

## **Toward a Stylish Gut**

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### **Abstract**

Rock art “style” is routinely tacitly treated as a cultural and temporal marker. However, recent research suggests that concepts of rock art “style,” as used at present, may be unreliable or even deceptive as an indicator of both time and culture. Needed are sound theoretical approaches to rock art style.

### **Author’s Note**

I must acknowledge an intellectual debt I suspect is owed Steven Manning. I do not remember reading or even hearing the September 1991 Manning presentation, “A Modal Based Classification System for Rock Art Research, Overcoming Stylistic Methodological Problems.” Manning’s approach in this paper was somewhat different than the one I chose. Although he commented on alternate classification methods, I chose merely to outline the problem with the hope that this would stimulate suggestions, but I am always suspicious of coincidence. After reading Manning’s prior publication following this symposium, I believe that it (as well as my own experience and informal conversations with many researchers) may have directly influenced my work. Manning’s paper details aspects of the problem I did not directly address and offers valuable suggestions. I urge readers to reread Manning on the subject.

“GUT” refers of course to Grand Unified Theory, something long sought by physicists to explain how all the known forces interact to produce the result we see as the observable physical universe. I believe rock art researchers also have a theory dilemma; we inadequately understand how the interplay of both social and physical forces affect the appearance of the resultant rock art panel. I argue that is because researchers have concentrated on style-based art history approaches to an object (the rock art panel) that, while it is certainly also “art” in the broadest sense, is first an in-situ archaeological artifact or feature (archaeologically, non-portable artifacts are usually called features).

I believe there are problems with the way the style concept is currently used for rock art. The problems lie both in assumptions made during rock art style studies and in assumptions about rock art based on the styles assigned.

## **Background**

Use of style as a cultural and temporal marker has long dominated classification and study of rock art. Existing rock art style names denote time periods, ethnic groups, artistic evolution within groups, archaeological cultures, and geographic areas. Often the first thing categorized about a rock art panel is the style, from which is derived the comfortable feeling that something is actually known about the panel.

A style is an arbitrary, subjective grouping of categorically similar objects possessing variable attributes, based on perceived similarities in the variables selected. For style as applied to rock art in the Southwest, Polly Schaafsma has been a major influence. Based on Schapiro’s ideas of the 1950s, Schaafsma (1971, 1980) says styles are defined through examination of major motifs, forms, form placement and relationships, and overall expressive qualities, as perceived by the individual researcher. Additionally, she suggests that element inventories, occurrence profiles, and examination of technique are important in assessing rock art style. She states that art historians and anthropologists in common assume that every style is peculiar to a cultural period or time, and an individual or group: that for every culture or time there is only one, or a limited number of styles. Her

discussion of style implies that styles are primarily the result of socially driven selections from the range of possible choices. Schaafsma notes that style studies, including hers, are normally made primarily from existing collections of photographs that fail to provide much context for the panels pictured.

### **Problems of the Style-Based Approach**

A basic research problem typical in rock art style studies lies in the data used. Schaafsma (1971) and Burton (1971) both note their primary data source is existing photographs. Hartley (1992) found that variations in the depth, parameters, and completeness of existing site records made it necessary to reject many sites as candidates for his study. Photo collections and photos incident to site recording typically exclude panels or elements that are small, subjectively judged unimportant or atypical, occur in "atypical" places, are difficult to photograph, or are simply not located during relatively brief site visits. Rock art style studies typically rely on statistical analysis of element class presence, absence, or ratio to other elements. However, statistically valid conclusions cannot be drawn from biased or non-representative samples.

Major problems also stem from past assumptions about the causes of rock art variability. These include assumption that style is culturally or temporally diagnostic, that style is independent of environmental constraints, and that style can be separated from function. Thirty years ago, the role of environment was underplayed, and styles were assumed to occur through social tradition within a culture and to change because of changes in social tradition over time. Social tradition was treated as the prime constraint on style.

Anthropologists' assumptions have changed a great deal since Schapiro's article (Schapiro 1953). One change is the advent of absolute dating techniques applicable to many types of archaeological artifacts and sites. Although rock art styles were assumed thirty years ago to be specific to cultural epochs, Francis, Loendorf, and Dorn (1993)

found, in a recent Wyoming study using AMS and Cation ratio dating, that all rock art styles were co-occurring within a given time period and across a large geographic area.

Today, stylistic variability can be viewed as resulting from the interplay of multiple selective forces: actor choice, socially driven choice, and environmental constraints. Actor choices include whim, borrowing, and individual physical capabilities or habits. Socially driven choices operate on a group level and must, as well as tradition (stable, evolving, or as affected through diffusion of ideas), include function (purpose and use of the artifact). Environmental constraints may operate from site to regional levels, or across time, and include physical constraints imposed by characteristics of tools and materials available at specific times and places. Thus, assignment of style as referent to populations, ethnic or social groups, or changes in artistic tradition cannot be independent of (a) comparing functional equivalents (we must compare apples to apples), (b) comparing equivalent variables (we mustn't compare apples and abstracts), (c) recognizing environmental constraints, (d) recognizing that some similarities may be due to individual borrowing and some variability due to individual physical capabilities or whim. To establish the parameters of a style as a marker for any social or ethnic group or time period, one must somehow quantify and exclude the effects of all variables except the selected marker variable. Let us examine the problems posed in determining the effects of (a) through (d) above.

