Chapter 8

Basketry of Northern California Indians

Interpreting Style Hierarchies

JOHN PRYOR AND CHRISTOPHER CARR

Archaeologists have defined style in a variety of narrow manners. Each definition has focused on a different, limited set of determining processes, some more active (e.g. Wobst 1977; Hodder 1982; Wiessner 1983), others more passive (e.g. Longacre 1964; Hill 1970; Sackett 1977; Hill and Gunn 1977). In contrast, the goal of this chapter is to help develop a more unified understanding of style that encompasses all determining processes and that integrates the various past views of it.

Toward this end and paralleling other chapters (Roe, Chapter 2; Carr, Chapters 6, 7; Rosenthal, Chapter 10), we make several suggestions for conceptual and analytical synthesis. First, we widen the definition of style to include those aspects of material culture that reflect any of the broad continuum of active to passive processes shown in Table 8-1. By active stylistic processes we mean those that are or can be directly controlled by the individual artisan. These include the well-known general processes of messaging, as in the stylistic communication of group membership within and between groups or among individuals. However, active processes also include the manipulation of power relations between high- and low-status individuals or families. By passive stylistic processes we mean those that are less directly controlled by the artisan. These include processes that result from social organizational, symbolic organizational, or historical constraints at the cultural or family levels; uncontrollable technological constraints; personal biological limitations or motor skills; psychological constraints; and other constraints on style content of which the artisan is not aware.

The second suggestion we make for synthesis is that multiple processes or constraints can affect the style of the same medium or item. Also, different processes or constraints tend to operate at different sociocultural and geographic scales, and to influence different stylistic attributes, which vary in their physical and technological characteristics. These patterns we illustrate through the analysis of ethnographic and museum data on the styles and the determinants of styles of northern California Pomo Indian baskets, which were studied by Pryor (1987a) for his dissertation research. Stylistic

JOHN PRYOR • Department of Anthropology, California State University, Fresno, Fresno, California 93701.
CHRISTOPHER CARR • Department of Anthropology, Arizona State University, Tempe, Arizona 85287.

Table 8-1. A Continuum of Some Active and Passive Processes and Constraints That Affect Style, and That Are Considered in This Chapter

Active processes
Ethnicity
Between groups: boundary maintenance (Wobst 1977)
Within groups: promotion of solidarity (Wiessner 1983)
Active interaction: the conscious attempt of an artisan or group to integrate with another group through stylistic mimicry.
Negotiation of social status relations among families: using style to establish and reassess relationships between families, as opposed to the better known process of using style to reinforce or resist status relations among individuals (see below in table). The process is illustrated in California Indian gift baskets (Pryor n.d.), and has a function similar to the potlatch among Northwest Coast Indians.
Negotiation of status relations between individuals outside of the family
Reinforcing high status (Wobst 1977)
Resisting high status (Braithwaite 1982; Hodder 1984)
Intrafamily power relations: power relations among family members, especially the old and young
Individual artisan's inspirations
Passive processes
Shared culture history
Artisan's personal preferences
Passive interaction: casual learning and diffusion of aspects of style through the contact of members of two groups.
Closely interacting artisans (Friedrich 1970)
Less personal interaction (Pryor 1987): When a style is borrowed through casual interaction of groups, it can be filtered and modified by (a) feelings of group identity and (b) beliefs about which groups from whom it is appropriate to borrow (McGuire 1981).
Personal history of the artisan and their family as a summary of lifetime interactions
Enculturation (Hill 1970; Longacre 1964)
Motor skills (Hill and Gunn 1977)
Technology of construction and raw material constraints
Raw material availability, in some environments

patterns at four socio-spatial levels of integration will be presented: the individual, family, community, and sublanguage group. A similar spatial research design was used by Wiessner (1983).

Table 8-2 lists the processes and constraints that one might theoretically expect to operate at each socio-spatial level and those that were found empirically to affect basket style in this case study. A brief summary of these empirical patterns follows, in order to provide the reader with a general, guiding perspective for considering the more detailed documentation presented below.

At the level of the individual artisan, the weaver's preference for certain designs, forms, and materials used in basket construction proved to be an essential determinant of basket style. These are the attributes that Pomo basket weavers, themselves, use to identify the makers of baskets. Motor skills are another important factor.

At the level of the family and interacting artisans, several processes were found to have an important effect on basket style. (1) Enculturation is most basic. The data to be presented show that the closest stylistic links within the family appear to be between mothers and the daughters to whom they taught basketry. (2) Intrafamily power relations are also significant. They take two forms. First is the unequal power relation between the high-status, older teacher and the low-status, younger student. Second are the power relations between in-laws, which encourage or discourage stylistic transmission across the semipermeable social boundaries between families. (3) The effects of passive interaction are also evident. As social distance between Pomo artisans increases and their opportunities for interaction lessen, their basket styles become less similar. (4) The personal history of

Table 8-2. Some Processes and Constraints That Affect Style at Various Levels, and That Are Considered in This Chapter

Level	Process or constraint
Individual level	*Artisan's personal preferences
	*Artisan's personal inspirations
	*Artisan's personal motor skills
	Technology of construction
Family and interacting artisans level	*Enculturation
	*History of the family and its members as a summary of lifetime interactions
	*Power relations between teacher and student within and outside of the family
	*Passive interaction
	*Technological dependency of design on weave, and its impact on enculturation
Community level	Between-group ethnicity, where boundary maintenance is important
	*Within-group ethnic solidarity
	Negotiation of social status relations among families
	Negotiation of status relations among individuals outside of the family
	Technology of construction
Language group and sublanguage group	*Shared culture history
	*Passive interaction
	*Active interaction
	*Technology of construction
	*Raw material availability in some environments

*Factor found to operate in this study of Pomo Indian baskets.

contacts of a weaver with other weavers or their products affects her basket style during and after she learns the basics of weaving from her mother or grandmother. (5) The technological limitation of design execution and basket shape by weave pattern can constrain the basket styles produced by a weaver. A weaver can be cut off from some of her mother's repertoire of designs and basket shapes if she does not learn all of the weaves that her mother knows.

At the community level, ethnicity as a product of both boundary maintenance behaviors between groups and processes that promote solidarity within groups can influence stylistic patterns. However, in this study, only the latter is evident. It appears that Indian communities of the North Coast Range used style more to integrate people than to exclude them (see also Washburn, Chapter 4). This finding is consistent with known hunter–gatherer adaptations, which often stress maximizing kin ties, and supports Wiessner's (1983) interpretation of !Kung projectile point styles. It is possible that boundary maintenance does not become a critical adaptive strategy, and that style is not used for this purpose, until the development of agriculture and extensive food storage made social exclusion and restricted food-sharing important.

At the level of the language group, it appears that the broad stylistic patterns among Pomo baskets are set by shared culture history. However, these patterns are later blurred by passive and perhaps active interactions. Another important factor that affects style at this level is the technology of construction, as predicted by the unified theory of artifact design (Carr, Chapter 7). The availability of raw material as an influential factor was somewhat mitigated among the Pomo by extensive trade.

The stylistic attributes that are affected by these processes vary in their visibility and their placement in a manufacturing decision hierarchy, as defined in Chapter 7. We will explore some of the relationships between attribute visibility, attribute manufacturing decision level, and the construction process, both supporting and extending the unified theory of design in Chapter 7. For example, as predicted, at the level of interacting artisans, the distribution of less visible attributes among the

baskets of friends, half-sisters, in-laws, and cousins accurately reflects social distance and interaction patterns, whereas more visible attributes are sometimes shared more widely. Similarly, at the sublanguage group level, the less visible attribute of weave reflects interaction patterns more consistently than do the more visible attributes of basket shape and design cluster. However, it will also be shown that visible attributes can reflect patterns of interaction when they appear on artifacts that are used in less visible contexts, such as inside the house. Differences in the form of the style distributions of Pomo mush boiler baskets and Kalahari San projectile points illustrate this. Finally, we will show that the hierarchy of decisions involved in planning and creating baskets is not a linear sequence. Rather, it is a complex network of constraints with an overall direction; also, at any single decision stage, multiple decisions about different attributes may be made simultaneously, in a coordinated or independent manner (see also Carr and Maslowski, Chapter 9).

Several other general issues about material style will also be revealed in the course of this essay. First is the role of power relations within and outside the family in determining patterns of enculturation. Enculturation is not a simple process that can be taken out of context when modeled for its effect upon style distributions (see also Roe, Chapter 2). Second, power relations also determine which persons are allowed to innovate styles (see also Roe, Chapter 2). Also, as a result of changes in power relations through the lifetime of an artisan, her or his style is likely to shift. A third general issue is the manner in which the style of a basket is apparently perceived by the Pomo when identifying its maker. Although documentation shows that the Pomo break down the style of a basket into attributes such as material, shape, and design when perceiving it, they also apparently consider attributes in the context of each other in a more holistic, Gestalt-like manner. These attributes may be of several different levels of visibility. Thus, attributes of a greater range of levels than has recently been thought pertinent to some style analyses and has been used in those analyses (e.g., Plog 1978:161) may actually be relevant.

ETHNOGRAPHIC BACKGROUND

The Pomo and neighboring Indians of Northern California, including the Yuki, Huchnom, Wappo, Hill Patwin, and River Patwin, inhabited the North Coast Range of California (Figure 8-1). At contact and until extensive cultural alteration (1880), these groups were complex hunters and gatherers. They were characterized by private ownership of land and resources (Gifford 1923; Stewart 1943), craft specialization (Loeb 1926:176–181), large villages of several hundred to 1,500 people (Kunkel 1962), and population densities as high as 16.7 persons/sq mi (Kunkel 1962:263). In the historic period, they congregated on lands that they bought or that were provided by the government, called "rancherias," where they blended hunting and gathering with agricultural labor.

The "Pomo" are not a single people. In 1880, California was occupied by a patchwork quilt of mutually unintelligible language groups. "The Pomo," themselves, spoke seven distinct but related languages: Southern Pomo, Southwestern Pomo, Central Pomo, Northern Pomo, Eastern Pomo, Southeastern Pomo, and Northeastern Pomo (McLendon and Holland 1979:106) (Figures 8-1, 8-2). Each language group was composed of a myriad of small, autonomous political units called tribelets (Kroeber 1932:259) (Figure 8-1). Solidarity was felt only within the tribelet, not the language family or language group (McLendon and Holland 1979:106). Although the language groups were culturally similar, there were differences among them as well (McLendon and Oswalt 1978:275). This patchy distribution of political and linguistic groups makes this area interesting for investigating stylistic variation.

Pomo Baskets

Pomo baskets proved to be fruitful for investigating style in two ways: they are decorated and they played a prominent role in Pomo society. Baskets were very important in Pomo subsistence

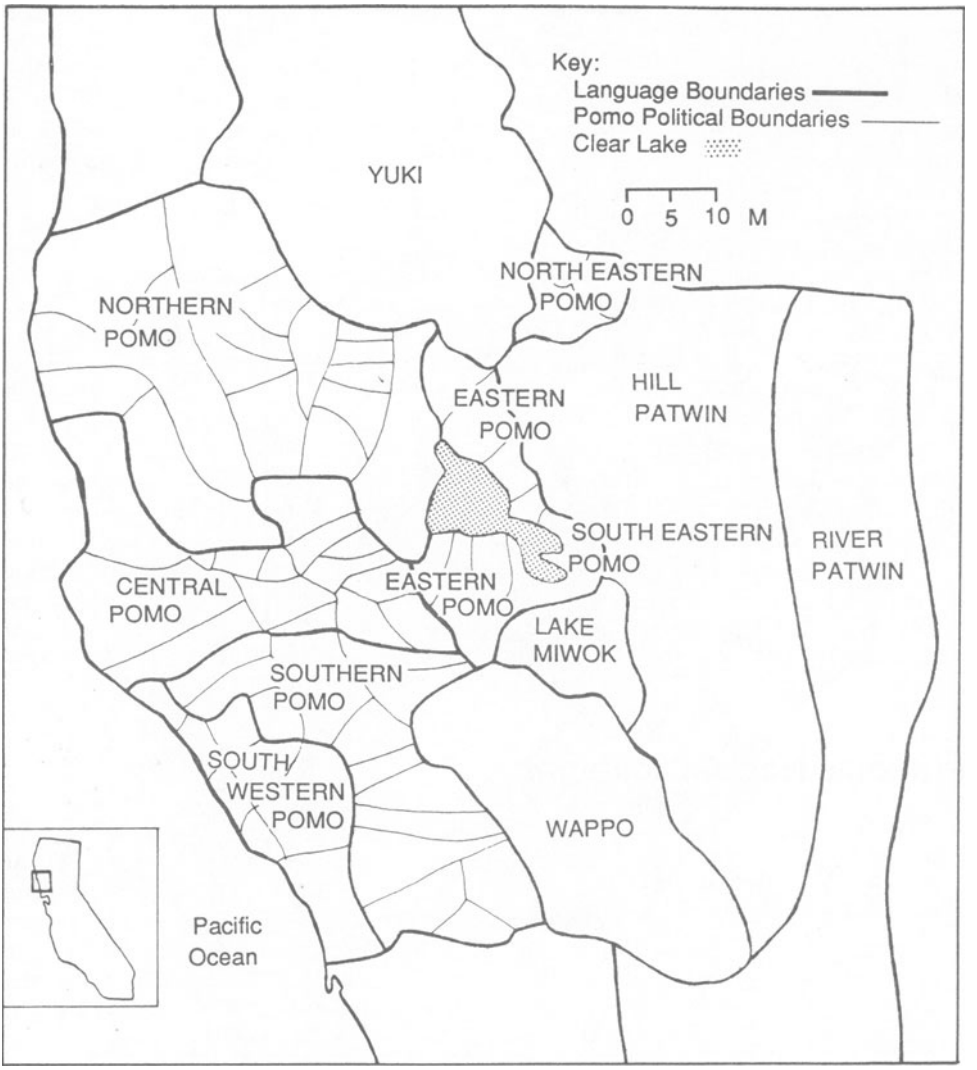


Figure 8-1. Language groups of California and Pomo tribelets of the North Coast range.

activities. They were used to collect and transport acorn and grass seed staples; to trap fish, field mice, rabbits, ground squirrels, quail, dove, and other small birds; and as granaries to store foods. Acorns were ground to flour using basket hopper mortars placed on top of mortar stones. The flour was then sieved through a basket, and in some cases, leached, cooked, served, and eaten in baskets. Grass seeds were winnowed, stored, parched, ground, sifted, cooked, and eaten with baskets. Water was kept in watertight baskets and drunk with a basket cup. Many of these baskets had specialized forms and characteristics for their specific functions (McLendon and Holland 1979:113).

