sites of small disks reworked from potsherds, perforated or unperforated, arouses no special interest, being naturally considered merely as part of the general discoidal problem, in other words, as indicating in a general way influence from the south. While it is impossible to say that these pottery objects are essentially different in function from their better known counterparts in stone (since we know next to nothing about their function anyhow), it is nevertheless quite evident that they have a different distribution. Whereas stone discoidals are a general southeastern feature, it appears

that pottery disks are a more specialized Mississippi factor. Furthermore their distribution carries back (that "back" is a question-begging word, but let it stand) to the Southwest and Middle America. Therefore it seems advisable to consider pottery disks as a separate problem, and to treat them under pottery, since they are usually made from sherds of the prevailing wares with which they are archaeologically associated. They are fairly common in Fort Ancient sites though one suspects that this is about the northern limit of distribution.

(1)
Trowels: Possibly associated with pottery disks and of equally problematical nature are certain "spool-shaped" or "mushroom-like" objects of baked clay. (As a matter of fact they look more like glorified collar-buttons than either spools or mushrooms.) They have been reported, among Fort Ancient sites, only from Fox Farm and there only in fragmentary condition. These objects are commonly referred to as "trowels" and are thought to have been used in the manufacture of pottery or in plastering the walls of wattlework houses. (2)

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(1) A "trowel" was found in the Dickson cemetery in Central Illinois, the convex face of the trowel in contact with the concave surface of the pottery disk (Cole & Deuel, 1936, Fig. 25:24).

(2) Webb, 1931a, p. 408. The term "anvil" used by Gifford in his study of the distribution of the so-called "paddle-and-anvil" method of pottery manufacture is perhaps better than "trowel". One hesitates to use it, however, because it implies that these objects were certainly used in pottery manufacture and that consequently wherever they are found pottery must have been made by the paddle-and-anvil method. A large question to beg without further evidence. No question of their similarity to the anvils used in the Southwest (southern part), but there is a possibility, I suppose, that in their wide diffusion they were adapted to another function. It may be worth while to go into this question more carefully later in this report.

Balls: Small clay balls are present but very rare and probably of no particular significance anyhow.

Beads, pendants, etc.: Beads are not mentioned, but various sorts of objects, for want of a better attribution, are described as pendants or simply ornaments.

Earplug: A small pottery earplug found at Fox Farm may be worth keeping in mind in view of its occurrence as a specialized Middle Mississippi feature.

Pipes: In general pottery pipes are a minor factor in Fort Ancient archaeology, due to the presence of an excellent pipestone in the immediate locality. Both tubular and elbow pipes do occur, however, the latter being very similar to the characteristic Middle Mississippi forms.

Summary of Fort Ancient culture: This tedious catalogue of archaeological materials now happily concluded, we are theoretically in position to attempt a concise summarization of Fort Ancient culture. I say "theoretically" out of a painful awareness of the utter inadequacy of such a proceeding. I have presented a body of curtailed facts representing perhaps not 5% of the total culture of the people we call Fort Ancient. (We are called upon to remember that, despite appearances to the contrary, these people were once alive, as alive as, -- let us say, the Trobriand Islanders of today). That miserable body of facts rescued from oblivion we are now going to reduce still further -- a fraction of a fraction -- to a number of shining sentences labeled "Summary of Fort Ancient culture". No need to enlarge on the somewhat ridiculous nature of the procedure.

The Fort Ancient people followed a fairly sedentary mode of life centering around large straggling villages, chiefly notable for the

large size of their cemeteries. That agriculture was of paramount importance in their domestic economy is attested by the large number of storage pits scattered about the villages and by the large part played by pottery in their material culture. That it was by no means the sole basis of existence is indicated by the abundance of animal bones and shells and the great reliance upon bone, and to a less extent, shell, as materials for implements and utensils.

Sites, however, exhibit little in the way of houses or other structures that might be expected of a sedentary folk. Mounds are on the whole low and unimpressive, are almost without exception mortuary in purpose. There is little or nothing in their form or arrangement to suggest the sort of assemblage typical of Middle and Lower Mississippi sites. The characteristic rectangular truncated mound of the latter regions appears in Fort Ancient only as a rarity. Defensive factors in the village sites belie the name "Fort Ancient" by their complete failure to appear. The unanswered question of the isolated hilltop fortifications is another matter.

Houses were entirely above ground, circular in plan, flimsy in construction. Wattlework, which undoubtedly represents an advance over the normal pole and bark construction appears here and there as an exception. Interior arrangement is simple in the extreme, a centrally placed firepit of puddled clay and a few storage pits. Arrangement of houses in accordance with any sort of plan there was none. A Fort Ancient village seems to have been little more than a large camp.

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(1) It occurs to me while writing this, that there may be a climatic factor involved. Wattle-and-daub has in North America a southern distribution. Even in Fort Ancient, I believe, it is found only in the southern range (Madisonville-Fox Farm). Off hand it would seem to be a poor sort of construction in a region of intense frost. Even the best cement stucco today often goes to pieces in the North.

Burial customs were exceedingly varied, though it is still possible to say that inhumation in an extended position was the prevailing mode.

Turning to artifacts it is hardly possible to emphasize the importance of bone and horn as materials for implements and ornaments. Conversely, stone working is decidedly less advanced. The triangular arrowpoint and grooveless ax or celt are definitive, and there are a number of stone objects, notably the discoidal, that point to affiliations with the south. More conclusively pointing in the same direction are such "negative" traits as the absence of the grooved ax, bell pestle and all problematical forms, all of which are prominent Woodland characteristics. Stone work alone would be sufficient to place Fort Ancient outside the Woodland Pattern, and to reveal its essential kinship with Mississippi cultures to the south. The use of shell likewise indicates a southern connection but the quality of the workmanship, whether we choose to call it rudimentary or degenerative, shows plainly a marginal situation. This is particularly true in reference to objects made from marine shells. The supposition seems warranted that Fort Ancient was on the end of the ocean shell route. ⁽¹⁾ Contrary to expectation the Fort Ancient people were found to have made very little use of copper, a circumstance that requires some explanation. Is the use of copper not a pronounced Mississippi trait after all? Are the Fort Ancient people merely exceptional in this respect? Is it possible that trade in copper, like that in marine shells, had declined in the period of Fort Ancient supremacy? These questions can only be answered after we have considered the position of copper

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(1) Or the trade may have been in decline in Fort Ancient times. Under the earlier Hopewellians it appears to have flourished.

in Middle and Lower Mississippi cultures.

While on the question of trade, it may be well to note that other prominent Hopewellian trade materials, obsidian, mica, silver, meteoric iron are conspicuously absent from Fort Ancient sites. Though placed in the same favorable situation geographically, the Fort Ancients seem not to have been a trading people.

No pottery complex, beyond the most rudimentary, can be summarized briefly without terrific oversimplification. Clay is a fluid medium, the very conditions of its manufacture into pottery ensure the widest possible variations within the limits of a single tradition. To describe Fort Ancient pottery as a single-type situation is entirely misleading if it gives an impression of simplicity and uniformity. Nevertheless for purposes of gross comparison it is essentially a single type, a coarse drab ware either plain surfaced or cord marked. Decoration is by means of rude incision, punctation or a combination of the two, and is confined to simple running motifs forming a band just below the vessel rim. Normal shape is a large globular, round-bottomed jar with slightly constricted neck and loop handles or lugs. Additional shapes, generally found only in the southern Focus are, I believe, directly attributable to influences from the Middle Mississippi. The occurrence of numerous small objects of pottery points in the same direction. Without anticipating possible conclusions which belong elsewhere in this report, it seems perfectly obvious that pottery is the best evidence we have that Fort Ancient is an out and out Mississippi manifestation. Scarcely

a single character of form or decoration that cannot be found more emphatically expressed in the Middle Mississippi Phase. Some Woodland factors we must expect on geographical grounds alone and these perhaps are to be found in the use of grit temper and the practice of texturing by means of a cord-wrapped paddle. But even where these practices obtain the pottery is just as thoroughly impressed with Mississippi characteristics of form and decoration. In short, if the stone work alone was sufficient evidence that Fort Ancient is not a Woodland culture, pottery is sufficient alone to warrant the statement that Fort Ancient is a Mississippi culture.

2. Iroquois Aspect

In the definition of Mississippi culture a study of the Iroquois Aspect, though desirable for the sake of completeness, is not likely to be very helpful. Assuming that Iroquois has been properly classified as an Upper Mississippi culture one would expect on geographical grounds alone that it would present Mississippi features in their most attenuated form. On the other hand, it might be argued on general diffusionist principles that the mere presence of Mississippi factors in an area so remote from their presumed origin is of the utmost significance, that from an examination of their marginal occurrence one can gauge their importance at the center. Translated into terms of the McKern Classification, this

would be equivalent to saying that traits which have demonstrated their vitality by persisting in marginal positions are perhaps the most satisfactory determinants for the definition of a culture. I think there is something to be said for this point of view, but am not going to attempt to apply it for lack of time for the detailed analysis it would require. The following very superficial account of Iroquois archaeology is designed merely to satisfy myself (and the reader) that Iroquois is an Upper Mississippi culture. For this purpose the barest outline will suffice. However, in cases where special circumstances in connection with a trait appear to reflect back on the general Mississippi problem, I shall not hesitate to digress at length.