(a) Function: Binford (1989) found his attempts to identify classes of functional equivalents among similar artifacts inaccurate in the face of his continuing experience. Differences in function may affect any or all elements of style. For example, sports cars and mountain bikes are both relatively small vehicles made of modern lightweight materials, used for pleasure or thrills, sometimes by the same individual, but they are not functional equivalents. Identifying sports car-mountain bike pairs made by the same manufacturer, or even manufacturers of the same nation, based on perceived similarities in style is unlikely to succeed. Rock art function may vary with location (trail marker vs. living space vs. hunting drive site). Rock art panels at the same site can also vary in function (as well as through time or by social group). Rock art function is yet to be

determined for most panels or sites. Hartley (1992) and I (Johnson 1995b) note that style seems to vary with function, where different functions can be inferred from physical situational differences (and additionally in Hartley, with associated artifacts).

(b) Element equivalency: Variability within an element class can not be defined unless the assemblage being assessed contains only equivalent elements. We all know the extreme variability of rock art elements. Schemes abound, but major class divisions are typically into anthropomorphic, zoomorphic, abstract in rock art studies, (“abstract” often refers not to simplified representational forms, but to non-representational shapes), and geometric elements. These are variously subdivided. However divided, the sheer number, diversity, and geographic spread of any element practically guarantees the data will be biased and incomplete. For instance, Hartley (1992) divides anthropomorphic figures into full figure, fragmentary, and human heads. However, I have shown that for interactive rock art, heads or other apparently missing body parts may exist as a shadow element, or as sculpting (Johnson 1995a), observable only at specific times of day and year. I have also watched apparently abstract elements revealed by interactive events to be representational zoomorphic or anthropomorphic figures, presented from an unexpected perspective. Thus, “incomplete” representations may or may not be equivalent to “complete” representations. At the 1994 URARA symposium (Johnson 1995c), I offered proof that some “abstract” and “geometric” shapes in northeastern Utah rock art are actually representational, depicting physical features of site terrain. If an unknown percentage of abstracts and geometrics can be representations of physical terrain or depict other representational element classes from an unusual perspective, and if apparent variability in degree of element completeness may not survive closer examination, then any assignment of style dependent on the presence, absence, or ratio of abstracts, geometrics, or on variability in treatment of representational elements is suspect. Styles based on variability in categories of rock art element shape cannot be defined without first accurately placing elements into categories as equivalent variables.

(c) Environment: Environmental constraints restrict variability in specific and physically objective ways. They can operate to varying degrees over time and through

space. They may be obvious (charcoal is not very visibly effective for drawing on basalt) or subtle. For example, modern tandem canoes might more readily be grouped into an aluminum style, a kevlar style, and a plastic sandwich style cutting across manufacturer categories, rather than into manufacturer styles. Each material affects the shapes, curves, and edge sharpness differently in the finished canoe. For rock art, interactive design using shadow templates is the major environmental constraint on stylistic variability. Element size, exact shape, completeness of representation, placement on the panel, and techniques used vary due to the shadow template shape and pattern of motion (Johnson 1993). Shadow template size and shape varies with all the geophysical factors involved, and outcrops of the same rock stratum often cast shadows with similar template characteristics. For example, three basic techniques, outlined body, en-toto pecked body, and dot body construction, account for most of the anthropomorphs in northeastern Utah. Burton (1971) suggests the choice of body style is social: an artistic style evolution from less sophisticated through representational through abstract portrayal over time. However, dot body figures tend more to co-occur with some outcrops of Glen Canyon sandstone, while large outlined bodies are more common on Frontier sandstone. For example, the lens of Frontier sandstone at McKee Spring naturally tends to cast long, solid, fairly straight-edged shadows. There are more than forty anthropomorphs at McKee Spring. Most have large outlined bodies designed using these large templates. Only one interactive anthropomorph uses the dot body technique. That is on a surface where the available shadow templates consist of very small sun cups, boxes, or arrow shapes more typical of the shapes cast by the Glen Canyon sandstone at Cub Creek, where many dot bodied anthropomorphs occur. Thickness of element lines, technique chosen for a line, and depth of pecking in a line can also be constrained by shadow templates. Panels on very "poor" surfaces, have on further study had templates that were exceptionally "important" to other panels and interactions at the site, or had especially dramatic shadow templates, motion, and/or timing. These panels, used in spite of poor surfaces, may appear crudely or sketchily done, not as a style component but because the surface constrains the finished panel appearance. For interactive rock art, elements portrayed vary with season of design,

and arrangement of elements on a panel varies with direction and nature of shadow motion across that panel on key days (Johnson 1993). Thus, the effects of environmental constraints can only be assessed by examination of all interactive events. Since distribution of interactive design is currently unknown, rock art styles cannot accurately be based on variations in technique, sophistication, element shape, position, or size without examining the degree to which these choices are environmentally constrained.