Baskets literally surrounded a Pomo Indian from cradle to grave. Newborn babies were washed in a special basket. Small children were carried about and spent most of their early years in a cradle basket. Young girls were given toy baskets to play with and, at puberty, were given a special basket

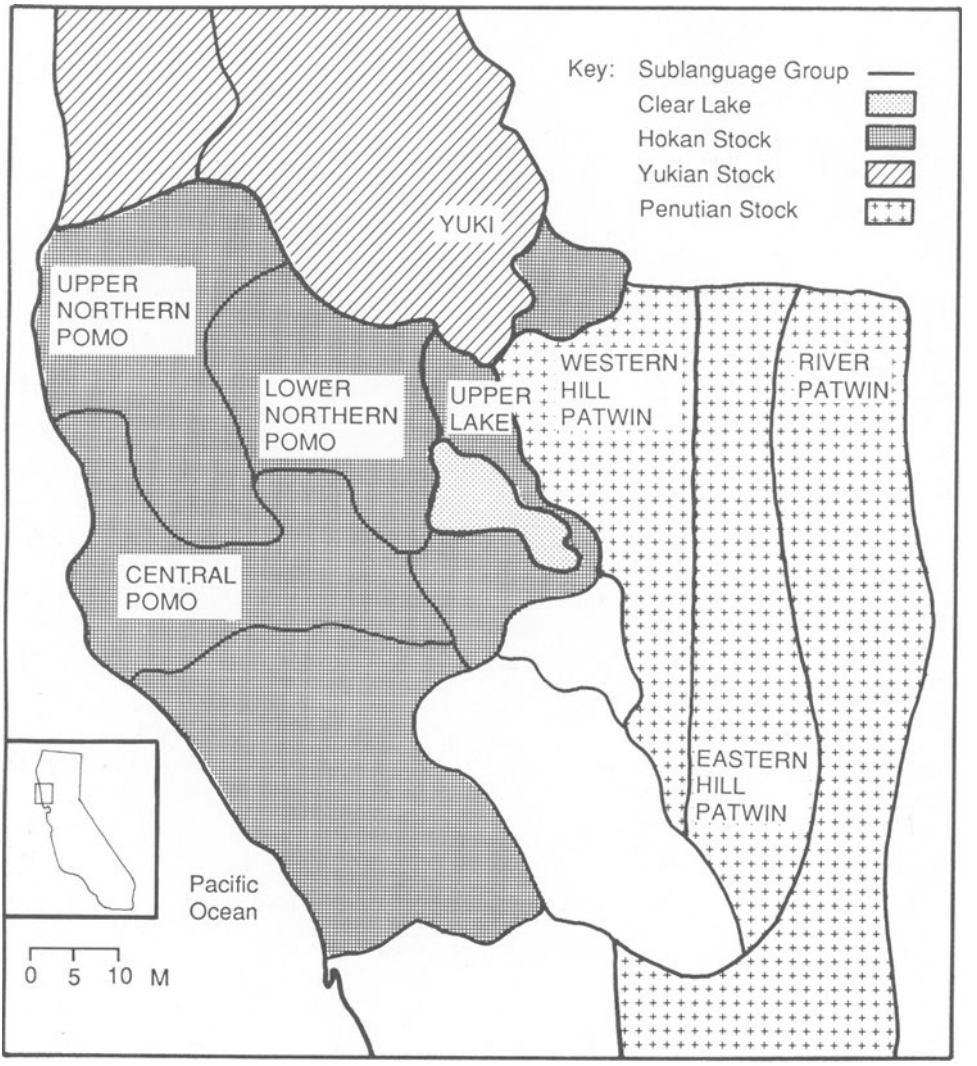


Figure 8-2. Sublanguage groups and their language stocks in the study area.

with which to wash themselves. Gift baskets that were exchanged between families at birth, at weddings, and at death were of central importance and highly decorated. At weddings, they were given by the wife's family to the husband's family. At death, they were thrown on the funeral pyre by family and friends of the deceased (McLendon and Holland 1979:113–115) or, more recently, buried with the deceased.

Baskets were made predominantly by women, although men made some coarse utilitarian baskets. Only women made decorative baskets (Gifford 1923:327; Loeb 1926:176). At contact, all women wove baskets (Gifford 1923:327) but not with equal proficiency. The best basket makers seem to have been in certain families. This variation of proficiency was accentuated by the elaborate nature of Pomoan basketry. Baskets were woven with numerous weaves or weave combinations and

decorated with patterns woven into them, as well as with beads and feathers. Most weavers specialized in one weave and only the best weavers mastered all weaves (McLendon 1981:209).

In the historic period, with the adoption of the White man's utensils and containers, there was no longer a need for every woman to make baskets. This added further to the existing differentiation in proficiency: some families continued to make baskets in order to support themselves in part or in full through sales to White basket collectors, whereas other families did not. Today, the young do not seem to be very interested in the tedious processes of collecting and weaving plant materials into baskets. With few exceptions, the best basket makers today are older women.

RESEARCH DESIGN

The Data

The primary data for this study consist of color photographs that Pryor made of 1,222 baskets from 19 museums and 15 private collections. For each basket, the formal and contextual attributes and attribute states listed in Table 8-3 were recorded.

Rich ethnographic data on the Pomo and their neighbors were also consulted (see Bean and Theodoratus 1978:299–304; McLendon and Lowy 1978:318–322; Pryor 1987:18–78; and citations within). The federal censuses of 1880, 1900, and 1910 were used to establish the social relations between rancherias (e.g., marriage patterns), which persons were living on which rancherias, and those persons' places of origin. Also, Pryor conducted an ethnoarcheological project among living basket makers in the North Coast Range in order to better document his photographs and to investigate the views that the Pomo, themselves, had on style and style boundaries. Eight basket makers—including both renowned and less well-known weavers, tribal and spiritual leaders, old and young tribal members, and persons of different ethnicity—were consulted. They are Mabel McKay, Frances McDaniel, Elsie Allen, Ramona McCloud, Joann McCloud, Magie Carpenter, Susye Billy, and Francis Jack.

Formal Basketry Attributes in Theoretical Perspective

In Chapter 7, Carr presents a unified middle-range theoretical framework that links the visibility of formal attributes of material culture, and their placement in a hierarchy of manufacturing decisions, to each other and to many processes that determine such formal variation. The basketry attributes examined in this chapter can be organized within this framework (Table 8-4, Figure 8-3) and used to illustrate and qualify it. In subsequent sections, we will refer to this organization of the data when examining the spatial distributions of basketry attribute states at multiple scales and the processes that determine those distributions.

Following the procedures defined in Chapter 7, basketry attributes can be ranked according to their relative visibility in an unambiguous, sequential manner (Table 8-4). In contrast, ordering them according to their role in manufacturing decisions (Figure 8-3) defines a complex network of dependencies with overall directionality, rather than a simple, single, sequential hierarchical structure. Also, at some single decision levels, multiple kinds of decisions can be made simultaneously, in either a coordinated manner (e.g., raw material and color) or independently (e.g., basket size, body shape, raw material). This decision structure is common to many media, such as painting, drawing, and fabric weaving (Carr, Chapter 7).

The decision structure of basket making is most similar to that of fabric weaving (Carr and Maslowski, Chapter 9). In both media, the states taken by multiple attributes at an earlier decision level can constrain those taken by a single attribute at a later decision level (e.g., the effects of basket size, shape, and weave on body designs). Also, the states taken by a single attribute at an earlier level

Table 8-3. Style Attributes and Attribute States Recorded for Pomo Baskets

Attribute	Attribute states	
Raw material	Redbud Sedge Bullrush	
Form	Spheroid with widest point below rim, but above middle Spheroid with widest point at middle Spheroid with widest point at rim Conical Truncated cone with a hole in the bottom Large truncated cone Small truncated cone Boat	
Weave	Coiled Plain twined	Diagonal twined Lattice twined
Design layout	Banded Vertical Diagonal Star-flower	Covering Isolate No design
Design cluster in body	Banded zigzag Banded triangle Banded square Covering Star-flower crossing Star-flower zigzag	Vertical square Vertical triangle-diamond Lightning bolt Isolate Checkerboard Banded simple line
Design cluster for starting[a]	Banded square Banded triangle Banded zigzag Isolate	Star-flower crossing Banded simple line Checkerboard
Design cluster for finishing[b]	Banded square Banded triangle Banded zigzag	Banded simple line Isolate Checkerboard
Design element	Traditional design elements: Square Rectangle Quail top-knot Triangle Zigzag Line "V" Circle Dot Star	Newer design elements and/or those borrowed from whites: Cross People Animals Letters Leaf Heart Club
Spirit breaks[c]	Presence, absence	
Add-on decorations	Feather Beads None	
Function		
Basket maker's name		
Basket maker's language		
Date of basket collection		

[a]A starting design is the first design made on the base of a basket. This cateogry is used by weavers (Barrett 1908:153).
[b]A finishing design is the last design made on the rim. This category is also used by weavers (Barrett 1908:153).
[c]A spirit break, or *dau*, is a break in the repetition of a design or an added element. It is made so that a bad event does not happen to the weaver (Barrett 1908:171, 193).

Table 8-4. Relation of Basket Attributes, Their Visibility, and the Processes That They Reflect

Attribute	Relative visibility	Expected determining process
Color	1	Raw material (e.g., blackroot, and redbud)
Size	2	Social or individual level, active or passive
Body form	3	Social or individual level, active or passive
Body design layout	4	Social or individual level, active or passive
Body design cluster	5	Social or individual level, active or passive
Feather or bead additions	5	Social or individual level, active or passive
Weave	5 or 6	Social level, passive; individual level, active or passive
Body design element	6	Social level, passive; individual level, active or passive
Weaver's mark	6	Individual level, active
Finishing design	6	Individual level, active or passive
Starting design	6	Individual level, active or passive

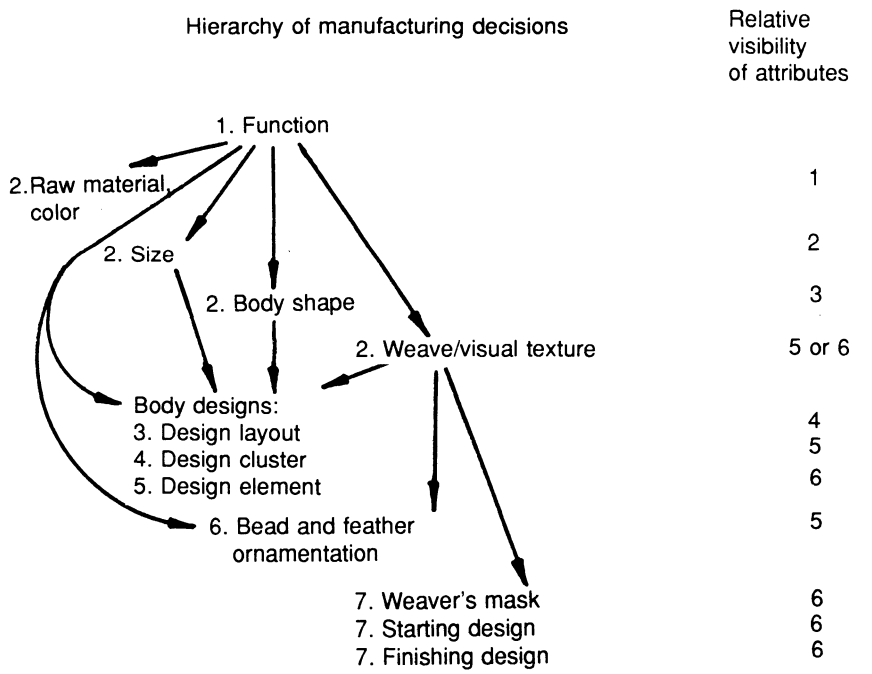


Figure 8-3. Relation of attribute placement in a manufacturing decision hierarchy to attribute placement in a visibility hierarchy for Pomo baskets. The decision hierarchy takes the form of a complex network (Carr, Chapter 7:225–228).

can constrain those taken by multiple attributes at a later level (e.g., the effect of weave upon ornamentation, weaver's mark, starting design, and finishing design). However, in contrast to the structure of decisions in fabric weaving, that in basket making does not appear to involve simultaneous decisions at a single level as commonly. Also, basket making decisions at a single level are independent or coordinated, whereas fabric weaving decisions at one level are often compensatory. Finally, the decision structure of basket making differs from that of cord making, where several globally independent decision paths exist (Carr and Maslowski, Chapter 9).

The unified theory of design predicts that the relative visibility of attributes should correspond approximately with their placement in a decision hierarchy. Although this relationship is found in Pomo basketry, it is not perfect (Figure 8-3). In part, this is so because the relative visibility of attributes defines a linear sequence, whereas their role in manufacturing decisions and constraints creates a complex network. In addition, in some instances, less visible attributes occur earlier in the decision hierarchy than more visible ones. Such anomalies can be found in many other media (e.g., Carr and Maslowski, Chapter 9). Consequently, when predicting the processual meaning of formal attributes and selecting relevant ones for an archaeological or ethnographic analysis of basketry, it would appear that one should rely more heavily on the visibility hierarchy, which relates directly to attribute communication potential, than on the decision hierarchy. Voss and Young (Chapter 3) have come to a similar conclusion, but for theoretical reasons. Table 8-4 shows the range of processual meanings that might be expressed by each basketry attribute considered in this chapter, as predicted by the unified theory.

Some of the dependencies in the decision hierarchy shown in Figure 8-3 are obvious, such as the dependence of the chosen raw material, basket size, body shape, body designs, and added ornamentations on intended function. These relationships are especially clear in the differences between how gift baskets and utilitarian baskets are constructed. Others dependencies require explanation and exemplification. (1) Basket function constrains weave in that only certain weaves are optimal and used for certain kinds of baskets. Burden baskets for carrying things and large storage baskets are always twined, for strength, whereas gift baskets are always coiled, for refinement and decoration. Sifters require an open weave. (2) Weave, and to some extent body shape, constrain the kinds or expression of design layouts and clusters that can be made. For example, on expanding conical forms, and on expanding and contracting globular forms, banded design layouts are easy to produce, whereas covering, crossing, and diagonal design layouts are difficult. The size of design elements or space between design repetitions must be adjusted to the expanding or contracting space. (3) The weave that is chosen constrains whether feathers and beads can be attached. Coiling, rather than twining, is required for these attachments. (4) Weave also limits the kinds of weaver's marks and starting and finishing designs, that can be made. (5) The size of a basket limits the complexity of the designs that can be used; smaller baskets allow less complex designs.

Each of these relationships is found in Pomo baskets and reflects some manufacturing constraint. Other statistical associations, such as the relationship between raw material and weave (redbud baskets are usually twined, whereas black root baskets are coiled), or between design layouts and design clusters, appear to reflect cultural choices rather than manufacturing constraints. Thus, they are not shown in Figure 8-3.

THE INDIVIDUAL LEVEL OF STYLE

In this and the following sections, stylistic patterning at ever larger socio-spatial scales of integration will be discussed. These scales include the individual, family, community, and sublanguage group. For each, both the processes that affect basket style and the basketry attributes upon which these processes operate will be presented.