So far as I am aware there has been no study of Iroquois archaeology as a whole. The most complete account is contained in Arthur C. Parker's "Archaeological History of New York" (1920). The most useful summarization is that of W. J. Wintemberg, published in 1931 under the title "Distinguishing Characteristics of Algonkian and Iroquoian Cultures". Upon these two works, supplemented by the published reports of Skinner, Harrington, Houghton, Ritchie, Cadzow and others, the following synthetic description is based.

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- (1) Parker, 1920.
 - (2) Wintemberg, 1931.
 - (3) Skinner, 1921.
 - (4) Harrington, in Parker, 1920.
 - (5) Houghton, 1916.
 - (6) Ritchie, 1934, 1938.
 - (7) Cadzow, 1936.

It is hardly necessary to state that no thoroughgoing study of Iroquois archaeology using the McKern approach has yet been made. The conferees at Indianapolis were content to assume that the various tribes would constitute so many foci of the Iroquois Aspect and let it go at that. This may have been a reasonable assumption but it fails to give expression to a two-fold grouping of the tribes that has been long recognized by students of the subject. It was Parker, I believe, who first pointed out that the historic tribal divisions fall naturally into two divisions, an eastern and a western. Others followed his lead but with some differences as to the correct place to draw the dividing line between the two groups. All agreed that the line was to be drawn in New York between the Cayuga and Onondaga, that is to say the Erie-Seneca-Cayuga (plus Andaste) constituting the western group were separable from the Onondaga-Oneida-Mohawk, the eastern. The position of the Canadian branches, the Neutral, Tobacco and Huron tribes, was less clear. More recently, work in eastern Ontario has furnished evidence relating the Huron, and with them the Tobacco, with the eastern, or Mohawk-Onondaga group. At first glance this grouping looks anomalous on account of the wide separation in historic times between the Hurons and their New York cousins. However, there is now abundant evidence that this separation was a fairly recent matter, that the Mohawk-Onondaga came into New York not long before the appearance of the whites, and from the

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(1) Parker, 1916, p. 497 et seq.

(2) Skinner, 1921, p. 21.

general direction of the St. Lawrence where they were in much closer contact with the Hurons. Sites in the upper St. Lawrence region, such as the late prehistoric Roebuck site and Hochelaga, the village visited by Cartier, show very close affinity to early historic Huron as well as Mohawk-Onondaga sites. This also agrees with the traditions of the latter bringing their ancestors into New York from the north. The Neutrals, on the other hand, are now clearly allied with the western division. Thus, the present evidence points to a twofold division of Iroquoian peoples, dating probably from the time of their first entrance into the region, one division taking the northern route above lakes Erie and Ontario, spreading out for an uncertain distance along the St. Lawrence valley, part of them subsequently backwashing into eastern and northern New York; the other division keeping generally to the south of the lakes (except the Neutrals who straddled Lake Erie at its western end) and distributing themselves over western New York, northeastern Ohio and the greater part of Pennsylvania. Considering the distribution as just outlined, it would seem more correct to call the two divisions northern and southern, the northern consisting of Tobacco, Huron, Mohawk, Oneida, Onondaga; the southern comprising the Neutral, Erie, Seneca, Cayuga, Andaste and Susquehannock.

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(1) Wintenberg, 1936.

(2) Op. cit., p. 121.

(3) Wintenberg, 1931, p. 66. The opinion of this writer should be conclusive on this point, since he has excavated a number of early neutral sites in the Niagara peninsula.

The division just adumbrated is not merely based on typological grounds. There is a chronologic factor as well. The culture of the eastern (which I prefer to call the northern) group is said to be of the late pre-European and early post-European stage of development; (1) none of the sites show evidence of earlier stages. Some of the southern manifestations, on the other hand, show successive stages of development. This is particularly true of Neutral sites and sites in Western New York, northern Pennsylvania and Ohio in the territory presumably occupied by the Erie. Consequently for the purpose of relating Iroquois to other Mississippi cultures, the southern division is likely to prove more significant. The northern division may be expected to show specializations away from the ancestral forms; it will be more pronouncedly Iroquoian, but less clearly Mississippian.

The reason for emphasizing this point is that here is an opportunity for checking the McKern classification against fairly reliable ethnographic data. The result is not very encouraging. If the tribes are merely given rank as foci in a general Iroquois Aspect, this important dual division is lost sight of entirely. Two alternatives are present. The northern and southern branches may be called foci or they may be postulated as aspects. The first alternative is out of the question because of the enormous area, geographical and cultural,

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(1) Wintemberg, 1931, p. 66.

one of the foci would have to comprehend (the southern). The second alternative is a better one, it seems to me, a Northern Iroquois Aspect and a Southern Iroquois Aspect. The retention of the name Iroquois indicates sufficiently their close relationship. In this connection it is well to remember that the closeness of this relationship has perhaps been overemphasized by an artificial unity imposed by the League in late prehistoric or protohistoric times. Elaboration of this point is outside the scope of the present work. In describing Iroquoian culture, however, I shall be constantly referring to this twofold division, consequently it is necessary to make clear my feeling that the Classification as it stands does not give it sufficient importance.

Sites: The Iroquois were not mound builders. Aside from the fact that they frequently surrounded their villages with defensive earthworks, there is very little in the way of general site characteristics to suggest Mississippi relationship. It is unfortunate that it was not possible to nail down the building of hilltop fortifications as a definite Fort Ancient trait, in which case their presence here would have been in line with expectations. However, in a general way defensive works can be regarded as a Mississippi factor, occurring fairly consistently in certain Middle and Lower Mississippi Aspects, so in spite of the Fort Ancient uncertainty, the practice may be tentatively counted as part of the Iroquois' (assumed) Mississippi inheritance.

It might be argued against this interpretation that defensive works are found mainly on early Iroquois sites, and that these are usually situated in the uplands, not on the richer bottom lands along the streams. In other words, not the sort of location generally chosen by Mississippi peoples. However, we have only to recall that the Iroquois were, in this period, interlopers, and that their selection of hilltop sites, aside from obvious military considerations, was not a matter of choice but of necessity. Later, when the success of their arms enabled them to do so, they came down out of the hills and occupied the richer agricultural lands bordering the lakes and streams.

House types: With our present knowledge, it is, I believe, impossible to derive the Iroquois longhouse from a Mississippi prototype. This would be disquieting to our main hypothesis, if it were possible to derive it from anywhere else. The longhouse apparently is sui generis. About all that can be said is that it is not likely to have been developed by a people with a circular tradition in house construction, hence is probably not Woodland in origin. About the house types of the Hopewellians we know nothing. Mississippi houses, insofar as we know anything about them, are in the main rectangular, so at present it is easier to derive the longhouse from

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this source than any other.

Burials: The normal form of burial was by inhumation, flexed. Extended burials were rare, or absent. Secondary burial, either in the form of single ("bundle") or massed ("ossuary") burials, was common. In general secondary burial seems to have been a Mississippi trait, particularly in its multiple form. There is nothing in Mississippi, however, comparable to the great ossuary burials of some of the later Iroquois, notably the Hurons. This must be counted as an extreme form, a late specialization. It was actually in the post-European period that the custom attained its maximum.

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(1) My brief excursion through the literature failed to bring out any references to early Iroquois house types, antedating the longhouse. If ordinary single houses of rectangular shape could be found, the probability of Mississippi derivation would be strengthened. On the other hand, it is not unlikely that the early Iroquois houses were round, as in Fort Ancient, in which case the origin of the longhouse becomes more of a problem than ever.

It is possible that a rectangular tradition got into the north-eastern area by some other means than Mississippi influence. I am told that the Beothuk of Newfoundland had rectangular houses. It is not impossible that the Iroquois were in contact with these people on the St. Lawrence. It may be remembered that the Beothuk were in contact with Breton and Basque fishermen from the early 16th century on. However, Cartier found the longhouse well established at Hochelaga in 1535, scarcely time for it to have developed from European inspiration.

A tempting subject for inquiry

Absence of extended burial and prevalence of secondary forms cancel each other in respect to possible Mississippi implications. This unsatisfactory result agrees with our findings in the Fort Ancient Aspect. Burial practices, except in special details, seem to offer the least satisfactory determinants for culture comparison.

Comparative abundance of mortuary offerings, particularly pottery, was seen to be a Fort Ancient trait and was assumed there to be significant of Mississippi relationship. The same thing can be said here with a good deal less emphasis however. Most authorities agree that compared with the Algonkin, Iroquois graves are rich in pottery. Unfortunately this is said to be not the case in the pre-⁽¹⁾historic period.

