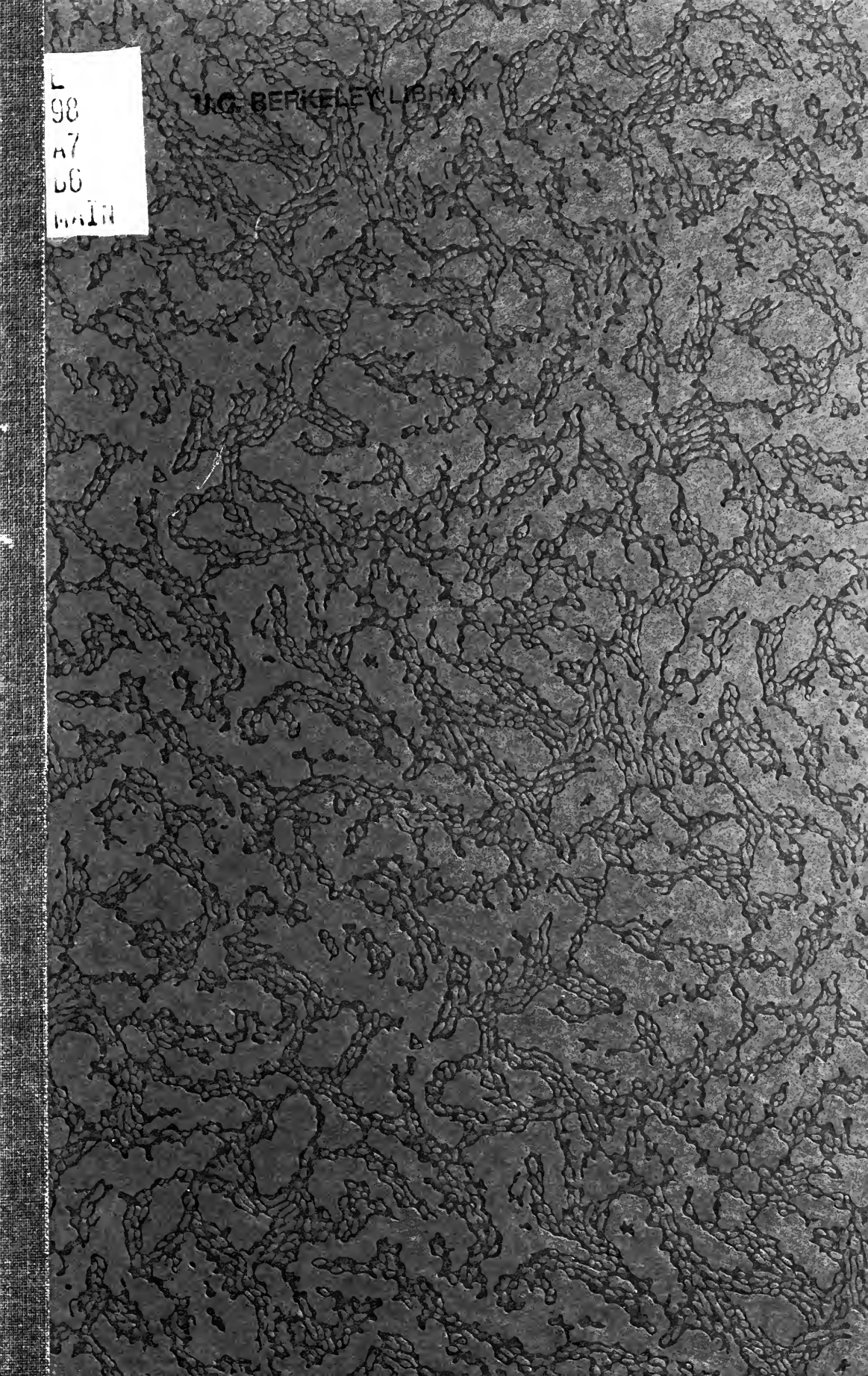
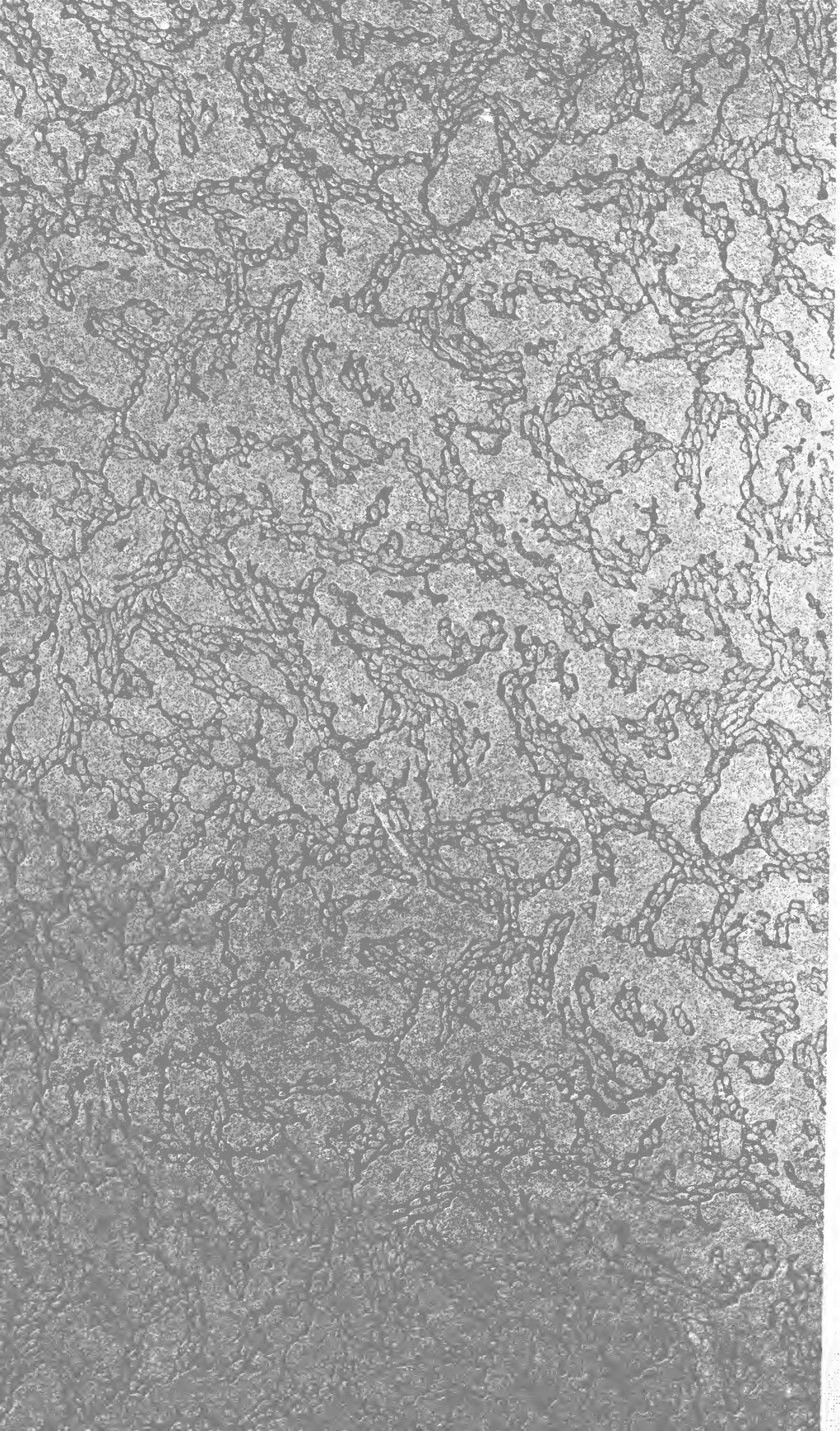