At the level of the individual, a variety of interacting processes, both active and passive, affect a person's style. The more active factors are an individual artisan's choices within community constraints and norms, and personal sources of creativity within or beyond these constraints. A more passive factor is the weaver's motor skills (Table 8-2).

Artisan's Preference

Individual weavers vary in their preference for certain forms, designs, weaves, and materials. Pryor was able to elicit, from some weavers, their preferences as well as those of past Pomo artisans. For example, Rhoda Knight seems to have preferred to make baskets with the truncated cone form, the quail top-knot, and diagonally stacked triangles covered with the quail top-knot design cluster—"her design" (Figure 8-4a). She also had a strong preference for using black root in her baskets. Rhoda Knight's mother, Nellie White, also chose to make baskets in the truncated cone form, but she preferred to decorate them with the diagonal, plain, zigzag, design cluster (Figure 8-4b). Similarly, Annie Burke liked to use "T" shaped blocks in covering and banded design layouts (Figure 8-4c). The designs are found not only on her plain twined baskets, but also on baskets of a variety of forms and functions: conical burden baskets, globular mush boilers, and tray-shaped plaque baskets. Out of the sample of over 1,200 baskets, this design cluster occurs only on Annie Burke's wares.

Identifying an Individual's Style

Formal preferences of individual weavers are so distinctive that they are able to identify the baskets of other weavers in their own and other communities. For example, in the documentation for the collections of the Mendocino County Museum is a story of how Elsie Allen identified the maker of one of the baskets. After seeing the basket and leaving the museum, she recalled that 8 or 10 years earlier, she had seen a basket with an identical design cluster at the Clarke Museum in Eureka, California. This basket had been attributed to Maude Scott Knight. Allen said that the design on the basket in the museum was "Mrs. Knight's design" and that she had seen it on no other basket weaver's works (Allen n.d.). Elsie Allen and other basket weavers felt that they could readily identify the maker of a basket from its design clusters, materials, and form. These findings are understandable in light of Graburn's (1976:21) work on art of the Fourth World: "In small-scale societies where everything is everybody's business, there is little anonymity, and most people would know the details of style, the aesthetic choices, and even the tool marks of their contemporaries."

When Elsie Allen identifies the maker of a basket, she appears not to isolate and use single attributes of style, but rather a whole constellation of attributes, such as material, basket shape, and design, and their associations, that are preferred by that weaver. This tends to supports the view that Pomo weavers do not perceive and interpret style simply by breaking it down analytically into discriminating attributes. Rather, they also perceive it in a Gestalt-like manner, in which each attribute serves as a context for the others and provides meaning through this association. Thus, the whole constellation is considered. Attributes of several levels of visibility and their association may be involved (see also Washburn, Chapter 4). Analytical and Gestalt perception both occur—in either a simultaneous or alternating manner.

This possibility is significant for archaeological analysis. It may mean that attempts to interpret single attributes as reflecting the individual or certain social units (e.g., Wobst 1977; Wiessner 1983) are less likely to be successful than multivariate analyses. Also, the pertinent attributes may have several different levels of visibility—a situation accommodated by the unified theory of design (Carr, Chapter 7) and social-psychological theory (Voss and Young, Chapter 3), but not recognized in the earlier analytic strategies of Wobst (1977), Plog (1978, 1980), and Voss (1982). In the unified theory of design, attributes of multiple visibility levels are seen as having the potential to reflect the individual.

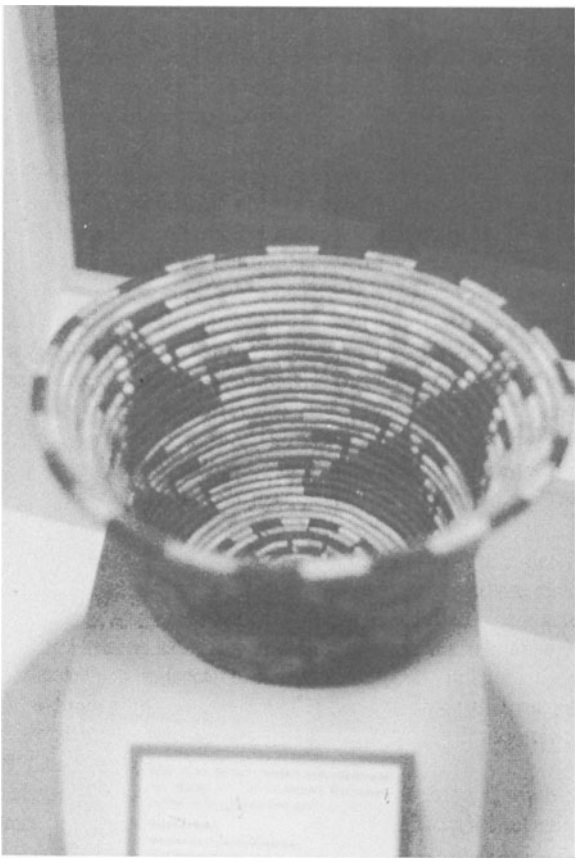


Figure 8-4. (a) Rhoda Knight's design. (b) Nellie White's basket. (c) Annie Burke's "T" design.

In contrast, Plog (1978:161) for example, suggested that attribute frequency analyses should be restricted to design attributes that are alternative choices and of one level in a design (visibility) hierarchy.

It is also important that in order for a basket to be recognized as the product of a specific individual, the basket would have to stand out only at that particular time and space, rather than in relation to baskets of distant places and times. Thus, an *individual's* style is not necessarily *unique* at a larger time–space scale. Also, one would not expect an individual to recognize the styles of all other persons at this larger scale, nor did Pryor find this for the Pomo. This supports Wobst's (1977), and Voss and Young's (Chapter 3), discussions of the maximum geographic scales over which styles are recognized and operate in messaging.

Temporal Variation in an Individual's Style

There is both continuity and change in a basket maker's preferences over time. Repetitive use of form, material, and design makes intuitive sense. It is hard to imagine that a basket weaver would start fresh with every new basket, making each one entirely different from the last, even with the great

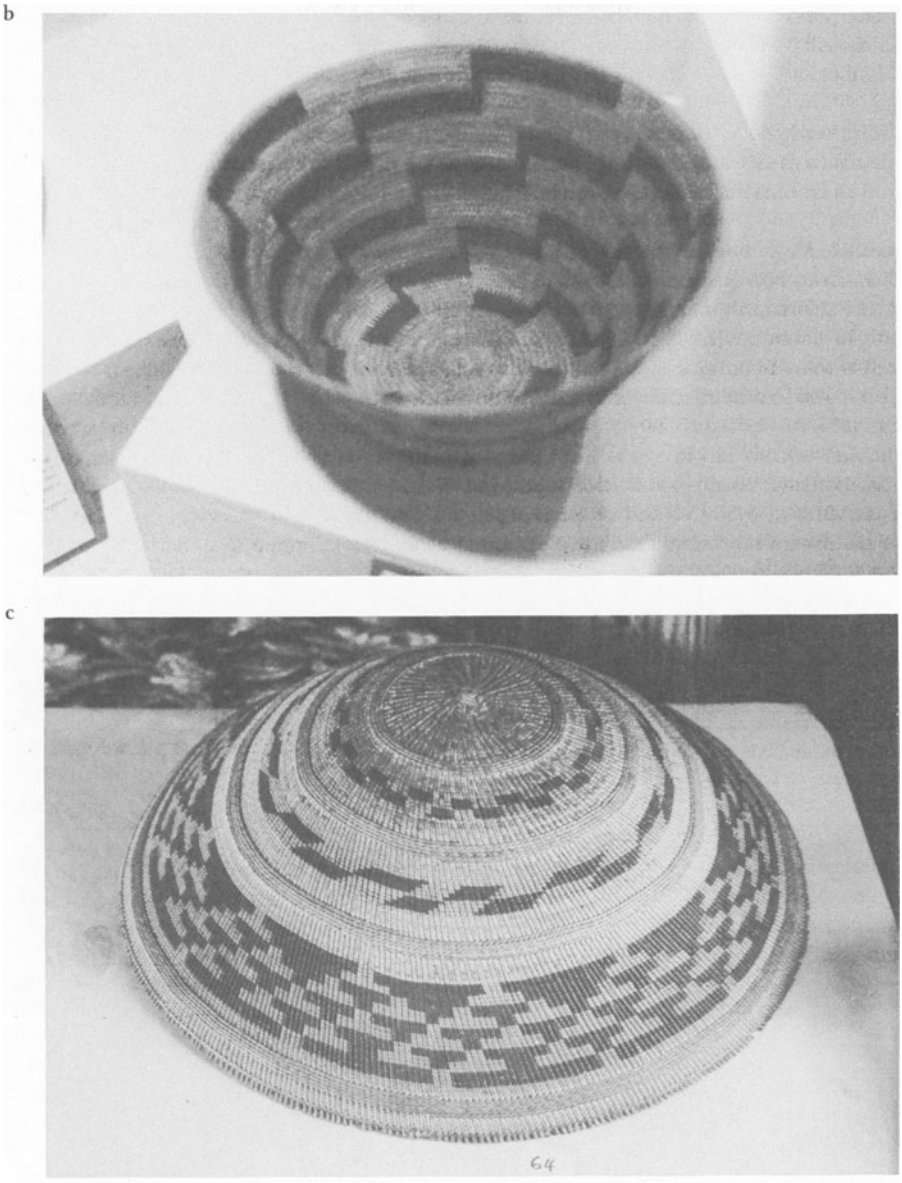


Figure 8-4. (*Continued*)

diversity shown by the Pomoan weavers. Rather, basket weaving is a process of growth and learning in which each basket is part of a progression of the baskets produced, influenced by the ones made before and influencing those to be made in the future. New weaves and designs are tried and perfected. Certain designs, forms, and material choices are found to work together and are repeated, whereas others do not and are abandoned (see also Roe, Chapter 2).

Preference of weave, design, and form develop throughout a weaver's life not only by personal choices, but also in response to outside forces. The personal style of a basket weaver involves a dynamic between her own creativity, and family and community norms and constraints (see also Roe, Chapter 2). Thus, style must be understood, in part, as the effect of an *interaction* between individual, family, and community level processes, rather than a simple composite of their effects. Among the key external variables that are involved in this dynamic are: (1) power relations between the artisan and members of her family and community, who teach her basketry, and (2) mortuary practices which required the burning of baskets and, thus, the models that they provided with the death of their maker.

Changes in the ages of the persons within a basket maker's family, and the power relations among them, over the artisan's life were integral to her acquiring and shifting in her personal style. The Pomoan household was composed of the young, parents, and grandparents. Parents were primarily the subsistence producers, whereas grandparents taught the young. Elders slowly and carefully doled out their knowledge because, in Pomoan society, the power of the old was in the knowledge that they controlled. Initially, the teaching of basket making can be seen as a negotiation between teacher and student. The teacher gained power and respect, and the student gained a valued skill. However, the young weaver was at a distinct disadvantage in these negotiations because the teacher was usually a grandmother or mother. She taught weaving as a serious business, even citing spiritual sanctions for breaking any taboos related to weaving. Stylistic innovations were squelched by ridicule and teasing. As a result, the young weaver gave up much of her stylistic freedom.

As the student grew older, the power relations shifted from those of student and teacher to the more equal relations of closely interacting artisans. This allowed a freer flow of innovations and ideas. When the older generation of weavers within and outside the family died, their baskets were to be burned with them on their funeral pyres (see p. 280). This wiped clean the stylistic slate—what Roe (Chapter 2) calls "cultural amnesia"—and encouraged innovation. It freed the now middle-aged weaver to create her own style of basketry and to reify it as the basketry rules and esthetics that "have always been." Roe (Chapter 2) calls this perspective a "deflection-from-self" strategy for innovation.

With the arrival of grandchildren, the weaver reached the pinnacle of her power and stylistic freedom. She continued to portray her style as timeless and as part of a cultural heritage being passed down unchanged from the ancestors.

Nowadays, an individual's weaving style also involves a dynamic between her own creativity and white market preferences, which has led to various stylistic innovations. Contact and the development of this market has witnessed, for example, the predominance of fancy baskets at the expense of utilitarian forms, and the "signing" of work with a maker's mark. However, these innovations have been built on and filtered through culturally antecedent practices. The fancy baskets were traditionally gift baskets. Maker's marks have antiquity in the spirit breaks, or *dau*, described in Table 8-3.

Not all individual choices in response to market forces have led to change. This is clear in the choice of basket materials. Basket weavers have continued to use natural materials over store bought ones because of their cultural values, even though this has meant a reduction in profits.

Individual Sources of Inspiration

The factors that inspire truly new and creative approaches to basketry, as opposed to the borrowing of new approaches, are difficult to determine. One explicitly stated factor, however, is dreaming (see also Rosenthal, Chapter 10). Mabel McKay, a Cashe Creek Pomo tribal elder, spiritual practitioner, and renowned weaver, told Pryor that dreams were the source of her designs. Mauldin (n.d.) also recorded this, stating "she showed a star design on a basket which was made as the result of a dream. She prays each night for a design to work into a basket and whatever dream she has relative to a design then that design she makes."

Mabel McKay's use of dreams is linked to her work as a healer:

> Mabel told us that she did not learn basketmaking from her mother, as one might have expected, but that rather it derived from inspiration out of a dream she had at the age of seven, the same dream that also brought her healing powers. Pomo basket-makers used to guard their basket-making techniques closely and it was difficult to learn basket-making when she was a child because all the old basket-makers would hide their work and not show it to anyone until it was finished.
>
> As a child she first made miniature baskets, baskets that were a traditional part of certain healing ceremonies in Pomo life. . . . her powers are directly related to her making baskets.
>
> The person who is ill comes to the basket-maker and asks her to make a basket to relieve her pain. In the process of making the miniature basket the source of pain is revealed by the basket and the maker then helps to remove the pain into the basket. The finished basket is then given to the healed person who thereafter wears the miniature basket next to their body. Mabel McKay is much in demand as a basket-maker and as a healer. [Gogol 1983:4–5]

In contrast, Frances McDaniel, Mabel's half-sister, does not weave in this manner. Analogous ties of artistic creation to healing power are also discussed by Rosenthal (Chapter 10).

Most indicative of the influence of healing power on Mabel McKay's style is a feather basket start, which portrays coyote dancing in the round house (Figure 8-5a). All basket makers with whom Pryor talked said that it was bad to portray objects or people on baskets, which would cause blindness. To portray coyote, the Creator, dancing in the sacred structure, is to break this taboo to an extreme. Frances McDaniel would not produce such a basket, nor would many other Pomoan basket makers today. Mabel McKay can produce such a design because others believe she has power and, thus, do not dare question her choice in designs.

Other basket makers besides Mabel McKay dream their designs; the practice is not abnormal. It tends to run in families that have the modern ghost dance dreamers, *maru* (Barrett 1917; Loeb 1926:394-397; Du Bois 1939; Meighan and Riddell 1972). In these instances, dreaming designs may be considered a "family" style to basket making.

