A History of Normative Theory in Americanist Archaeology

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Efforts in the 1960s to demonstrate the value of the "new archaeology" involved showing that the competing culture-history paradigm was inferior. One allegedly weak plank in that paradigm had to do with how culture historians viewed culture— as a set of ideas transmitted in the form of ideal norms or mental templates. Lewis Binford referred to this view as "normative theory." In archaeology that view was manifest in the equation of artifact types with prehistoric norms—an equation that, according to Binford, the culture historians had made so that they could track the flow of ideas through time and thus write culture history. Culture historians regularly subscribed to cultural transmission as the theoretical backdrop for their artifact-based chronometers such as seriation and the direct historical approach, but with few exceptions they perceived only a weak relationship between norms and artifact types. It was not until 1960, in a paper by James Gifford, that what Binford labeled as normative theory appeared in anything approaching a complete form. Ironically, the first applications of normative theory were products of the new archaeologists, not the culture historians.

KEY WORDS: artifact types; cultural norms; culture transmission; normative theory.

INTRODUCTION

A well-known event in the history of Americanist archaeology was the emergence in the 1960s of "new," or "processual," archaeology (Binford, 1968; Deetz, 1970; Flannery, 1967), which from the start was intended as a replacement for "culture history." Part of the strategy for showing the limited value of culture history was to argue that it was based in large part on "normative theory," a term that quickly became a pejorative label for any effort to examine the history of cultures. It subsequently evolved into a synonym for masking variation among cultural

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phenomena. Binford (1965) coined the term "normative theory" and presented a history of it in Americanist archaeology. But did such a theory actually exist in the form described by Binford, or did he create a useful straw man to emphasize the differences between culture history and the new archaeology? What is the history of the theory during the second half of the twentieth century? We address these issues here. As we will show, it is, ironically, in the work of the new archaeologists, not that of the culture historians, where the concept of normative theory assumed an explicit explanatory role.

One might think that normative theory is unworthy of discussion in the first decade of the third millennium, given that as an explicit archaeological topic it is now 40 years old and has not been a big part of the theoretical literature for perhaps half that time. But consider that the concept is discussed in several recent introductory texts. Sharer and Ashmore (2003, p. 67), for example, indicate that the "normative concept of culture holds that within a given society, behavior patterns are the result of adherence to a set of rules, or *norms*, for behavior." They go on to state that "norms really specify the ranges and limits" of tolerated behaviors and that "the remains of past cultures recovered by the archaeologist may be assumed to represent past behavioral norms . . . . Pottery can be viewed as a reflection of norms governing technological behavior." Fagan (1997, p. 91) indicates that norms "define the range of acceptable behavior" and that archaeologists argue that "artifacts represent norms of technological behavior, if nothing else." Thomas (1998, p. 231) is more circumspect, stating that "temporal and spatial variability [among artifacts] is best reflected by the shared, modal aspects of culture." Our opinion is that normative theory is still prominent in Americanist archaeology and deserves a more detailed examination than it has received.

Because any discussion of normative theory demands it, we begin with a brief consideration of the culture concept and then consider how one individual's take on that concept served as a framework for the seminal discussion of normative theory in archaeology. This is followed by an evaluation of those authors who Binford (1965) claimed offered criticisms of normative theory before him. Statements by culture historians who were alleged to promote and to exemplify the use of normative theory are then summarized. That leads us to the individual who in 1960 published an article that we think was a major inspiration for Binford's critique. We then turn to the post-1965 history of how new archaeologists used normative theory as a means both to criticize culture historians and to interpret many of their own data. Finally, we document how the term normative has retained its pejorative tone, yet evolved from a particular ontology to a term synonymous with mode or average.

CULTURE

There are hundreds of definitions of culture, but we focus only on a few pertinent examples. Osgood (1951, p. 208) defined culture as "all ideas of the

manufacture, behavior, and ideas of the aggregate of human beings which have been directly observed or communicated to one's mind and of which one is conscious." Culture is mental—what Osgood termed "concepta"—but it has empirical manifestations—Osgood's "percepta." Bidney (1953, p. 24) defined *a* culture as "an aggregate of ideas in the minds of individuals" and the movement of those ideas over time from person to person as a "stream of ideas." He used the term "normative culture" to signify ideal as well as mental (ideational) culture, noting that "'material culture' is a contradiction in terms, since the 'real' cultural entities are the conceptual norms and patterns, not the particular artifacts which exemplify them" (Bidney, 1953, p. 26). Osgood's and Bidney's characterizations fit Kroeber and Kluckhohn's (1952, p. 145) preferred definition of culture as extrasomatic and nongenetically transmissible products of human societies. Based on their compilation of over 150 definitions, Kroeber and Kluckhohn's summary definition captures what many anthropologists of the previous five decades thought about culture: It is acquired by learning (it is ideas), and a "culture trait" is the unit of cultural transmission (Lyman and O'Brien, 2003a).

The only explicit definition of a "norm" that we have found is given by Oliver (1964, p. 23), who defines norms as "ideas concerning the way things *ought* to be" (emphasis in original). Anthropologists writing around midcentury (e.g., Kluckhohn, 1951; Murdock, 1940, 1954; Opler, 1945) routinely viewed norms as emic units. Others felt that a norm was an analytical abstraction equivalent to the "ideal, average, or expectable behavior of all members of a . . . society" (Steward, 1951, pp. 374–375). We think this difference was the result of concern over the relationship between what was sometimes referred to as ideal (normative) and actual behavior. Kroeber (1949a,b) noted that there was a gap between the two. Like others of his time, Kroeber might have assumed that cultural traits were empirical manifestations of conceptual ideals or norms for analytical purposes, but he was not deluded into believing there was always a strong correspondence between the two (Thoresen, 1975).

This appears to have been the thinking of most anthropologists of the time— so much so that Tooby and Cosmides could describe what they variously labeled "traditional anthropological ideas" (1989, p. 43) and the "standard social science model" (1992, p. 31). This standard model includes the following points: (1) human groups are bounded by behaviors, beliefs, ideational systems, and symbols that are widely shared within a group but that differ between groups; (2) shared traits are socially transmitted and maintained; (3) within-group similarities and between-group differences are "cultural"; (4) culture is normally replicated with great fidelity across generations; and (5) fidelity of replication is effected by learning and enculturation.

Binford (1965, p. 203) characterized normative theory in similar fashion when he noted that under the "normative view" what is being studied is "culture with a capital C." He argued that "normative theorists" attribute three features to culture: (1) culture is an abstract, mental construct consisting of ideas; (2) culture is an

internally cohesive set of ideas; and (3) artifacts are "objectifications of normative ideas about the proper ways of life executed by now extinct peoples" (p. 203). We are not sure what Binford meant by this, in that someone cannot logically hold to both features 1 and 2 without conflating "culture with a capital C" (feature 1) with *a* culture (feature 2). No culture historian (or ethnologist) of whom we are aware made this mistake. Further, feature 2 does not encapsulate what most normative theorists, particularly those steeped in the Boasian tradition, thought (Lewis, 2001). To them, a culture was never thoroughly "internally cohesive" because, being historical ethnologists, they believed that innovation, diffusion, and the like were more or less continuous and that modification and integration of newly introduced culture traits were ongoing processes (Hatch, 1973).

