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2000

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King, Mary Elizabeth, "Pitfalls, Perceptions, Problems, and Possibilities in the Perusal of Prehistoric Fabrics" (2000). *Textile Society of America Symposium Proceedings*. 809.

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Pitfalls, Perceptions, Problems, and Possibilities in the Perusal of Prehistoric Fabrics

Mary Elizabeth King

Nearly 40 years ago, Anna Gayton wrote a paper entitled, "The Cultural Significance of Peruvian Textiles: Production, Function, Aesthetics for the *Kroeber Anthropological Society Papers* (1960). Textile studies at that time and earlier had tended to focus on one or more of these three categories when dealing with ethnological textiles, but studies of archaeological textiles were almost entirely descriptions of techniques and designs. While in the past 10 or 15 years, significant advances have been made in the interpretation of ancient fabrics; we still have a long way to go.

What, then, are the approaches that we must now take to adequately study prehistoric textiles and derive the greatest amount of knowledge from them? First, accurate descriptions with attention paid to terminological clarity, preferably using a standard such as that of Irene Emery (1966); second, a thorough knowledge of the literature, museum collections, and range of possibilities; third, employing multi-disciplinary corporations analysis; fourth, the use of such studies as semiotics, linguistics, ethnographic analogy, and mythology to attempt to understand meaning; fifth, experimentation; sixth, to make use of logical and scientific theory, yet approach the study with an open mind; and seventh, to always keep in mind the fact that are archaeological specimens are the product of human beings. Since it is unlikely that any one person could possibly accomplish all of this, it will be necessary to call upon others with specific areas of expertise and, whenever possible, to communicate with one's colleagues for their advise and criticism.

In any field, it is necessary to acquire a mass of basic data before one can begin to assess this data with an eye to making hypotheses and drawing a conclusion. One should look at all of the examples possible, though in many areas of textiles studies this may not be easy achieved. It may take years before sufficient examples are found to make meaningful comparisons. The scarcity of examples may lead us to make incorrect assumptions about the distribution of techniques and textile types through time and space, a problem with the study of all perishable materials. The problem is further magnified by the incomplete nature of all archaeological exploration. With advances in archaeological techniques, however, more and more fragments of fabrics are being found, and it may eventually be possible to make more reasonable statistical approximations of reality.

It is also important, perhaps particularly so in the study of ancient New World fabrics, to understand what was going on elsewhere. We must know what was happening in the past in North, Central, and South America, as well as in the Old World at the time of the original New World settlements. The latter can enlighten us as to the kinds of things that humans brought with them in their migration; the former can show us the results in diffusion and innovation in various New World cultures. As an example, Archaic peoples across North America utilized such garments as string skirts and fur-and feather-twined blankets. It seems clear that these were items that they brought with then

from the Old World. It would have been impossible for people to migrate or even to make extended hunting excursions without warm clothing, carrying devices, and all the many other things that they would need to preserve themselves and their way of life.

As to the importance of understanding the industries of the various parts of North and South America, without such knowledge it is impossible to understand the origin of techniques. Many techniques are more wide spread than is commonly believed, and most, if not all, of us have made substantial errors in speaking of origins and relationships without understanding the larger picture. In other words, descriptive studies form a basis for more sophisticated studies and hypotheses, but a sufficient number of descriptive studies must be available to assess the reliability of the data, and, if possible, the studies must be widely available, not simply buried in unpublished delivered papers, masters' theses, doctoral dissertation, or little-known local journals. Ultimately some of these may achieve wider access, but some important studies reach a wide audience. It is incumbent upon true students of a subject to make their works available for critical analysis and incumbent upon the critics to make their criticism objective and free of personal bias. The web may offer us a new chance "publish" important bits of knowledge (see, for example, Karen Bruhns' "The Story of a Sherd: The Second Oldest Textile in Ecuador.")

Modern graduate students often believe that the older literature in the field is not worth their consideration, but those without a knowledge of past information are often doomed to make serious misinterpretations. We might all be spared embarrassment if we had a better grasp of past published material as well as the contents of museum collections, to say nothing of frequently consulting with our colleagues before publishing our material.

Textile studies have, indeed, become more perceptive in recent times. One might cite William Conklin's 1973 and 1986 papers, "Structure as an Index of Numerical Thought in Archeological Textiles – An hypothesis" and "The Mythical Geometry of the Ancient Southern Sierra;" Mary Frame's imaginative demonstrations of techniques transposed into designs (1986); and many others. Semiotics, long applied to ethnic costume (see, for example, Bogatyrev, 1971) and even to high fashion (Barthes, 1983) can also be applied to ancient textiles, perhaps explicating that most elusive of traits—meaning—that might otherwise remain unknown. In *The Fashion System*, Barthes uses "image garments" in this case fashion photographs, in his semiotic analysis. While we unfortunately have no photographs from the distant past, we do have their equivalent in such things as human effigy potter, figurines, mural paintings, etc. Many of Barthes' "significant units" seem to have been virtually ignored in modern studies. Few of us have dealt with the meaning of placement, whether of details or whole design units. In Paracas, Safford (1941) pioneered in such a study, and Anne Paul (e.g., 1997) and Mary Frame (1988) have continued to do meaningful studies of design placement. One other paper (Brugnoli Bailoni and Hoces de la Guardia, 1995) uses placement to attempt to determine meaning in Chavin and Wari textiles. In the former, they believe that two textiles have agriculture calendrical significance; in latter, the meaning is not clear.