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# THE POPULAR SCIENCE MONTHLY.

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## THE DECORATIVE ART OF THE NORTH AMERICAN INDIANS.

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THE extended investigations on primitive decorative art which have been made during the last twenty years have clearly shown that almost everywhere the decorative designs used by primitive man do not serve purely esthetic ends, but that they suggest to his mind certain definite concepts. They are not only decorations, but symbols of definite ideas.

Much has been written on this subject; and for a time the opinion prevailed that wherever an ornament is explained as a representation of a certain object, its origin has been in a realistic representation of that object, and that it has gradually assumed a more and more conventionalized form, which often has developed into a purely geometrical motive.\* On the other hand, Cushing and Holmes have pointed out the important influence of material and technique in the evolution of design, and, following Semper, have called attention to the frequent transfer of designs developed in one technique to another. Thus, according to Semper, forms developed in wood architecture were imitated in stone, and Cushing and Holmes showed that textile designs are imitated on pottery.

The origin of certain designs from technical forms is now recognized as an important factor, and it must therefore be assumed that in many cases the interpretation has been read into the design. The existence of this tendency has recently been pointed out by H.

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\* See A. C. Haddon, 'Evolution in Art.'  
VOL. LXIII.—31.



FIG. 1a ESKIMO IN ORDINARY DRESS.

Schurtz\* and by Professor A. D. F. Hamlin,† who has treated in a series of essays the evolution of decorative motives.

In speaking of the process of conventionalization or degeneration of realistic motives, Professor Hamlin says: "Indeed, this degeneration may reasonably be accepted as suggesting that the geometric forms which it approaches were already in habitual use when it began, and that the direction of the degeneration was determined by a



FIG. 16. SHAMANISTIC COAT OF ESKIMO.

preexisting habit or 'expectancy' (as Dr. Colley March calls it) of geometric form acquired in skeuomorphic decoration" ‡ (*i. e.*, in a form developed from technical motives). At another place § he says: "After having undergone in its own home such series of modifications, the motive becomes known to the artists of some race or

\* H. Schurtz, 'Urgeschichte der Kultur,' p. 540.

† *The American Architect and Building News*, 1898.

‡ *Ibid.*, p. 93.

§ *Ibid.*, p. 35.

civilization through the agency either of commerce or of conquest. It is carried across seas and lands, and in new hands receives still another dress in combinations still more incongruous with its original significance. It is no longer a symbol, but an arbitrary ornament, wholly conventional, modified to suit the taste and the arts of the foreigners who have adopted it. In many cases it undergoes modification in two or more directions, resulting in divergent developments, which in time produce as many distinct motives—cousins, as it were, of each other—each of which runs its own course independently of the others. This phenomenon we may call ‘divergence.’ A common cause of divergence is the tendency to assimilate a borrowed motive to some indigenous and familiar form, usually a natural object, thus setting up a new method of treatment quite foreign to the origin of the motive.”