We do not consider feature 2 of normative theory as characterized by Binford further. Instead, we focus on features 1 and 3. Feature 1 constitutes Tooby and Cosmides's standard model of cultural transmission; feature 3 is not a part of the standard model because it concerns the correspondence between norms (as units of transmission) and their empirical manifestations, particularly artifacts. These two features are critical to understanding normative theory as it was originally presented by Binford.

FIRST USE OF THE TERM "NORMATIVE" IN ARCHAEOLOGY

Binford's inspiration for his characterization of normative theory was a discussion by Aberle (1960) of a linguistic model that has three components—idiolect, language (or dialect), and a system of communication. This model served in Aberle's view as the basis for a model of culture that also has three components—cultural idiolect, shared culture, and cultural system. A cultural idiolect is unique to an individual; shared culture consists of "activities manifest in similar or near-identical form by each member of the group"; and a cultural system is participated in rather than shared because it "involves the interaction of, not the sum of, the cultural behavior of [all age–sex groups]" (Aberle, 1960, p. 14). To Binford (1965, p. 204), normative theory assumes that each culture comprises a set of "natural 'packages,'" typically termed "cultural traits," that are the subject of "ideational transmission." Learning is the basis of cultural transmission between generations, and diffusion is the basis of transmission between social units not linked by regular breeding behavior. The spatiotemporal distributions of culture traits are interpreted in terms of how cultural transmission works in particular historical instances. Disruptions to the continuous and gradual flow of ideas through time and across space (manifest as continuous distributions of traits or artifact types over time and space) signify historical events such as migrations (movement of people carrying ideas), trade (movement of objects and their ideational connotations), and diffusion (movement of ideas themselves). To write culture history, a normative archaeologist must "abstract from cultural products [artifacts] the normative concepts extant

in the minds of men now dead" (Binford, 1965, p. 203). This last point is feature 3 of normative theory—that artifacts are empirical manifestations of norms.

Feature 1—that culture is mental and consists of ideas—is the basis for what Binford (1965, p. 204) labeled the

> aquatic view of culture.... [in which c]ulture is viewed as a vast flowing stream with minor variations in ideational norms concerning appropriate ways of making pots, getting married, treating one's mother-in-law, building houses, temples (or not building them, as the case may be), and even dying. These ideational variations are periodically "crystallized" at different points in time and space, resulting in distinctive and sometimes striking cultural climaxes which allow us to break up the continuum of culture into cultural phases.

Binford found fault with normative theory because it was a theory of cultural transmission only and thus ignored the tremendous amount of variation evident in a cultural system. We return in a later section to the terms "aquatic view" and "crystallization."

SUPPORT(?) FROM EARLIER COMMENTATORS

Binford was concerned that normative theory causes one to focus on cultural transmission, which in turn forces one to assume that formal variation in artifacts is "meaningful only as a way of measuring the passage of time"—an assumption that might "turn out to be one of the most wasteful fallacies archeologists have committed" (Binford, 1971, pp. 1225–1226). Binford (1965) cited White (1954), Spaulding (1957), and himself (Binford, 1963) as having offered criticisms of normative theory similar to the one he was making in 1965. What, in fact, had these individuals, including Binford, said?

Leslie White

In evaluating Kroeber and Kluckhohn's (1952) preferred definition of culture, White (1954, p. 467) found little to his liking and remarked that he "deplored" abandoning the "theoretical standpoint" that culture has an empirical aspect in favor of one holding that culture consists only of concepts in the minds of people. This was a misreading on White's part; Kroeber and Kluckhohn did not limit culture to concepts. Rather, as Harris (1968, p. 10) noted, their definition constitutes "a theory of culture, namely, an explanation of how the features of a particular population's behavioral repertory are established, i.e., by learning rather than by genetic processes." This makes culture an analytically useful concept for those interested in sociocultural history precisely because it concerns cultural transmission.

White (1959a, p. 248) noted that culture constitutes "symboling" or "bestowing meaning upon a thing or an act, or grasping and appreciating meanings thus bestowed." His well-known example was holy water. He labeled a thing or act

dependent on symboling a "symbolate" and equated a set of symbolates with a set of culture traits and a culture (White, 1959a). We suspect that White would have agreed that a culture trait, just as a symbolate, is equivalent to a unit of cultural transmission (Lyman and O'Brien, 2003a); it is an idea. He also would have agreed, we think, that a symbolate is normative in the sense that its meaning is agreed on by those sharing it (otherwise holy water is just wet). But White (1959b, pp. 3, 8) preferred to expand the definition of culture to "an extrasomatic, temporal continuum of things and events dependent on symboling" and "an extrasomatic mechanism employed [by people] in order to make life secure and continuous." Kroeber and Kluckhohn's definition did not indicate what culture does or why it is perpetuated, only what it is and how it is perpetuated. White's definition did both. Binford (1965) echoed White and implied that normative theory is incomplete because it ignores the variation, functions, and structural relationships of empirical cultural phenomena.

Albert Spaulding

Spaulding (1957) did not care for the view that culture is a stream that has a constant flow. Viewing culture in this manner forced archaeologists to view their artifact and cultural types as "arbitrarily defined units" carved out of a continuum. Instead, Spaulding suggested that archaeologists use statistical techniques to discover artifact types represented by nonrandom attribute clusters. In his view "clustering of this sort is generally characteristic of cultural data" (Spaulding, 1957, p. 87). Archaeologists had to develop methods to detect such clusters, but once these clusters were discovered, the "significance attributed to [them] will be a function of other data; examples of possible explanations are varying rates of culture change through time, shifts of culture type over space for ecological reasons, or conceivably even some remarkably bad luck in sampling" (Spaulding, 1957, p. 87).

Culture historians regularly acknowledged that the rate of culture change was not steady. Willey (1953, p. 368), for example, noted that the "course of ancient cultures can be plotted as a dynamic flow, and, at the same time, it can be kept in mind that prehistoric artisans were aiming at modalities which to them seemed fixed and which, undoubtedly, did not change at a set rate of speed." It was those periods of slow or no change that might reveal something, as Spaulding suggested, but whether that something was a norm or not was unclear (see below). And note Willey's nod to the third feature of normative theory that artifacts were empirical manifestations of norms. Willey believed that artisans "aimed at modalities," but their accuracy was, he thought, less than perfect. Among other things, Spaulding's statistical methods assumed a high degree of accuracy.