(d) Individual choice: Individual choices include physical capabilities or habits, borrowing of techniques, shapes or figures, and whim. Individual choices are generally under-considered as a factor in rock art variability. Binford (1989) suggests that physical capabilities such as individual motor habits might identify and account for some variability, even across artifact classes. For example, as a left-hander, I use tools in a different manner than the average person, with results often detectable in the finished product. I observe that similar element treatments are shared by multiple panels at some northeastern Utah sites, but vary across sites. These variations do not appear due to environmental constraints or differences in function but do occur on equivalent elements. These minor stylistic choices seem to be actor-driven and individual. I think the most economical explanation is individual style choices (I-style): consistent treatment of element or figure detail apparently independent of environmental constraint, function, tradition, and location, but centered on one site. Individual borrowing of rock art “pictures,” shapes, or techniques seems to occur. “Fremont” rock art associated with “Anasazi” artifacts (Sharrock 1966) may represent diffusion rather than individual borrowing, but enough “out of place” rock art figures or elements occur to suggest traveling individual rock artists were not above borrowing new ideas. Although it may be possible to isolate stylistic variability due to individuals, prehistoric I-styles are unlikely to be useful in discussing ethnicity, social groups, or temporal cultures. The chief effect of possible individual borrowing seems to lie in obfuscation of style distributions.

There are of course a number of stylistic elements in rock art that do seem driven by social factors. Site motifs are an example. A site motif is an element or figure centered on and recurrent at one site, occurring only occasionally and with decreasing frequency as one

moves away from that site. The element or figure appears to exist independent of interactive necessity, individual choice, or panel function (at least as far as determined by interactive study). An example from my experience is the McKee Spring object, a relatively large element, approximately the shape of a huge corner-notched projectile point, but depicted as suspended by the tip. Various rock art enthusiasts and authors have confidently described this object as representing a human head, a psychedelic mushroom, a scalp, a medicine bag, a spear, and a pot with water pouring out of it. After working with this site for six years, I believe it is still safest to call it a McKee Object, because no one, including me, has offered a test of any hypothesis. Site motifs may represent real world objects or shared ideas, but they seem most likely to bear upon a localized social group creating the rock art site. For this reason, I speculate that site motifs might represent group identity at a family or clan level.

Since discussions and assignments of rock art style seem generally to ignore the probable annual and life ranges of individuals and groups involved, I should point out that many estimates of the home range of foraging groups in arid climates are at around 10,000 square kilometers (Hartley 1992:43-6). According to Binford, an individual's lifetime home range can be double that, and the range individuals may have traveled on hunting trips is much larger still (Binford 1983:114-117). Most of the rock art examples used in this paper are attributed to Formative period peoples, who as horticulturists may have had a somewhat more restricted range than foragers. However, it is worth noting that most rock art attributed to, for instance, the approximately one-thousand years of Uinta Fremont occupation occurs inside an area no larger than the average home range of one foraging group.

Since present style assignments largely ignore the effects of environmental constraints, function, and individual choices on variability, and are based on biased samplings, and suffer from inaccurate element classification, we must recognize at least two things:

1. Present style assignments are arbitrary classifications that may or may not reflect any emic (actor-recognized) relationships.

2. Present rock art style assignments in Utah have been made in the absence of a body of tested ideas about panel function, symbolism, creator ethnicity, and epoch of creation and/or use.

### **Summary**

Photographing, preserving a visual record of, and aesthetic appreciation of rock art are perfectly valid, historically important, and very satisfying pursuits. In those pursuits, it is difficult not to mentally categorize observed rock art into “styles.” However, the point I have attempted to make above is that if, in addition to appreciation, one is also doing research using the archaeological artifact/feature that is rock art, then art history becomes only one of many sources of information contributing to investigation of rock art. Styles assigned from an art history perspective, while aesthetically serviceable, may be unserviceable in science-based approaches. If uncritically accepted as answers to rock art questions, they may impede further progress in the archaeology or aesthetic appreciation of rock art.

For use in rock art recording, study, interpretation, or hypothesis formulation and testing, we need to develop a Grand Unified Theory of rock art variability that considers the interplay of surfaces, locations, purposes, interactive templates, seasons, representation, techniques, technology, motifs, tradition, and individual capabilities to explain rock art similarity and variation. If the concept of style is ultimately useful in understanding rock art, it will not be as a descriptive device substituted for careful scientific study. Rock art style will be useful only if used to help accurately classify panel, site, temporal, and areal variability, thus advancing our understanding and appreciation of the people who created rock art.

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