
Judging the Mark of an Individual: An Investigation of Design Variation in Prehistoric Pottery from Grasshopper Pueblo, Arizona

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Archaeological research on ceramic styles has become a mainstay of archaeological investigation wherever collections are available. This trend has gained momentum in recent decades as traditional applications (e.g., dating sites and identifying patterns of regional interaction) have gradually been eclipsed by more dynamic explorations of style as “nonverbal” communication. Despite this positive course of research, recent essays (e.g., articles in Conkey and Hastorf 1990, Hegmon 1992) have noted the unchecked variability manifest in the methodologies and interpretations offered in the literature on this subject. Indeed, with no “unified” theory of style, researchers are free to define style and its meaning (at any level) however they prefer, and often they do so on the basis of unsound assumptions concerning the seemingly inaccessible, multifarious operation of style in prehistoric communities. The present study seeks to explore an alternative method for the study of ceramic styles, focusing on *objectively* delimited design structures as revealed by aspects of “sub-design” variability. A collection of late prehistoric decorated ceramics from eastern Arizona are used as a preliminary case study to investigate variation in design structure patterns between multiple production centers. En route to a more “unified” approach to style in prehistory, this essay attempts to provide an alternative, less subjective means of reconstructing prehistoric cognitive processes and relating these to meaningful correlates in sociocultural organization and interaction.

INTRODUCTION

The study of decorative patterns on painted pottery of the prehistoric Southwest has underwritten nearly a century of substantial archaeological investigation. The documentation of stylistic trends evidenced through the temporal and geographical distributions of painted wares has allowed for the relative dating of nearly all

archaeological contexts where broken pottery is present. In addition to chronology building, avenues of social interaction within and between regions have been inferred from the patterning and distribution of ceramic styles. More recently, attempts have been made, with varying degrees of success, to investigate intra-site social organization, based on the frequency and distribution of stylistic elements and motifs in ceramic assemblages within prehistoric communities (cf. Longacre 1970). Despite such applications, research on these issues has proceeded in an *ad hoc* fashion, in the absence of a coherent, culturally relevant theory of style and its operation in the prehistoric past.

More recently, a positive trend has emerged wherein greater detail is devoted to exploring the operation of ceramic styles in the cultural spheres of the individuals who manipulate them. Nevertheless, the concept of style in Southwestern ceramics continues to be ill-defined. The conventional explication relies on the covariance of different sets of elemental decorative attributes, implying that prehistoric potters understood stylistic differences among decorative schemes as nothing more than formulas for attribute and motif blending. We should be cautious, however, in supposing *a priori* that our analytical frameworks of decorative styles are equivalent to those of the ancients. Our constructs are well-suited to questions of chronology, and to a certain extent cultural interaction, but we have yet to establish objective means for assessing how pottery styles were transformed and perceived in prehistory by both individuals and their communities. I suggest this can be achieved by developing a methodology for examining variable patterns of sub-design variation (see Friedrich 1970; Watson 1977) and layout composition of individual ceramic vessels decorated with similar stylistic representations.

In order to realize a more objective approach for the examination of stylistic variation (as hinted above), a case study is explored that is dedicated to the lofty goal of comprehending how a late prehistoric stylistic tradition—the Pinedale Style—was conceived and executed on a group of reconstructed and whole vessels from the Grasshopper region of east-central Arizona. The collection represents a group of Cibola White Ware jars, otherwise identical except for subtle differences in size and decorative presentation. Compositional analyses conducted by Zedeño (1991) make it possible to differentiate between locally manufactured versus im-

ported vessels, and more important, provide a unique opportunity to assess the expression of the Pinedale Style in multiple production centers. This has been accomplished through a careful reconstruction of design execution for each vessel, as revealed by the relationship of brushstrokes (e.g., abutments, overlaps, etc.) and spatial relationships within each design field. I make no argument for a one-to-one correlation between design execution and the potter's perception of the subject matter presented (see Layton 1981:161; Van Esterik 1981:20), but instead I suggest that revealing stylistic formulas (and the learning frameworks they divulge) can serve as a foundation for fruitful inferences concerning the direct and indirect transfer of the "technological" foundation of stylistic designs between potters. Indeed, the focus on the Pinedale Style for the subject of this essay is all the more relevant given Crown's (1992, 1994) argument that wherever this style appears, it signifies participation in a regional cult. This essay speaks directly to this issue, illuminating the relevance of "local" stylistic expressions to the understanding of how broadly defined and distributed styles operated in the prehistoric past.

THE USE OF STYLE IN ARCHAEOLOGY: GENERAL CONSIDERATIONS

From an archaeological standpoint, style can fundamentally be defined as a method for doing something, distinctive from other available choices in the appearance of its end product or, in other words, a patterned set of attributes that occur consistently in similar contexts (Hegmon 1991:9). Beyond this generalized description, the purpose and contextual meaning of prehistoric styles are hotly contested. This debate is characterized by two (overlapping) schools of interpretive thought: The traditional, functionally minded perspective states what is useful in terms of how archaeological style is passively expressed in the material record, contrasted with a more fashionable perspective concerned with the communicative or active nature of stylistic efformation.