Spaulding (1953, p. 305) had earlier defined an artifact type both as "a group of artifacts exhibiting a consistent assemblage of attributes whose combined

properties give a characteristic pattern" and as a combination of attributes "favored by the makers of the artifacts." Earlier, Brainerd (1951a, p. 305) stated that an artifact type reflected a "cultural standard" if it was composed of a "constant combination of attributes." To find those constant combinations, Brainerd (1951b, p. 119) suggested that "statistical procedures for the formulation of, and sorting of specimens into, types [would reveal] the cultural specifications followed by the artisans." Spaulding (1953, p. 313) echoed Brainerd when the former advocated the use of statistics to "discover the cultural significance inherent in archaeological remains." The only aspect of cultural significance that he explicitly identified was that an artifact type had to have "historical relevance," by which he meant that it reflected "the customary behavior of the makers of the artifacts" and thus "cannot fail to have historical meaning" (Spaulding, 1953, p. 305). This is an argument that one should search for norms among artifacts.

Lewis Binford

Binford (1963) reviewed how the concept of genetic drift had been used in anthropology as a mechanism of culture change. The general view, he suggested, was that "random individual variations in the execution of norms" of concept and conduct provide the raw material for culture change. Further, these variations are so small as to occur almost without notice, yet over time accumulate and eventually result in profound changes (Binford, 1963, p. 90). Ironically, Binford (1963, p. 90) defined culture as "the normative behavior of a society or other social unit." Using Aberle's (1960) terms, Binford noted that drift in cultural idiolects would not produce change in a cultural system. Rather, change in the latter was a function of "adaptive pressures," and "selection of some sort" was responsible for change (Binford, 1963, p. 91). He then described cultural drift based on the model of genetic drift, noting three things: (1) "in any given social unit there is a range of variation in the manner of execution of stylistic norms appropriate to the manufacture of particular items or in the use of certain decorative and stylistic modes"; (2) "this 'pool' of variability on the individual level (cultural idiolect) is no doubt as subject to sampling error as is the gene pool"; and (3) the second point is "based on the assumption that the range and stability of individual variations in the execution of stylistic norms between parent and daughter communities is a function of the generational continuity in learning and enculturation between the populations" (Binford, 1963, pp. 91–92).

To Binford, drift is a function of transmission, whether cultural or genetic. Thus, when there is "decreased generational continuity and stability we would expect minor variations to arise in the relative frequencies for different modes of normative execution between parent and daughter communities" (Binford, 1963, p. 92). The greater the sampling error or lack of stability, the greater the discontinuity and the greater what would shortly be termed "social distance" by

new archaeologists (e.g., Leone, 1968). Interestingly, he noted that "such a shift [in relative frequencies of modes] may remain a purely statistical phenomena or may, under selection for maximizing the material means of group identification, be objectified and elaborated, thereby serving the function of enhancing group solidarity" (Binford, 1963, p. 92). Here he appended a social function to the replicative sorting that is cultural drift. He argued that cultural drift will operate "within the individual's cultural idiolect or the shared behavioral aspects of culture" and thus within the "cultural content" but not within the cultural system. The latter is modified only "through processes of readaptation or evolutionary change" (Binford, 1963, p. 92). This is because "formally different elements of culture content . . . such as decorative motifs" can be "functional equivalents" when their formal properties "crosscut functional classes," and thus they can change "through drift without affecting the structure of the cultural system involved" (Binford, 1963, p. 92). Cultural drift, then, "implies a process of formal modification in culture content, particularly within classes of functional equivalents or in relative frequencies of stylistic attributes which may crosscut functional classes" (Binford, 1963, p. 93).

In summary, the literature Binford (1965) cited as pre-1965 critiques of normative theory variously indicates that culture is transmitted and shared. White proposed a particular definition of culture for analytical reasons, yet supported the transmission and shared aspects of the normative definition because his own definition demanded that culture be continuous. He even identified a unit of cultural transmission equivalent to a norm. Spaulding explicitly advocated the search for prehistoric norms manifest as artifact types. Binford's (1963) own comments were an elaboration of normative theory, building it into a more robust model of cultural transmission than previously available. We see no support for Binford's contention that the commentators he cited in his 1965 paper provided critiques of normative theory. In fact, their comments advanced the notion that normative behavior was a key component of culture. The next question is, how widespread was this view and, more importantly, did culture historians actually use normative theory as described by Binford in the way in which he said it was used?

DID "NORMATIVE THEORY" CONTRIBUTE TO THE ACTUAL PRACTICE OF ARCHAEOLOGY?

Binford (1965) cited Rouse (1939), Taylor (1948), Ford (1954), and Willey and Phillips (1958) as examples of those who believed that their artifact types were empirical manifestations of cultural norms. We review each in turn and then briefly examine the work of other culture historians that might be seen as being based in normative theory. We conclude with a discussion of the publication that we believe was the true source of Binford's characterization of normative theory.

Irving Rouse

Rouse (1939, p. 18) stated that an artifact type is "the result of conformity by the artisans to a cultural standard which indicated the proper kind of appearance for a completed artifact to have." Rouse (1960, p. 313) defined a mode as "any standard, concept, or custom which governs the behavior of the artisans of a community, which they hand down from generation to generation, and which may spread from community to community over considerable distances." But do not be misled by these statements. Rouse was *not* equating an artifact type or a mode to a cultural norm. Modes are attributes of artifacts (Rouse, 1939, p. 11), and "types and modes are conceptual patterns" that are "set up by the [archaeologist]" (Rouse, 1939, p. 19). Rouse (1939, pp. 18–20) noted that there are many intervening variables that weaken the correspondence between an artifact or type and its underlying norm, including change, behavioral and psychological idiosyncrasies, and environmental factors. He did not seek norms among attributes of artifacts, individual artifacts, or artifact types because although artisans may have been aiming at norms, their marksmanship was poor for many reasons.

Smith (1954, p. 24) noted that when Rouse (1939) spoke of an "ideal type" he was referring "to an ideal or abstract form which exists in the mind of the classifier," *not* the maker of the artifact. For Rouse (1939), modes and types could be treated analytically *as if* they were norms in the minds of the artifact makers, but that did not mean that they were in fact empirical manifestations of past ideas. Throughout his career, Rouse (1972, pp. 164–165) held the view that a "norm" is a "creation of the investigator"; it is inferred from behavioral by-products such as artifacts of individuals under study and is based on regularities. What is "regular" is a function of the classifier, not some intrinsic feature of the materials classified. In fact, a person may not even be aware of the norms that result in behavioral regularities.

Walter Taylor

Taylor (1948), desirous of developing a definition of culture useful to archaeologists, argued that a culture is a set of ideas transmitted from individual to individual. He found it incorrect to demand that to be considered cultural a trait has to be shared, pointing out that culture can be idiosyncratic just as easily as shared and "normative" (Taylor, 1948, 1967). To Taylor a norm was equivalent to a statistician's mode—the value or score that occurs most frequently. Taylor (1948, p. 102) explicitly denied any equivalency between an (etic) statistical abstraction and a (emic) norm when he stated that inferring a "shared idea" from artifacts could be done only by "unconditional surrender to purely subjective, unsupported, and non-testable hypotheses." The correspondence between an artifact type and its underlying norm may be strong, but then again, it may not be. To

Taylor, there was no means of determining which possibility applied in any given case.

