THE TEXTILE ART IN PREHISTORIC ARCHAEOLOGY.

When the ancestors of the human race, far back in the shadows of the past, stepped across the boundary that separates the realm of instinct from the realm of reason, they were already endowed with some of the machinery of civilization. They had, in all probability, acquired the rudiments of language, and in common with the birds and the beasts, possessed considerable skill in certain branches of industry. Our arts of to-day were not yet differentiated, but the germ was there, and from this sprang up first of all, the two great arts, architecture and weaving, which were at a later day destined to pursue such divergent ways. That they did thus arise, is to be inferred from what is known of the nature of man and his environment. His habits were doubtless arboreal, and his dwellings were in the forests that furnished his food. Twigs, vines, leaves, and filaments intertwined in various ways served to shelter him from the elements and from the enemies that beset him.

In time nets, baskets, mats, and coverings for the body were made, and as the ages passed by these developed into the cloths, tapestries, laces, and rich goods of the cultured races of men; these represent the textile art. House-building among such races had, at an early period, gone its separate way.

It requires no argument to show that from the beginning the textile art formed one of the most important human activities, and the story of its development and of its peculiar influence upon other arts merits the closest attention of science.

In our studies of the beginnings of art we can depend upon written records to carry us back but a few thousand years along the pathway of progress, and beyond this we encounter a deep shadow into which archaeology seeks to throw a ray of light.

Much can be learned of the character of the earlier stages of our highly-matured arts by a study of the work of the
primitive tribes of to-day. We have thus within our easy reach, illustrations of conditions, processes and results, which along the ancestral lines of our riper civilizations would lie farther back of the foundling of the pyramids than that is back of us. But such analogies are not entirely satisfactory. We long for a closer acquaintance with the early forms of art peculiar to those nations that have actually achieved a high grade of culture, and thus we appeal to prehistoric archaeology.

The primary failure of the textile art as a historic, or rather a prehistoric record, is the susceptibility of its products to decay. Examples of very archaic work survive to us only by virtue of exceptionally favorable conditions. The fabrics of the Incas, buried in the dry saline sands of the rainless shores of Peru, are, after the lapse of hundreds of years, found to be as fresh-looking as when first wrapped about the bodies of the dead. After the flight of thousands of years, the mummy-wrappings of the ancient Egyptians are equally well preserved, a result attributable to the fact that they had been steeped in balsam and stored in well-built tombs.

Our mound fabrics are in many cases preserved through contact with objects of copper, the salts of which have a tendency to arrest decay, and also through charring, which leaves them, while undisturbed, all but indestructible. The latter method of preservation is finely illustrated by the well-preserved fabrics of the Lake Dwellers of Switzerland, which having fallen into the water when partially consumed were preserved by the deposition of slime.

Again, the fabrics of the North American tribes are made known to us in a way wholly distinct from the preceding. The primitive potter employed woven textures in the manufacture and ornamentation of his wares. In the process, the fabrics were impressed upon the soft clay, and when the vessels were baked the impressions became indelibly fixed. A number of restorations, made by taking casts in clay of these impressions, are given in a paper published in the third annual report of the Bureau of Ethnology. Evidence of the practice of the art by many ancient nations is also preserved to us by such implements of weaving as happen to be of enduring materials. Spindle whorls in clay and stone are perhaps the most common of these relics. On the site of ancient Troy, Schliemann obtained 22,000 specimens and some of our American sites are hardly less prolific. These objects tell us definitely of the practice of the art, but give little insight into the character of the products, for woven fabrics, as to quality, depend but little upon the character of the machinery employed.

It happens, however, that these and kindred means are not the only ones through which a knowledge of prehistoric fabrics can be gained. The textile art is abundantly reflected in a number of associated arts whose products were embodied in more enduring
The influence of this art upon other arts has been exerted chiefly in two directions, first by giving form to their various products, and, second, by furnishing them with decorations.

In the matter of form this influence is somewhat limited, as textile construction does not usually give rise to those rigid shapes that tend to impose themselves upon materials themselves rigid. Basketry is the most notable exception.