Motor Skills

It has been suggested that individuals differed enough in the starting knots that they used in making baskets that specific makers can be identified (Dawson, personal communication). It is possible that motor habits, in combination with learned behavior, produce the peculiarities of starting knots. If so, this would be the most passive factor influencing basket style (Hill and Gunn 1977). We do not have the data to demonstrate this.

Formal Attributes Affected by Individual-Level Processes

The several processes that operate at the level of the individual affect a range of basketry stylistic attributes, as discussed above and summarized in Table 8-5. These attributes vary widely in their visibility and their placement in a manufacturing decision hierarchy (Table 8-4, Figure 8-3). Also, the processes that they reflect range from active ones, such as signature with a maker's mark or expression of a design that was dreamed as part of a curing procedure, to passive processes such as motor skills. Both the range of visibility of the attributes and their active or passive nature concord with predictions of unified theory of design (Carr, Chapter 7:Table 7-1).

THE FAMILY

A number of processes at the level of the family and closely interacting artisans affect the style of Pomo baskets. These include: enculturation, the personal history of the family and its members, the

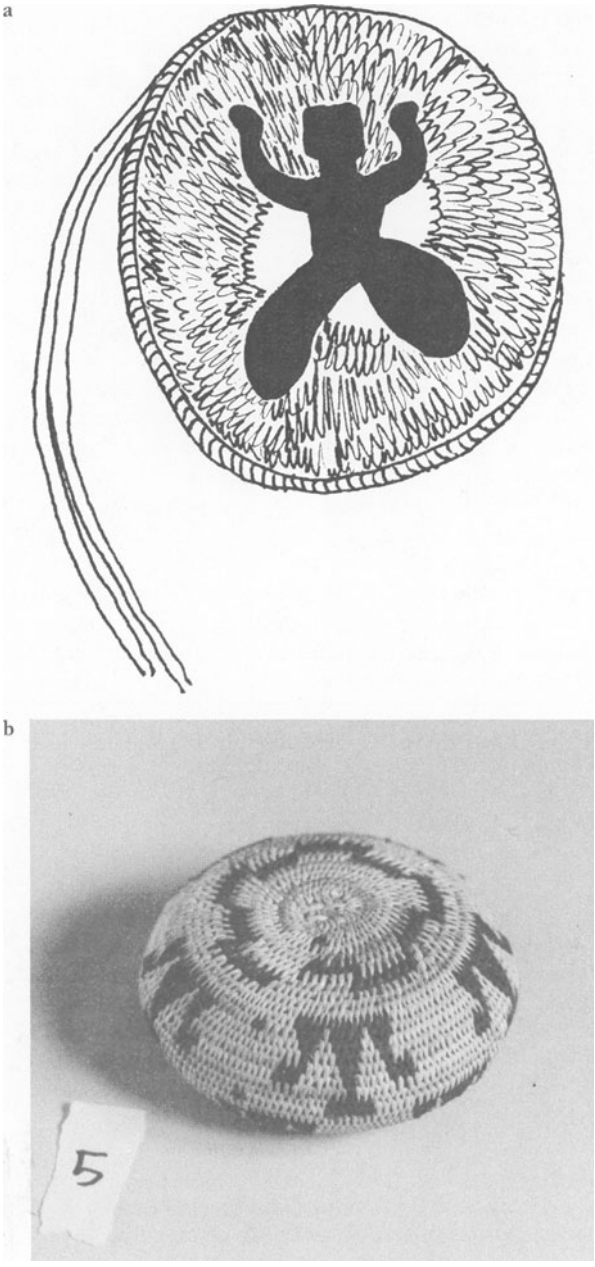


Figure 8-5. (a) Mable McKay's design coyote dancing in the round house. (b) Elsie Allen's *dau*. (c) Mary Benson's basket with a variant of Rhoda Knight's design.

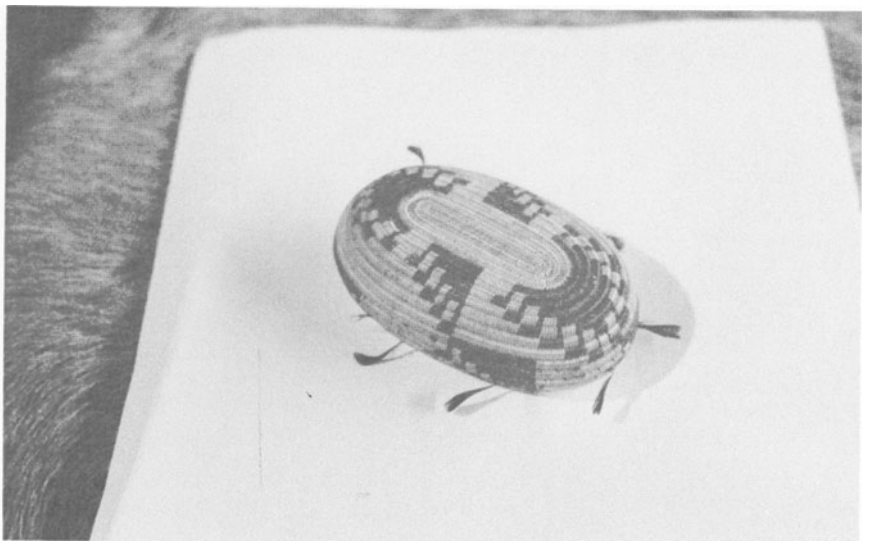


Figure 8-5. (*Continued*)

Table 8-5. Stylistic Basketry Attributes Affected by Processes at Various Levels

Process	Attributes
Individual level	
Artisan's personal preference	Materials, body form, design cluster, spirit breaks, color choice in beadwork
Dreaming as inspiration	Design cluster, starting design
Motor skills, in part	Starting knots?
Family Level	
Enculturation in the context of personal and family history and power relations; passive interaction	Material, body form, design layout, design cluster, weave, add-on decorations, starting knots
Technological dependency of design on weave and its impact on enculturation	Design cluster
Interacting artisans level	
Passive interaction	Material, body form, design layout, design cluster, weave, relationships among weave and material, spirit breaks, add-on decorations, rim stitching, design element, design element width
Community level	
No attributes or processes clearly reflecting this level of organization were found	
Sublanguage group level	
Shared culture history in the form of migration together into the region	Material, form, weave, design layout, design cluster
Passive interaction	Primarily weave, secondarily form, design cluster
Active interaction	Primarily form and design cluster

preservation and availability of a teacher's baskets after her or his death, power relations among teacher and student within or outside of the family, passive interaction, and the technological dependency of design upon weave (Table 8-2). Each of these processes is discussed, in turn, below.

Power relations have not usually been recognized as significantly affecting enculturation and style (but see Roe, Chapter 2). However, it will be shown here how power relations help to explain why some persons innovate stylistic traits whereas others do not, and why some people can break style rules whereas others are more timid. Similarly important is the interaction of technology, the manufacturing decision hierarchy, and enculturation. Because basket weave determines the range of designs and, to some extent, the range of forms that can be made, a person who does not learn some weaves of his or her family is effectively cut off from using some of the family designs and forms.

The documentation to be presented affirms points made by Roe (1980, Chapter 2), Friedrich (1970; Hardin 1979, 1983), Lathrop (1983), and Arnold (1983). These authors stress that the style of an artisan changes through life as a result of his or her interactions and working with other artisans, both kin and community members. A person's style does not remain that acquired during childhood, as was simplistically assumed by some early "ceramic sociologists" (e.g., Longacre 1964; Hill 1970).

Enculturation

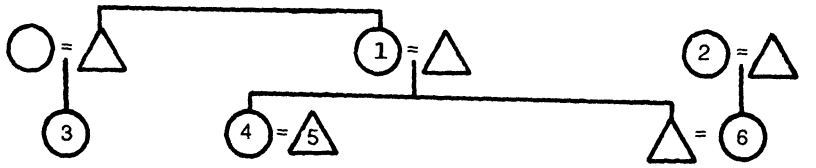
In this section, we will provide examples of the transfer of styles among persons of several kinds of family relations. The genealogical relationships among the individuals to be discussed are summarized in Figure 8-6.

The strongest stylistic similarities in Pryor's basket data are between the baskets of mothers and daughters. This makes sense because basket weaving was taught primarily by the mother and grandmothers of a family (McLendon and Holland 1979:108). Stylistic similarities between grandmothers and granddaughters have not been documented well enough to discuss them. Examples of stylistic similarity between mothers and daughters can be seen in the virtually indistinguishable baskets of Ramona McCloud and Joann McCloud. Also, mother Nellie White and daughter Rhoda Knight both made many truncated cone form baskets and used a rather rare design cluster—the quail top-knot banded—on their basket bases.

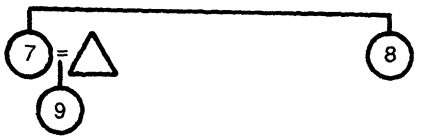
Stylistic similarities between mothers and daughters reflect processes at many levels, ranging from more to less passive. Regarding a process at an apparently more passive level, Virginia Knight-Buck (n.d.) has commented that both Rhoda Knight and Rhoda's mother, Nellie White, had starting knots that looked very similar. It may be that some basic aspects of technology, such as starting knots, are transmitted passively from teacher to student rather than actively chosen by the student, largely for lack of known alternatives, and thus tend remain unchanged over generations. This, however, cannot be corroborated. (See an analogous argument and supporting data regarding cordage twist direction, provided by Carr and Maslowski [Chapter 9:321–322].)

Preference for basket weaving materials and their correlation with weaves and designs also seems to be passed from mother to daughter at a more passive level. Collecting, processing, and using materials are more a matter of training in one set of procedures and a lack of known alternative procedures than they are choices among alternatives. If a teacher does not know about some material, her student will usually be excluded from using it. Rhoda Knight and her mother, Nellie White, both produced baskets in black root, as did Rosie Fred, Ramona McCloud, and Joann McCloud (Figure 8-6). Both Mary Benson and her mother, Sarah Knight, used redbud to produce designs on twined baskets and black root to produce designs on coiled baskets.

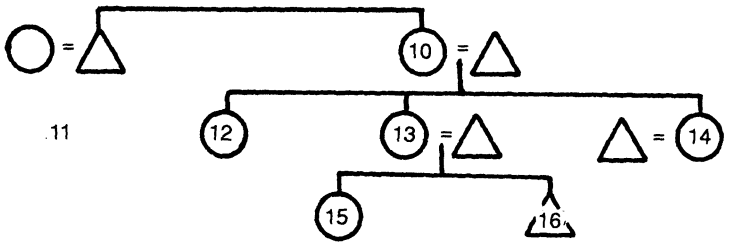
Preferences for weaves are also passed from mother to daughter at a more passive level. Again, a student is limited in the weaves that she can learn to those known by her teacher. Both Rhoda Knight and Nellie White's baskets are exclusively coiled. So are the baskets by Rosie Fred, Ramona McCloud, and Joann McCloud. Both Mary Benson and her mother, Sarah Knight, excelled in the twining weaves, especially the difficult and highly praised lattice twining.



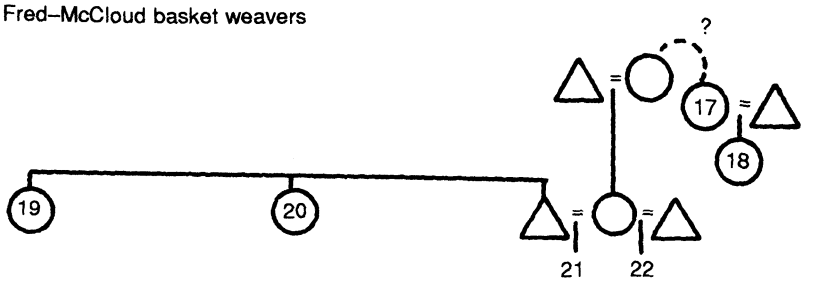
Knight–White–Benson basket weavers



Burke–Allen basket weavers



Fred–McCloud basket weavers



McKay–McDaniel basket weavers

Key: 1 = Sarah Knight, 2 = Nellie White, 3 = Joseppa Dick,
4 = Mary Benson, 5 = William Benson, 6 = Rhoda Knight,
7 = Annie Burke, 8 = Susie Billie, 9 = Elsie Allen,
10 = Rosie Fred, 11 = Katie Fred, 12 = Vivian Fred,
13 = Ramona McCloud, 14 = Nora Fred, 15 = Joann McCloud,
16 = Sonnie McCloud, 17 = Uni Taylor, 18 = Banish Taylor,
19 = Nannie Williams, 20 = Annie Boone, 21 = Mable McKay,
22 = Frances McDaniel

Figure 8-6. Genealogies of basket-making families discussed in the text.

Perhaps at a somewhat less passive level is the apparent imparting of preferences for certain designs and basket shapes from mother to daughter. A daughter's productions need not reflect active, conscious decisions to make baskets "like her mother's" rather than "like someone else's" but, instead, simply the intuitive satisfaction of producing her mother's familiar designs and shapes with which she was surrounded while growing up. Also, because basketry is learned primarily through observation, and because the production of designs is a complex process that is interrelated with the construction of the basket, it is understandable that the student would feel most comfortable producing the designs of her teacher. Thus, alternative forms may be known but not seriously considered for production. This technologically constrained situation is somewhat different from the relative freedom in choices that a potter has in painting designs on vessels, for example.

All of these stylistic traits—the starting knots, weaves, designs, and materials—which are known and used by a family and passed down the generations in a more passive fashion, constitute what Sackett (1982) would term "isochrestic variation." They comprise a pool of possibilities that is largely the product of what Braun (Chapter 5) calls "historicity."

Regarding a more active process, aunts and nieces also show stylistic similarity in their baskets. This may reflect the fact that some weavers, after they have learned rudimentary skills from their mother or grandmother, actively reach out to an aunt to learn other basket weaving techniques (Colson 1974:48–49). In this way, Elsie Allen learned to weave feather baskets from her aunt, Susie Billie. Her mother did not know how to weave these (Allen 1972). Pryor has data on two or three baskets made by Elsie Allen's aunt. One of them shares a design cluster with Elsie Allen's baskets and one shares a form with her baskets.

Colson (1974) reports that one weaver told her that, after initially learning weaving from her mother, she turned to her aunt to learn three-stick coiling. She also learned a new design. The weaver was from Mendocino County and her aunt was from adjacent Lake County. The aunt was from a different group who spoke a different language. In this way, style and technology can cross regional and political boundaries, and yet stay within families.

Personal and Family History

Enculturation is not a process that can be understood in isolation. Rather, it must always be contextualized, for it is filtered through unique selective conditions such as personal and family histories, the duration of preservation of material culture templates, and power relations (see also Roe, Chapter 2). These circumstances make enculturation more complex than that denoted by the single term, "isochrestic variation." We now discuss each of these factors in turn.