James Ford

Prior to receiving formal training in anthropology, Ford (1935a, p. 9) defined culture as "a set of ideas as to how things should be done and made." He remarked that "typologically related [pottery] decorations found together in the [several] collections . . . indicate the probability that they represented variations of one major idea of decoration" (Ford, 1935b, p. 8). Later, Ford (1949, p. 38), citing Kroeber's (1917) concept of culture as superorganic, defined culture as "a stream of ideas, that passes from individual to individual by means of symbolic action, verbal instruction, or imitation." Cultural change is "a gradual process" and involves a "slow shifting of norms" (Ford, 1949, p. 39). Prehistoric potters "conformed to prevailing ideas" (Ford, 1949, p. 40). Finally, "the specific forms of ceramic variables are controlled by the attitudes and ideas that were held by the makers of the vessels. These ideas, transmitted from individual to individual, are the cultural trait that is studied" (Ford, 1952, p. 319). Ford never tried to identify (emic) mental templates or even (etic) average forms of artifacts. Why? Because the artisan probably did not know exactly what the ideal type or norm was, and thus the item produced only approximated it (Ford, 1954). If so, then what made archaeologists think that *they* could identify norms?

Gordon Willey and Philip Phillips

Willey and Phillips (1958, p. 13) noted that "there is still some dispute about what [an artifact type] signifies"; the "principal difference of opinion may be crudely stated as opposition between those who believe that types are arbitrarily 'designed' by the classifier and those who think that types exist in nature and that the classifier 'discovers' them." Willey and Phillips (1958, p. 13) indicated that the latter viewpoint "maintains that [artifact types] have, or should have, behavioral reality in the sense that they would be recognized as norms, the 'right way,' in the societies that produced the objects being typed." They suggested that "all types possess some degree of correspondence to cultural 'reality' [to norms] and that increase of such correspondence must be the constant aim of typology" (Phillips and Willey, 1953, p. 616). But the degree to which an artifact type accurately reflected a norm was unclear to them: "It is the archaeologist's job to be aware of the arbitrary nature of his unit concepts and, at the same time, alert to the possibility of making them less arbitrary" (Willey and Phillips, 1958, p. 17). Further, in 1953 they suggested that Spaulding's (1953) statistical procedure "holds promise" for improving the correspondence of types with norms, but neither Willey nor Phillips ever used statistics in the manner suggested by Spaulding.

Statements by Other Archaeologists

Krieger (1960, p. 142) noted that in 1956, when he was writing, there were no "common techniques for creating typologies [or] even agreements on what the term 'type' should connote." Krieger (1944) had earlier indicated that artifact types were combinations of attributes that had to recur on specimen after specimen. These recurrent attribute combinations represented "underlying plans" and "culturally distinct ideas" (Krieger, 1944, p. 280), although he never said explicitly that there was a close correlation between an artisan's ideas and an archaeologist's artifact types.

Griffin (1943, p. 340) stated that the "exact meaning of any particular object for the living group or individual is forever lost, and the real significance of any object in an ethnological sense has disappeared by the time it becomes a part of an archaeologist's catalog of finds." We interpret this to mean that Griffin believed that although cultural transmission took place, and ideas were the units of transmission, the correspondence between a norm and an artifact type was unknowable. Recall that at the time "culture trait" signified a unit of cultural transmission. Traits could vary tremendously in scale as well as in terms of definitive attributes (Lyman and O'Brien, 2003a). Not knowing exactly what a culture trait was in terms of scale and permissible heterogeneity meant that a trait could never be closely aligned with either an artifact or an artifact type. This lack of alignment finds expression in the type–variety system of classification (Wheat *et al.*, 1958). This system underscored the tremendous variation among artifacts and gave flexibility to the analytical and interpretive (etic) status of a category of artifacts while simultaneously underscoring the unclear cultural (emic) status of the categories.

Clarke (1968, pp. 88–101, 179–222) made explicit the role of culture as a transmission system and how it related to variation in artifact form. At the same time, he explicitly denied that archaeological types, whether at the scale of an artifact, an assemblage, or a culture were the same sort of thing that an ethnographer might see. Units in both fields were "equally real, equally arbitrary and simply different" (Clarke, 1968, p. 364). These units were analytical constructs of the archaeologist or ethnographer rather than fossilized norms held in the minds of dead people.

Dumont (1975) was explicit about the crucial role of classification in identifying norms on the basis of artifact forms. She argued that statistical detection of artifact types rests on the attributes chosen and that those attributes may or may not have been norms or ideas in the minds of the artisans. These points were often acknowledged by culture historians when they built artifact types, even though the majority of them did not use statistical techniques to construct types. Dumont (1975, p. 7) claimed that the new archaeologists were seeking to demonstrate that normative theory was "not appropriate as a *scientific* paradigm." One generally accepted hallmark of new archaeology as a scientific endeavor was that its results

could be tested (Binford, 1968). Identifications of prehistoric norms on the basis of artifact types were said by many who commented on normative theory to be untestable, and thus culture history guided by normative theory was nonscientific. As we have shown, however, it was precisely because many culture historians recognized that they could *not* test any such identifications that they in fact did not seek to make them.

Wylie's (2002, pp. 64–67) analysis of Binford's views on normative theory is insightful, but she comments that W. C. McKern (1937, 1939) embedded in his Midwestern Taxonomic Method the notion "that discontinuous variability embodying antecedent cultural norms exists in the [archaeological] record, there to be discovered and used as the basis for systematization" (Wylie, 2002, p. 45). McKern was, in fact, unsure as to what variability and its discontinuity signified; the Midwestern Taxonomic Method was a form of phenetics, and the similarities it documented might, in McKern's view, represent genetic-like affinity. But this was no sure thing. Because continuity and similarity had unclear meaning and ambiguous significance, discontinuity and dissimilarity had unclear meaning and ambiguous significance. Nowhere in McKern's publications or unpublished correspondence did he write about anything that remotely resembled cultural norms (Lyman and O'Brien, 2003b).

So far as we can determine, Rouse, Taylor, Ford, Willey and Phillips, and others named above never disputed Binford's claim that they believed artifact types represented norms. We suspect that they did not for the simple reason that they all hoped for such a correspondence, though as we argue below they recognized that this kind of correspondence could not be empirically demonstrated. Further, most culture historians treated their types *as if* they represented norms, so there was only a subtle epistemological point to dispute.