We are all aware of the importance of using specialist in other fields to assist us in our analyses. We are accustomed to using botanists and zoologist to help us identify further errors in print. Since many early fiber identifications are inadequate or totally wrong, and since analytical techniques are constantly improving, it is always wise to rest fibers and other organics. Sadly, some of these early errors are still being repeated in recent and otherwise excellent publications. For instance, the animal skins used in twined fur blankets are still being identified as rabbit, when a quick trip to the local zoologist would show that they are mixed small mammals. If it is impossible to retest, it should be made clear that these are old identifications. Dye analyses are woefully inadequate; basically only red and blues have sound source information. It is difficult to identify yellow dyes, but it would be worthwhile to find a dye chemist who is willing to spend a few years studying yellow plant dyes. It would undoubtedly have to be limited to a specific geographic region, but anything would be better than nothing.

There are, however, other ways in which scientists can be of use. Some time ago, two Austrian zoologist (Wickler and Seibt, 1983, 1988) offered a re-evaluation of the Paracas "double-headed snake" design, convincingly suggesting that the design actually represents polychaetes, sea worms that not only appear to have "heads" at both ends and protrusions from their sides but also have considerable calendrical significance. The earliest depiction of them is in a twined fabric from the preceramic site of Huaca Prieta on the north coast of Peru, in which they are shown with crabs. In actuality, polychaetes sometimes co-inhabit crab burros. They are often brightly colored, and they spawn at the ocean surface in great numbers annually. It would be impossible for coastal-dwelling people to ignore them. Polychaetes are widespread in the world, and, in Indonesia, they figure in the mythology, so it is quite reasonable to believe that they had significance to the ancient Peruvians as well. The publication of this identification was in a well-known European journal, but it had obviously been missed by most Peruvianists.

Linguistic analysis can be useful in design analysis as well; for example, minimal pairs can be located in repetitious design layouts and serve to distinguish similar beings or designs from one another. E.J.W. Barber (1991) has made superior use of her training as a linguist, archaeologist, and weaver in her discussion of the prehistoric textiles of the Old World. Likewise, experimentation, which Barber also practiced, can serve to reinforce technical analysis.

Experimentation, can, however, be dangerous unless the person experimenting has, at the very least, skills approaching those of the original craftspersons. Barber's use of the techniques is so successful because she is a skilled, second-generation weaver. The same process in other hands can be disastrous. We must be aware that early craftspeople may have utilized techniques unfamiliar to us and not make judgments based on what modern craftsmen and women can or cannot duplicate. If we find ourselves considering a production method that is far more complicated or time-consuming than need be, we should probably apply the principle of Ockham's razor and look for a simple explanation based on prior knowledge.

Archaeologists have used ethnographic analogies for many years in an attempt to explicate archaeological behavior, and though not infallible, such analogies sometimes help us to understand the archaeological counterparts. The fact that everyday artifacts and behavior often acquire ceremonial uses and meanings through the passage of time can also add dimension to the understanding of both archaeological and ethnographic textiles. Some obvious examples are the survival of medieval dress style in recent nuns' garments, the use of candles in ritual situations, and the transformation of the everyday semi-subterranean house into the kiva in the Southwest. A curious "survival" which does not fit this pattern concerns an odd Peruvian poncho or shirt from the Central Coast (Gayton, 1955; Emery and Kind, 1957). Sometimes called a mummy-bundle poncho, these relatively common garments consist of loosely woven narrow brown plain-weave cloths sewed together horizontally and bordered with red and blue weft-faced plain weave. The construction process produces a horizontal neck slit, and, in most examples, "arm" holes at the top edge of the poncho-shirt, rather than on the sides. This has been interpreted as a garment that could have easily been pulled over a mummy bundle, with the small fabric and the construction of the garment were both so loose and open that it would have been difficult to wear in life without catching on anything and everything. I recently encountered an illustration of a Chancay pottery figurine wearing a fragment of the same textile as a poncho (Damien, 1995:116-117, Fig. 4). Damien describes the female figurine as a votive "*cuchimilco*" figure found in graves, with obvious ritual significance. More surprising, the identical garment construction, albeit made of bark cloth, appears in the Peruvian Amazon among the Asherinka (Vebber, 1996), where it is worn by women and described as a prehistoric garment. Interestingly enough, the men wear a poncho made up of the same strips, but with the strips sewn together vertically, producing a normal neckslit and armholes. Thus a shirt can be turned from a male to a female garment or vice versa by simply unstitching it and putting it back together in the opposite direction. This appears to be the complete reversal of the more common situation of the everyday into ceremonial gear, but it might possibly be a case of a construction method used for both ritual and everyday circumstances.