A good example of the effect of family history is the dissimilarities between the basket styles of a mother and daughter: Annie Burke and Elsie Allen. Whereas Annie Burke produced baskets of many weaves—coiled, plain twined, open work plain twined, lattice twined, and open work lattice twined—her daughter used only coiled and open work plain twined weaves (Table 8-6). There are also striking differences in the types of baskets that Annie Burke and Elsie Allen produced. Pryor's data show that 13 of the 19 documented baskets made by Elsie Allen are either miniature or feathered. None of Annie Burke's baskets are miniature, and she did not weave feather baskets. Finally there is very little overlap in the design layouts used by the mother and daughter (Table 8-7).

These stylistic dissimilarities are rooted in the Burke-Allen family history. Both weavers grew up similarly, in isolation from other Pomo. They were born and initially raised among the more heavily acculturated Southern Pomo, and then on a White ranch at Hopland (Allen 1972:7–13; Colson 1974). The two women differ in that Annie Burke had greater stability in residence at an early age and was able to actively seek out new weaves and designs from other weavers, whereas her daughter had many interruptions soon after starting to learn basketry from her mother and grandmother. At age 11, Elsie Allen was sent away to the Covelo Indian school, where there was an active attempt to eliminate the children's Indian ways. She moved back to Hopland at age 13 when an Indian school was opened

Table 8-6. Frequencies and Percentages of Weaves by Burke-Allen Family Members

Burke-Allen family members	Weave												
	Coiled		Plain twined		Diagonal twined		Lattice open work		Twined closed		Open work twining		Total
	N	%	N	%	N	%	N	%	N	%	N	%	N
Annie Burke's mother	1	100	0	0	0	0	0	0	0	0	0	0	1
Annie Burke	6	35	4	24	0	0	3	18	1	6	3	18	17
Elsie Allen	18	90	0	0	0	0	0	0	0	0	2	10	20
Agnes Santana	1	100	0	0	0	0	0	0	0	0	0	0	1
Susie Billie	3	100	0	0	0	0	0	0	0	0	0	0	3
Agnes Santana's grandmother	0	0	1	100	0	0	0	0	0	0	0	0	1

there. At age 18 she left home to work in San Francisco. A year later she was sent home, a victim of the 1918 flu epidemic, and was nursed back to health by her mother. She married a Northern Pomo in 1919 and moved with her mother to the Northern Pomo rancheria of Pinoleville (Allen 1972:10–13). In 1932, Elsie Allen's grandmother died and, as was customary, she was buried with her basket material and baskets. Thus, Elsie Allen lost not only her help and knowledge about weaving, but most of the examples of her grandmother's work (Allen 1972:13). Partially as a result of these many interruptions in the learning process and other personal factors, Elsie Allen's attitude toward weaving soured:

> In the first few years of my married life, I attempted basketweaving. I made a basket of about eight or nine inches and that was buried with my grandmother. My next one-stick coiled basket was buried with my great uncle. A third basket was passed all around to relatives when someone died and finally somehow came back to us and was buried with my brother-in-law. I didn't have a good feeling about making baskets after that. [Allen 1972:13]

Elsie Allen returned to weaving just before her mother's death (Allen 1972:13–15). Although she had her mother's baskets as a stylistic template, she did not have her mother to teach her the more complex twining weaves. Because of the intricate relationship between style and technology (Pryor

Table 8-7. Frequencies and Percentages of Design Layouts by Burke-Allen Family Members

Burke-Allen family members	Design layout												
	Banded		Diagonal		Vertical		Star-flower W		Star-flower W		Covering		Total
	N	%	N	%	N	%	N	%	N	%	N	%	N
Annie Burke's mother	0	0	1	50	0	0	0	0	0	0	1	50	2
Annie Burke	10	59	3	18	0	0	1	6	1	6	0	0	17
Elsie Allen	1	5	7	37	0	0	9	47	0	0	2	11	19
Agnes Santana	0	0	0	0	0	0	1	100	0	0	0	0	1
Susie Billie	0	0	1	50	0	0	1	50	0	0	0	0	2
Agnes Santana's grandmother	1	100	0	0	0	0	0	0	0	0	0	0	1

1987b:91–97), and specifically the dependence of design and some aspects of form upon weave, Elsie Allen was technologically cut off from certain designs and forms that her mother used. Of her mother's baskets, approximately 64% were twined and, thus, not of much use to Elsie Allen as a template for her productions, which were overwhelmingly coiled. Table 8-7 shows that, consequently, there was little overlap in the design layouts of mother and daughter. Also, all of the forms of her mother's twined baskets were lost to Elsie.

In contrast, as one would expect, there is similarity between the mother's and daughter's coiled baskets. Three out of the six coiled baskets that Pryor recorded and that were made by mother Annie Burke are the small globular forms that predominate in her daughter's baskets. Another is a medium-sized boat basket, of which Pryor recorded one example for her daughter. The last two are flat disk shapes. There is one example of this form having been produced by her daughter. Finally, both the mother and daughter used redbud and black root in the designs of their coiled baskets, which was rather rare. Usually redbud is reserved for twined baskets.

Preservation of Stylistic Templates

Another factor at the family level that serves as a context for enculturation is whether baskets are preserved as style templates after the death of a teacher—the factor of "cultural amnesia" (Roe, Chapter 2). Upon the death of a Pomo, all of his or her possessions were to be destroyed. This was done so that the spirit would not be drawn back to the living and cause illness by being seen (Freeland 1923:67). At the death of a basket maker, baskets were among the key possessions destroyed. Gift baskets given by friends and relatives were also destroyed. Baskets were traditionally burned in the funeral pyre with the body and, later in time, either burned in a graveside fire or buried in the grave (Parsell n.d.; Loeb 1926:286–297). As a consequence, a weaver was commonly left without examples of her or his teacher's baskets to follow later in life. Other family-historical factors can have a similar effect, leaving a pupil isolated from her teacher's templates.

The importance of whether stylistic templates are preserved is clear in the case of Ramona McCloud. She told Pryor that she only produced baskets like those of her mother. However, she no longer had any of her mother's baskets to use as examples and, although she remembered her mother's designs, this did not help her reproduce their intricacies. When Pryor showed her photographs of one basket she exclaimed, "Oh, so that's how that design went." She then showed Pryor one of her baskets in which she had attempted to reproduce the design, which was noticeably different (Figure 8-7). The same effect might occur when a mother's baskets were destroyed at her funeral.

Power Relations between Teacher and Student

Power relations between teacher and student were discussed above as influencing the creativity of an individual: younger, subordinate weavers were more constrained in the styles of baskets that they could produce than older weavers. However, power relations also affect the learning process. In this case, development of the basket style of the dominant person, rather than the subordinate, can be restricted. A good example of this is provided by the baskets of Nellie White and Rhoda Knight, mother and daughter. Rhoda Knight's baskets have quail-top feathers along their rims. Adding this decoration is difficult to execute and must be learned: Ramona McCloud told Pryor that she was given a whole jar of top knots, but ended up having to give them back because she did not know how to weave them into the basket so that they would stand up right. In contrast to Rhonda Knight's baskets, Nellie White's lack feathers. This difference apparently derives from the fact that Rhonda Knight married into a family that produced quail-topped baskets when she was of the correct age and power relations to learn from her in-laws, and apparently did so. In contrast, it would have been undignified for Nellie White, as a mother-in-law, to ask her in-laws to teach her this trick. She was the age of a teacher of cultural heritage, not a learner (see Roe, Chapter 2, for similar examples).

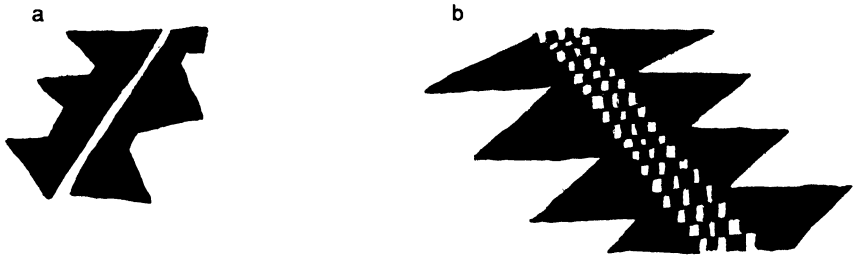


Figure 8-7. Difference between (a) Ramona McCloud's design and (b) her mother's design.

Power relations and their effects on enculturation and creativity shift not only through the lifetime of the individual, as discussed previously, but also over longer periods. In the past, basketry was a valued skill that was wanted by students and was doled out judiciously by elders. Through this process, the elders controlled the young, gained respect as teachers of their cultural heritage, and constrained the basket styles of the young. Today, power relations have, to a certain extent, flipped. Young members of families no longer want to learn basketry, whereas the elders desperately want to pass it on. The result is that the rule-laden system of basketry has become less so: as long as a younger family member wants to learn, the elders are overjoyed and old taboos and restrictions are relaxed.

This loosening of stylistic constraints is reflected in the attitudes of Sonny McCloud, the son of Ramona McCloud. One basket started by him had a variant of the pumpkin flower design, which was one of his mother's favorite designs. However, the design was produced in three colors of beads, which is quite unusual not only for the McCloud family, but also for Pomo baskets in general. When Pryor asked Sonny McCloud about the design, he told Pryor that it was all right, that one could do whatever one wanted. This is far from what Pomo of his parents' and grandparents' generation told Pryor.

Formal Attributes Affected by Processes at the Family Level

Table 8-5 shows that a broad range of stylistic attributes, which vary in their visibility and their placement in a manufacturing decision hierarchy, are affected by enculturation at the family level. This is predicted by both the unified, middle-range theory of design (Carr, Chapter 7:Table 7-2) and Friedrich's (1970) conclusions about more passive processes of interaction, such as enculturation.

BEYOND THE FAMILY: INTERACTING ARTISANS

This section shows that as the social distance between Pomo artists increases and their opportunities for interaction lessen, their basket styles become less similar—what Roe (Chapter 2) calls the "hypothesis of propinquity." However, not all attributes are affected equally. It is the less visible attributes of baskets that show dissimilarity when frequencies of interaction among artists are low. More visible attributes may still be shared, although not always. Data on the basket styles of cousins and in-laws illustrate this. In contrast, data on more closely interacting friends and half-sisters show the sharing of both less visible and more visible attributes. All of these findings corroborate Friedrich's (1970) conclusions. Also provided are several examples of how close interaction can lead to the "blurring" of stylistic boundaries between ethnic groups (see also Rosenthal, Chapter 10).

Closely Interacting Artisans

Closely interacting artisans include both kin and friends. A clear example of the effects of close interaction on poorly visible stylistic attributes is found in Elsie Allen's practice of making a break in the pattern, or *dau*, in nearly all of her baskets. Her *dau* is distinctive and takes the same form each time: an intermittent line of dots of color running up the side of the basket (Figure 8-5B). In contrast, her mother, Annie Burke, strictly followed the old Pomo weaving rule of making a break in only banded designs on twined baskets; she did not do so on baskets of other designs or weaves. Also, Annie Burke's *dau* differed in form from Elsie Allen's. Nevertheless, Elsie Allen told Pryor that every basket has to have a *dau*, and legitimated this by saying that this practice was handed down to her by her mother. She would search her mother's baskets for the slightest imperfection, which she would then call a *dau*. Instead, it appears that Elsie Allen derived her practice of making *dau* from other weavers, such as friends of the family, like Annie Lake. Another friend, Margie Carpenter, also follows this practice. Both friends' *dau* form specks of color in their baskets similar to Elsie Allen's. Thus, aspects of a weaver's style can move through any network of interacting artisans, not simply among interacting kin. Note that because *dau* are not very visible traits, they are a reliable indicator of the degree of interaction among artisans (Friedrich 1970).

More Distant Artisans

As one moves from close blood kin and in-laws to more spatially, temporally, and socially distant relatives, baskets of these artisans decrease in similarity systematically for less visible attributes, and sometimes for more visible attributes. For example, in the Knight-Benson family (Figure 8-6), the basket maker whose style is least like that of other family weavers in Pryor's data is Maud Stewart Perrish. Unlike her cousin, Rhoda Knight, Maude wove both coiled and diagonal twined baskets. Also, her coiled baskets had designs woven in redbud, rather than in the traditional black root which her cousin Mary Benson used. Both weave and the "grammatical" relationship between weave and color/material are less visible attributes that one would expect to, and that do, reflect this low degree of interaction. Visible attributes likewise reflect little interaction between Maude Stewart Perrish and Mary Benson, though this is not necessarily predictable theoretically: Maude's covering design layout is found in only 6% of Mary Benson's baskets. Also, Maude's design clusters are different from Mary Benson's.

Similarly, in the McCloud-Fred family (Figure 8-6), it is the more distant Katie Fred that was stylistically most dissimilar from other family members. Katie Fred was Ramona McCloud's older cousin. They lived about 25 miles apart. Also, Ramona McCloud disliked traveling, which was sufficient to keep the cousins from having much contact. Adding to their separation was their age difference, which was apparently significant. Pryor photographed one example of Katie Fred's baskets. It shares its most visible attributes—shape and material—with Ramona McCloud's work, but is very different in the less visible attribute of design cluster.

In-laws also may have a semipermeable boundary between them, with the least sharing of poorly visible attributes. Mabel McKay told Pryor that a girl who married into a family from another group would not adopt their weaving style. She would maintain "the hand" of the group from which she originally learned basketry weaving. A good example of this can be found in the Knight-Benson family (Figure 8-6). In-law Nellie White and her daughter, Rhoda Knight, coiled their baskets, whereas both Sarah Knight and Mary Benson were proficient at twining baskets. Neither Rhoda Knight nor Nellie White learned twining from their in-laws.

In contrast, at least one visible attribute was shared between these in-laws. One basket reputedly made by Mary Benson bears the design cluster that Virginia Knight-Buck calls "Rhoda Knight's design" (Figure 8-5c)—a design cluster that she had seen on few other person's baskets.

Close Interaction across Ethnic Boundaries

Several examples illustrate how close interaction among artists of different ethnic affiliations can blur stylistic boundaries between them. Mabel McKay and Frances McDaniel are half-sisters. Although both had the same mother and grandmother, Mabel McKay was influenced by the Pomo weaving tradition of her matriline and calls herself Pomo, whereas Frances McDaniel was influenced by the Wintun (Patwin) tradition of her father and calls herself Wintun. For more detailed personal histories, see Gogol (1983). Nevertheless both make vessels with Pomoan and Wintun traits. This variety appears to have developed in Mabel McKay's works after she began weaving with her half-sister.

Some differences in the two women's basket styles, which are attributable to their ethnic differences, are apparent. Mable McKay, unlike her half-sister, uses quail top-knots to decorate her baskets, does featherwork, makes boat baskets and miniature baskets, and ornaments her baskets with clam disc beads and abalone shell ornaments. These are all influences from the Pomoan tradition which have withstood change. On the other hand, baskets of both weavers share certain Wintun stylistic features as a result of the weavers having worked together. A diagonal band design cluster called "whirl wind" occurs on 23 percent of Mabel McKay's baskets and 25 percent of Frances McDaniel's baskets. Another design cluster, called the "scorpion design," occurs on 8 percent of the Mabel McKay's baskets and 50 percent of all of Frances McDaniel's baskets. These designs are Wintun not only in form, but in execution. The center line that runs down the middle of the scorpion design is variable in width, which is characteristic of Wintun baskets, but rare in the fanatically crafted Pomoan baskets. Also, the quail top-knot design element of the scorpion design has two variants on the same basket—T- and L-shaped. This is more common in Wintun baskets; it is rare in Pomoan baskets, where strict design element repetition is adhered to.