The Aquatic View of Culture

Despite his critical comments a few years later, the early Binford (1963) subscribed to the "aquatic view" of cultural transmission. Did culture historians presage Binford? Indeed they did (Lyman, 2001). In an early reference to the fluid flow of cultural change over time, Nelson (1932, pp. 105, 122), a student of Kroeber's, wrote about the "flow" of culture as involving in part a "stream of inventions" and referred to this as "the cultural *process*." Brew (1946, p. 63) used a similar aquatic metaphor when he commented that anthropologists and archaeologists "are dealing with a constant stream of cultural development, not evolutionary in the genetic sense, but still a continuum of human activity." Even White (1959b, p. 16) wrote that "we may think of the culture of mankind as a whole, or of any distinguishable portion thereof [such as a particular culture], as a stream flowing down through time" and that the "stream of culture undergoes changes of content as well as alterations of form as it flows." Thus, the flowing

stream was a metaphor for continuous cultural transmission. If mentioned at all, the unit of transmission was labeled a culture trait (Lyman and O'Brien, 2003a). For example, Jennings (1947, p. 192) referred to the "continuous flow of cultural traits."

Ford (1952, p. 343) equated a ceramic tradition with a "stream of ideas," anticipating the later formal definition of a tradition as "a socially transmitted form unit (or a series of systematically related form units) which persists in time" (Thompson, 1956, p. 38). We suspect it was Ford who penned the phrase in Phillips *et al.* (1951, p. 22) that indicated that properly constructed artifact types measured "a continuous stream of changing cultural ideas." Ford (1954, p. 51) referred to the "fluid process" of cultural change and "streams of thought," but he also argued that there was no such thing as a "typical" artifact or behavior, even within the minds of the people manufacturing the artifacts or doing the behaving. This carried to its logical end his notion of 5 years earlier (Ford, 1949) that a potter would not know what the norm of his or her society was. Given his aquatic view, Ford (1935a, p. 9) maintained that culture "is in a continuous state of evolutionary change" and that it changed gradually. He maintained this view throughout his career (O'Brien and Lyman, 1998). This contradicts Binford's (1965, p. 204) suggestion that the aquatic view maintained that the continuum of cultural change "'crystallized' at different points in time and space, resulting in distinctive and sometimes striking cultural climaxes which allow us to break up the continuum of culture into cultural phases." This was precisely what Ford did *not* agree with. Where, then, did the notions come from that the transmission of norms represents a discontinuous flow and that artifact types are equivalent to norms?

Rates of Change and Crystallization

Although there were early converts (e.g., Griffin, 1943), it was not until the mid-1950s (e.g., Phillips *et al.*, 1951; Spaulding, 1953) that many archaeologists agreed that cultural change is not uniformly gradual but rather "a series of sharply rising escarpments connected by slightly sloping plateaus" (Thompson, 1956, p. 37). Binford (1972, pp. 251–252) summarized a model of "cultural dynamics" that he said characterized traditional archaeology. That model makes the following statements: Culture is (1) localized in individual human beings; (2) transmitted among humans; (3) shared; (4) derived from humans; (5) cumulative; (6) a continuum; (7) continuously changing; and (8) gradually changing. He argued that this model results in a "basic assumption standing behind the traditionalists' paradigm . . . that the human species is partitioned into culturally maintained distinctive populations, ethnic groups" (Binford, 1972, p. 290). How a continuum of change that does not vary in rate can be "partitioned" is unclear, but it apparently is those partitions that bound the periods of "crystallized norms" (Binford, 1965, p. 204).

We believe an individual whom Binford (1965) cited but did not quote influenced his views on normative theory. This was James Gifford (1960), who advocated use of the type–variety method of artifact classification that had been formally described by Wheat *et al.* (1958). Wheat and his colleagues had in mind an analytical (etic) unit that measured varying amounts of time and space, but Gifford's views went further. To him, varieties "closely approximate actual material ceramic manifestations of individual and small social group variation in a society" (Gifford, 1960, p. 342). Because types generally include multiple varieties, they are "summations of individual and small social group variation"; they "reflect cultural values"; and they are a "ceramic idea or 'esthetic ideal' the boundaries of which were imposed through the value system operative in the society by virtue of individual interaction on a societal level" (Gifford, 1960, pp. 342, 343).

Gifford argued that most people in a culture "tend to conform to the demands of a majority of the norms that are a part of their culture at a particular time in history" (Gifford, 1960, p. 343). To substantiate this claim, he quoted various statements by Kroeber and Kluckhohn that indicated that a culture is patterned over time and space because of limitations and constraints on innovation that originate in a culture's values or standards. For Gifford (1960, p. 343), then, artifact types "equate themselves with the crystallization of conscious or unconscious . . . esthetic [mental] images conditioned by values." Recall that Binford (1965, p. 204) wrote that norms "are periodically 'crystallized' at different points in time and space." Binford's use of the word "crystallized" and Gifford's use of the word "crystallization" suggests that the former was characterizing the latter's ideas as normative theory.

The basic notion that artifacts were made according to some sort of culturally dictated convention was reiterated by Smith (1962, p. 1167), who argued that a fictional female potter was subject to "an alarmingly ramified set of intellectual complexes that act to control her ultimate [ceramic] output." Here, only on the eve of the birth of the new archaeology, do we find clear and complete statements of normative theory as characterized by Binford (1965), one by Gifford and one by Smith, not to mention Binford's (1963). Here were all three features of culture mentioned by Binford (1965) as characteristic of normative theory: (1) culture comprises ideas; (2) a culture is an internally cohesive (crystallized) set of ideas; and (3) artifacts are empirical manifestations of norms or ideas about the proper ways of life. There are no similar prior statements, nor can one be derived from combinations of pieces of the pre-1960 culture-history literature largely because the third feature was never accepted. If normative theory did not originate fully developed in culture history, then where did it originate? We suggest that it was with the integration and coalescence of select notions regarding culture history as outlined by Gifford (1960) that the theory crystallized and emerged with explicit clarity and cohesiveness.

EARLY MISCHARACTERIZATIONS

Ironically, it was the new archaeologists who employed normative theory in the manner first described by Gifford (1960) and operationalized by Spaulding (1953, 1960). Deetz (1965), Hill (1966, 1968, 1970b), Leone (1968), Longacre (1964, 1968, 1970a), and Whallon (1968) all used statistical techniques to study clusters of design elements on pottery, and they interpreted significant clusters of design elements as culturally and normatively significant. Deetz (1965, p. 82), for example, believed that one could find "a breakdown in the association patterns of the various attributes which had significance to the potter." He assumed that cultural norms could be discovered among archaeological materials and that one could determine when those norms were disrupted by alterations in cultural transmission effected by "a change in social organization characterized chiefly by a shift in post-nuptial residence rules" (Deetz, 1965, p. 86). Deetz (1968b, p. 43) remarked that his work and that of Longacre (1964, 1968) "demonstrated that tight clustering of attributes might result from the orderly transmission of behavioral pattern relating to pottery manufacture along female lines, permitting the postulation of matrilocal residence."