I intend to show in the following pages that the same processes, which Professor Hamlin traces by historical evidence in the art of the civilized peoples of the old world, have occurred among the primitive tribes of North America.\*

Before taking up this subject, I wish to call attention to a peculiar difference between the decorative style applied in ceremonial objects and that employed in articles of every-day use. We find a considerable number of cases which demonstrate the fact that, on the whole, the decoration of ceremonial objects is much more realistic than that of ordinary objects. Thus we find the garments for ceremonial dances of the Arapaho covered with pictographic representations of animals, their sacred pipe covered with human and other forms, while their painted blankets for ordinary wear are generally adorned with geometrical designs. Among the Thompson Indians ceremonial blankets are also covered with pictographic designs, while ordinary wearing-apparel and basketry are decorated with very simple geometrical motives. On the stem of a shaman’s pipe we find a series of pictographs, while an ordinary pipe shows geometric forms. Even among the eastern Eskimo, whose decorative art, on the whole, is very rudimentary, a shamanistic coat has been found which has a number of realistic motives, while the ordinary dress of the same tribe shows no trace of such decoration (Fig. 1). Perhaps the most striking examples of this kind are the woven designs of the Huichol Indians of

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\* The examples and illustrations here represented are taken, unless otherwise stated, from specimens in the American Museum of Natural History. The information and material used were collected by Dr. Roland B. Dixon, Professor Livingston Farrand, Dr. A. L. Kroeber, Dr. Berthold Laufer, Dr. Carl Lumholtz, Mr. H. H. St. Clair, Mr. James Teit and Dr. Clark Wissler, all of whom have contributed to the systematic study of decorative art undertaken by the museum.



Mexico. All their ceremonial weavings are covered with more or less realistic designs, while all their ordinary wearing-apparel presents geometrical motives. In fact, the style of the two is so different that it hardly seems to belong to the same tribe (Fig. 2). The same phenomenon may be observed outside of America, as is demonstrated by the difference in style between the shaman's coat and the ordinary coat of the Gold of the Amur River (Fig. 3). We may perhaps recognize the same tendency in the style of decoration of modern dwelling-rooms and in that of public buildings. The designs on the stained glass of house-windows are usually arranged in geometrical forms; those of churches represent pictures. The wall decorations of houses are wall papers of more or less geometrical character; those of halls devoted to public uses are generally adorned with symbolic pictures.

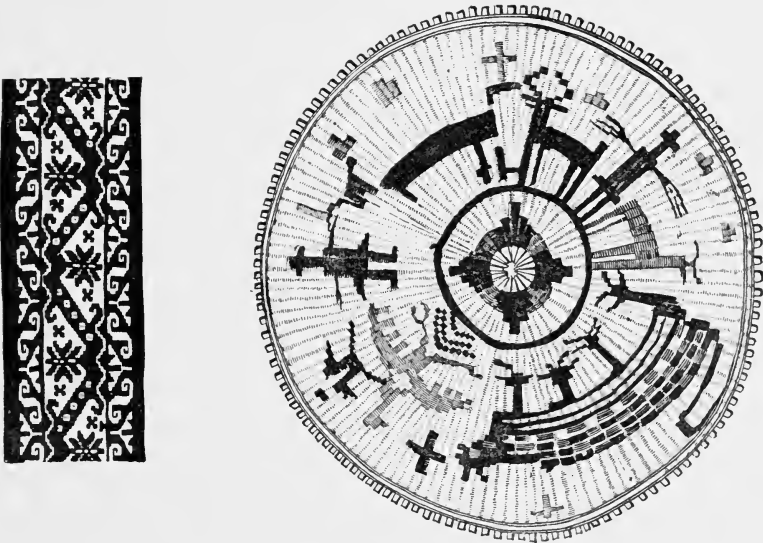


FIG. 2. WOVEN DESIGNS OF THE HUICHOI INDIANS. (After Dr. Carl Lumholtz.)

This difference in the treatment of ceremonial and common objects shows clearly that the reason for the conventionalization of motives can not be solely a technical one, for if so, it would act in one case as well as in the other. In ceremonial objects the ideas represented are more important than the decorative effect, and it is intelligible that the resistance to conventionalism may be strong; although in some cases the very sacredness of the idea represented might induce the artist to obscure his meaning intentionally, in order to keep the significance of the design from profane eyes. It may, therefore, be assumed that, if a tendency to conventionalization exists, it will manifest itself

differently, even among the same tribe, according to the preponderance of the decorative or descriptive value of the design.

On the other hand, the general prevalence of symbolic significance in ordinary decoration shows that this is an important aspect of decorative art, and a tendency to retain the realistic form might be expected, provided its origin were from realistic forms. If, therefore, the whole decorative art of some tribes shows no trace of realism, it may well be doubted whether their ordinary decorative designs were originally realistic.



FIG. 3a. ORDINARY COAT OF THE GOLD OF THE AMUR RIVER. (After Dr. Berthold Laufer.)

The history of decorative design can best be investigated by analyzing the styles of form and interpretation prevailing over a limited area. If the style of art were entirely indigenous in a given tribe, and developed either from conventionalization of realistic designs or from the elaboration of technical motives, we should expect to find a different style and different motives in each tribe. The general customs and beliefs might be expected to determine the subjects chosen for decoration, or the ideas that are read into the technical designs.