An expression of the former theoretical school is advocated by Sackett (1977, 1985, 1986, 1990), who has argued that style represents what is knowable by archaeologists in terms of raw variations in material items—intrinsically devoid of intentional symbolic content. The isochrestic model he outlines argues that stylistic variation in the archaeological record is passive, the result of a "spectrum of equivalent alternatives, of equally viable options, for

attaining any given end in manufacturing and/or using material items" (1990:33). As such, the use of stylistic variation in research is best suited as an analytical tool for revealing temporal and spatial systematics (Hegmon 1992:518). As for the symbolic or ethnic content of stylistic expression, he cautions that there exists a proclivity to accentuate "data [that] can be translated directly into statements about human behavior couched in functional terms that find sympathetic vibrations in much of anthropological thought" (1990:36). For Sackett, style is inherently passive but "nonetheless functions iconically because people automatically react symbolically without prodding . . . [and] messages are far more often read than deliberately sent" (1990:37). This is an important point that I will address shortly.

Where Sackett argues for the symbolically inert nature of most stylistic variation in material culture, a more liberal research perspective has furthered our investigation of the active role in cultural spheres (cf. Braithwaite 1982; Braun 1991; articles in Conkey and Hastorf 1990; Graves 1981, 1982; Hays 1992; Hegmon 1986, 1989, 1990; Hodder 1982; Lathrap 1983; S. Plog 1978, 1980, 1990; Pollock 1983; Prentice 1986; Sinopoli 1991; articles in Washburn 1983; Wobst 1977). Wobst has advocated this general perspective, arguing that stylistic expression is "that aspect of artifact form and structure which can be related to processes of information exchange" (1977:335). Although his original argument narrowly defined this sort of exchange as involving "only simple invariate and recurrent messages" (1977:323), recent essays have expanded and refined this approach to elucidate more visually intricate decorative "messages" (see Arnold 1983, Wonderley 1986). Still other researchers have focused on the "production and perpetuation" (after Hegmon 1992) of stylistic expression in social interaction spheres (see Friedrich 1970, Hardin 1991, Kintigh 1985, S. Plog 1980). Most of these works subscribe to the tenet that style served an active (albeit multifarious) role in the communication of anything from group identity to symbolically deep visual messages. As Hegmon puts it, "*not all* material variation is style; rather, style is that part of variation that conveys information" (1992:521; author's emphasis). This interpretive approach suggests—in contrast to Sackett's supposition that the symbolic content of style is often imposed after the fact—that style, by definition, represents a pur-

poseful, often deliberate, and significantly meaningful form of nonverbal communication.

The body of ideas consolidated into each of these semi-polarized theoretical factions are by no means mutually exclusive. Advocates of the "information exchange" model are faced with the reality that there is a "great amount of 'stylistic' variability that cannot be explained by reference to information exchange" (Hill 1985:371). The issue of intentionality is relevant to the determination of which aspects of stylistic presentation fall into the symbolic, iconographic range versus what we might refer to as purely individualistic, aesthetic, or otherwise. A significant degree of the meaning we perceive in material style may be a byproduct of the user's willingness to read more into a particular "message" than the creator intended (a point I alluded to earlier; see Sackett 1990). Moreover, style is as much determined by the intent of its author as it is by the medium through which it is expressed, which has a direct effect on the expression of the style its ability to function (in whatever capacity intended). Complicating this further is the reality that cultures have very specific rules concerning the depiction of visual representations from one medium to the next (see DeBoer 1991). Clearly the focus on an *active* versus *passive* dichotomy oversimplifies a more complex distinction.

This brief review of the literature was intended to raise several issues with concern to the perception of style in the archaeological record, as well as demonstrate that we continue to lack a coherent, unified theory of stylistic meaning in prehistory. Indeed, this may prove to be impossible since we find ourselves so far distanced from the prehistoric past that the multiple guises of stylistic expression and their emic contents may never be realized (Melas 1989). As Layton has commented:

...it is impossible ever to investigate someone else's thoughts or intentions directly. They can be understood only via the means he uses to communicate them, and our understanding of such messages is based not on his experience, but our own (1981:11).

Unfortunately, this note of caution has landed on deaf ears in several examples of research on this general topic (see Pauketat and Emerson 1991). The potential for consensus on this issue does exist, however, and would vastly benefit from a greater emphasis on how individualism affects (and is reflected in) the lives of styles. We

must remember that style is not only a material culture variation, but also an important, albeit illusive, component of human social activity (Hegmon 1992). My own bias leads me to prefer a more active interpretation for most styles, and I would argue the relationship between the individual's perception and manipulation of style, and what we would consider the more generalized, culture-wide expression of style, has yet to be adequately explored. Below the surface of generalized definitions of styles, there are patterns of consistency and inconsistency from one material medium to the next. This cultural phenomenon is ultimately a product of an individual's intentions and attitudes, skill and ability, comprehension and insight with regard to what is being emulated and expressed. If we concede that at least some material styles convey, on some scale, nonverbal information, we must begin to accept the individual as both filter and catalyst for stylistic expression. The study of decorative trends (especially sub-design variation) on prehistoric ceramics—which by their nature are prehistoric glimpses of individual manipulations of more broadly defined styles—embodies potential for this untapped source of archaeological insight.

CERAMIC STYLES IN THE PREHISTORIC AMERICAN SOUTHWEST

The documentation of stylistic trends in decorated ceramic wares has served the field of Southwest archaeology in immeasurable ways. A significant amount of this effort, however, has focused on the use of stylistic analysis as an analytical tool for answering questions of temporality and, on a superficial level, issues of ethnicity and social interaction within and between regions. In fact, it would be an understatement to say that our conception of ceramics stylistic trends has been largely dictated by an zealous fascination with dating archaeological contexts and supplementing culture-historical frameworks.