In some cases, Pomo and Wintun traits are actually combined in the same basket. Mabel McKay made a large bowl basket that has a typically Pomoan lightening-bolt design, but also the truncated cone form of Wintun mush boilers (Pryor 1987:147–152). Another of her large bowls has the typical oval form of Pomoan mush boilers (Pryor 1987:152–168), but the Wintun scorpion design. Frances McDaniel made a Wintun platter with a typical Pomoan ant trail design cluster.

Thus, close interaction among artisans from different ethnic backgrounds can blur the stylistic boundaries between them. Note, again, that the effected attributes range from visible (e.g., basket form, design cluster) to poorly visible (e.g., design element, design element dimensions), in line with theoretical expectation (Carr, Chapter 7).

Interaction among different ethnic groups has been described thus far at the microscale of relationships among particular individuals. At the other extreme, such interaction can be conceived in a more global, summary fashion as the product of all personal histories and movements of individuals between groups, without specifying the particular persons. This is the interaction of which archaeologists more typically speak (e.g., Plog 1980). Intermediate in perspective, one can trace the history and movement of an individual among groups, without specifying the persons with whom they interact. The following two examples, concerning Annie Burke and the Lunna sisters, show this to be productive in understanding the blurring effects of interaction on basket style.

Annie Burke was born in Southern Pomo territory, moved to Hopland in Central Pomo territory, and finally to the Northern Pomo community of Pinoleville. These moves are reflected in her basketry style. Seven of the design clusters that Annie Burke used were present in other Southern Pomo baskets. Ten other design clusters were found on only baskets of the other groups.

The Lunna sisters originally came from Long Valley in Hill Patwin territory, close to Eastern Pomo country. Later, they moved to Yokaia (Central Pomo), and finally settled around Healdsburg (Southern Pomo) (McKay n.d.). This personal history and the interactions that the sisters apparently had with weavers in these different Pomo groups are reflected in the styles of their baskets that Pryor examined and that reportedly were collected around Healdsburg.

There is little that directly indicates the sisters' origins among the Hill Patwin. Two baskets, however, do show influence from the adjacent Eastern Pomo. One is a plaque basket, which is coiled rather than twined, and has a design that resembles the pumpkin flower design. Both traits are characteristic of the Eastern Pomo style (Pryor 1987:154–155). The second basket is a small jar, which has the simple, diagonal, zigzag, design cluster that is also prominent among the Eastern Pomo (Pryor 1987:152–168).

Other baskets of the Lunna sisters show influence from the Central Pomo. Two have a characteristic crossing, star-flower, design layout. The greatest impact on the Lunna sisters' crafts came from the Southern Pomo. One fancy plaque basket, which combines diagonal twining, bands of paired warp twining, lattice twining, and three-strand braiding, is very reminiscent of an early basket attributed to the community of We-shum-tat-tah in the Healdsburg area. Two large jar forms have the characteristic mix of nonrepetitive design clusters that is reminiscent of the Southern Pomo. Three baskets decorated by small "seed beads" resemble the fine work done by the Wappo to the north of the Southern Pomo in Alexander Valley. Finally, there is a plain twined, mush boiler with an overstitched rim, which reminds one of the Southwestern Pomo to the west (Dawson, personal communication).

It is obvious that the Lunna sisters learned much and were greatly influenced stylistically after they left Long Valley. Attributes ranging from visible design layouts and design clusters to poorly visible rim stitching were affected by their interactions.

Formal Attributes Affected by Processes at the Interacting Artisans Level

Summarizing all of the cases of closely interacting artisans just presented, one finds that the visibility of the stylistic attributes that were affected by interaction at this level is the same as the visibility of attributes that were affected by enculturation at the family level: excellent to poor. These data accord with the middle-range theoretical expectations discussed by Carr (Chapter 7) and Friedrich (1970) for more passive interactive processes.

THE COMMUNITY LEVEL OF STYLE

At contact, the community was the level at which ethnic and political solidarity was felt (Kroeber 1932:259). The writings of some early ethnographers imply that beyond certain social processes that promoted cohesion internally, active boundary-maintenance processes between groups also occurred (Hudson n.d.; O'Neale 1932; Washburn, Chapter 4). If this is so, and if basketry style was integral to boundary maintenance (Wobst 1977), then this condition should be evident in the stylistic data that Pryor (1987) collected. However, the data suggest otherwise. It appears that the Indian communities of the North Coast Range used style more to integrate people than to exclude them. As mentioned at the beginning of this paper, this circumstance is reasonable in relation to hunter–gatherer adaptations, which often stress maximizing kin ties; it also concords with stylistic patterning found by Wiessner (1983) for !Kung projectile points.

The data that speak to this issue are as follows. The earliest active collectors of the later 19th century (e.g., Hudson, Purdy) note that each of the various Pomoan groups used characteristic design elements, which enabled other groups to determine where and by whom a basket was made. The zigzag design, known in Eastern Pomo as "wave on the lake," was supposedly characteristic of the Eastern Pomo basket makers around the northwest side of Clear Lake. The triangular design element, known as arrowpoint, supposedly represented the Katcha of Redwood Valley (Hudson n.d.).

McLendon and Holland (1979:124,125) used baskets from the early collectors (Hudson, Purdy, Briggs) to check these stylistic patterns and to look for others. Their results qualify and counter Hudson's less systematic observations. They found that the zigzag design did occur predominantly on the baskets of the Eastern Pomo on the northwestern shores of Clear Lake. However, several examples

were also found that came from the Central Pomo community of Yokaia. This can be explained by the fact that at least 20 Eastern Pomo were living in Yokaia (1900 Federal census) as a result of their marriages. Thus, the zigzag design appears to reflect active, internal social cohesion and/or passive social interaction, rather than active boundary maintenance.

McLendon and Holland found that the arrowpoint design was characteristic not of one ethnic group but of a whole linguistic group—all Northern Pomo-speaking groups. Similarly, they found that elaborate, diagonal overall design compositions based on more than one design element, and delicate compositions of lattice-like elements could be attributed predominantly to the Central Pomo-speaking linguistic group (Yokaia, Shanel, or Hopland), rather than any single ethnic group (McLendon and Holland 1979:124). These patterns again suggest that stylistic basket traits reflect more passive social interaction—here, within the language group—rather than active boundary maintenance between ethnic groups.

A final pattern that supports this position is McLendon and Holland's finding of a strong interrelationship between a basket's shape, size, function, design, the material used, and the *linguistic* Pomoan group to which its maker belonged. For example, the Northern Pomo coil some of their tray-shaped parching and winnowing baskets as well as mush boiling baskets. This is counter to the norm for most Pomoan groups. Central Pomo-speaking communities also have characteristic baskets:

> Diagonal overall design compositions, alternate pairs twining, and the use of redbud and sedge are associated predominantly with cooking and serving vessels. Diagonal overall designs, alternate pairs twining, and the use of redbud and pine root are associated with burden baskets production by Central Pomo-speaking communities, but none are associated with tray like parching and winnowing baskets, mortar baskets, or cups. Cups are consistently coiled and flat bottomed. [McLendon and Holland 1979:125]

These patterns at the language group level are borne out by Pryor's data, which are analyzed in the next section.

THE SUBLANGUAGE GROUP LEVEL OF STYLE

At the sublanguage group level, several primary factors were found to significantly affect the style of baskets, and in particular, their form and designs. These are: (1) shared culture history in the form of the past migration of Pomo groups together into the region; (2) passive interaction as casual learning and diffusion through personal contacts of the kinds described previously; (3) perhaps active interaction as the conscious attempt of an artisan or group to integrate themselves with another group through stylistic mimicry; and (4) the technological dependence of design and form upon weave, working in combination with the above factors. Passive interaction was found to affect the form, designs, and weave of baskets. The least visible attribute, weave, allowed estimation of interaction patterns most consistently, as expected.

These general patterns were found with the help of several multidimensional scaling and regression analyses. The observations, variables, and procedures that were used in these analyses are as follows. First, basket function and its effects on style were held constant in this analysis by focusing on one functional category: mush boilers. These were used to cook acorn mush, a staple of the California Indians. Mush boilers were selected for analysis from the various kinds of Pomo baskets for several reasons. (1) They were less likely to have been traded among the groups. Unlike gift baskets, which were made to be given away, mush boilers are basic, utilitarian baskets made for "home use." (2) They were not made for "show" in the public sphere, unlike gift and feast baskets. Mush boilers were made to be used at the center of the Indian household. (3) Mush boilers were rarely produced after the turn of the century, when they were replaced by more convenient pots and pans. Thus, this category is less affected by temporal variation, particularly the introduction of market forces and the

production of baskets predominantly for sale to White collectors. (4) Mush boilers are well represented in the collections that were studied (N = 171) and are well distributed among sublanguage groups.

Baskets from eight sublanguage-stylistic regions/groups were analyzed: Upper Lake, Upper Northern Pomo, Lower Northern Pomo, Central Pomo, Yuki, Western Hill Patwin, Eastern Hill Patwin, and River Patwin (Figure 8-2). Sublanguage-stylistic groups were defined intuitively by inspecting the stylistic data on mush boilers for communities within each language group and subdividing the group into communities sharing distinctive styles. For example, in the upper portion of the Northern Pomo linguistic territory outside of the Russian River drainage, mush boilers are more like those of the Yuki to the north than those in the lower portion of the Northern Pomo territory. Consequently, the Upper Northern Pomo were defined as a sublanguage-stylistic group separate from other Northern Pomo. Similarly, the Western Hill Patwin made their mush boilers more like the Pomoan groups, whereas the Eastern Hill Patwin made theirs more like the River Patwin, so the Hill Patwin were separated into two groups. Also, the Eastern Pomo were divided into the Big Valley group and the Upper Lake group. However, the Big Valley group had too few baskets for comparison and had to be excluded. In contrast to all of these divisions, the Central Pomo and the River Patwin appeared sufficiently homogenous stylistically to be retained as single classes. Using these sublanguage-stylistic groups for analysis, rather than strictly linguistically defined groups, appears to have been appropriate. It produced results that are very similar to those of analyses using the language groups themselves, but provided more detail (Pryor 1987), which was important for interpretation. For brevity, only the sublanguage analyses are presented here.

Language groups fall neatly into three language families, which are useful for interpretation: the Yukian (Yuki), the Hokan (Eastern Pomo, Northern Pomo, and Central Pomo), and the Penutian (Hill Patwin and River Patwin) (Figure 8-2). According to Moratto (1984:529–574), these three language families represent three separate migrations into the North Coast Range of California.

Formal variation in mush boilers was studied in two steps. First, Brainerd-Robinson similarity coefficients (Marquardt 1978:266–304), which range from 0 (dissimilar) to 200 (identical), were calculated for each pair of sublanguage-stylistic groups based on the percentage of occurrence of various mush boiler style traits. These similarity scores were used in an ordinal-scale multidimensional scaling (MDS) analysis to summarize the relationships among regions in two-dimensional plots. Second, multiple regression models were built in order investigate whether linguistic, social, and/or technological factors best account for the variability in the similarity scores.

One set of similarity coefficients was produced for each of three aspects of style: form, design cluster, and weave. The variables used to describe each of these aspects of style are shown in Table 8-8. Weave was studied, even though it is traditionally viewed as an aspect of technology rather than style, because it determines and is intimately linked with form and design cluster (Figure 8-3). Each set of similarity scores was then scaled with the SAS Proc ALSCAL (Young, Lewychj, and Takane 1983) and, for each, an optimal configuration of the sublanguage-stylistic groups in two dimensional space was plotted (Figures 8-8, 8-9, 8-10). The plots of style relationships among regions were then compared to the actual geographic relationships of groups in order to understand the effects that geographic distance—as a measure of interaction potential and linguistic relationships—might have had on the form, design, and weave aspects of style.

Multiple regression analyses were made to further clarify the effects of language, interaction, and technology on basket form and design. The predictor variables that were chosen to build the models are: (1) the linguistic similarity between sublanguage-stylistic groups, as measured by whether the two groups fell within the same language family, within the same branch of the language family, within the same language group, or within the same dialect group (Shipley 1978:80–90; McLendon and Oswalt 1978:274–275); (2) the geographic distance between sublanguage-stylistic groups, as a measure of their interaction and as estimated by the number of miles between their central points; and (3) the weave similarity between sublanguage-stylistic groups, as a measure of their technological similarity

Table 8-8. Variables Used to Describe Basket Weave, Form, and Design Cluster in the Multidimensional Scaling Analysis

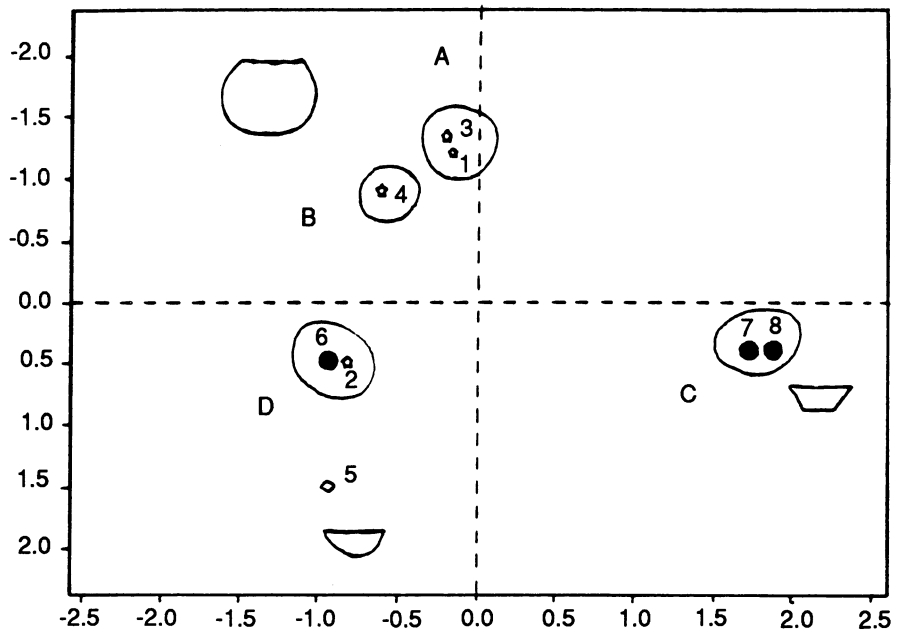
Weave	Form	Design cluster
% Coiled	% Spheroid with widest point below rim, but above middle	% Banded zigzag
% Plain twined	% Spheroid with widest point at middle	% Banded triangle
% Diagonal twined	% Spheroid with widest point at rim	% Banded square
% Lattice twined	% Large truncated cone	% Covering
		% Star-flower crossing
		% Star-flower zigzag
		% Vertical square
		% Vertical triangle-diamond
		% Lightning bolt
		% Isolate
		% Checkerboard
		% Banded simple line

and as based on the absolute difference in the percentage of coiling of mush boilers for each pair. Two regressions models with different response variables were constructed, one using the similarity scores for basket form, and a second using the similarity scores for design cluster. SAS Proc Regression (Sall 1982:37–83) was used to produce standardized Beta-values for each variable in each model. From these standardized values, the relative contribution of each predictor variable in accounting for the similarity scores was established.