As a matter of fact, the native art of North America shows a very different state of affairs. All over the Great Plains and in a large portion of the western plateaus an art is found which, notwithstanding local peculiarities, is of a uniform type. It is characterized by the application of colored triangles and quadrangles in both painting and embroidery in a manner which is found in no other part of the world.

The slight differences of styles which occur are well exemplified in the style of painted rawhide bags or envelopes, the so-called 'parfleches.' Mr. St. Clair has observed that the Arapaho are in the habit of laying on the colors rather delicately, in areas of moderate size, and of following out a general arrangement of their motives in stripes; that the Shoshone, on the other hand, like large areas of

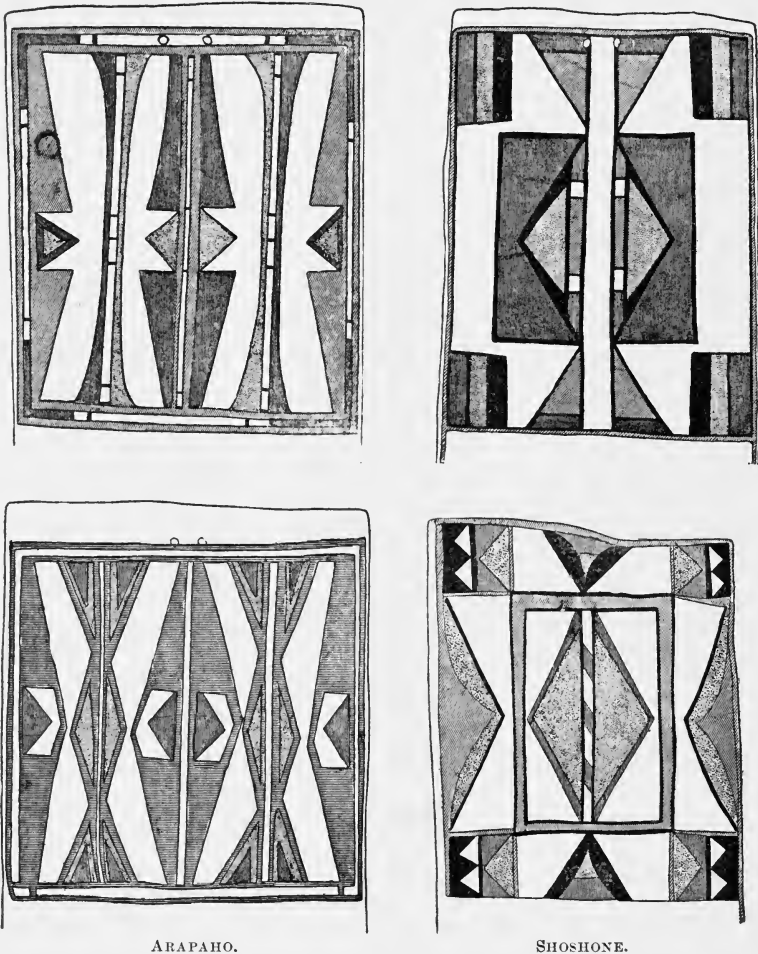
solid colors, bordered by heavy blue bands, and an arrangement in which a central field is set off rather prominently from the rest of the design (Fig. 4). This difference is so marked that it is easy to tell a Shoshone parfleche that has found its way to the Arapaho from par-



FIG. 36. COAT OF A SHAMAN OF THE GOLD OF THE AMUR RIVER.

fleches of Arapaho manufacture. In other cases the most characteristic difference consists in the place on the parfleche to which the design is applied. The Arapaho and the Shoshone never decorate the sides of a bag, only its flaps, while the tribes of Idaho and Montana always decorate the sides. Another peculiarity of Arapaho parfleche-

painting, as compared to that of the Shoshone, is the predilection for two right-angled triangles standing on the same line, their right angles facing each other—a motive of common occurrence all over the southern part of the Plains and in the southwestern territories; while the Shoshone generally place these triangles with facing acute angles.



ARAPAHO. SHOSHONE.  
FIG. 4. PAINTED RAWHIDE BAGS. (After A. L. Kroeber and H. H. St. Clair.)

A detailed study of the art brings out many minor differences of this sort, although the general type is very uniform.

Certain types of designs are so much alike that they might belong to one tribe as well as to another. A series of moccasins of the Shoshone, Sioux and Arapaho (Fig. 5) will serve as a good example. The characteristic forms of all of these are a cross on the uppers, con-

nected with a bar on the instep, from which arise at each end two short lines. These designs are so complex that evidently they must have had a common origin. It is of great importance to note that nevertheless the explanations given by the various tribes are quite different. The design is interpreted by the Arapaho as the morning star; the bar on the instep, as the horizon; the short lines, as the twinkling of the star. To the mind of the Sioux the design conveys the idea of feathers, when applied to a woman's moccasin; when found on a man's moccasin, it symbolizes the sacred shield suspended from tent-poles. The identical design was explained by the Shoshone



A B C  
FIG. 5. MOCCASINS; A. SHOSHONE; B. SIOUX; C. SIOUX AND ARAPAHO.

as signifying the sun (the circle) and its rays; but also the thunder-bird, the cross-arms of the cross evidently being the wings; the part nearest the toe, the tail, and the upper part, the neck with two strongly conventionalized heads attached. If these are the ideas conveyed by this design to the weavers, it is clear that they must have developed after the invention or introduction of the design; that the design is primary, the idea secondary, and that the idea has nothing to do with the historical development of the design itself.