This trend began in the early part of this century, manifest in the classic works of Amsden (1936) and Colton and Hargrave (1937), where detailed, exceptionally comprehensive efforts were made to record decorative trends on prehistoric pottery for means of regional comparisons within specific temporal frameworks. For convenience, types (and more broadly based styles) were designated by the distribution and covariation of similar design elements and the higher-level motifs and patterns they fabricated

among vessels from variable archaeological contexts. According to Colton and Hargrave (1937:14), recognition of a style depended on the presence of “a certain given element, motif, or pattern, on two or more pottery types,” organized in multileveled orders of elements, motifs (groups of fitted elements), and patterns (groups of motifs). This hierarchical framework amounted to a mixing and matching of visual elements and motifs in order to delineate prehistoric formulas for design styles, which according to Amsden, was substantiated by ethnographic studies of modern Pueblo pottery design techniques (e.g., Bunzel 1929, Chapman 1953, Guthe 1925). Styles (and types to some extent) were thus characterized according to the presence/absence of a corpus of seemingly independent elements (e.g., terraced elements, scrolls, solid triangles, diamonds, etc.).

Despite a relevance to the concerns of culture-historical research, the implicit assumption in these *etic* frameworks was their accurate reflection of the prehistoric conception of stylistic design variation. As one recent critique has noted, these early researchers provided “no systematic evidence to support their segmentation of the design...[or no evidence] that the producers of Southwestern ceramic decorations recognized the same geometric figures that we do, or that they conceived of or used such geometric figures in any ‘elemental’ way” (Jernigan 1986:5). Moreover, the “attributes upon which these studies are based, whether they are called design elements, design motifs, or some other term, often...are not defined...[which] creates problems in interpreting meaning of variation in the units isolated” (S. Plog 1980:42).

An alternative means of stylistic analysis and documentation—a self-professed non-hierarchical method—has been outlined by Jernigan (1982, 1986). Liberating himself from the traditional element-motif-layout framework, he aims to identify the “units of design as they were conceived by the workers of the style,” through the identification of emically significant schemata (defined as configurations or patterns of configurations that “retain distinct identity” from one vessel context to the next) (1986:9). Unfortunately, the originality of these statements and attractiveness of his technique mask several theoretical flaws, most notably that it is ultimately subject to the same methodological barriers as the traditional hierarchical approach. As Douglass and Lindauer have acutely noted, the “evidence that a given schema was con-

ceived as a design unit by the maker is in effect the manner in which the schema appears within the design *as recognized by the analyst*" (1988:623; author's emphasis). While Jernigan claims to have identified the primary or meaningful aspect of the design structure, he seems to confuse the use of emic/etic distinctions (see Douglass and Lindauer 1988; Melas 1989). Moreover, his process of schemata delineation is arguably burdened by the same degree of subjectivity as the traditional element-motif-pattern framework he rejects.

These general theories seek to elucidate emic information in stylistic media with mediocre success at best. Unfortunately, we have no clue as to the prehistoric perception of stylistic variation and its expression on the surface of ceramic vessels—save for a handful of ethnographic analogues. Amsden (1936) originally substantiated his structural approach with reference to the ethnographic studies by Bunzel (1929) and Guthe (1925), in which the decorative process among individual contemporary Pueblo potters was documented. Despite Amsden's "culture-historical" emphasis on categorizing the elemental structures of pottery designs for research concerns of his day and age, he does allude to the analysis of the overlap relationships of "painted lines" as means of revealing individual design structures (see also Hagstrum 1985, Hill 1977, Shepard 1965:259-66). Indeed, it is this most reducible design aspect—the individual brushstroke—that may lead us to a more coherent perspective on a visual design structure and the interpretation of stylistic variation in general. If we consider that each of these movements represents intent, then perhaps we should narrow our vision of stylistic variation to a level at which the lowest-level instances of decision making are considered. Without confusing the issue prematurely, I borrow a statement (out of the author's original context) which speaks of "attributes...equated with decisions, whether conscious or unconscious, made by the artisan during the manufacturing or decorating process" (S. Plog 1980:41). A focus on the design structure as it is constructed by the lowest-level attributes—not elements per se, but rather the individual brushstroke itself—may offer an avenue of analysis and style definition free from subjective classifications. These attributes and their sequences, in fact, would seem to "embody the way a culture perceives, categorizes, and organizes a particular segment of its world" (Washburn 1983:4).

Drawing on earlier works (e.g., Bunzel 1929 and Guthe 1925),

Hardin (1979, 1983), Friedrich (1970), and Lathrap (1983) have explored the issue of design structuring on decorated ceramics at the level of individual production. According to Hardin, a design structure "is the cognitive system underlying particular style...[which] provides the artist with a means of organizing the information needed to create objects in that style" (1983:8-9). This design structure is ultimately knowable to the modern eye by way of the "evidence provided by observations of the ordered steps used to construct decoration [i.e., brushstroke sequences]" (1983:9). This sort of careful documentation provides not only the opportunity to assess the individual's role in the life of a shared community or regional, etc., style, but also the ways in which *individual* mannerisms, material constraints (e.g., paint quality, brush size), motor skills and abilities, and aesthetic criteria all contribute to the appearance of the design structure (see Friedrich 1970:340-1). Revealing this design composition can address questions concerning individual proficiency and artistic idiosyncrasies, as well as provide significant insights into the individual's conception and propagation of what appear as "culturally recognized, appropriate, grammatically correct" design structures underlying our stylistic classifications (Lathrap 1983). I would argue that careful analyses of these design structures provide a rare opportunity to encounter the individual prehistoric mind as it relates to the content and utilization of cultural styles over time and space.