Deetz (1967, p. 45) popularized the term "mental template" when he remarked that the "idea of the proper form of an object exists in the mind of the maker, and when this idea is expressed in tangible form in raw material, an artifact results. The idea is the mental template from which the craftsman makes the object." Deetz was even more clear about the relationship of artifact form and cultural norms a year later. He wrote, "Objects of human manufacture have as their templates mental models pieced together over time from diverse sources . . . . It is in the viewing of the artifact as the concrete expression of a mental template that we might move closer to [reconstructing the culture of the artifact makers]. Each attribute exhibited by an artifact is present for some reason, and a vast majority of these attributes are employed for reasons of culturally conditioned choice on the part of the manufacturer" (Deetz, 1968a, p. 31). Deetz presented a provocative but yet-to-be-pursued set of bases for attribute choice on the part of the artisan, and noted that "the discrete isolation of all attributes in an artifact assemblage is in many ways analogous to the isolation of allophones in a language, and their subsequent combination into culturally meaningful units is very similar to the isolation of morphemes and their constituent allomorphs" (Deetz, 1968a, p. 32). This last comment took the equation of an artifact or artifact type with a cultural norm far beyond any effort by a traditional culture historian.

Some commentators at the time (e.g., Stanislawski, 1973) realized that normative theory underpinned the efforts of new archaeologists. Allen and Richardson (1971, pp. 42, 43) put it well in two short sentences on two different pages: First, the indicated studies had to assume that females were "taught by their mothers and other related females to select certain combinations of attributes which were

prescribed by lineage norms." Second, when the lines of transmission were broken by a shift to nonmatrilocal residence, then "women who once selected certain combinations of attributes which were prescribed by the lineage norms [could now] choose designs with greater freedom (as a result of moving outside of their matrilocal unit), and there resulted a lower degree of patterning [homogeneity] in the finished artifact[s]."

For the most part, though, the new archaeologists ignored any comments that might have suggested that what they were doing was based in normative theory. Instead, when they referred to normative theory, they almost always did so in pejorative terms. Hill (1970a, pp. 16–17), for example, described normative theory as

> perhaps the most widely held theoretical framework in current archaeological research. This is the theory or premise that culture is a collection of *shared* ideas, norms, values, beliefs, mental templates, and so forth. It follows from this premise that since people within a community share their culture, they usually participate equally in it. Culture is considered a relatively *homogeneous* thing, and the individuals who "share" it are striving to behave in accordance with the accepted ideas and norms.
>
> This, then, leads to the implicit idea that to *describe* a culture (living or extinct), the major *problem* must be to isolate the norms. These norms are believed to be manifested in the empirical data as "typical" behavior ("typical" artifacts in the case of the archaeologist). The researcher's problem becomes one of trying to find out what is typical of a particular region, society, or archaeological site. . . .
>
> Given [the] presumed homogeneity within site components (and even regions), it follows that there is little point in studying variability *within* them! (emphasis in original)

Hill's (1970a, p. 18) point was that normative theory "obscures the fact that there are a large number of *different* groups and statuses within a society, and the people involved in them are often *not* participating in the same kinds of behavior." Hill (1970a, p. 52) observed that normative theory prompts archaeologists to explain culture change "in terms of idea transmission." He concluded that "norms, ideas, beliefs, and so forth" are merely "abstractions" and therefore "are not measurable, and thus not subject to scientific manipulation or verification" (Hill, 1970a, p. 56).

Hill (1972) later argued that under normative theory the collection of archaeological data involved "observing and collecting the materials that are most representative of these norms—i.e. most 'diagnostic' of the cultures being studied" (Hill, 1972, p. 74). Various materials and observations are ignored in favor of "the observation of gross *stylistic* variability in material remains [because] styles are considered (intuitively) to be the best possible manifestations of norms and mental templates" (Hill, 1972, pp. 74–75). Such "trait-list-normative theory . . . assumes that sites and local regions are relatively homogeneous culturally (i.e. normatively) [so] it is not logically necessary to collect large samples or get even coverage when sampling sites" (Hill, 1972, p. 75). We think it doubtful that culture historians, whom Hill was fingering as culprits, assumed that sites in a region were culturally homogeneous, given that ethnologists made no similar assumption regarding a culture. Regardless, Hill never realized (or at least did not point out) that his own

work on pottery from east-central Arizona was built specifically around "normative behavior."

Martin (1970, p. 196), an intellectual and financial supporter of the ceramic studies of Hill, Longacre, and others (Graves, 1998; Longacre, 2000), endorsed Hill's (1970a) opinion of normative theory, adding that it is "stultifying" and that it and concepts like it "muddy the waters and retard methodological and theoretical advances. . . . Probably no single idea other than the normative approach has been so responsible for concealing the true nature of human data—archaeological and contemporary. . . . The idea that culture consists of shared ideas and behavior is non-sense of the first magnitude." We find these remarks interesting because they come from someone who earlier had used frequency seriation and percentage stratig-raphy extensively in his studies of the prehistory of the American Southwest—techniques that rest squarely on (implicit) notions of cultural transmission, heri-table continuity, and cultural stability (Lyman *et al.*, 1998; Lyman and O'Brien, 1999; O'Brien and Lyman, 1999). But Martin had long been an anthropological archaeologist, so of course he would favor any conceptual shift that would help him get at ethnological aspects of the people behind the artifacts.

Longacre (1970a), in his study of pottery from east-central Arizona, noted that cultural norms are "averages." He indicated that a "normative approach sees material remains as reflections of the ideals that form the crux of culture. Changes in the materials reflect changes in the norms as a result of diffusion or inven-tion" (Longacre, 1970b, p. 129). Alteration of cultural-transmission mechanisms or pathways would produce cultural change. In Longacre's (1970b, p. 129) view, holding a normative perspective causes one to assume that "an archeological site will be fairly homogeneous, at least with respect to the ideal styles of pottery or architectural forms," and to "expect" that there will be "changes through time in the typical styles of houses and pots" in stratified sites. But note that the expec-tation is not a necessary consequence of normative theory but rather is merely an anticipation of difference over time. The expectation rests on the view that the archaeological unit under study is equivalent to a group of people participating in the same culture and thus sharing precisely the same ideas or norms. Most archae-ological units of scales larger than a discrete object are stratigraphically bounded (Rouse, 1955). Whether they are equivalent to an occupation or a community is an assumption, and culture historians were unafraid to admit that it was a tentative one (Phillips and Willey, 1953; Rouse, 1955; Willey, 1953; Willey and Phillips, 1958).