One of the commonest pitfalls in prehistoric textile studies is the use of circular reasoning that creeps unintended into many arguments. Often eager to prove our cases, we may base a premise on the assumption, without proof, that a certain situation exists. Thus, as is often said to be the case in the Southwestern U.S., if the backstrap loom was introduced ca. A.D. 500, accompanied by cotton, then any example of cotton cloth cannot precede A.D. 500, or, if there is a backstrap loom, there must be cotton.

I have already written (1978) of the difficulties involved in the study of archaeological textiles, especially those which consist of impressions on pottery or those adhering to metals, and I believe that my conclusion in that paper are still sound. It is usually necessary to see both sides of a structure to identify it positively. Many descriptions of techniques based on pottery impressions are downright fanciful. In all archaeological textile studies we must make decisions about which details are significant and whether the significance applies in all circumstances. Some works, admirably, give us all possible details and let the reader make the decisions, but this is a very labor intensive approach. If we take the direction of spin and ply, for example, we are faced

with somewhat limited possibilities. There are only two directions: S and Z (\ and /). It seems clear that plant fibers have their own preferred direction of initial spin based, no doubt, on their structure, with cotton being usually initially spun Z and the other plant fibers, both leaf and stem, usually spun initially S. This is not infallible, it is simply the norm. Plies are usually in the opposite direction from the original spin, for the reason that they hold their twist better in that situation. Some variations in spin may be due to handedness or to the method of spinning. Non-plant fibers may be easily spun in either direction, and on occasion, opposite spins or plies in adjacent warps are used for a kind of herringbone patterning in textiles (Dransart, 1995:233, Fig. 5), a trick that the craftspeople may have originally learned with twining. The use of opposite plies in a given fabric may have a magical connotations as Goodell (1968) found in Andean ethnographic textiles, and, similarly Dransart (1995:240, endnote 11) cites Meisch (1986:27) for the information that opposite spin is used by the Tarabuco of Bolivia for plaited ties worn around the ankle "to protect the body." Goodell (1968:7) agrees that *lloq'ë* (clockwise, or S, spin) has protective qualities, as well as being used in offerings. The presence of opposite spins or plies in prehistoric textiles may indicate similar beliefs.

Adovasio and his colleagues (e.g., Maslowski, 1996) have long insisted that changes in spinning practices indicate a new population or culture moving into the areas, but they could just as well mean the introduction of a new fiber (which, of course, does not preclude a new population, as well). In a very few instances there do appear to be cultural preferences in spin. In northern Peru, for example, cotton is almost always initially spun S, and a textile that includes nothing but S-spun cotton can be safely said to be from the north. This, however, is the only clear example of such a preference that has been noted, and the northern Peruvians do not seem to be significantly different culturally from their southern neighbors. When Chavin-style textiles occur on the South Coast of Peru as a result of influence from the north, they are Z-spun. In the north, where preservation is unfortunately interior, the spin would be S. Unfortunately, there are few early textiles preserved from the North Coast. In prehistoric fabrics from northern Mexico, Taylor (1968) noted a preference for final twist, rather than initial spin. This results in some rather strange spin and ply combinations, such as the same direction in both and singles and plies with the same final spin, and it is impossible to know whether this was an aesthetic decision or had other meaning.

Both Dransart (1995:237ff) and Frame (1986:56) have suggested that spinning direction may have greater meaning, that it may be "the embodiment of the rotating motions in the [*waynu*] dances" (Dransart, 1995:239) or to simulate "the Apparently spiral direction of the sun in its daily and annual cycle" (Frame). If spinning does have such connotations it makes it less open to change than might otherwise be the case. However, these meanings cannot be all inclusive, since some fivers are spun in one direction and others in the opposite within the same culture. Clearly this is a subject for additional study. For that reason and others, I find it difficult that publications on design in fabrics rarely contain technical details such as size, fibers used, spin and ply, etc. These could be simply recorded in footnotes or appendices. Such an inclusion would render the articles far more useful and need not distract the reader from the discussion of design and meaning.

The most difficult thing to determine is unquestionably, meaning. Even with ethnographic textiles, differing interpretations of a single design can often be elicited from a group of artisans. With archaeological textiles, only semiotics used together with ethnographic analogy, holds out some promise for deciphering meaning, and even then, we can never be sure that we are right. Sometimes it appears that we simply cannot determine how something was made or used, or what it meant to the people who possessed it. Irene Emery (1966:xv) long ago pointed out that the method of construction usually cannot be positively identified from the finished product, although the structure can, in most cases, be described. Often a number of construction methods, more or less indistinguishable in the final fabric, can be used to produce a given effect.

There are still many unsolved problems. Some, such as the ultimate origins of techniques may not be susceptible to solution owing to the perishable nature of fabrics and their long history. We are bound to be left hanging in our studies of fabrics that are not accompanied by a written language. As Barthes (1983:277) has said, language is the “guardian of meaning and gateway to the world.” Without it, we can make surmises, but we cannot be assured that we are correct. In fact, the worst thing about the analysis of prehistoric fabrics is the fact that we can never really know whether a great many of our interpretations are right or wrong. We can only do the best we can to wring every shred of data from our artifacts. Even in our failures, we gain knowledge.

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