It is true that the primitive builder employed textile combinations in constructing his dwellings, and that many features of these are impressed upon architectural decoration and through it upon the decoration of other arts, but basketry occupies a wholly distinct field; it is almost universally practiced by primitive peoples, and its products are so intimately associated with the various other arts employed in domestic work that its influence is exceptionally strong. In the earlier periods one of its more nearly related associates was the ceramic art, which seems to have been, as it were, a younger sister whose youth and plastic nature made it easy to give shape to her features. There is not a group of pottery within my knowledge that does not furnish examples demonstrating the correctness of this observation.

Ancient pueblo peoples were masters in the basket-making art, as are also most of the living races of the Pacific slope, and their pottery in many ways shows traces of the textile influence. One example will serve to exemplify this, Fig. 1 represents a pueblo basket of modern make, but in all probability of archaic type. It is drawn one-third the actual size, and serves to illustrate the form and surface characters of one class of these vessels. Fig. 2 represents an ancient pueblo cup in gray earthenware, which in form, in surface characters, and to some extent in construction, imitates a woven vessel of the variety shown in Fig. 1. Did we not have these modern baskets to illustrate the textile art of this people, there are hundreds of pieces of ancient pottery that would serve to make clear to us the character of that art at the period when the older pueblos and cliff dwellings now in ruins were teeming with life. The same is true to a less marked degree of the arts of other American races, and it is not unusual to find articles of wood, stone, and metal, whose forms give hints of textile domination.

It is in ornament, however, that the influence of the textile art is most deeply and widely felt, and no single art, ancient or modern, in which men have endeavored to embody elements of beauty, is
without strongly marked traces of its presence. By a study of archaic ornament, therefore, the archaeologist may hope to add something to the sum of his knowledge of textiles.

Architecture, by the nature of its construction from geometric units, also necessarily gives rise to geometrical forms in some respects resembling those produced in fabrics, but this need not lead to confusion as the history of the arts will easily demonstrate that before architecture, as embodied in hewn wood, dressed stones and bricks, had arrived at a stage capable of influencing decoration, the textile art had occupied the field, and its peculiar conventionalities were disseminated throughout the whole range of the embellishing arts; architecture itself, when it reached the proper stage, did not escape its influence. Examples may be given to enforce these statements, and in doing this we need not go beyond our own country.

Perhaps no American nation had in pre-Columbian times reached a grade of skill equal to that of Peru, at least it happens that there fabrics of a very high class are exceptionally well preserved; but, aside from this, her art in other materials bears evidence of the perfection of her textile products. The conventional decorations upon wood, clay, stone, and metal, are often of textile extraction. The forms of men, monkeys, birds, and fish, recurring again and again in all branches of art, show decided traces of the peculiar angularity imposed by previous treatment in the loom.

Architecture could also be made to contribute to our fund of information, as we shall see from an example taken from the "Hall of Arabesques" at Chima and shown in Fig. 4. This charming design is worked out in stucco, and exhibits characters
that could not have arisen in either stucco or stone, but which repeat almost literally the peculiar devices of the native textiles. Throughout Central America and Mexico, where no fabrics are preserved to tell their own story, architecture exhibits conventions hardly less textile in their appearance. Fine examples are found in the marvelous ruins of Uxmal and Mitla.

The pueblo art of New Mexico and Arizona is perhaps better suited than any other to illustrate these thoughts, as it belongs to the near past and almost equally to the present, and all the needed elements are available for reference. The native textile art has, without doubt, declined greatly since the advent of the Spanish people, for we find painted upon the ancient pottery of this region designs of great beauty and complexity much superior to anything produced at the present day. The very pleasing design given in Fig. 5 is copied from a large vase made by some
of the older cliff-house peoples. In it we discern all the textile angularity, a certain continuity in the lines, and a consistency in the arrangement of the parts that arises through no other than textile channels. Another example, taken from the upper surface of an ancient vase, is presented in Fig. 3. It, also, is better in design than anything found in modern pueblos work. It was probably copied by the potter from the inner surface of a basket plaque, a form of vessel in use by all the pueblo tribes. The painted figure departs from the geometrical symmetry of the original textile work in some of its details. This is due to the lack of precision characteristic of free-hand delineation where the hand and the eye are not thoroughly trained.

From the examples presented it will be seen that had all traces of American prehistoric textile fabrics been lost, a fair idea of the condition of the art could be obtained by the archaeologist from other branches of the art.

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