Style Distributions: A Multidimensional Scaling Analysis

Figures 8-8 through 8-10 show the stylistic similarity of baskets of different sublanguage-stylistic groups to each other, based on weave, form, and design, in a two-dimensional MDS configuration. On a global level, the three plots are alike. Pomoan (Clusters A, B) and non-Pomoan groups (Clusters C, D) segregate in their basket styles. For the more visible attributes of form and design, Pomo, Patwin, and Yuki language groups segregate in their basket styles. These represent the three prehistoric migrations into the area (Yukian, Penutian, and Hokan). The pattern suggests the influence of shared culture history upon the distribution of form and design.

Basketry of the Western Hill Patwin has a mixture of features from surrounding sublanguage-stylistic groups, which is documented by its central location in the plots. This situation initially suggests that early culture history established a distinct stylistic pattern for the Western Hill Patwin, but that subsequent passive interaction diffused the pattern through time. However, this interpretation is suspect because the Western Hill Patwin are thought to have migrated into the area quite late (Moratto 1984:571). If stylistic similarity were based solely on the length of time that groups have interacted, then one would not expect the Pomo and the Western Hill Patwin to be so similar. Thus, it is tempting to interpret the pattern of stylistic similarity as the result of not simply passive interaction but, rather, active interaction—a conscious attempt on the part of the Western Hill Patwin to integrate themselves with the Pomo by mimicking their basketry style. Through such integration, they might have hoped to ease the hostility caused by their migration into former Pomoan territory. At the same time, one must consider that mush boilers were used primarily in domestic rather than public contexts, that they were not made for display, and that they are not the most likely forms of material culture for achieving this end. Thus, it is not clear that active interaction is responsible for the pattern. Finally, taken together, these points illustrate the importance of interpreting style distributions in their historical context, as Hodder (1982) has stressed.



Key:

Pomo
1 = Upper Lake
2 = Upper Northern Pomo
3 = Lower Northern Pomo
4 = Central Pomo

Yuki
5

Patwin
6 = Western Hill Patwin
7 = Eastern Hill Patwin
8 = River Patwin

Analytical clusters of groups

Figure 8-8. Multidimensional scaling plot for basket forms of subdivided language groups. Letters designate analytic clusters.

A second pattern that is apparent in the three plots is the clustering of Yuki, River Patwin, and Eastern Hill Patwin together (Cluster C). The baskets of these sublanguage-stylistic groups become more dispersed on the plots as one moves from the plot for weaves to the plots for forms and designs. In other words, the baskets of these groups are more similar for the less visible attribute of weave than the more visible attributes of form and design. This is not unexpectable, given that the three groups are geographically close to each other and interacted, and that less visible attributes are more accurate measures of social interaction (Friedrich 1970; Carr, Chapter 7).

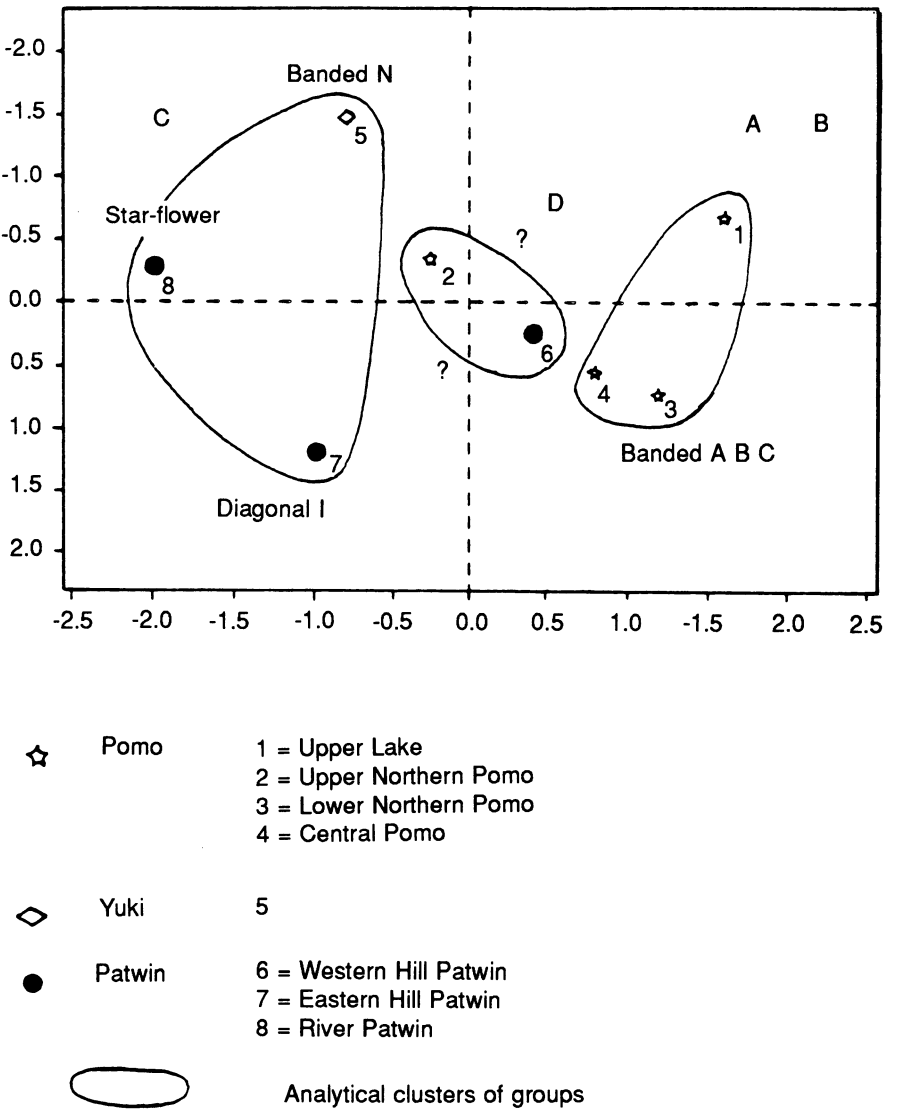
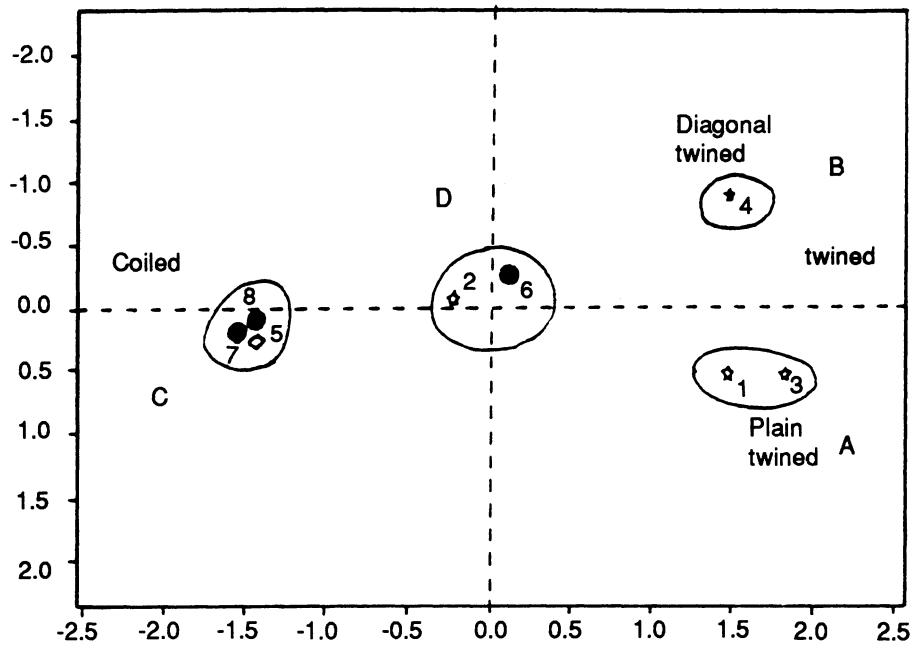


Figure 8-9. Multidimensional scaling plot for basket design clusters of subdivided language groups. Letters designate analytic clusters.

In contrast, the Upper Lake and Western Hill Patwin, which are geographically adjacent, do not cluster together in any of the plots and do not have mush boilers of similar styles. This apparently results from differences in mush boiler technology between the two groups, which will be discussed below.

Dimensional and cluster interpretation of each of the three plots shows which variables are more or less responsible for the patterning in them. In the plot of basket weaves (Figure 8-10), the horizontal axis largely represents the percentage of coiling versus twining. The Yuki, River Patwin, and Eastern



Key:

Pomo
1 = Upper Lake
2 = Upper Northern Pomo
3 = Lower Northern Pomo
4 = Central Pomo

Yuki
5

Patwin
6 = Western Hill Patwin
7 = Eastern Hill Patwin
8 = River Patwin

Analytical clusters of groups

Figure 8-10. Multidimensional scaling plot for basket weaves of subdivided language groups. Letters designate analytic clusters.

Hill Patwin, who compose one cluster on the left, each exclusively coil their mush boilers. In contrast, the Lower Northern Pomo, Upper Lake, and Central Pomo, who cluster on the right, each twine most of their mush boilers. The vertical axis seems to relate to the percentage of diagonal twining versus plain twining. The Central Pomo, high on this axis, twine their mush boilers diagonally more than any other Pomoan group (45%), whereas the Lower Northern Pomo and the Upper Lake, lower on the axis, twine most of theirs plainly (67% and 63%, respectively).

In the plot of basket forms (Figure 8-8), all of the Pomoan groups (Clusters A, B) have a high percentage of spheroid mush boilers that are widest in the middle. The Yuki (no. 5) have the highest percentage of spheroid mush boilers that are widest at the rim (bowl shaped). The Eastern Hill Patwin and the River Patwin (Cluster C) have the highest percentage of large truncated cone mush boilers. The Western Hill Patwin and the Upper Northern Pomo (Cluster D) both have a mixture of the Pomoan and Yukian mush boiler forms. The Central Pomo (Cluster B) have more of the Yukian mush boiler forms, and thus fall closer to that group.

In the plot of basket designs (Figure 8-9), the River Patwin have a higher percentage of the starflower zigzag design cluster, the Eastern Hill Patwin have a higher percentage of the diagonal design cluster, and the Yuki have a higher percentage of the banded simple line design cluster. The Central Pomo, the Lower Northern Pomo, and the Upper Lake (Clusters A, B) all have more banded design clusters (zigzag, triangle, and square). The Western Hill Patwin and the Upper Northern Pomo (Cluster D) have a mixture of all of these design clusters.

Factors that Affect Style Distributions: A Regression Analysis

Multiple regression analysis was used to discover the relative contributions of linguistic similarity, interaction (as approximated by geographic distance), and technology (as approximated by percentage of coiling weave), to formal and design similarity between sublanguage-stylistic groups. Tables 8-9 and 8-10, which give the results, show that approximately 50% of the similarity among sublanguage groups in both the form and designs of their baskets can be predicted from geographic distance/interaction and weave technology alone. Also, adding linguistic similarity did not result in a significant improvement in the level of prediction. A similar result was obtained in regression analyses where stylistic similarity was calculated between language groups rather than between sublanguage-stylistic groups. However, in this case, language group did contribute significantly, if weakly, to the final model (Pryor 1987a).

These patterns suggest that forms of interaction below the scale of the sublanguage or language

Table 8-9. Regression Analysis of Similarity Scores for Basket Form

Analysis of variance

Dependent variable: Form similarity

Source	*DF*	*Sum of squares*	*Mean square*	*F-value*	*Prob > F*
Model	2	34428.15252	17214.07626	12.505	0.0002
Error	25	34414.81176	1376.59247		
C Total	14	68842.96429			
	Root MSE	37.10246	R-Square	0.5001	
	Dep Mean	64.03571	Adj R-Sq	0.4601	

Parameter estimates

Variable	*DF*	*Parameter estimate*	*Standard error*	*T for Ho: parameter = 0*	*Prob > ITI*	*Standardized estimate*
Intercept	1	147.52178	18.11586896	8.143	0.0001	0
Distance	1	−0.85111535	0.22432978	−3.794	0.0008	−0.53650584
Coil	1	−0.73183196	0.22449266	−3.260	0.0032	−0.46098012

Table 8-10. Regression Analysis of Similarity Scores for Basket Design Cluster

Analysis of variance

Dependent variable: Design cluster similarity

Source	*DF*	*Sum of squares*	*Mean square*	*F-value*	*Prob > F*
Model	2	18721.20721	9360.60380	16.447	0.0001
Error	25	14228.04240	569.12170		
C Total	14	32949.25000			

Root MSE 23.85627 R-Square 0.5682

Dep Mean 95.75000 Adj R-Sq 0.5336

Parameter estimates

Variable	*DF*	*Parameter estimate*	*Standard error*	*T for Ho: parameter = 0*	*Prob > ITI*	*Standardized estimate*
Intercept	1	157.33013	11.64820611	13.507	0.0001	0
Distance	1	−0.63241319	0.14424037	−4.384	0.0002	−0.57622747
Coil	1	−0.53403030	0.14434509	−3.700	0.0011	−0.48623222

group and across language and sublanguage-stylistic group boundaries (as discussed on pp. 283–285, 287–288), blurred what stylistic distinctions had been produced at these levels by shared culture histories. Few crisp stylistic boundaries can be found; the modal styles of one group fade into the modal styles of another. It cannot be concluded whether passive or active interactions are largely responsible for these patterns, although examples of both have been cited and both are theoretically possible for visible traits like basket shape and design (Carr, Chapter 7). It is clear, however, that a process of boundary maintenance between language or sublanguage-stylistic groups did not operate through the medium of mush boiler style.

The indeterminant relationship found between language and style attributes of several visibility levels is contrary to the pattern found by Wiessner (1983:267–270) for Kalahari San projectile points. Among the San, language groups are differentiated stylistically with both visible attributes (arrow-point size, body design) and less visible attributes (arrow-point tip shape). This difference apparently relates, at least in part, to different patterns of interaction for the Pomo and San. For the Pomo, interaction extends beyond the language group through intermarriage, mobility, and other contacts. For the San, Wiessner concludes that risk is pooled within the language group and that style functions to promote solidarity and sharing within this group. This produces style discontinuities between language groups.