A CASE STUDY OF THE PINEDALE STYLE: METHODOLOGY AND GENERAL CONSIDERATIONS

The present study seeks to investigate the aforementioned issues by focusing on the depiction of a singular stylistic representation on ceramic vessels originating from at least two late prehistoric production loci in the Southwest. The study collection consists of 26 Cibola White Ware jars collected from the prehistoric sites of Chodistaas (A.D. 1263-mid 1290s) and Grasshopper Pueblo (c. A.D. 1280s-1400) in east-central Arizona (see Figure 1), all distinguished as either locally or non-locally produced, according to chemical composition analyses, such as neutron activation and ICP spectroscopy analyses (Zedeño 1991).¹ All vessels are whole or reconstructed, variably sized versions of the same class (medium- to large-sized *ollas* or jars), and the decorative content embodied on the black-on-white painted surfaces displays repeated representa-

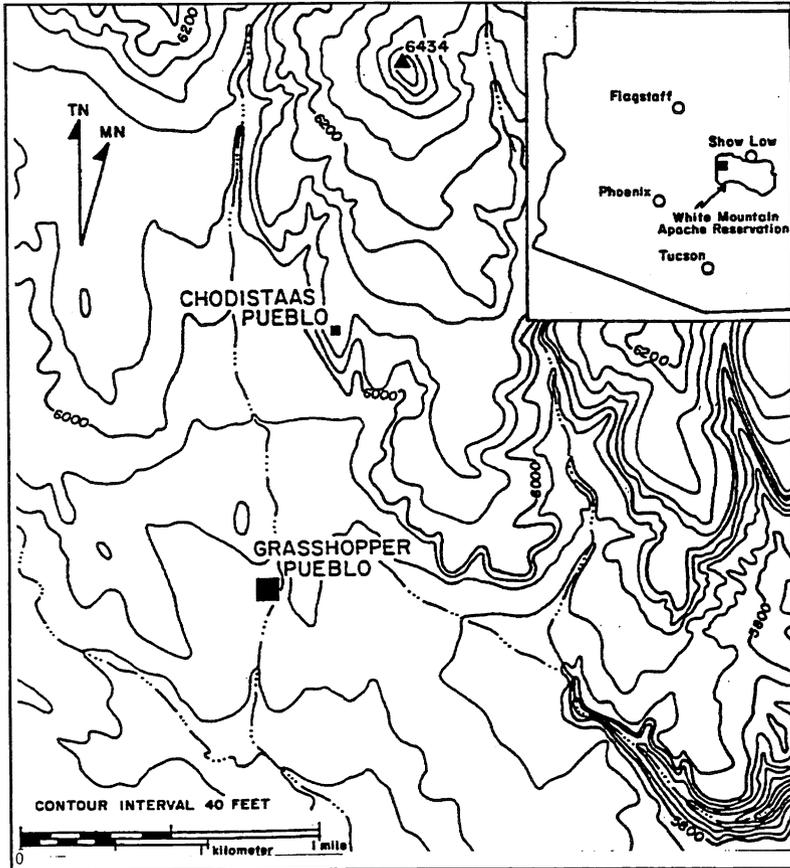


Figure 1: Location of Grasshopper and Chodistaas Pueblos

tions of interlocking or opposed solid and/or hatched figures in presentations that have generally been defined as the Pinedale and Tularosa styles (Carlson 1970, 1982; Crown 1981). The provenience of each vessel, and the archaeological context in general, was not considered in this brief study (as I am emphasizing methodology here), but these aspects would certainly be a necessary parameter for further research.

Crown (1981:67) characterizes the entire assemblage at Chodistaas as Pinedale Black-on-white ($n=9$ in this study), despite their embellishment with Tularosa stylistic designs (with one exception); the non-local ($n=6$) and local ($n=10$) Grasshopper pots are

all labeled Pinedale Black-on-white, and with few exceptions, all embody the Pinedale Style. Though this essay concentrates on the expression of the Pinedale Style in the Grasshopper examples, the Chodistaas material has been included as a "control group" to enhance the sample size. The latter vessels were likely manufactured slightly earlier than the Pinedale Style examples but fall within the same compositional groups as the non-local Grasshopper material (i.e., the same "foreign" localities may have contributed to the non-local stock at both sites; see Zedeño 1991:182, Table 19). Moreover, the Tularosa and Pinedale representations are closely related on the basis of visual criteria, so much so that the latter has been interpreted as a "predecessor" (and contemporary) to the former (see Crown 1981:67).

Carlson has defined the Tularosa Style as characterized by six to eight repetitions of "wide hatched units...interlocked with a medium width solid unit of approximately the same form" (Carlson 1970:90). Hatchured areas are equal to or *greater than* adjacent solids, and motifs incorporated include scrolls (or spirals), double terraces, vertical sawtooth edges, and frets; "classic" Tularosa examples are marked by fine line work and hatching, with framing lines of equivalent size to hatching lines (Crown 1981:296; Zedeño 1991:185). The Pinedale Style is differentiated from the Tularosa Style by panel presentations repeated only two to four times and hatchured areas equal to or *less than* adjacent solids. Motifs basically parallel those in the latter style, less the double terrace motif. The appearance of quartered-diamond designs (which produce "offset quartered layouts"), interlocking hatchured and solid scrolls, and a generally bolder and negative appearance, are diagnostic characteristics for the Pinedale Style (Crown 1992:2; Zedeño 1991:185). It should be noted both the Tularosa and Pinedale Styles crosscut ceramic traditions, appearing, for example, on both Cibola White Ware and White Mountain Red Ware (Carlson 1970).