Artifacts, stone: The contrast in general cultural paraphernalia between Iroquois and Algonkin has been repeatedly emphasized by all students of the subject. It is apparent at first glance that linguistic differentiation is, for once at least, correlated in a

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(1) Skinner, 1921, p. 85. "In prehistoric graves, clay jars are rarely found in the Iroquois country, and apparently not at all in Cayuga territory. The time when such mortuary offerings were commonly made was from the period of the first contact of white people to relatively modern times. In the Seneca confines, for example, the graves most productive of pottery and other native artifacts are those which date from the time of the advent of the first Europeans,"

Cf. Ritchie, 1938, p. 97. ". . . . grave goods very rare and when present consisting usually of pipes, tubular bone beads, a few cylindrical shell beads, bone awls, stone celts, stone adzes, arrow-points and (very rarely) pottery."

thorough-going manner with cultural differentiation. Since no one would attempt to deny that Algonkin is a straight Woodland culture, these differences take on considerable interest from the point of view of the general problem of Woodland versus Mississippi. It will therefore be of some advantage to discuss Iroquois archaeology, not only in terms of resemblance to acknowledged Mississippi cultures, but also in terms of difference from Algonkin, an acknowledged Woodland culture.

The subordinate position of stone in relation to bone, horn, shell, etc., observed in the case of Fort Ancient, likewise obtains here, and is given additional emphasis by contrast with the Algonkin situation with respect to these materials. This is not to say that Iroquois stoneworking is inferior to Algonkin, but simply that it occupies a less important position relative to the total culture. This by itself is perhaps a generic Mississippi trait, at any rate is certainly characteristic of the Upper Mississippi phase.

Coming down to details, in the chipped category there are differences, basic enough to suggest actual differences in technology, though I should not feel competent to discuss them on that basis. Iroquois flintwork tends to triangular, leaf-shaped and lanceolate forms, worked in a flat flake technique, in contrast to the somewhat heavier notched and stemmed forms of the Algonkin. This is particularly true of arrowpoints, which are uniformly triangular, small, thin and finely worked, perhaps the most consistent and dependable diagnostic in Iroquois archaeology. The relationship to the triangular forms of

Fort Ancient and beyond, to the Mississippi valley, is obvious. The association with antler points, a special Mississippi trait makes it the more striking.

In polished stone the same thorough-going differences are observable. Celts and adzes are Iroquois traits, though there is apparently some difference of opinion as to how common their occurrence. (On certain sites they have been described as "rare".) Celts and adzes are Mississippi tools, but by no means confined to this pattern. Hence their presence here is not particularly significant. The Algonkin had them too. But the grooved ax is distinctly not a Mississippi form. Its total absence from Iroquois sites is therefore of some consequence. Backing it up is a whole range of artifacts in ground stone, all of them conspicuously absent from Iroquois archaeology: polished slates, cylindrical pestles, gouges, plummetts, gorgets, boatstones, birdstones, banner stones, bar amulets, tubes, etc. All these things are likewise non-existent in Mississippi archaeology (speaking classificatorily not geographically -- they occur frequently enough in collections from the Mississippi valley, but not in association with Mississippi culture). Parker was at great pains to account for the Iroquois' lacking these things. Loth to admit any lack of capacity or adaptability on the part of his tribal ancestors, he ascribed their seeming reluctance to take on

these things to a positive abhorrence, amounting to an active
(1)
tabu. Whatever the explanation, the fact alone is striking, and
strongly suggests that the Iroquois were not merely in contact
with a Mississippi culture somewhere in the course of their wander-
ings, but were actually the carriers of that culture when they
appeared in New York state.

The evidence as regards polished stonework is not all negative,
however. The Iroquois made various beads, disks and other ornaments,
not encountered in Algonkin archaeology. Stone pipes are likewise
said to be absent from Algonkin sites. Some types closely recall
(2)
the blocky stemless forms of Fort Ancient.

It has been my impression that the stone discoidal, particularly
the bi-concave type, is a Mississippi factor. Its presence at Fort
Ancient seemed to confirm this impression. There were indications,
however, that southern Ohio was about the northern limit of distribu-
tion. In looking through the Iroquois material I find no reference

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(1) Parker, 1920, p. 132. "The absence of these forms of implements
is significant and is the result of something more than mere accident.
The Iroquois had every opportunity for knowing of such objects and
they were fully capable of making them had they so desired. It appears
from these facts that the Iroquois deliberately chose not to use these
things and tabooed them from being employed in any way. Apparently
there was a direct attempt to banish such articles beyond the pale of
their culture."

(2) There is said to have been a great increase in the use of stone
for pipes in the early colonial period, after the introduction of
steel tools. It is the earlier pre-European forms, however, that
suggest Fort Ancient analogies.

to this artifact, though it is known to occur occasionally in an
(1)
Algonkin context in New England. Crude discoidals without concavities
were found in Susquehannock sites in south central Pennsylvania.
Perhaps the discoidal is not a Mississippi factor after all, but one
with a more easterly distribution. Willoughby says they are abundant
in the South, east of the Mississippi. Their northward diffusion may
consequently have been coastal rather than by way of the Mississippi
and Ohio. This would account for its presence in New England without
any corresponding occurrence in the Iroquois horizon in New York.
It is, of course, ridiculous to generalize on such scanty information.
Nevertheless, it is enough to suggest that the discoidal will bear
watching when we come to a consideration of Mississippi culture in
its homeland.

The general conclusion on stonework reached in Fort Ancient may
be repeated here almost word for word. If there were no other
evidence at all, the Iroquois use of stone, particularly in its
negative aspects, would make a strong a priori case for placing
Iroquois in the Mississippi Pattern.

Bone: Fort Ancient has been called a "bone-age" culture. If
the expression were not wholly inadmissible, it could equally, if
not more emphatically, be applied to the Iroquois. The similarity

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(1) Willoughby, 1935, p. 111.

of the two cultures in respect to the general importance of bone and antler is backed up by a large number of specific analogies, such as beaming tools, flakers, bone and antler points, fishhooks, antler combs, to name but a few. There are, however, a number of traits, not observed in Fort Ancient, and some, it would appear, that reached a higher stage of development than in Fort Ancient. Here, we must remember, we are dealing with a culture that overlaps into the historic period. Therefore, certain modification may have been the result of the introduction of European ideas and steel tools. This is particularly apparent in such things as antler combs, which, in the early period, were extremely simple like those of Fort Ancient, later blossomed out with many more teeth and elaborate carved tops. The barbed fishhook, likewise a late development, may belong to the same category. (1)

Nevertheless one has a distinct impression that, however close the relationship, it is not in the nature of an Iroquois dependence on Fort Ancient. One would need to know a great deal more about Algonkin bonework, as well as Iroquoian, before undertaking to generalize on this point. The harpoon, for example, a pronounced Iroquois feature, is also Algonkin and Woodland generally. Though found in Fort Ancient, it is pretty certainly not a Mississippi trait. There are doubtless many other similar examples. In other words, the

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(1) They show no marks of steel tools, however. (Wintemberg, 1936.)

general feeling, already expressed (p. 27) is borne out, namely, that bonework is not likely to prove very useful in defining Mississippi culture. Fort Ancient and Iroquois both show a very pronounced development, but whether this is due to their supposed Mississippi affiliations or to some other reason, I am unable to say.

Shell: The occurrence of shell in the Iroquois region presents a rather clear picture. Only fresh water clam shells, unmodified, and a few pendants are found in the early Iroquois period. Objects of marine shell occur on late sites only, post-European for the most part. This is very interesting because some of these objects are typical Middle Mississippi forms such as disk-headed pins and "masks". These, it will be recalled, were encountered in Fort Ancient only in sites of the Madisonville-Fox Farm Focus, particularly at Madisonville, which is a proto-historic site. The chronological implications for Middle Mississippi generally are sufficiently obvious. It would seem to have been sufficiently late for the spread of some of its characteristic types to have been still in progress at the opening of the historic period.

Copper: The situation of Ford Ancient in respect to the possession of copper has prepared us to find very little of the metal in Iroquois archaeology. It would scarcely be an exaggeration to say there is none at all. Both Parker and Wintemberg agree that whatever copper is found in Iroquois and Algonkin sites, and there is evidently more on the latter than the former, is derived from the mound building peoples to the west. By which I presume they mean Hopewell;

from what we have just seen, it plainly could not have come from Fort Ancient. It begins to look as though the spread of copper is more likely to be tied up with Hopewell and Woodland than with Mississippi cultures.

Pottery: Iroquois pottery is not easy to characterize briefly, nor is it a simple matter to state where it reveals its essential Mississippi background. The reason, however, is not far to seek. The familiar type of Iroquois pottery, the type that springs immediately to mind, is actually a late specialization, an individualization that is Iroquois and nothing else. Whatever elements have gone into the making of it are masked by the conspicuous features of its own development. Chief of these, of course, is the peaked overhanging collar with rectilinear incised decoration. This development is most clearly exemplified in the pottery of the northern branch (Huron-Mohawk-Onondaga) who seem to have brought the style to its highest pitch of development in the period immediately preceding the coming of the whites. For pottery that betrays its relationship with other aspects of Mississippi culture we have to go to the southern branch, where, particularly on the earlier sites of western New York and Pennsylvania, we may find more generalized features unobscured by later specializations.