Struever (1971, p. 10) and Binford (1978) echoed Longacre's (1970a,b) re-marks regarding the relationship between a culture and a site, component, or as-semblage of artifacts. Others elaborated on the relationship in a different way. Watson *et al.* (1971, pp. 61–62) emphasized that an archaeologist's artifact types were meant to reflect "mental templates" in the minds of the makers of the artifacts. They indicated that their "position is very similar to Spaulding's [1953] and may be summarized as follows: The particular attributes chosen to define a type may

be arbitrary in the sense that they are selected from an immensely large quantity of potential attributes, but once the attributes are chosen, whether types exist or not is empirically testable" (Watson *et al*., 1971, p. 127). They paraphrased Spaulding's definition of an artifact type as "the result of two or more attributes occurring nonrandomly with respect to one another" and noted that this "implies that there exists a relationship between two or more attributes which is *meaningful in its own right* and is more than just the common occurrence of attributes" (Watson *et al*., 1971, p. 127). And although they indicated that "the attributes one chooses to work with should reflect one's problem," and that "if no statistically verifiable clusters [of attributes] exist," then no "meaningful types" exist in a collection, they also emphasized that the presence of "statistically verifiable types reflects patterned behavior, which may or may not correspond to mental templates" (Watson *et al*., 1971, pp. 131, 132). Their recognition of a potential lack of correspondence echoed the concerns of earlier culture historians. Watson and colleagues anticipated the question of how actual behavior differs from ideal (normative) behavior by re-marking that the actual behavior indicated by statistically verifiable types "can be the result of individual motor habits or other idiosyncratic behavior, or behavior defined as appropriate by the culture in question" (Watson *et al*., 1971, p. 132). This, too, implies that they found the correspondence between artifact types and norms potentially to be poor, just as culture historians did.

Watson *et al*. (1984, p. 69) later noted that the normative view defines a culture as a "set of shared ideas or values (norms)" and that this view "led to fixation on the characteristic, diagnostic, or typical pot, arrowhead, or site with accompanying neglect of ranges of variation of these materials" (see also Gibbon, 1984, p. 4). It should by now be clear that normative theory did not lead to any such fixation on the part of culture historians. Rather, because they lacked other sorts of chronometers, archaeologists working between about 1915 and 1960 focused many of their efforts on constructing artifact types that measured the passage of time. This allowed them to determine the relative ages of the archaeological materials they were studying. Watson (1995, p. 689) later acknowledged this when she wrote that "archaeologists of the 1930s did not attempt to operationalize the prevailing [Tylorean] culture concept [ideas shared by transmission], but rather ignored it while absorbed in creating time-space frameworks, essential to North American prehistory." That culture historians eventually came to refer to various sets of those artifacts as "cultures" was not surprising, but it had little to do with any theory of cultural norms or belief that their artifact types closely reflected mental templates or norms. Rather, common-sense notions of cultural transmission underpinned chronometers such as frequency seriation, stratigraphically superposed collections, and the direct historical approach (Lyman *et al*., 1997, 1998; Lyman and O'Brien, 1999, 2001; O'Brien and Lyman, 1998, 1999).

Plog (1974, p. 6) argued that "if an investigator is interested in the relationship between norms and the behavioral or material patterns through which these norms are expressed, this relationship can be studied far more easily in the present than

in the past. In the present, norms and their material consequences can be studied independently, and hypotheses concerning their relationship formulated and tested. For the past, norms must be inferred from the same data that will be used to infer the material consequences of the norms. When such a technique is used, there are no independent data, and the relationship in question is not subject to testing, much less to explanation." This is precisely what Longacre, for example, did when he initiated ethnoarchaeological research on pottery technology (Longacre, 1974).

Cordell and Plog (1979, p. 407) objected to normative statements "that seek to identify some typical or average pattern that is said to characterize the northern Southwest or to draw broad spatial or temporal contrasts." They found a "close counterpart" to normative theory in the paleobiological theory of phyletic gradualism first identified by Eldredge and Gould (1972). The parallel Cordell and Plog (1979, p. 405) saw is that both punctuated equilibrium in paleobiology and what they termed the "systemic tradition" in archaeology represent "a critique of concepts and approaches that emphasize normative patterns and fail to consider the patterned articulation of diversity."

Echoing paleobiologists who responded to punctuated equilibrium by noting that phyletic gradualism seemed to account for various sorts of data in the fossil record (see relevant references in O'Brien and Lyman, 2000), Hunter-Anderson (1981, p. 195) countered Cordell and Plog's (1979) claims regarding the lack of value inherent in normative theory by stating that "the normative descriptive framework has captured empirically valid directional trends." Cordell and Plog (1981, p. 198) responded that Hunter-Anderson referred to "'corporate groups,' a highly normative term," and yet they conceded that "elements of normative thinking remain in [Cordell and Plog, 1979]." This exchange suggests that the term normative theory had come to denote any instance in which an individual assigned a label to a group of phenomena, and later someone else said that the variation within the group, not the group itself, should be the target of analytical interest. This conception would come to dominate later use of the concept of normative theory.

LATER THOUGHTS

By the mid-1980s the term "normative" had come to signify virtually any approach that ignored variation that was not ethnic or that was pansystemic and could generally be characterized as cultural (e.g., Binford, 1986, p. 558). Schindler (1985, pp. 475, 479) implied that normative theory involves "typological analyses to identify 'cultures'" and that "similarities and differences in artifact types and artifact complexes are taken to mark the boundaries of 'cultures' as entities." Fitzhugh (1985, p. 485) described the "nasty normative method" as using "typologies and classifications (of artifacts, cultures, and complexes) to analyze similarities and differences in the archeological record and to use them to create abstractions of archeological cultures," but he also emphasized that the units

resulting from the classifications "are models or abstractions, not real entities, and they were never intended to stand for social, economic, or political relations of individuals." Anthony (1990, p. 896) indicated that "normatively defined societies" and "normatively defined culture areas" were recognized and discussed during the first half of the twentieth century. Jochim (1991, p. 310) used the term "normative descriptions" to refer variously to the average or modal behavior of a group during some more or less limited portion of the spatiotemporal continuum, such as a seasonal round in an area or the behaviors undertaken during a particular season. In his view, these descriptions are misleading models when used to interpret the archaeological record because they mask variation.

Earle and Preucel (1987, p. 502) characterized the "normative approach" as involving a view of culture as "a set of norms or values shared by individuals which determines human behavior." They followed Gibbon (1984) and credited (blamed?) Boas with popularizing this approach in Americanist anthropology and archaeology, noting that it "might be called cultural determinism [because it] regarded culture as a pattern of norms held implicitly by the members of a culture and obtained through historical tradition [transmission over time] and diffusion [transmission over space]" (Earle and Preucel, 1987, p. 503). In our view, Earle and Preucel's characterization of normative theory is accurate relative to Binford's original characterization, though we note that Boas did not publish a definition of culture until 1930 (Kroeber and Kluckhohn, 1952).

Claassen (1991, p. 249) provided an exemplary statement of the evolved concept when she wrote, "normative thinking or normative treatment is that which seeks to identify typical or average behavior and occurrences. . . . The results of normative thinking are the distortion of an archaeological record of variation in adaptive responses into a record of homogeneous response." This was a far cry from what normative theory originated as, which was a statement about what culture is, how it is transmitted, and what its relationship is to empirical phenomena such as artifacts.