The present case study sought to extend these visual, purely etic descriptions, by searching for patterns in the execution of each vessel's design structure. This was achieved in the careful documentation of the overlap and ordering of brushstrokes, the organization and interrelationships of framing lines, the distribution of different brushstroke sizes, and the overall spatial partitioning of the entire design field (see Shepard 1965:203-206, 264-266). The sequencing for each vessel was mapped and described on stan-

standardized forms, outlining whenever discernible, each singular brushstroke motion as it contributed to the construction of the entire design field. In addition to these sequence reconstructions, general descriptions of hatched characteristics (e.g., lines per inch) and various visual idiosyncrasies were noted, and to a limited extent, measurements of repeated features as well (allowing for a more objective judgment of spatial delineation around the entirety of the design field). The use of whole pots afforded the rare opportunity to view a coherent and complete picture of the utilization of a stylistic design by an individual potter.

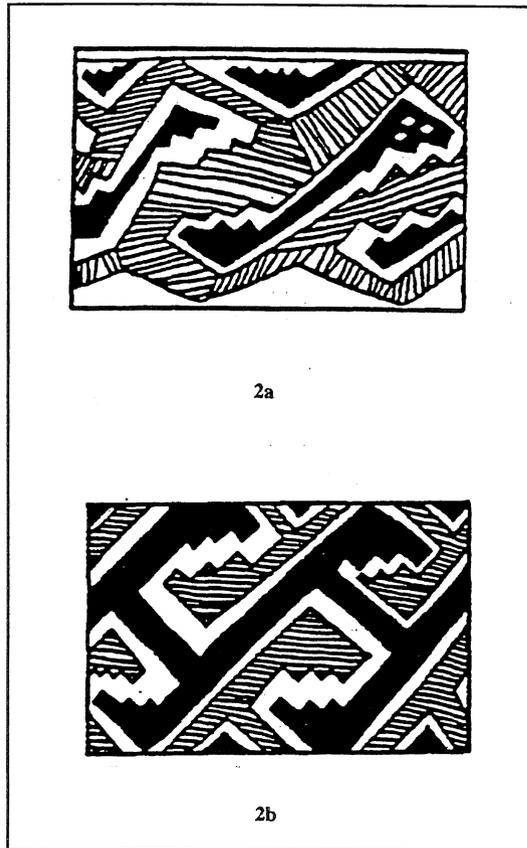
Design sequences for each vessel were established to assess to what degree stylistically comparable representations masked underlying variability in execution and conceptualization (i.e., of what is being depicted). I submit that each vessel reveals a moment in time in which we are able to glimpse an individual's expression of what is otherwise broadly categorized under the rubric of a single style. This project anticipates a more dynamic definition of the Pinedale Style, taking into consideration relevant parameters—material constraints (paint and brush quality, available design space), personal ability and individuality (Hill 1977), and individual comprehension and cognition of Pinedale Style “grammatical” rules—en route to a more sentential understanding of the operation of these visual fashions in the prehistoric past.

Since it is possible the local potters at Grasshopper were emulating the designs adorning the imported Cibola White Ware jars, I anticipated differential patterning in the design execution of these local examples, reflective of an indirect (i.e., person-to-pot) learning framework involved in the conveyance of this style among production loci. Given the widespread distribution of ceramic styles during the late prehistoric period, it is likely that movement of people was commonplace, and it is entirely possible that direct (i.e., person-to-person) learning-interaction exchanges occurred. This possibility would theoretically be reflected in patterns of homogeneous visual representations and matching design sequences between the local and non-local examples. I should note that my presumption concerning one decorated pot to one individual “artist” may be in need of qualification. Guthe (1925:69) mentions, for example, that multiple members of the same household contributed to the decoration of single pots; although I see no evidence for this in the Grasshopper pots (non-local or local),

several Chodistaas examples hint at the participation of more than one individual in the design execution.

RESULTS OF THE STUDY

The Chodistaas vessels in the study revealed significant variability in visual design content from one vessel to the next though they are all classified as Tularosa stylistic designs. This may, in part, be due to the temporal span from which the collection is drawn (see Montgomery and Reid 1990), as well as the fact that they reflect three different compositional groups (contrasted with one group for all non-local vessels from Grasshopper). In addition to outward