It may be well to give a few additional examples of such similarity of design and difference of symbolism. One of the typical designs

of this area is a cross to the ends of which deeply notched squares are attached (Fig. 6). Dr. Kroeber\* received the following explanation of this design from an Arapaho: the diamond in the center represents a person; the four forked ornaments surrounding it are buffalo hoofs or tracks.

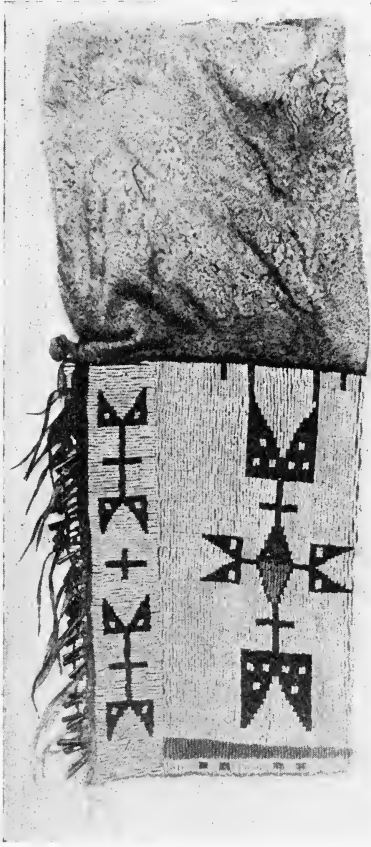


FIG. 6. LEGGING WITH BEAD EMBROIDERY.

Dr. Wissler found the design on a pair of woman's leggings of the Sioux. In this case the diamond-shaped center of the design represents the breast of a turtle; the green lines forming the cross indicate the four points of the compass; the forked ornaments symbolize forks of trees struck by hailstones, which are indicated by small white rectangles. Mr. St. Clair came across the same design among the Shoshone, where it was found on a cowhide bag. The central diamond was interpreted as the sun and clouds; the notched designs were explained as mountain-sheep hoofs. There is a certain similarity in this case between the explanations given by the Arapaho and those of the Shoshone, while the Sioux connect ideas of a different type with the design.

Such differences of interpretation are also found on painted designs. The Shoshone sometimes imagine they see a battle scene in the squares and triangles of their parfleche designs. The square in the center of Fig. 7 was explained to Mr. St. Clair as an enclosure in which the enemy was kept by a besieging party, represented by the marginal squares. The narrow central line is the trail by which the enemy made good his escape. Many others represent geographical features, such as mountains and valleys. Such geographical ideas are represented on some Arapaho parfleches, while others exhibit a more complex symbolic significance. Battle scenes, however, are not found in interpretations given by the Arapaho.

\* A. L. Kroeber, 'The Arapaho,' *Bulletin American Museum of Natural History*, Vol. XVIII.

The similarity of complex designs, combined with dissimilarity of interpretation, justifies a comparison of simpler forms. These might be believed to have originated independently; but the sameness of the complex forms proves that their component elements must have had a common origin, or at least have been assimilated by the same forms. One of the striking examples of this kind is the cross. Among the Arapaho it signifies almost invariably the morning star. To the mind of the Shoshone it conveys the idea of barter. The Sioux recognizes in it a man slain in battle and lying flat on the ground with arms outstretched. The Thompson Indians of British Columbia recognize in it the crossing trails at which sacrifices are made.

The simple straight red lines with which skin bags are decorated are another good example. A specimen was collected by Dr. Kroeber among the Arapaho (Figs. 8a and 8b) in which he explains the stripes on the

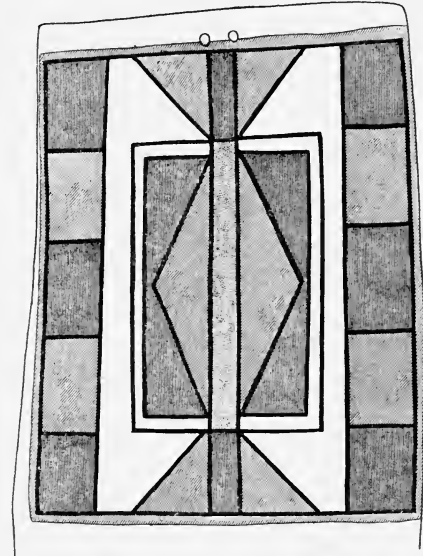


FIG. 7. SHOSHONE PARFLECHE DESIGN.

beaded design on the narrow sides and on the flaps of the bag as camp-trails; the shorter transverse stripes intersecting these longitudinal lines, as ravines, that is, camping-places. On the front of the bag the horizontal lines of quill-work, which resemble the lines on buffalo-robcs, are paths. Bunches of feathers on these lines represent buffalo-meat hung up to dry. Adjoining the bead-work are small tin cylinders with tufts of red hair; these represent pendants or rattles on tents. Mr. St. Clair obtained the following explanation of a Shoshone bag of almost identical design: The porcupine-quill work on the front of the bag represents horse-trails. The red horse-hair tassels at each side are horses stolen by people of one village from those of another, the villages being represented by the bead-work at the sides of the bag. The bead-work on the flap represents the owners of the horses indicated by the horse-hair tassels on the flap. Among the Sioux the same design is used in the puberty ceremonial, and symbolizes the path of life.