The difficulty is that the pottery of this western region has never so far as I can discover been adequately described. Older reports of Harrington and Parker on excavations in western New York were written at a time when the importance of pottery was not stressed (one is tempted to say over-stressed) as it is at present. More recent work has been done in western Pennsylvania by a distinguished amateur, Ross P. Wright, and a fine collection of pottery amassed, but no description of

the material has appeared. I am forced to depend on a general impression derived mainly from illustrations, backed up to a certain extent by superficial examination of material in the museum. (1)

Paste is coarse, grit-tempered (with occasional use of shell, however), ranging from gray to reddish brown in color. The surface is normally smoothed but not polished, occasionally malleated, not infrequently by means of a cord-wrapped paddle. (2) The principal shape is a squat, globular, round-bottomed jar with slightly constricted neck and flaring rim. Some form of decorative rim treatment is usual, either notched, knobbed, castellated or peaked. The last term refers to a special type of rim, quite common on early sites in western New York and Pennsylvania, in which an overhanging rim is drawn into a raised point, not unlike a modern pitcher spout. The overhanging collar of the full Iroquois period is occasionally foreshadowed, but actually seldom attained. (3) Lugs and handles are present but exceedingly

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(1) From the Ripley site, Chautauqua County, N.Y. Excavation of M. R. Harrington.

(2) Cord-marking seems to be an early feature in the Iroquoian area with a possible significance as a survival of Woodland influence. According to Wintemberg (1929, p. 83-84) pottery from early Neutral sites north of Lake Erie exhibits not only cord-marking but other features more characteristic of Woodland as well. Perhaps it is here that one may look for the earliest impact of Iroquoian (Mississippi) on an older Woodland culture.

(3) The problem of the origin of the Iroquois collar would be an interesting subject for a special inquiry. Since it is pretty clearly not a Mississippi derivative, it is not our business to consider it here. It could conceivably have developed from the castellated rim common on early sites in western New York and Pennsylvania.

rare. Decoration is most commonly by incision, though various impressed devices (cf. Woodland) are present in the early period. Designs, if such they may be called, are almost invariably rectilinear. There is nothing comparable to the curvilinear meander so common in Fort Ancient ware.

Miscellaneous pottery objects: The tendency to use baked clay for various artifacts, already noted (in anticipation) as a general Mississippi feature, is not particularly emphasized here. Besides pipes, of which more anon, the only objects noted are miniature vessels and pottery disks. The question of the function of miniature vessels will very likely come up later on in the course of this study. It may therefore be of interest here to note that they commonly occur on western New York sites in child burials, a circumstance which argues strongly either that they were simply toys, or that they were manufactured expressly as mortuary offerings to accompany the bodies of children. Pottery disks have a fairly common occurrence on early as well as late Iroquoian sites. My guess (p. 51) that southern Ohio probably marks the northern limit of their distribution was evidently premature. It ought to be safe at any rate to say that the Iroquois region does so, for they are not (so far as I can discover) found on Algonkin sites in the northeast. This circumstance deserves emphasis since it indicates that the pottery disk is not a Woodland trait.

Pottery pipes: Iroquois pipes in clay deserve, but will not get, more than passing comment. They represent a development in plastic art

that is perhaps more interesting than any other single accomplishment of Northeastern Indians in prehistoric times. The wealth and variety of forms, based mainly on animal and human motives, is almost unlimited, and the degree of skill in execution is of a high order. Without going into great detail it is impossible to say whether the pottery pipe, as exhibited here, is a Mississippi trait or one derived from another source entirely. Whatever its origin, it owes its development, no doubt, to factors within the Iroquois themselves. The mere fact, however, that pottery was used for pipes so extensively, added to the emphasis on effigy forms, argues for a general compatibility with the Mississippi way of doing things. The original impetus could very well have been furnished within the Mississippi framework.

Summary of Iroquois pottery: It must be admitted that, on the whole, Iroquoian pottery is not as incisive as other categories of material in pointing to affiliation with the Mississippi Pattern. It quite evidently partakes of many Woodland characters, expressed in the use of various cord-impressed techniques. All-over texturing by means of a cord-wrapped paddle is a feature that is shared with Woodland by other Upper Mississippi as well as Middle Mississippi wares,

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(1) Decoration by cord impression is not to be confused with cord-marking. In the first, individual cords are pressed into the soft clay to form decorative patterns, the second is an all-over texturing device that may actually have no significance as decoration whatever.

does not therefore have the same clear Woodland implication. The appearance of stamping, notably in the high incidence of the check-stamp at the Roebuck site in Ontario, indicates the possibility of another element in the ceramic complex, one derived in all probability from the south Atlantic coast. (1) In other words, although by its similarity to Fort Ancient Iroquois pottery may be regarded as basically Mississippian, it nevertheless has incorporated many features that are not Mississippian, on top of which it has added features of its own.

Iroquois in Northern Ohio: The western limits of the Iroquois Aspect have not been set. A group of sites in northeastern Ohio, among them several hilltop fortifications, has been tentatively ascribed to the Erie, an Iroquoian tribe or group of tribes who are known to have occupied a large portion of the region south of Lake Erie. Beyond the simple fact that they were Iroquois we know little about the Erie,

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(1) Notwithstanding my intention to confine the discussion to pottery of the southern (or western, if you prefer) Iroquois, I cannot refrain from commenting on the appearance of the check-stamp in certain sites along the upper St. Lawrence valley in Ontario. I have already referred to its presence as a distinct minority factor on certain Fort Ancient sites, and have cited Kelly's belief that it represents a very early type of stamping in the Southeast. What shall we say, then, when we find it occurring on the Roebuck site in Ontario in quantity (some 20% of the total sherd content of the site), bearing in mind that Roebuck is a very late prehistoric or protohistoric Iroquois site? Wintemberg discusses the distribution of this type, regarding it as continuous with the south Atlantic coast. (Wintemberg, 1936).

owing to the fact that they were extinguished by their more powerful brothers of the famous League, just before the period of the first European contacts in the region. They had already passed into history, though recent history to be sure, when the Jesuits began their excellent series of ethnographic reports.

Without going into details of the rather meagre culture exhibited by these sites, admirably described by E. F. Greenman of the Ohio State Archaeological Society, we may accept without hesitation his cautiously expressed opinion that this focus of culture is in all probability Iroquoian, but shows a closer relationship to Fort Ancient than any other known Iroquoian manifestations further to the east. The basis for this opinion is, of course, the pottery, which shows almost none of the characteristic Iroquois specialization. The overhanging collar, for example, appears only in a rudimentary form. It is interesting, however, that it appears at all. If actually put to it, we should have little difficulty in deriving the fully developed collar from this, or a similar proto-typical form. A question, however, entirely outside the scope of the present study.

The pottery in question is admirably described in the reports already cited. A coarse grit-tempered ware (though shell tempering occurs as a minority factor) of a reddish-brown color. The surface sometimes smoothed but never polished, textured by cord-marking or other similar device more often than not. Decoration, by incision and less often

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(1) Greenman, 1935a, 1935b.

(2) Greenman, 1935a, p. 9.

punctation, is rectilinear and elementary in design. On some vessels the texturing is carried clear up to the rim and the incised decoration is executed over the cord-marking. This, I believe, is a characteristic Fort Ancient device. There is no mention of cord-impressed, roulette, stamping, or other typically Woodland decorative techniques. In other words the divergence from Iroquois pottery of New York is not in the direction of Woodland, but clearly toward Fort Ancient. Judging from description, the ware would seem to be practically indistinguishable from rather crude Fort Ancient pottery.

It is impossible to say much about general aspects of form, since no whole vessels were obtained. Judging from rim sherds illustrated, the form approximates the standard Fort Ancient jar form, with perhaps less constriction of the neck, and, with very few exceptions, no lugs (1) or handles. A detail of form which is of considerable interest here is designated by Greenman as a "crimped" rim. It is apparently an old friend, the thing which I have called elsewhere "indented rim coil" (p. 39). It is, I believe, a pronounced Middle Mississippi feature, one that seems at present to be most at home in the Cumberland Aspect.

It is impossible not to agree with Greenman that this pottery shows obvious Fort Ancient affinities, though not sufficient perhaps to detach these sites from the Iroquois Aspect, into which, as probable

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(1) The presence of handles without lugs bears adversely on certain speculations already made concerning the distribution of these adjuncts (p. 42). However, the evidence is too slight to be considered very seriously in this connection.

Erie sites, they most naturally fall. Offhand it looks like a perfect intermediate situation. If anything were wanting to clinch the bond between Fort Ancient and Iroquois, it seems to me this evidence, incomplete as it is, would be sufficient.

Summary of Iroquoian problem: The evidence, notwithstanding its superficial and inadequate presentation, leaves no reasonable doubt that the classificatory position of Iroquois as a Mississippi manifestation is correct. Whether it is a single aspect, or, recognizing its twofold division, two closely related aspects is a question of no great importance perhaps. At the same time, as we might expect from geographical considerations alone, a long thrust into Woodland territory, Iroquois is by no means as purely Mississippian as are other aspects less marginally placed. It carries numerous elements, particularly ceramic, of Woodland, as well as elements that appear to have a southeastern derivation. Now that the archaeology of Pennsylvania is beginning to be better understood, it should be possible to estimate the extent and significance of this southern element in Iroquois archaeology. To state the problem in slightly different terms, it appears that Parker's hypothesis, which brings the Iroquois peoples and their culture in from the west, while supported in the main by the findings of archaeology, is nevertheless like all hypotheses an oversimplification. Iroquois culture might be more correctly conceived as the result

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(1) As Ritchie points out in a recent paper (1938, p. 95), a comparison of Iroquois with Deuel's summary (1935) of Mississippi and Woodland traits, reveals the fact that in slightly over half the traits concerned, the agreement is with Woodland rather than Mississippi.

of the interplay of at least three cultural moments: (1) a thrust of Mississippi culture from the west, acting on (2) a Woodland stratum already in possession, the resulting amalgam modified perceptibly by (3) influences direct from the South. Whether these southern elements are also Woodland, as many believe, or belong to an as yet unrecognized pattern, will soon be made clear, I believe, as the result of extensive work now going on in the Southeast.