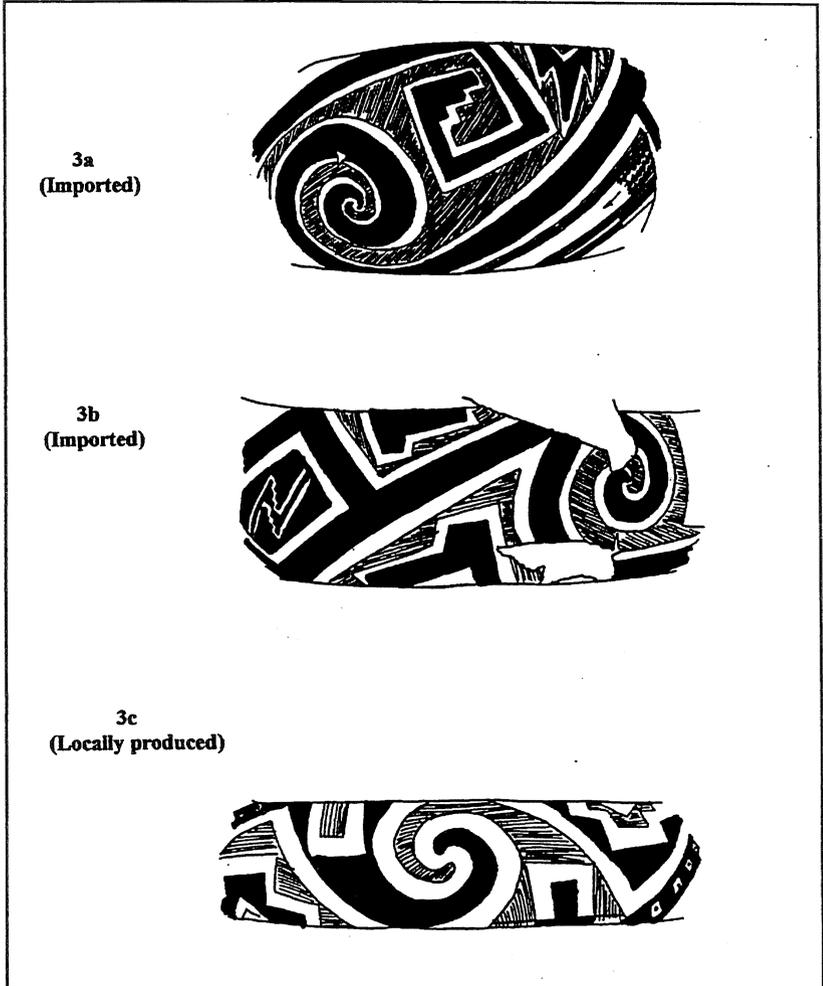


Figures 2a and 2b: Panel Details from Pinedale Black-on-white Jars (Tularosa Style), Chodistaas Pueblo (not to scale)

appearance, the design structures and brushstroke sequences reveal a great deal of latitude as well. Two examples (see Figures 2a and 2b) display very similar visual designs—eight repetitions of solid, double-ended stepped elements, surrounded by hatchured areas. The result on the former example (Figure 2a) is a presentation of interlocking hatchured and solid elements (a diagnostic for the Tularosa Style), whereas a less “unifying” brushstroke formula can be seen on the latter example (Figure 2b), in which solid stepped figures are unconnected (creating a completely different effect). Moreover the treatment of the upper and lower horizontal framing lines (in terms of execution order and brush size selection) are finished on a manner dissimilar from very consistent treatments in the other 24 study vessels (with the exception of two Grasshopper examples).

Nearly all of the Chodistaas vessels adhere to a roughly defined design formula in a summarized sequence beginning with upper and lower borders that divide the space (and vertical division framing lines in three examples), followed by outlines for solid features (six to eight repetitions), outlines for hatchured areas, and finally solid filling and hatching of outlined areas. However, slight exceptions or inconsistencies to this sequence appear on nearly every vessel examined, and would appear to be the result of personal or individual styles. Moreover, three Chodistaas vessels display inharmonious characteristics that may reflect, as hinted earlier, the participation of more than one individual in design painting. In general, the design structures are more consistent than the pure visual content of each vessel, but no unified theme appears to be manifested in the brushstroke sequences themselves. The collection is admittedly too small and the representations too varied to attach substantial cultural significance to this conclusion, but it would appear that beyond a few shared decorative techniques and methods, both the visual appearance and learning frameworks manifest in their design structures were highly variable.

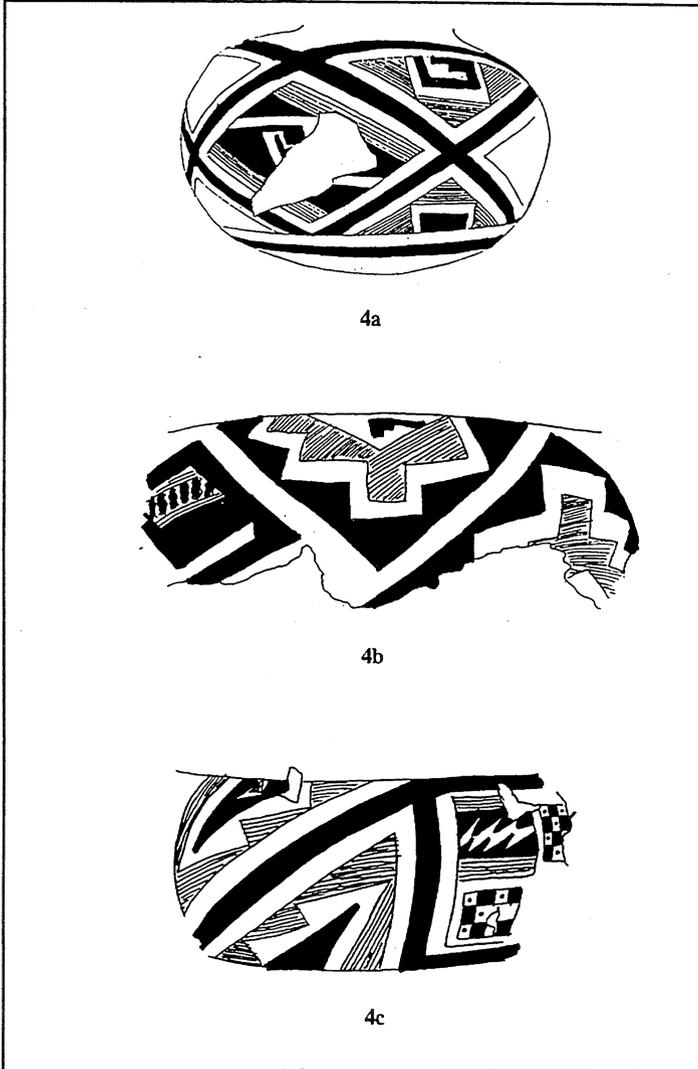
Compared with the non-local vessels at Chodistaas, the design sequence analysis of both the locally produced Pinedale Style vessels and the imported vessels from Grasshopper revealed interesting patterns. Nearly all the vessels display diagnostic features for the Pinedale Style, characterized by sweeping representations of solid and hatchured interlocking scrolls coupled with quartered-