It must not be believed that the interpretation of a certain motive, or even of a complex figure when used by the members of one tribe,

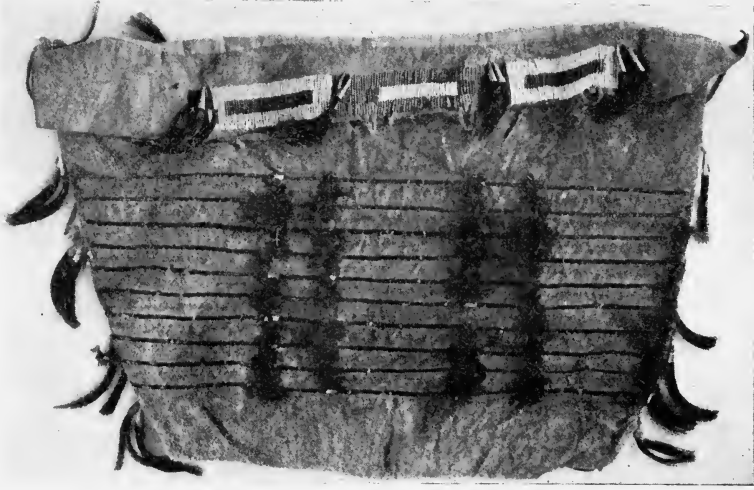


FIG. 8a. SKIN BAG OF THE ARAPAHO. (After A. L. Kroeber.)

is always the same. As a matter of fact, the number of ideas expressed by it is often quite varied. We find, for instance, the obtuse triangle with enclosed rectangle (Fig. 4) explained by the Arapaho as the mythic cave from which the buffalo issued, as cattle-tracks, as a mountain, cloud, brush hut and tent; an acute triangle, with small triangles attached to its base, as a bird-tail, frog, tent and bear-foot.



FIG. 8b. SIDE OF ARAPAHO BAG.

Nevertheless the explanations given by various tribes show peculiar characteristics in which they differ from those of other tribes. The explanations possess no less a style of their own than the art itself. Triangles are explained as tents by all the tribes, and mountains or hills form a prominent feature of their descriptions; but among the three tribes mentioned only the Sioux see wounds, battle scenes with moving masses of men, horses, the pursuit of enemies, the flight of arrows, in their conventional de-



signs; only the Shoshone see in them pictures of forts and stones piled up in memory of battles; only the Arapaho recognize in them prayers for life directed to the morning star.

We find, therefore, that in this area the same style of art is widely distributed, while the style of explanation differs materially among its various tribes.

It may be worth while to review briefly the distribution of the style of art here discussed. On the whole, it is confined to the Plains Indians, west of the eastern wooded area. It would seem that it has been carried into the plateau region rather recently, where, however,

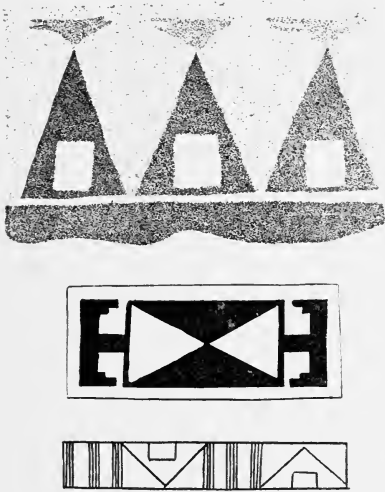


FIG. 9. DECORATIVE MOTIVES OF THE PUEBLO INDIANS. (After Dr. W. F. Fewkes.\*)



FIG. 10 WOVEN BAG OF THE NEZ PERCÉS.

it has affected almost all the tribes east of the Cascade Range and of the Sierra Nevada. We find the acute triangle with small supporting triangles, and the obtuse triangle with enclosed rectangle, in the characteristic arrangement of the *parfleches*, on a bag of the Nez Percés (Fig. 10) collected by Dr. Livingston Farrand. At first glance, the art of the Pueblos seems quite different from the one that we are discussing here; but I believe that an intimate association of the two may be traced. The old pottery described by Dr. Fewkes, for instance, shows a number of the peculiar triangle and square motives which are so characteristic of the art of the Indians of the Plains. The same triangle with supporting lines, the same triangle with the enclosed square (Fig. 10), is found here. It seems very plain to my mind that the transfer of this art from pottery to embroidery and painting on flat surfaces has brought about the introduction of the triangular

\* From specimens in the U. S. National Museum.

and rectangular forms which are the prime characteristic of this type of art.

In the prehistoric art of the northern plateaus, in California, on the North Pacific coast, in the Mackenzie Basin, in the wooded area of the Atlantic coast, we find styles of art which differ from the art of the Plains, and which have much less in common with Pueblo art. Therefore I am inclined to consider the art of the Plains Indians in many of its traits as developed from the art of the Pueblos. I think the general facts of the culture of these tribes are fairly in accord with this notion, since it would seem that the complex social and religious rites of the southwest gradually become simpler and less definite as we proceed northward. If this opinion regarding the origin of the art of the Plains is correct, we are led to the conclusion that the tent with its pegs is the same form in origin as the rain-clouds of the Pueblos, so that the scope of interpretations of the same form is still more enlarged. Under these conditions, we must conclude that the interpretation is probably secondary throughout, and has become associated with the form which was obtained by borrowing. With this we are brought face to face with the skeuomorphic origin of the triangular design from basketry motives, which has been so much discussed of recent years.