3. Oneota Aspect

Nothing but a desire for an appearance of completeness has induced me to include a discussion of the Oneota aspect of Upper Mississippi. It is plainly not yet in position, from the point of view of publication, to be dealt with even in the superficial manner of the Fort Ancient and Iroquois sections just concluded. According to the published classification, a large number of sites (or components) have been grouped together to form nine foci. Careful search through the files of all publications dealing with the general area concerned, and through the miscellaneous writings of the principal investigators of this area, resulted in the discovery of a single excavation report, to wit, Hill & Wedel's report on the Leary site in southeastern Nebraska. (1) Fortunately this excellent report contains a discussion on the relationship of the Leary site with the Oneota in Iowa and comparative trait

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(1) Hill & Wedel, 1936.

(1)

lists of the two manifestations. From this, helped out by occasional references from various sources, the following brief summary is drawn.

Oneota takes its designation from an old Siouan name for the Upper Iowa river in the northeastern part of Iowa, where the culture was first studied and recognized as a distinct entity. It is now known to have a remarkably wide distribution comprising portions of northern Illinois, southern and western Wisconsin, Iowa, southern Minnesota, eastern Nebraska, northeastern Kansas, central Missouri and possibly northwest Arkansas. This enormous range of a manifestation so far down the taxonomic scale as an aspect might excite wonder were it not for the strong probability that the culture was carried by the Chiwere Sioux, and possibly the Dhegiha as well, in their protohistoric wanderings from the northern Mississippi valley into the eastern plains.

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(1) Hill & Wedel, 1936, p. 70-71.
(2) Keyes, 1929, p. 140-141.
(3) Griffin, 1937a, p. 180.
(4) McKern, Indianapolis Conference Report, 1937, p. 2.
(5) Keyes, 1929, p. 41.
Hill & Wedel, 1936, p. 67.
(6) Wilford, Indianapolis Conference Report, 1937, p. 8.
Notes and News, Am. Ant. vol. IV, no. 3.
(7) Hill & Wedel, 1936, p. 67.
(8) Ibid.
Wedel, in Notes and News, Am. Antiq. vol. III, no. 3, p. 276
(9) Griffin, 1937a, p. 180.
(10) Griffin, 1937b, p. 297.
(11) Griffin, 1937a, p. 181.
(12) Hill & Wedel, 1936, p. 67.

General site characteristics: Sites are large villages, covering sometimes as much as 125 acres, situated on open river terraces or prairie bluffs. Their locations are marked by quantities of potsherds and other village refuse, but little if anything in the way of constructional features. Mounds, earthworks, etc. on Oneota sites, referred to in earlier descriptions, have upon more recent excavation (1) been found to pertain to an earlier Woodland occupation. "Mounds" on the Leary village site were evidently nothing more than low midden accumulations. Excavation in them failed to reveal even traces of (2) house construction. Two larger mounds on the bluffs overlooking the site were not investigated owing to the presence of recent Indian burials from the nearby Iowa Reservation. Their association with (3) the village site was therefore not ascertained. It would seem, therefore, that in respect to the important question as to whether the Oneota people were mound builders, the evidence is negative.

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(1) Cf. Keyes, 1929, p. 141 and Keyes, 1934, p. 352. In spite of its later date, Hill & Wedel's report on the Leary site (1936) has not made use of Keyes' 1934 report, consequently "burial mounds, geometrical enclosures, etc." are included in their trait list for Oneota (p. 70). Removal of these items would make the correspondence between the Leary site and Oneota a good deal stronger, for they do not appear in the Leary column.

(2) Hill & Wedel, 1936, p. 23. One of the terminological difficulties in North American archaeology is the use of the term "mound" to cover any sort of elevation of artificial origin. Since mound building is so often an important diagnostic trait in the area, it would seem advisable to limit the use of the term "mound" to actual constructions in which a deliberate mound-building purpose was at work. This is particularly apposite in the Upper Mississippi area. One more than half suspects that if all the accidental "mounds" were removed from consideration, the Upper Mississippi phase would make a very poor showing as a mound-building culture.

(3) Hill & Wedel, 1936, p. 23

In respect to house types there is virtually no information. Hill & Wedel report one semi-subterranean earth lodge with side entrance passage from the Leary site, but extensive trenching failed to locate others. The authors conclude with due caution therefrom that the typical houses were of some perishable surface type (tipi or bark-covered lodge⁽¹⁾).

Lack of houses at the Leary site was compensated by an abundance of bell-shaped storage pits, which were in fact the most characteristic features of the site. Unfortunately Keyes' scanty description of sites in the eponymous area contain no reference to such pits, so they cannot with certainty be said to characterize the aspect as a whole.

Burials are in cemeteries or scattered about the village sites in the open. The presence of mound burial cannot be affirmed on the basis of existing literature (see above, p. 81). Primary extended burials predominate, though secondary "bundle" burial is present. Storage pits were occasionally utilized for burial purposes. Artifacts, including pottery are said to accompany burials in the Iowa foci. At the Leary site, on the other hand, offerings were rare and pottery did not appear.

Artifacts: It is in the general domain of artifacts, particularly pottery, that the affiliation of the Leary site with Upper Iowa Oneota is most clearly expressed. Characteristic stone implements include small plano-convex granite mealing stones, grooved mauls ("penmican pounders"), polished celts (chipped celts present but rare) and crude grooved or notched axes. The dominant point is small, triangular, unnotched. Small plano-convex, "thumb-nail" scrapers were so common

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(1) Hill & Wedel, 1936, p. 19.

(1)
 at the Leary site as to be definitive. Unfortunately they are not
 referred to specifically in the Iowa reports. Disk-stem and "Siouan"
 pipes of catlinite and other materials are present, but pottery pipes
 of any form are said not to occur. The last is a rather significant
 omission, the pottery pipe being a particularly strong Mississippi
 determinant. With the mention of incised tablets of catlinite, not
 altogether unlike the famous "palettes" of the Hohokam, the list of
 definitive stone traits is complete.

Extensive use of bone, a pronounced characteristic of Upper
 Mississippi cultures so far investigated, is said to be in evidence
 here as well, but specific information comes only from the Leary
 site, where bone materials were only moderately plentiful. Prominent
 here are "hoes" and "spades" of bison scapulae, ulna "picks", flat-
 eyed needles, arrowshaft straighteners and polished tubes of uncertain

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(1) Definitive for the Leary site, but perhaps not a determinant for the Oneota aspect. It is said to be a "common type on most prehistoric and protohistoric villages in the Central Plains" (Hill & Wedel, 1936, p. 49), apparently a trait more Plains than Upper Mississippi.

(2) ". . . flake scrapers are the usual and simple types." (Keyes, 1929, p. 141).

(3) I am unable to find out just what a "Siouan" pipe is. According to West "The Siouan Calumet of the Upper Mississippi-Great Lakes area are ceremonial pipes, and were given their name from their use rather than their form." (West, 1934, p. 128).

(4) Hill & Wedel, 1936, p. 47.
 (5) Deuel, 1935, p. 435.
 (6) Haury, 1937, p. 121-126.
 (7) Hill & Wedel, 1936, p. 71.
 (8) Ibid.

use. A similarly moderate use of antler includes "flakers" and (1)
socketed projectile points, the latter, otherwise rare in Nebraska,
a strong evidence of connection with Upper Mississippi cultures to
the east.

Evidence of work in shell is too scanty for consideration.
Considering the importance of shell in Mississippi cultures generally, (2)
however, the lack of evidence here may be not without significance.

The copper question is confounded by the presence of European (3)
metal on some of the Iowa sites, and by the fact that the single
object of copper found at the Leary site, a crude copper cone ("jingle") (4)
was of uncertain association.

Pottery: A glance through the scattered references to the
presence of Oneota culture in localities remote from the original
Iowa center is sufficient to reveal the incisive role played by
pottery in all such determinations. It is perhaps not too much to
say that 3/4 of the burden of identification is carried by pottery

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(1) Hill & Wedel, 1936, p. 58.

(2) Cf. Deuel, 1935, p. 434.

(3) Hill & Wedel, 1936, p. 71.

(4) Ibid., p. 61.

(1)
alone. The inference follows that Oneota pottery must be sufficiently homogeneous to permit its recognition over such an immense area of distribution. If such is the case the following brief description based almost entirely on the Leary site report, the only adequate published description, should be sufficient for our present purpose. (2)

Pottery from the Leary site was abundant and unusually homogeneous. The ware is characterized by a fine, even gray paste, heavily tempered with shell, with smooth but unpolished surface ranging in color through the usual grays and drabs to buff and orange-brown. The dominant shape is a somewhat flattened version of our "standard jar form" with a short flaring rim terminating in a notched or indented lip, and provided with 2 (sometimes 4) small vertical loop handles, generally flat or flattish in section (Fig. 7). The tendency is to large sizes, 10-18 in. in diameter with diameters up to 22-24 inches not uncommon. Whether a smaller "mortuary" version (see p. 412) was also present is not clear. This "standard jar" was the dominant, if (3)

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(1) It is interesting to note that, however conscientious the attempt to "put pottery in its place" so to speak, and it is certainly the mid-western archaeologists who are to be credited with the attempt, it invariably re-emerges as the most useful and reliable measure of cultural association.