Figures 3a–3c: Non-local and Local Pinedale Black-on-white Jars (Pinedale Style), Grasshopper Pueblo (panel details not to scale)

diamond features and, in a few examples, sweeping, double-ended interlocking solid and hatched scrolls (less the quartered-diamond motif) (see Figures 3a–3c; see also Figure 5). The brushstroke sequences for these vessels are remarkably consistent. Briefly summarized here, the design formula begins with upper and lower framing lines representing the first step (upper solid band filled later), followed by the solid scroll and/or diamond outlines, adja-

cent hatched area outlines, "outer" hatched area outlines, filler element outlines (performed one after the other moving away from center motifs), and finally hatching and solid filling. (Inner diamond features fall somewhere in this sequence after the initial outlining stage.) With the exception of personal idiosyncrasies in



Figures 4a–c: Panel Details from Local Pinedale Black-on-white Jars (Pinedale Style), Grasshopper Pueblo (not to scale)

execution (line quality and size, paint composition, equal use of space), and the variable use of small details in periphery areas and diamond interiors (e.g., staggered lines, rectilinear versus barbed terraces), a singular, immutable execution formula is present.

In contrast to these non-local vessels, the eight local Pinedale Style examples display roughly as many variable brushstroke design sequences as there are numbers of representations available for study. The visual content of the majority of vessels is not unlike that of the non-local examples—quartered diamonds, opposing solid and hatched scrolls, and generally bolder appearances (in contrast to the Tularosa Style) clearly distinguish these vessels under a similar stylistic rubric. The means of achieving these visually akin presentations, however, digresses from vessel to vessel. The diamond quarters in the vessel illustrated as in Figure 4a, for instance, are outlined in a radically different sequence of brushstrokes than all other Pinedale Style examples in the study. Following the execution of the upper and lower framing lines, another vessel (Figure 4b) is segmented by offset quarters, formed by lines that extend out from the lower and upper original framing lines to form four triangle field dividers on both top and bottom (followed in sequence by outlines for solid diamonds). On yet another example (Figure 4c), the sweeping effect is undermined by the placement of the diamonds on their flat side. In addition, the number of panel/motif repetitions is seemingly aberrant with respect to typical Pinedale-style “formulas” in several other examples (e.g., one with one quartered diamond and another with five). These illustrative exemplars of variable design structure formulas (and their results), in addition to numerous other clues, suggest the basic visual appearance of these local vessels is comparable to non-local examples (according to the diagnostics defined by Carlson [1970] and others), but the local producers are applying highly variable execution formulas.

The finest example of this conclusion is found in the design organization of a locally manufactured vessel from Grasshopper (see Figure 5). At first glance, the visual presentation is remarkably akin to several non-local examples in this study (to which the potter may have been exposed at one time or another). While the design executions in the latter vessels are uniform and consistent, the execution in the local vessel pictured in Figure 5 is radically different. Following the execution of upper and lower framing

lines, the potter outlined the hatchured scroll (which has an avian likeness) *prior* to the surrounding solid scroll; this had the secondary effect of disjoining the quartered diamonds from the scroll "tails." Despite this deviation from the consistently "proper" execution formula (which has a crafty effect on the presentational

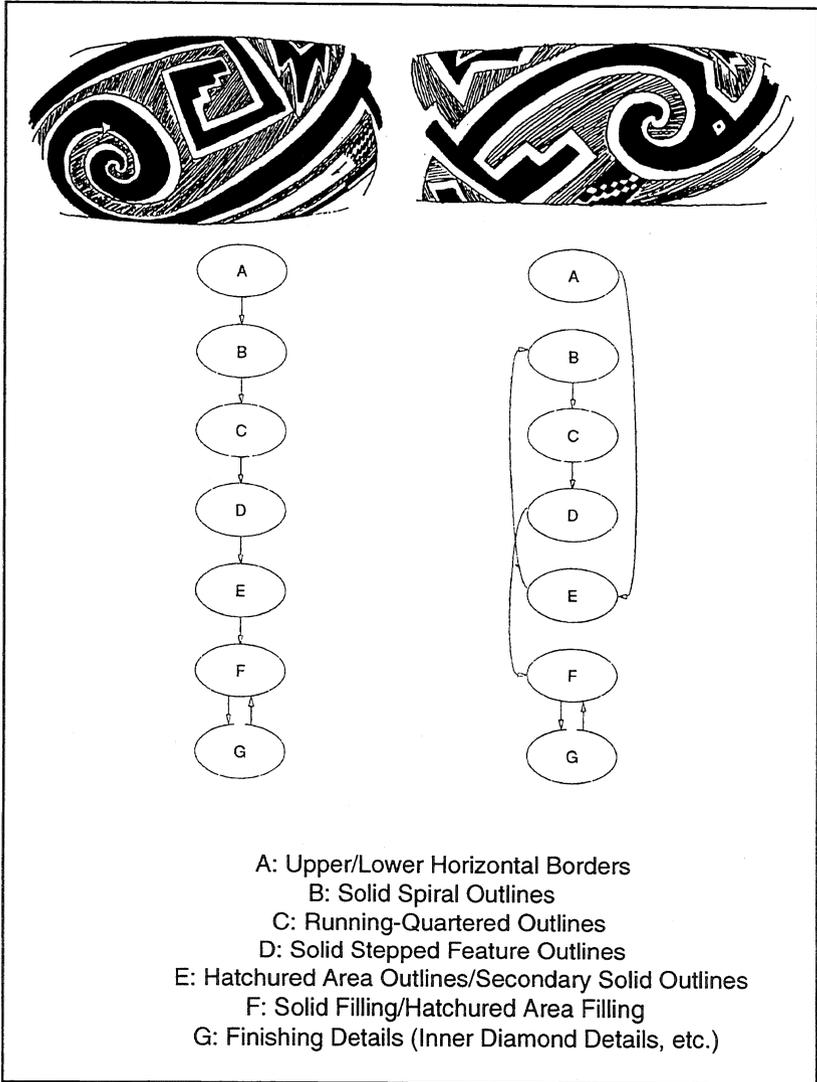


Figure 5: Summarized Design Sequences for Non-local (left) versus Local (right) Pinedale Black-on-white Jars