What of the originator of the critique of normative theory in Americanist archaeology? Binford (1989) accused Dunnell (1971) of advocating normative theory. Dunnell (1971, p. 132) had made it clear that various recurrent attributes on artifacts and attribute combinations are "assumed" to reflect "ideas held in common by makers and users of those artifacts" and are analytically treated *as if* they provide an accurate reflection. He explicitly stated that recurrent attributes and combinations thereof might not reflect "the same mental template"; whether they indeed do "cannot be demonstrated or held to be true" (Dunnell, 1971, p. 133). Like Rouse, his teacher, Dunnell stated that the recurrence of attributes and attribute combinations in an artifact classification is a function of the classifier, not the artifact maker (see below). Thus Binford's accusation was misplaced.

In at least two places in *Debating Archaeology* Binford (1989, pp. 113, 267) stated that "most traditionalists believed that they could [see] mental templates,

stylistic norms, etc., in the archaeological record." Elsewhere in that volume (p. 30) he indicated that "traditional archaeologists recognized that, while [archaeological] patterning might have reference to culturally embedded behaviors, [such] patterning might not have any directly readable meaning with reference to the specific norms and values, codes and rules in the sociocultural domain." The contexts in which these contradictory assertions were made suggest that Binford had erected different straw men to justify his position.

Finally, Binford's most recent remarks reflect the evolved notion that a norm is an average—"I was able to obtain a number of mean or normative values for settlement size by types" (Binford, 2001, p. 2)—but that is not all he has to say. What Binford (2001, p. 12) referred to as the "normative assumption" is the belief that "societies are internally homogeneous, in both action and organizational poses, and leaves open for investigation the explanation of documented forms of internal variability." This identifies the variation of interest as functional rather than ethnic or temporal (see also Binford, 2001, p. 29).

DISCUSSION AND CONCLUSION

The belief that normative theory characterized preprocessual archaeology was so strong in the early 1970s that it was the subject of a news article published in *Science*. There, Hammond (1971, p. 1119) reported that he had been told by archaeologists that "traditionally, culture has been thought of by some anthropologists as a set of shared norms, and patterns in the type and distribution of physical artifacts have often been taken as a measure of cultural affinity reflecting those norms." We have argued here that this perception of history is in several ways inaccurate. Certainly, cultural transmission was important within the culture-history paradigm, and many early thoughts on culture referred to it as "social heritage," a term that nods to cultural transmission (Kroeber and Kluckhohn, 1952). But the unit of transmission was seldom discussed, and even then it was typically referred to as a culture trait, an ambiguous unit at best (Lyman and O'Brien, 2003a). More importantly, culture historians were explicit about the unclear relationship between norms and artifact types and thus rarely if ever sought norms among artifacts. Brainerd, Spaulding, and Gifford, in that order chronologically, were the exceptions to the rule.

Martin (1970, 1971) got it wrong when he said that there had been a major metaphysical change in Americanist archaeology during the 1960s. Rather, there was a coalescence and advocacy of what had been variously implicit, scattered, and contentious notions about the relationship between norms as prehistoric ideas and artifact types as modern entities. The new view, ironically, was the very one vilified by Binford—that culture consists of norms that are transmitted between individuals, and artifact types are accurate objectifications of cultural norms. Normative

theory as this integrated whole did not exist until 1960, and it wasn't used as such until the mid-1960s, when various new archaeologists used it as the basis for inferences about social distance and changes in postmarital residence patterns.

Given that the term "normative theory" and its derivatives have come to signify one researcher's negative opinions about another's aggregates of phenomena, we find it interesting that Taylor (1967) had recognized this problem at about the same time that normative theory was originally described by Binford. Taylor (1967) distinguished between a norm and an idiosyncratic case, emphasizing that such a distinction can be made only with respect to some "frame of reference" or "category of meaning." This means that the identification of a norm in the form of a statistician's mode is a function of how phenomena are classified (Lyman and O'Brien, 2002; O'Brien and Lyman, 2002). Such classification-dependent tenuous relations between categories of artifacts and prehistoric norms indicate why culture historians did *not* seek mental templates among artifacts.

In summary, the term "normative theory" was a straw man that new archaeologists used to show how foolish culture historians were and how much better off archaeology would be were it to adopt the notion that culture was an extrasomatic means of adaptation rather than just the information transmitted among social bipedal mammals. But only with Gifford's (1960) article did all parts of the theory as originally characterized by Binford (1963, 1965) come together in a relatively coherent whole. The culture-history paradigm had no explicit, well-developed theory to guide it, though vague and weakly developed notions of cultural transmission did underpin much of it (Lyman, 2001; Lyman *et al.*, 1997). The aquatic view part of normative theory—that culture is shared ideas that are transmitted nongenetically—underpinned the chronometers based on artifact forms that were developed by culture historians. But culture historians never sought mental templates, cultural norms, or fossilized ideas in the form of artifact types. That their types *might* reflect prehistoric ideas about how to, say, make pots was a necessary part of the definition of an artifact as something created by people, but beyond that archaeologists were extremely cautious about stating how closely their types reflected past ideas. They were cautious because they did not know how to test a hypothesis that the reflection was accurate.

Brainerd (1951b) hinted at and Spaulding (1953) proposed an explicit method for discovering what they *inferred* to be accurate reflections of mental templates or fossilized ideas. Gifford's (1960) formulation, aided by Smith's (1962) comments, integrated and made explicit what had previously been disjointed and somewhat implicit. But even after Brainerd and Spaulding had their say, Ford, Krieger, and Willey and Phillips indicated that they were still unsure as to the validity of the results of applying Brainerd's and Spaulding's inductive discovery procedures. The notion that norms in the form of ideal, culturally specific ideas about how to make pottery were transmitted from person to person underpinned the origins of ceramic sociology, one of the initial products of the new archaeology.

The definition of culture as extrasomatically transmitted ideas is today popular in archaeology (e.g., Bentley and Shennan, 2003; Jordan and Shennan, 2003; Kohler *et al.*, 2004; O'Brien and Lyman, 2003a,b; Tehrani and Collard, 2002), and anthropologists are discussing in theoretical terms not only the implications of a definition of culture as shared ideas (e.g., Laland and Hoppitt, 2003) but also the cultural transmission of norms (e.g., Henrich and Boyd, 1998, 2001; Henrich and McElreath, 2003) and the empirical expression of norms as ethnic markers (McElreath *et al.*, 2003). This does not mean that the definition of culture as an extrasomatic means of adaptation has been discarded, as it is now abundantly clear that a complete theory of culture must retain both concepts (Alvard, 2003). It remains to be seen how much our knowledge increases in light of a definition of culture that includes both, but we think it will be a significant increase.

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