(2) "The pottery of the late prehistoric and protohistoric Oneota sites of Iowa is virtually indistinguishable from that at the Leary site . . . " (Hill & Wedel, 1936, p. 41).

(3) Hill & Wedel report no burials with pottery. "Small vessels, 4 to 6 in. in diameter are also indicated, but their exact form is uncertain." (1936, p. 33)

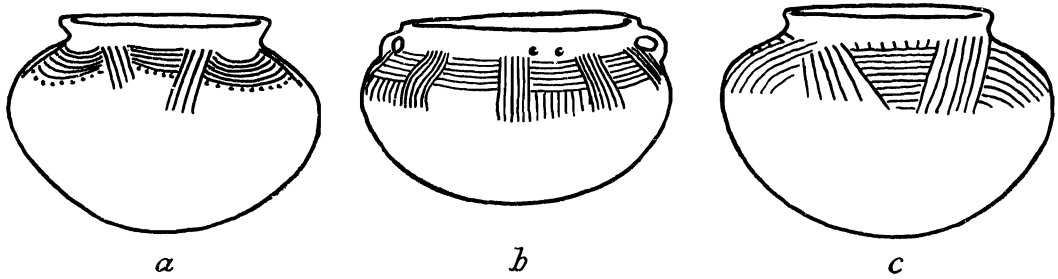


Fig. 7. Characteristic jar forms, Oneota. (Hill & Wedel, 1936)

not the only form at the Leary site. "One or two sherds suggest bowls, but there is no good evidence of platters, ladles, mugs, vases, canteens or bottle forms"⁽¹⁾. The deficiency may be made up in part by information from Wisconsin. McKern, in a recent note, adds a number of detailed pottery traits to the Lake Winnebago focus of the Oneota aspect, among which are the following: miniature vessels, ladles, effigy heads (which presupposes bowls to put them on) and lateral lip extensions (lugs)⁽²⁾ in sets of four. It is scarcely necessary to point out that these are elaborations in a Middle Mississippi direction.

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(1) Hill & Wedel, 1936, p. 33.

(2) Notes and News, Am. Antiq., vol. III, no. 2, p. 192.

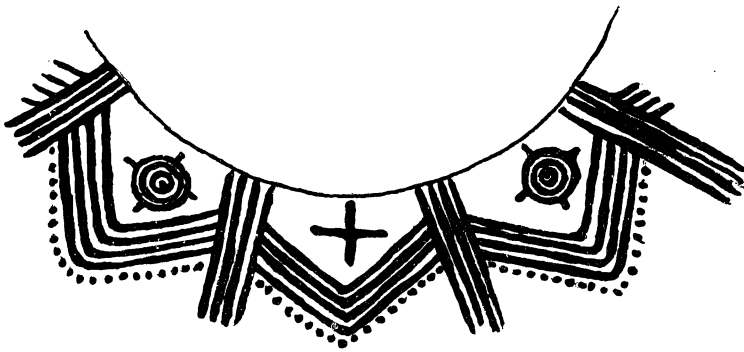


Fig. 8. Oneota decoration showing "cosmic" symbols.
 (Hill & Wedel, 1936, fig. 4a.)

Decoration, generally confined to the flattened upper body or shoulder (and handles), consists mainly of grouped parallel incised lines and punctates in various simple combinations. Elementary "cosmic" figures, such as the cross and circle (Fig. 8) are interesting from the point of view of Middle Mississippi associations. Indeed, not only in precise decorative factors, but in general style and treatment, and particularly in the predominance of shell tempering and lack of cord-marking, Oneota pottery seems a good deal more closely related to Middle Mississippi than to its Upper Mississippi relatives, Fort Ancient and (1) Iroquois.

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(1) Ceramically, Oneota-Middle Mississippi relationships are emphasized by McKern's recent addition to the Lake Winnebago trait list, already referred to. In addition to the factors mentioned above, is the presence of painting "by means of stripes of thin reddish paint on the dark gray outer surfaces." (Am. Antiq., vol. III, no. 2, p. 192)

4. The Upper Mississippi Phase: Discussion

The tentative conclusion reached in the preceding paragraph regarding the position of Oneota pottery leads directly to a consideration of the extent of cohesion exhibited by the three supposed aspects of the Upper Mississippi phase in all departments of culture. Such consideration is tantamount to an examination of the concept of "phase" itself. The excuse for entering the brier-patch of classificatory theory at this time, rather than at the conclusion of this study, lies in the fact that Middle Mississippi has been only incipiently classified, and therefore we cannot approach it without a fairly clear idea of what a "phase" is supposed to be and, in particular, some understanding of the nature and extent of the interrelations of the aspects that compose it. Clarification of these problems may be expected to follow upon a careful comparison of the three aspects of the Upper Mississippi phase.

The obvious method is to proceed at once to a comparative table of determinants for the three aspects in question, and so I shall, but not without first having something to say about the principles and methods involved in the construction of such beguiling devices. Let us take as a point of departure, a table of pottery determinants as set forth by Dunlevy & Bell, in a recent publication, by means of which the authors are endeavoring to show that three sites on the

Lower Loup river in eastern Nebraska are to be classified as a focus
 of an unnamed aspect of the Upper Mississippi phase. In their table
 is included a column devoted to the Oneota aspect (called Wisconsin,
 an earlier designation) and another to the Upper Mississippi phase
 itself. These last are included not for comparison with the Lower
 Loup sites but in order to "indicate the relation of an aspect to
 its phase". This is precisely the question we are interested in,
 so I may be excused for abstracting that portion of Dunlevy & Bell's
 table, adding on my own account a Middle Mississippi column for pur-
 poses that will presently appear. (Fig. 9)

Omitting from the Dunlevy-Bell table those traits which are
 absent, or concerning which information is lacking, in both Wisconsin
 (Oneota) and Upper Mississippi, we get a total of 25 traits. Of these
 25 traits there are 19 correspondences between Oneota and Upper
 Mississippi, 4 show a partial agreement and the remaining two are
hors de combat for lack of information on one side or the other.
 This, I take it, would be regarded as a very satisfactory correlation

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(1) Dunlevy & Bell, in Bell, 1936, p. 206-7.

(2) These trait lists are based on McKern's "Certain culture classifica-
 tion problems in Middle Western archaeology", 1934, which was reprinted
 in the Indianapolis Conference Report, 1937. It might have been better
 to have based our discussion on the original lists rather than on Dun-
 levy & Bell's recasting of them, but the latter is the more recent work
 and perhaps represents a more developed stage in the classificatory ex-
 periment. In either case, I think, the result would be about the same.

(3) Dunlevy & Bell, 1936, p. 204, cf. also p. 216.

Fig. 9. Comparison of pottery determinants, Oneota, Upper Mississippi and Middle Mississippi. (Oneota and Upper Mississippi comparison from Dunlevy & Bell, 1936, table 4; Middle Mississippi list added by writer.)

<u>Pottery traits</u>	Wisconsin (Oneota)	Upper Mississippi	Middle Mississippi
<u>Temper</u>			
1. Grit	*	x	x
2. Shell	x	x	x
3. Cell	*?	x	x
<u>Texture</u>			
4. Fine to medium coarse	x	x	x
<u>Structure</u>			
5. Flakey	x	x	x
<u>Hardness</u>			
6. Softer wares predominate (1-4)	x	x	x
<u>Surface Finish</u>			
7. Irregularly smoothed	x	x	x
8. Polished imperfectly	x	*	x
<u>Color</u>			
9. Light to dark gray and buff, dull terra cotta	x	x	x
<u>Thickness</u>			
10. 3/32 - 15/32 in. range	x	x	x
<u>Lip form</u>			
11. Squared	x	?	x
12. Rounded	x	?	x

Fig. 9. (Continued)