outcome), treatment of the peripheral areas on this local vessel are otherwise similar to the three vessels mentioned above. I would interpret these execution discrepancies—in a context where the visual quality (as it reflects motor skills, painting abilities, material and technological qualities, etc.) is otherwise comparable—to indicate that the potter is emulating the non-local Pinedale stylistic designs without the benefit of direct instruction. This inference is confirmed by an across-the-board dissimilarity in design executions for local Pinedale Style vessels, contrasted with the consistency in execution in non-local examples from the same site.

INTERPRETATIONS AND CONCLUSIONS

The observations summarized above, in addition to the numerous other brushstroke “clues” revealed in the analysis of each vessel, provide an excellent opportunity to perceive prehistoric learning frameworks as they relate to the transmission and reinterpretation of a stylistic tradition from one potter to the next. This study verifies that a generalized stylistic terminology can mask subtle variations in the perpetuation of both images (and content). It appears that the local potters at Grasshopper were “parroting” designs on imported vessels, with little idea as to how these designs were formulated and executed in their original contexts.

As is the case with other aspects of ceramic technology, the stylistic “recipe for action” (Krause 1985, Schiffer and Skibo 1987) can only be authentically transmitted through “intense interaction between painters” (Friedrich 1970:337). This is not to say that the style is reproduced incorrect—features such as the quartered-diamond and interlocking solid and hatched scrolls are duplicated conscientiously but with “hypothetical,” inconsistent design formulas. This would appear to signal the presence of *indirect* learning frameworks (i.e., pot-to-potter interaction) for the transmission of this stylistic repertoire. With indirect access to non-local stylistic “recipes,” these conclusions hint at the possibility that variability in “local” Pinedale Style design executions signal a lack of uniform conceptualization (or multiple-meanings) associated with this widespread late prehistoric style.

Crown has recently argued that “because decorative styles indicate group affiliation and help to maintain group boundaries, the unprecedented widespread adoption of the Pinedale Style is strong evidence for a changed social identity in the Southwest,”

and thus "wherever the Pinedale Style appears it is associated with the adoption of a regional cult, as evidenced by a suite of redundant and ubiquitous icons that appear...and increase in frequency through time" (1992:4; see also Adams 1991). The apparent rapid replacement of the Tularosa Style with the Pinedale in the Grasshopper Region likely relates, in some capacity, to these late thirteenth century demographic shifts in the northern Southwest (see Carlson 1982; Graves 1982, 1984; Montgomery and Reid 1990; Zedeño 1991, 1992). Indeed, the Pinedale Style appears in the Grasshopper region during this period and is quickly adopted and replicated with local resources. Given Crown's assertion, this would seem to indicate that the Grasshopper occupants are subscribing to a fresh set of ideas associated with the expansion of a group of iconographically depicted "religious" concepts. The evidence presented in this study, however, challenges this sweeping theory. Although the local Grasshopper potters were painting Pinedale stylistic designs, the remarkably variable individual design executions are in no way indicative of a shared, coherent, or direct learning framework, and thus would seem to bear out the extent of the "local" (and individual) comprehension of a broadly defined stylistic tradition. This argument relies on the precarious assumption that this methodological approach is a worthy measure of prehistoric perceptions of stylistic meaning; perhaps these variations in design sequence, on the other hand, *do not* relate to how potters (and their communities) comprehended the "significance" of prehistoric styles. In any case, however flawed this case study may appear, I have attempted to provide a technique for stylistic analysis that can minimally claim to have taken important steps towards *objectively* considering "ancient mental phenomena" (after Cowgill 1993:568).

The stated goal of this essay was to explore an alternative method for defining style that would allow us to distance ourselves from traditional, subjectivity-ridden frameworks. I have provided a preliminary methodology that allows us to assess the prehistoric individual as he/she interacts on an individual scale with the "lives" of stylistic traditions. The "analytical" approach developed here has allowed for an exploration of prehistoric mental or cognitive structures by way of a unique investigation of the lowest-level "technology" of decorations on ceramic surfaces. Although this brief essay has not addressed all conceivable analyses of sub-design

variation, I have attempted to provide one preliminary application and at least a few inferences with regard to the social correlates of the patterns in design structure variation observed.

The ideas and methods explored here are unrefined, but I suspect that a more coherent and prosperous technique for stylistic analyses of ceramic collections and other materials—one that reaches for criteria beyond elementary visual similarities—could likely evolve from the concepts explored herein. I would argue that a coherent theory of style in archaeology will be forthcoming only in the event that researchers begin to reexamine the usefulness of identifying the “individual in prehistory.”

ENDNOTE

¹ Local production here is defined as production within the general locale of Chodistaas and Grasshopper, with locally procured clays; non-local production involves the manufacture of pottery outside the Grasshopper Plateau, with non-local materials (see Zedeño 1991:56-7).

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