At the same time, the difference between the distributions of visible style traits for San points and for Pomo mush boilers may also reflect the different visibility of the mush boilers and points, themselves, which is a function of their different contexts of use and which determines their relative potentials for signalling. San points are readily visible within and among language groups. Their visible attributes can be used to signal within-group solidarity or between-group distinctions. In contrast, Pomo mush boilers, which are used in the domestic space, are much less visible, both within and among language groups. Their visible attributes (form and design) would not be as effective in signaling solidarity at the language group level or in maintaining boundaries between groups as would the visible attributes of the San's points. Rather, they would more likely, and apparently do, reflect patterns of interaction. Since interaction extends beyond the language group for the Pomo, style distributions for the visible traits of mush boiler do so, too, and are distinguished from the style distributions of visible San point traits.

This aspect of the Pomo case is important to the development of style theory in general. It illustrates that attributes of all visibility levels have the potential for reflecting interaction in their spatial distribution for objects used in less visible contexts (Carr, Chapter 7:195), just as less visible

attributes do in any context (Friedrich 1970). This principle explains the seeming contradiction in Braun's (1977) study, in which expectable patterns of interaction were found, but with visible, rather than obscure, style attributes. Braun examined cooking vessels from domestic contexts that provided them low visibility.

A second conclusion of the regression analyses is the strong effect of weave and its distribution on design and form and their distributions. The Central Pomo and Lower Northern Pomo are adjacent to each other geographically, but differ in the styles of weaves that they prefer. Likewise, the Upper Northern Pomo and the Western Hill Patwin are adjacent, but differ in the weaves that they prefer (Figure 8-10). These distinctions are repeated in the basket forms and designs used by these groups. This illustrates the importance of tracing out the technological constraints defined in a manufacturing decision hierarchy (Figure 8-3). If form and design were not constrained by weave, they might have distributions that are more independent of weave and that reflect factors beyond interaction (see also Carr, Chapter 7:196).

CONCLUSIONS

Detailed analyses of the styles of northern California Indian baskets suggest several general conclusions that are critical to the development of style theory and that have been discussed elsewhere in this book in more general terms. (1) A broad array of behavioral and other processes affect artifact style. Any general theory of style must address all of these processes and their respective effects, rather than a single process such as information exchange or social interaction. (2) Despite this complexity, archeologists can often use artifact styles to reconstruct particular kinds of behavioral processes. This possibility exists because different processes tend to operate at different sociocultural and spatial scales, and to affect different stylistic attributes. (3) The stylistic attributes that are affected by various processes are somewhat predictable from their visibility and manufacturing decision order, as discussed by Carr (Chapter 7) and Friedrich (1970). (4) To be accurate, most style analyses must consider the relations of stylistic variation to technological constraints (Roe, Chapter 2; Carr, Chapter 7; Carr and Maslowski, Chapter 9). (5) Acknowledging the microlevel processes that can determine style, such as personal histories, power relations among family members, and personal sources of creative inspiration, is essential to building any theory of style that pertains to macrolevel processes such as group interaction or group boundary maintenance (see also Roe, Chapter 2; Rosenthal, Chapter 10). The role of power relations in determining patterns of enculturation and stylistic continuity over time and space is an especially important example. This conclusion contradicts Braun's (Chapter 5) position that microscale processes are superfluous in understanding macroscale patterning. (6) The style of an artisan is dynamic through his or her life and relates to the person's social context (see also Roe, Chapter 2). (7) Although artists may be aware of individual stylistic attributes, they also may perceive them in a Gestalt manner, either simultaneously or alternately, when they are discerning the maker of a basket. It is hoped that this paper makes these points more tangible.

ACKNOWLEDGMENTS

John Pryor collected the primary data used here and made initial analyses and interpretations of it in the course of his doctoral work. Christopher Carr posed the outline and direction of this chapter and helped in a reinterpretation of Pryor's initial study. This chapter is the product of considerable sharing and refining of ideas by the authors.

Pryor wishes to thank the following granting agencies, for making this research possible: The National Science Foundation, for a dissertation improvement grant (BNS 8418656); the Smithsonian Institution, for a short-term visitor grant; Sigma Xi; and SUNY-Binghamton Foundation, for a special projects grant. His deepest appreciation goes to the numerous museums and their patient support

staffs, who not only allowed him to photograph baskets in their collections, but generously assisted him in recording documentation for the various baskets. He is also thankful to the many private collectors who opened their collections to him and graciously permitted him to photograph them. Margaret Conkey, Randall McGuire, and Vincas Steponaitis, Pryor's dissertation committee, helped in formulating the ideas expressed in this essay. He is forever grateful to the basketweavers, those special women, with whom he worked, who generously shared their insights.

Carr wishes to thank Beryl Rosenthal for her insights during the initial planning of this chapter and for bringing certain problem areas into focus. Jill Neitzel provided many comments that helped in rewriting the chapter.

REFERENCES

Allen, Elsie
1972 *Pomo Basketmaking.* Naturegraph, Healdsburg, Ca.
n.d. Unpublished notes documenting collections. Medocino County Museum. Willits, CA.

Arnold, Dean
1983 Design Structure and Community Organisation in Quinua, Peru.In *Structure and Cognition in Art*, edited by Dorothy Washburn. Cambridge University Press, Cambridge. Pp. 56–73.

Barrett, Samuel
1908 *Pomo Indian Baskets. University of California Publications in American Archaeology and Ethnology* 7(3):134–308. Berkeley.
1917 *Ceremonies of the Pomo Indians. University of California Publications in American Archaeology and Ethnology* 12(10):397–441. Berkeley.

Bean, Lowel, and Dorothea Theodoratus
1978 Western Pomo and Northeastern Pomo. In: California, edited by Robert Heizer, *Handbook of North American Indians*, Vol. 8., William G. Sturtevant, general editor. Smithsonian Institution, Washington, DC. Pp. 289–305.

Braithwaite, M.
1982 Decoration as Ritual Symbol: A Theoretical Proposal and an Ethnographic Study in the Southern Sudan. In: *Symbolic and Structural Archeology*, edited by Ian Hodder. Cambridge University Press, Cambridge. Pp. 80–88.

Braun, David P.
1977 *Middle Woodland—(Early) Late Woodland Social Change in the Prehistoric Midwestern U.S.* Ph.D dissertation, Department of Anthropology, University of Michigan.

Colson, Elizabeth (Editor)
1974 *Autobiographies of Three Pomo Women.* University of California Archaeological Research Facility, Berkeley.

Du Bois, Cora
1939 The 1870 Ghost Dance. *University of California Anthropological Records* 3(1):1–151. Berkeley.

Freeland, Lucy
1923 *Pomo Doctors and Poisoners. University of California Publications in American Archaeology and Ethnography* 20(4):57–73. Berkeley.

Friedrich, Margaret Ann
1970 Design Structure and Social Interaction: Archaeological Implications of an Ethnographic Analysis. *American Antiquity* 35:332–343.

Gifford, Edward
1923 *Pomo Lands on Clear Lake. University of California Publications in American Archaeology and Ethnology* 20(5):77–92. Berkeley.

Gogol, John
1983 Pomo and Wintun Basketry. *American Indian Basketry*, 9:3–8.

Graburn, Nelson
1976 Introduction: Art of the Fourth World. In: *Ethnic and Tourist Arts: Cultural Expressions From the Fourth World*, edited by Nelson Graburn. University of California Press, Berkeley. Pp. 1–22.

Hardin, Margaret Ann
1979 The Cognitive Base of Productivity in a Decorative Art Style: Implications of an Ethnographic Study for Archeologist's Taxonomies. In: *Ethnoarcheology: Implications of Ethnography for Archaeology*, edited by Carol Kramer. Columbia University Press, New York. Pp. 75–101.
1983 The Structure of Tarascan Pottery Painting. In *Structure and Cognition in Art*, edited by Dorothy Washburn. Cambridge University Press, Cambridge. Pp. 8–24.
Hill, James
1970 *Broken K Pueblo: Prehistoric Social Organization in the American Southwest*. Anthropological Papers of the University of Arizona No. 18. University of Arizona Press, Tucson.
Hill, James and Joel Gunn (Editors)
1977 *The Individual In Prehistory, Studies of Variation in Style in Prehistoric Technology*. Academic Press, New York.
Hodder, Ian
1982 *Symbols in Action*. Cambridge University Press, Cambridge.
1984 *The Present Past*. Pica Press, New York.
Hudson, John
n.d. Correspondence with Otis T. Mason 1896–1903. Smithsonian Institution Archives, Washington, DC.
Knight-Buck, Virginia
n.d. Unpublished Notes on file at the Mendocino County Museum. Willits, CA.
Kroeber, Alfred
1932 *The Patwin and Their Neighbors. University of California Publications in American Archaeology and Ethnology* 29(4):253–423. Berkeley.
Kunkel, Peter
1962 *Yokut and Pomo Political Institutions: A Comparative Studies*. Ph.D. dissertation, Department of Anthropology, University of California, Los Angeles.
Lathrop, Donald
1983 Recent Shipibo–Conibo Ceramics and Their Implications for Archaeological Interpretation. In: *Structure and Cognition in Art*, edited by Dorothy Washburn. Cambridge University Press, Cambridge. Pp. 25–39.
Loeb, Edwin
1926 *Pomo Folkways. University of California Publications in American Archaeology and Ethnology* 19(2):149–405. Berkeley.
Longacre, William
1964 Sociological Implications of the Ceramic Analysis. In *Chapters in the Prehistory of Arizona, II*, by Paul S. Martin, John B. Rinaldo, William A. Longacre, Leslie G. Freeman, Jr., James A. Brown, Richard H. Hevly, and M. E. Cooley. Fieldiana: Anthropology 55:155–170.
Marquardt, William
1978 Advances in Archaeological Seriation. In: *Advances In Archaeological Method and Theory*, Vol. 1, edited by Michael B. Schiffer. Academic Press, New York. Pp. 266–304
Mauldin, Henry
n.d. Unpublished notes on file at the Lake County Library, Lakeport, CA.
McGuire, Randall
1981 A Consideration of Style in Archeology. *University of Arizona Anthropology Club, Atlatl, Occasional Papers* 2:13–29. University of Arizona, Tucson.
McKay, Mabel
n.d. Unpublished notes on file at the Healdsburg Museum, Healdsburg, CA.
McLendon, Sally
1981 Preparing Museum Collections For Use as Primary Data In Ethnographic Research. *Annals, New York Academy of Sciences*, 376:201–227.
McLendon, Sally, and Brenda Shears Holland
1979 The Basketmakers: The Pomo Indians of California. In: *The Ancestors: Native Artisans of the Americas*, edited by Anna Curtenius Roosevelt and James Smith. Museum of the American Indian, New York. Pp. 100–129.
McLendon, Sally, and Michael Lowy
1978 Eastern Pomo and Southeastern Pomo. In: California, edited by Robert Heizer, *Handbook of North American Indians*, Vol. 8. William G. Sturtevant, general editor. Smithsonian Institution, Washington, DC. Pp. 306–323.

McLendon, Sally, and Robert Oswalt
1978 Pomo: Introduction. In: California, edited by Robert Heizer, *Handbook of North American Indians*, Vol. 8. William G. Sturtevant, general editor. Smithsonian Institution, Washington, DC. Pp. 274–288.
Meighan, Clement, and Francis Riddell
1972 *The Maru Cult of the Pomo Indians: A California Ghost Dance Survival*. Southwest Museum Papers, No. 23. Los Angeles.
Moratto, Michael
1984 *California Archeology*. Academic Press, New York.
Parsell, Alfred P.
n.d. *A Pomo Funeral*. Manuscript on file at the Ukiah Public Library, Ukiah, CA.
Plog, Steven
1978 Social Interaction and Stylistic Similarity: A Reanalysis. *Advances in Archaeological Method and Theory*, 1:143–182.
1980 *Stylistic Variation in Prehistoric Ceramics*. Cambridge University Press, Cambridge, England
Pryor, John
1987a *Gift Baskets and Sale Baskets: Dynamics of Pomo Power Relations*. Paper presented at the 52nd Annual Meeting of the Society for American Archaeology, Philadelphia.
1987b *Temporal And Spatial Stylistic Patterns Of Northern California Indian Baskets*. Ph.D. dissertation, Department of Anthropology, State University of New York at Binghamton.
Roe, Peter
1980 Art and residence among the Shipibo Indians of Peru: A Study in Microacculturation. *American Anthropologist* 82:42–71.
Sackett, James
1977 The Meaning of Style in Archaeology: A General Model. *American Antiquity* 42:369–80.
1982 Approaches to Style in Lithic Archaeology. *Journal of Anthropological Archaeology* 1:59–112.
1985 Style and Ethnicity in the Kalahari: A Reply to Wiessner. *American Antiquity* 50(1):154–159.
Sall, J.P.
1982 The REG Procedure. *SAS User's Guide: Statistics*. SAS Institute Inc., Cary, NC.
Shipley, William
1978 Native Languages of California. In: California, edited by Robert Heizer, *Handbook of North American Indians*, Vol. 8. William G. Sturtevant, general editor. Smithsonian Institution, Washington, DC. Pp. 80–90.
Stewart, Omer
1943 *Notes on Pomo Ethnogeography*. University of California Publications in American Archaeology and Ethnology, 40(2):29–62. Berkeley.
Voss, Jerome A.
1982 A Study of Western TRB Social Organization. *Berichten van de Rijskdienst voor het Oudheidkundige Bademonderzoek*, 32:9–102.
Wiessner, Polly
1983 Style and Society Information in Kalahari San Projectile Points. *American Antiquity* 48(2):253–276.
Wobst, H. Martin
1977 Stylistic Behavior and Information Exchange. In *Papers For the Director: Research Essays in Honor of James B. Griffin*, edited by C. E. Cleland. Ann Arbor: University of Michigan, Anthropological Papers of the Museum of Anthropology, No. 61. Pp. 317–342.
Young, Forest, Rostyslaw Lewychj, and Yoshio Takane
1983 The Alscal Procedure. In: *SUGI Supplemental Library User's Guide*. Statistical Analysis System, Cary, NC.

Style, Society, and Person

Archaeological and Ethnological Perspectives

Edited by

CHRISTOPHER CARR
Arizona State University
Tempe, Arizona

and

JILL E. NEITZEL
University of Delaware
Newark, Delaware

Springer Science+Business Media, LLC

Library of Congress Cataloging-in-Publication Data

On file

Cover design: "The Mask." The left half of the cover design is an adaptation of a set of overlaid human and animal images apparently representing one or more masks worn by an elite member of Ohio Hopewell Society (150 B.C.–A.D. 350) and rendered on a bone. From the Hopewell site (Chicago Field Museum of Natural History catalog number 56369). Cover design by Christopher Carr.

ISBN 978-1-4899-1099-8 ISBN 978-1-4899-1097-4 (eBook)
DOI 10.1007/978-1-4899-1097-4

Originally published by Plenum Press, New York in 1995
Softcover reprint of the hardcover 1st edition 1995

10 9 8 7 6 5 4 3 2 1

Contents