<u>Pottery traits (cont'd.)</u>	Wisconsin (Oneota)	Upper Mississippi	Middle Mississippi
<u>Rim form</u>			
13. Plain, high direct flaring	x	x	x
<u>Neck form</u>			
14. Line of junction between neck and body	x	x	x
<u>Orifice</u>			
15. Broad	x	x	x
16. Round	x	x	x
<u>Shoulder form</u>			
17. Round	x	x	x
18. Absent	x	x	x
<u>Basal form</u>			
19. Rounding	x	x	x
20. Sub-conical	*	*	*
<u>Handles</u>			
21. Narrow to broad, flat, strap-like	?	x	x
22. Loop	x	x	x
<u>Decoration</u>			
23. Shoulder area to lip	x	x	x
24. Incised or punctate intaglios	x	x	x
25. Parallel lines	x	x	x

and would be interpreted without hesitation as proof that, so far as pottery is concerned, Oneota is contained in the Upper Mississippi (1) phase. But, a similar comparison between Oneota and Middle Mississippi yields even better results: 22 correspondences, 2 partial agreements and 1 lack of information. On the basis of the traits selected for comparison Oneota would appear to be as closely, if not more closely, related to a Middle than to an Upper phase of the Mississippi pattern. So much for the "relation of an aspect to its phase". Clearly there is something wrong and the obvious place to look for trouble is in the traits selected for comparison. A brief glance through the table is sufficient. Of the 25 traits, 22 are general enough to serve as determinants for the Mississippi pattern. In other words all but trait numbers 1, 3, 20, though it would not take very much stretching to use these also. Of these 22 traits 9 are actually too generalized, it would seem, for pattern determinants, but might come into play as determinants for the shadowy "base" to which the entire Eastern United States belongs. These are by number: 4, 6, 7, 9, 10, 12, 15, 16 and 18. Two of these, nos. 15 and 16, "orifice broad" and "orifice round", are so general as to lack all meaning whatever. Small wonder that Oneota by this showing fits as well into the Middle as the Upper Mississippi phase. The determinant traits, in other

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(1) Dunlevy & Bell do not comment on the close comparison and its implications; they are, I believe, meant to be taken as a matter of course.

words, have not been selected with sufficient attention to the rule that demands a specificity appropriate to the taxonomic rank in which they are used. But does not this point further to the real difficulty, to wit, that of defining an Upper Mississippi phase in terms sufficiently general to include all its aspects, without recourse to terms that include the Middle Mississippi as well? In short, instead of clarifying the relations of an aspect to its phase, Dunlevy & Bell have shown merely the relationship of an aspect to its pattern and thus, unintentionally, raised the question of the very existence of the phase.

With this salutary experience in mind we may proceed to a comparative trait listing of the three Upper Mississippi aspects already described (Figs. 10, 11). Its purpose is twofold: (1) to determine the degree of cohesion between the three aspects; and (2) to examine the possibility at this stage of defining an Upper Mississippi phase in terms of appropriate specification. It is hardly necessary to add that this is not to be taken as a classificatory effort in the McKern sense, but merely as an exploratory tentative in preparation for a more exhaustive consideration of the Middle Mississippi.

Fig. 10. Comparison of Oneota, Fort Ancient and Iroquois Aspects, non-ceramic traits.

	<u>ONEOTA</u>	<u>FORT ANCIENT</u>	<u>IROQUOIS</u>
General site characteristics	Large open villages on river terraces. No mounds, earthworks, etc.	Large open villages, no embankments, occasional low mounds.	Large villages, palisaded. Defensive locations. No mounds.
		Hilltop fortifications of uncertain association.	Hilltop fortifications common.
	Storage pits abundant.	Storage pits common.	Storage pits common.
Mounds	Uncertain association	Irregular low conical burial mounds. Rectangular truncated pyramidal mounds present but rare.	Burial mounds exceedingly rare.
House types	Little information. Rectangular semi-subterranean earth lodge present but rare. Probably perishable surface types (tipi, wigwam, etc.)	Very little information. Round, pole-frame structures on surface, often very large.	Information lacking in early period. Long-house typical of early historic period.
Burials	Scattered village site burials and "cemeteries".	Village site burial, "cemeteries", burial mounds containing many burials.	Village site burials. Information on "cemeteries" lacking, mound burial very rare.
	Primary extended burials predominate, "bundle" burial present.	Primary extended burials predominate, flexure important on some sites. "Bundle" burial common. Stone graves on some sites. Cremation rare. Tendency toward segregation of infants.	Primary flexed burials predominate. "Bundle" burial common. Secondary massed ("ossuary") burial characteristic in later period.

Fig. 10. (Continued)

	<u>ONEOTA</u>	<u>FORT ANCIENT</u>	<u>IROQUOIS</u>
Burials (cont.)	Artifacts with burials, especially pottery.	Artifacts with burials, especially pottery, though not on all sites.	Artifacts with burials, not particularly abundant.
Artifacts: stone	Work in stone not particularly well developed, nor abundant. Special emphasis on: Small triangular points. Knives and scrapers. "Thumb-nail" scraper important. Celts. Grooved maul. Plano-convex mealing stones. Elbow pipes. Disk-stem pipes. Absence of problematics and grooved ax.	Work in stone not particularly well developed nor abundant. Special emphasis on: Small triangular points. Knives and scrapers. Celts. Grooved maul. Discoidals. Sandstone abriders. Elbow pipes. "Blocky" pipes. Absence of problematics and grooved ax.	Work in stone not particularly well developed nor abundant. Special emphasis on: Small triangular points. Knives and scrapers. Celts and adzes. Discoidals rare or absent. Stone pipes subordinate to pottery pipes. Absence of problematics and grooved ax.
Bone	Moderately plentiful. Special emphasis on: Needles. Antler flakers. Arrowshaft straighteners. Socketed antler points. Bone tubes.	Extremely varied and abundant. Special emphasis on: Awls - various types Needles. Beamers. Cut deer jaws. Antler flakers. Arrowshaft straighteners. Socketed antler points. Bones tubes. Fish-hooks. Combs. Tubular beads. Flutes. Worked astragali.	Moderately plentiful. Special emphasis on: Awls - various types Needles. Beamers. Cut deer jaws. Antler flakers. Socketed antler points. Fish-hooks. Combs.

Fig. 10. (Continued)

	<u>ONEOTA</u>	<u>FORT ANCIENT</u>	<u>IROQUOIS</u>
Shell	Practically no information -- negative evidence possibly significant.	Moderate use, more utilitarian than decorative. Little use of marine species. Unio "hoes". Spoons. Beads, pendants. Gorgetts - engraving rare. Long pin and disk-headed pin occasional. "Masks".	Very little shell except in later period. Beads, pendants. Disk-headed pins. "Masks".
Copper	Information lacking.	Very scarce. Information confined to late site (Madisonville). Uncertain because of association with European metal.	Very little. Perhaps none.

Fig. 11. Comparison of Oneota, Fort Ancient and Iroquois aspects, pottery.

	<u>ONEOTA</u>	<u>FORT ANCIENT</u>	<u>IROQUOIS</u>
	(Inverted commas, Dunlevy & Bell, 1936)	(Inverted commas, Griffin, 1935a)	
General	Abundant, well made. Homogeneous.	Abundant, well made.	Moderately abundant, less homogeneous than Oneota and Fort Ancient. Difference between early and historic sites.
Paste	"Fine to medium coarse." Flaky texture. Shell temper predominates. Softer ware predominating (1-4). "3/32 - 15/32 in. range" thickness.	"Fine to medium coarse." Grit or shell. Softer ware predominating (2-3.5) No data.	Coarse. Grit temper- occasionally shell. No data. No data.
Surface	"Irregularly smoothed" - occasionally "imperfectly polished." Cord-marking absent. "Light to dark gray and buff, dull terra cotta."	"Body tooled with cord-wrapped paddle". "Body tooled with cord-wrapped paddle and smoothed."	Imperfectly smoothed but not polished. Cord-marking occasional but not general. Gray to reddish brown.
Shapes	Large, slightly flattened globular jar with short flaring rim and handles (standard jar form) dominant, and almost only, shape. Loop handles predominate, lugs occasional.	Standard jar form predominates. Deeper than Oneota- slight tendency toward sub-conoidal form. Longer (higher) rim, less flaring than Oneota. Handles and/or lugs. Loop handles generally flattened in section (strap-like). Zoomorphic handles.	General resemblance to standard jar form somewhat masked by emphasis on rim elaboration. Overhanging collar, especially characteristic of later period. Handles and lugs exceedingly rare.

Fig. 11. (Continued)

	<u>ONEOTA</u>	<u>FORT ANCIENT</u>	<u>IROQUOIS</u>
Shapes (cont.)	Additional shapes as minority fac- tors: Simple bowls. Rim effigy bowls.	Additional shapes as minority fac- tors: Simple bowls. Rim effigy bowls. Bowls with notched rim coil. Double vessels (ver- tical). Colander. "Salt pans".	Additional shapes very rare.
Decoration	Generally con- fined to upper body or shoulder. Incision and punc- tation. Simple arrangements of parallel lines. Generally recti- linear. Cosmic symbols, cross, circle, etc. Painted decoration reported in one Focus (Winnebago).	Generally confined to rim. Occasion- ally extends to shoulder. "Incising." "Trailing." "Impression." Both curvilinear and rectilinear. Particular impor- tance of guilloche. Painted decoration reported in one Form (Madisonville-Fox Farm) Very rare.	Generally confined to upper body of rim. Overhanging collar important field for decoration. Incision predominating Various impressed techniques (Woodland) present. Check stamp (possibly intrusive). Mainly rectilinear.
Miscel- laneous pottery objects	Miniature vessels. Ladles. Pottery pipes ab- sent.	Miniature vessels. Ladles. Figurines. Disks. Trowels (anvils). Balls. Beads, pendants, etc. Earplugs. Pipes - tubular and elbow.	Miniature vessels. Disks. Pipes - special devel- opment.

By means of the elaborate and excessively dreary tabulations above it should be possible to define the Upper Mississippi phase, if such a thing exists. The ease or difficulty of framing such a definition, particularly the extent to which inordinately vague generalizations come into play, ought to furnish an approximate measure of the validity of this particular phase, if not of the concept of phase in its entirety.