The so-called 'quail-tip' design of California is another example of the continuous distribution of a motive over a wide area, the occurrence of which in the outlying districts must be due to borrowing. The characteristic feature of this design, which occurs in the basketry of California and Oregon, is a vertical line, suddenly turning outward at its end. This motive occurs on both twined and coiled basketry, and with many explanations.\* In some combinations it is explained as the lizard's foot (Fig. 11, *a, b*), in others as the pine cone or the mountain (Fig. 11, *c*). The gradual distribution of this motive over a wide area can best be proved in this case by a comparison with the distribution of the technique in which it is applied. The design occurs all over central and northern California. On Columbia River it is found on the Klickitat baskets. These are of the peculiar imbricated basketry which is made from this point on, northward. While the designs on imbricated basketry found in British Columbia are of a peculiar character, the Klickitat baskets of the same make (Fig. 11, *d*) have the typical California designs which also occur on the twined bags of this district (Fig. 11, *e*).

Thus we find, not only that the distribution of interpretations and that of motives do not coincide, but also that the distribution of technique does not agree with that of motives. I think we can also demon-

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\* Roland B. Dixon, 'Basketry Designs of the Indians of Northern California,' *Bulletin American Museum of Natural History*, Vol. XVII., pp. 2 ff.

strate that the limits of styles of interpretation in some cases overlap the limits of styles of art. We have seen that on the Plains the style of art covers a wider area than the style of interpretation. It would seem that in other regions the reverse is the case. For instance, the style of art of the Nootka tribes differs very much from that of the

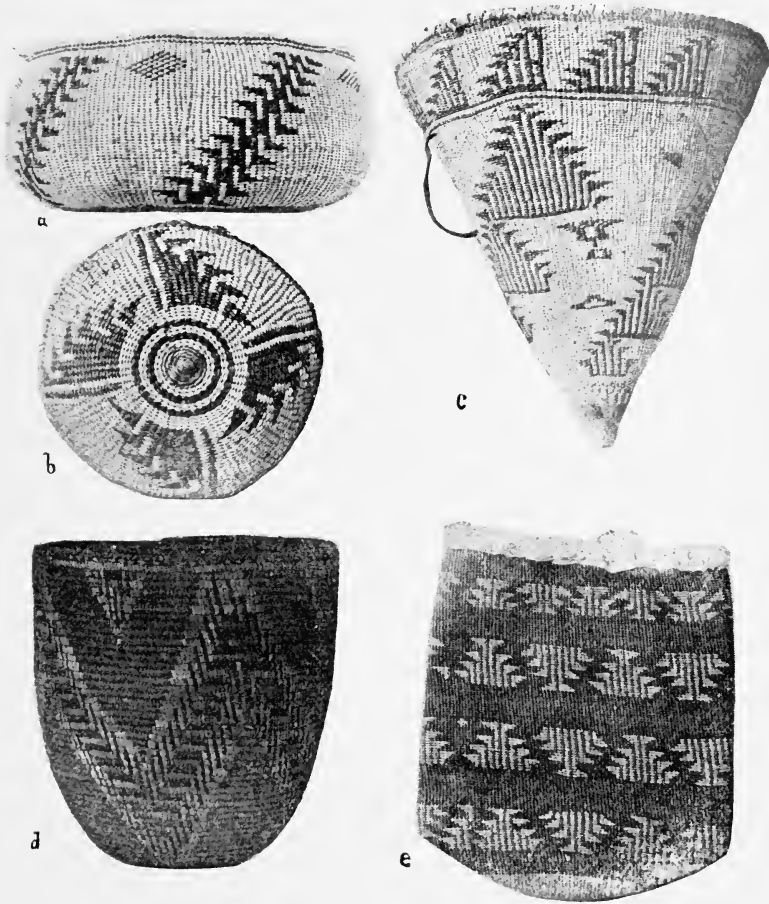


FIG. 11. BASKETS FROM THE PACIFIC COAST. *a, b*, PIT RIVER, CALIFORNIA; *c*, MAIDU, CALIFORNIA; *d*, KLICKITAT, WASHINGTON; *e*, NEZ PERCÉS, IDAHO. (*a, b* and *c* after Dr. Roland B. Dixon.)