Upper Mississippi culture is marked by large open village sites without conspicuous mounds, earthworks, or other constructional features. Burial mounds occur but are not characteristic of the phase as a whole. Since we are dealing with a Mississippi manifestation, the absence of rectangular platform mounds is an important negative trait. On the question of house types there is practically no agreement among the various aspects. Both circular and rectangular types are present, but it is not even possible to say which is dominant. Lack of data (sub-surface floors, post-hole patterns, etc.) argues strongly for the prevalence of highly perishable structures above ground. A pit-house type is present, however, in one aspect (Oneota). Storage pits, or caches, are common in all three aspects. Village site or "cemetery" burials predominate, but the apparent agreement in methods of disposal between Fort Ancient and Oneota breaks down completely with the Iroquois, whose practice of flexure and the highly specialized "ossuary" are outside the Mississippi scheme of things entirely. Apparently the only burial traits common to all three aspects are the

presence of secondary "bundle" burials as a minority factor, and a general tendency for burials to be furnished with artifacts, particularly pottery.

Coming down to material objects, there is a substantial agreement in the generally subordinate position of stone in relation to other archaeological materials, notably bone and pottery. There is a general similarity in the techniques of working stone and in the range of implement types. Particularly characteristic of all three aspects are small triangular points and the celt. Other detailed correspondences would undoubtedly appear with more comprehensive trait lists. Important too, in its negative bearings, is the complete absence of the grooved ax and the various problematics (banner-stone, bird-stone, boat-stone, plummet, etc.) characteristic of the Woodland pattern.

The case of bone work is a little different. There is no question of its fundamental importance in Fort Ancient and Iroquois --- lack of corresponding weight in Oneota may be the result of insufficient data -- but owing to the general importance of bone in all cultures of the Great Lakes area, Woodland as well as Mississippi, it is impossible without a great deal of detailed knowledge to select traits of particular significance as Mississippi determinants. Reference to Deuel's generalized definition of the Mississippi pattern suggests that awls, needles, antler flakers and socketed antler projectile points are the most definitive of the traits listed. Before

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(1) Deuel, 1935, p. 434.

leaving the subject, I must emphasize again the incompleteness of the data entering into the present comparison. There can be no question that the general importance on bone working itself is an important diagnostic of Upper Mississippi culture. I have an uneasy suspicion that it may be in this category that some of the major determinants for the phase are to be found. Any conclusions, therefore, regarding the classificatory validity of Upper Mississippi must be subject to reservations on the score of inadequate knowledge of the bone and antler industries.

Work in shell, on the other hand, is patently not important. The evidence, so far as it goes, may be interpreted as an attenuation of the general Mississippi situation, with considerable indications of a late spread, particularly for traits employing marine shells. The particular absence of shell in the western aspect (Oneota) -- also late -- unless purely a matter of incomplete information, suggests the possibility that emphasis on shell work may be more in the nature of a general southeastern complex rather than strictly Mississippian.

Native copper appears only in negligible quantity and under conditions of considerable uncertainty, consequently can enter into a definition of Upper Mississippi only on the negative side.

In respect to pottery, the three aspects fail to hold together. Between the almost-Middle Mississippi pottery of Oneota and the almost-Woodland pottery of the Iroquois is a gap that is only partly bridged by Fort Ancient. To include all three manifestations in a single

definition forces a resort to the sort of vague and unsatisfactory terms I have already criticized in Dunlevy & Bell. To make this point explicit I shall proceed to such a definition. There is no humor intended.

Upper Mississippi pottery is, generally speaking, well made and abundant. Paste varies from fine to coarse in texture, is either grit or shell tempered, and the softer wares predominate (except perhaps in Iroquois, for which I have no data). Surface is plain, irregularly smoothed or cord-marked. Color ranges from gray, through buff to reddish brown or dull terra cotta. The dominant shape is a globular or sub-globular jar with restricted neck and recurved rim. In Oneota and Fort Ancient it approximates closely what I have called the "standard Mississippi jar form," with handles and/or lugs. Such resemblance in Iroquois is reduced by the absence of handles and masked by special rim elaborations. Additional shapes are present but rare. Decoration, confined to upper body and rim, is predominantly by incision and punctation. Simple geometrical arrangements of parallel lines, either recti- or curvi-linear predominate.

I am painfully aware of the inadequacy of data on which the above definition of Upper Mississippi culture is based. In certain respects, notably the category of bone materials, it could undoubtedly be refined. Nevertheless, in the main, I believe it to be substantially correct, so that we have a right to ask -- what sort of entity does this definition describe? The best way of getting at the answer to this important

question is to compare this definition of Upper Mississippi with
(1)
Deuel's definition of the Mississippi pattern. The comparison is
presented in Fig. 12.

The result of this comparison is rather surprising. Instead of
(2)
an "enriched edition" of the pattern determinants, we find that the
definition of Upper Mississippi is actually couched in more general
terms than that of the Mississippi pattern. The enrichment, if any-
thing, goes the other way. This, of course, is partly due to the
difference in the point of view that went into the making of the two
definitions, but it cannot be wholly explained that way. Another
reason is at hand. Comparing those traits in which the Upper Mississippi
terms are more general than the Mississippi terms with Deuel's Woodland
definition, we find that the enlargements are almost without exception
(3)
in the direction of Woodland. There can be but one conclusion, it
seems to me, namely, that Upper Mississippi is not a classificatory
entity possessing its own unique characteristics, but is nothing more

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(1) Deuel, 1935, p. 436-437. Deuel's definitions of Mississippi and Woodland have been roundly criticized as premature, but are certainly no worse than my definition of Upper Mississippi. In any case I think both are sufficiently close to the mark for the purpose in hand. Detailed accuracy is not necessary to bring out the point I am endeavoring to make.

(2) McKern, 1939, p. 307. "For the more specialized divisions, progressing from lesser to greater specialization, the determinants will be an enriched edition of the determinants for the immediately preceding, more general, division, as altered to include greater detail, plus a considerable number of trait elements peculiarly characteristic of the more specialized division."

(3) Such as, for example, the presence in Upper Mississippi of circular house types, flexed burial, grit tempered pottery, cord-marking, etc.

Fig. 12. Comparison of Mississippi Pattern with the Upper Mississippi Phase. (Determinants for Mississippi Pattern from Deuel, 1935.)

	<u>MISSISSIPPI PATTERN</u>	<u>UPPER MISSISSIPPI PHASE</u>
I. House types	(1) Rectangular semi-permanent. (2) Mounds primarily substructures, pyramidal.	Both rectangular and round, semi-permanent. Pyramidal mounds absent or very rare. Burial mounds occasional.
II. Burial customs & ceremonial	(1) Predominantly extended. (2) Simple interment in cemeteries. (3) Grave goods profuse. (4) Grave goods usually pottery, copper and shell.	Both extended and flexed. Cemeteries and mounds. Grave goods present but not profuse. Grave goods usually pottery, rarely shell, almost never copper.
III. Industries and art forms	(1) Pottery, shell, copper, bone most highly developed. (2) Stone: (a) projectile points: simple small isosceles triangles from this flat flake technique. (b) discoidals common (c) no grooved ax (d) grooved abraising and whetstones common (e) problematics in polished stone very rare (3) Articles of bone commonly occurring: (a) fish-hooks (b) awls from ulna of deer and awls from tarso-metatarsus of wild turkey	Pottery and bone most highly developed. Stone: (a) Same (b) discoidals present but not common (c) no grooved ax (d) grooved abraising and whetstones common in some aspects. No data in others. (e) same Bone articles profuse fish-hooks common these and many other types of perforators

Fig. 12. (Continued)

	<u>MISSISSIPPI PATTERN</u>	<u>UPPER MISSISSIPPI PHASE</u>
III. Industries and art forms (cont.)	(4) Textiles: evidence of woven mats fre- quent.	No data
	(5) Pipes: clay pipes common. Massive effigy pipes of stone in some phases.	Clay pipes dominant in some aspects - stone in others.
	(6) Pottery:	
	(a) temper predominantly shell	grit and shell temper
	(b) firing temperature generally low but well controlled	no data - probably same
	(c) wide variety of shape and decora- tion	little variety in either
	(d) round to flat bases - flattened globular shape	flattened globular shape in some aspects
	(e) handles, flanges, lugs and feet	handles and lugs in some aspects - no feet
(f) effigy forms common	effigy forms absent	
(g) objects other than containers	few objects other than containers	

than a name given to a series of marginal manifestations of Mississippi culture, all containing Woodland elements, but in sharply varying degree. It can be contained within a larger Mississippi pattern, not through increased specialization, McKern's "enrichment", but through attenuation, the opposite of enrichment. If this surmise is correct it should be brought out very clearly after we have considered the Middle Mississippi phase. We may even go so far as to predict that the differences between Middle and Upper Mississippi will not appear as the normal differences between two equal members of a classificatory series, but that Upper Mississippi will appear as an attenuation of Middle Mississippi, and its distinction therefrom will find expression mainly in negative terms. With this tentative conclusion and the expectation involved in it, we may proceed to the core of our problem, the Middle Mississippi.