Kwakiutl. Although both apply animal motives, the Nootka use very little surface decoration consisting of combinations of characteristic curved lines, which play an important part in Kwakiutl art, and which serve to symbolize various parts of the body. Nootka art is more realistic and at the same time cruder than Kwakiutl art. The ideas expressed in the art of both tribes, however, are practically the same. In the southwest we find that the culture of the Pueblos has

deeply influenced the neighboring Athapascan and Sonoran tribes, while at the same time the decoration of their basketry bears a close relation to that of Californian basketry. Although I do not know the interpretations of designs given by the Apache, Pima and Navajo, it seems probable that they have been influenced by the ideas current among the Pueblos. Among the Pueblos themselves—and in these I include the tribes of northern Mexico, such as the Huichol—there are well-marked local styles of technique and of decoration, and a general

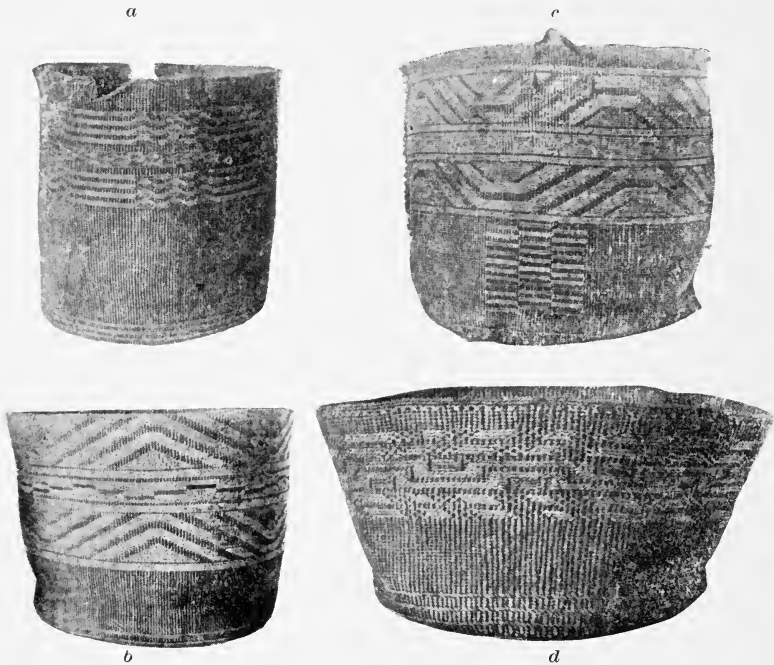


FIG. 12. TLINGIT BASKETS. (Specimens in the possession of G. T. Emmons.)

similarity of interpretation. I think the marked prevalence of geographical interpretations found among the Salish tribes of British Columbia, the Shoshone and the Arapaho is another instance of distribution of a style of interpretation over an area including divers styles of art.

In a few cases it seems almost self-evident, from a consideration of the interpretations themselves, that they can not have developed from realistic forms. The multiplicity of Arapaho explanations for the triangles which I mentioned before suggest this. According to G. T. Emmons,\* the zigzag and the closely allied meander in Tlingit basketry have a variety of meanings. The zigzag may represent the

\* 'The Basketry of the Tlingit,' *Memoirs American Museum of Natural History*, Vol. III., pp. 263 ff.

tail of the land-otter (Fig. 12, *a*), the hood of the raven (Fig. 12, *b*), the butterfly (Fig. 12, *c*), or, when given a rectangular form (Fig. 12, *d*), waves and floating objects. It is evident, in view of the data here discussed, that these must be different interpretations of motives of similar origin.

We conclude from all this that the explanation of designs is secondary almost throughout and due to a late association of ideas and forms, and that as a rule a gradual transition from realistic motives to geometric forms did not take place. The two groups of phenomena—interpretation and style—appear to be independent. We may say that it is a general law that designs are considered significant. Different tribes may interpret the same style by distinct groups of ideas. On the other hand, certain groups of ideas may be spread over tribes whose decorative art follows different styles, so that the same ideas are expressed by different styles of art.

We may express this fact also by saying that the history of the artistic development of a people, and the style that they have developed at any given time, predetermine the method by which they express their ideas in decorative art; and that the type of ideas that a people is accustomed to express by means of decorative art predetermines the explanation that will be given to a new design. It would therefore seem that there are certain typical associations between ideas and forms which become established, and which are used for artistic expression. The idea which a design expresses at the present time is not necessarily a clue to its history. It seems probable that idea and style exist independently, and influence each other constantly.

For the present it remains an open question, why the tendency to form associations between certain ideas and decorative motives is so strong among all primitive people. The tendency is evidently similar to that observed among children who enjoy interpreting simple forms as objects to which the form has a slight resemblance; and this, in turn, may bear some relation to the peculiar character of realism in primitive art, to which I believe Von den Steinen\* was the first to draw attention. The primitive artist does not attempt to draw what he sees, but merely combines what are to his mind the characteristic features of an object, without regard to their actual space relation in the visual image. For this reason he may also be more ready than we are to consider some characteristic feature as symbolic of an object, and thus associate forms and objects in ways that seem to us unexpected.

It may be worth while to mention one general point of view that is suggested by our remarks. The explanations of decorative design

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\* 'Unter den Natur-völkern Central-Brasiliens,' pp. 250 ff.

given by the native suggest that to his mind the form of the design is a result of attempts to represent by means of decorative art a certain idea. We have seen that this can not be the true history of the design, but that it probably originated in an entirely different manner. What is true in the case of decorative art is true of other ethnic phenomena. The historical explanation of customs given by the native is generally a result of speculation, not by any means a true historical explanation. The mythical explanation of rites and customs is seldom of historical value, but is generally due to associations formed in the course of events, while the early history of myths and rite must be looked for in entirely different causes, and interpreted by different methods. Native explanations of laws, of the origin of the form of society, must have developed in the same manner, and therefore can not give any clew in regard to historical events, while the association of ideas of which they are the expression furnishes most valuable psychological material.



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