

## NEW PATTERNS FOR SKIRTS

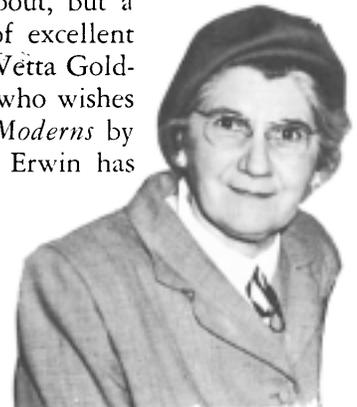
by Harriet Tidball

Skirts are the special interest of weaver Esther Hudson of Santa Rosa, California, and with two daughters, five granddaughters and numerous friends to keep supplied with her rainbow-hued creations, there is always a skirt warp on one of her looms. Every time I see one of Mrs Hudson's skirts I am struck afresh with the sparkling beauty of her designs and their unusual, vibrant color harmonies, making each one not just another handwoven skirt, but an individual creation. I had concluded that Mrs Hudson had unusual talent for doing something with colors which few can manage, so it was with amazement that I found Mrs Hudson's many students weaving skirts as beautiful and individual as hers. (Mrs Hudson has taught handweaving at Santa Rosa College for ten years.) This made me think that perhaps she had some system of designing, something to pass along which could be useful to other weavers. So I took a trip to Santa Rosa to talk to Mrs Hudson about her skirts.

When I asked what her special designing method was, how she achieved her handsome stripes and daring color harmonies, the answer Mrs Hudson gave me was, "It's all a matter of formula." Well, if there was a formula which could help one to such an achievement, I wanted to know it, and other weavers would too.

Mrs Hudson says, "My skirts are all color studies, and so I use a warp threaded to simple four-harness twill and never introduce any pattern techniques." However, as she developed her approach to the study of color harmony, I found that she was talking a great deal more about proportion than about color. "The important thing to realize is that any and all colors harmonize if combined in the right proportions." Below is the skirt designing system which Mrs Hudson developed for me in the course of our conversation.

The designing of a skirt starts with the person who is to wear the skirt. Analyze the person's natural coloring to determine whether the dominant color should be warm or cool, vibrant or subdued, pale or dark. Then analyze the person's figure to determine where the color stripes should be placed on the skirt, whether they should extend horizontally or vertically, how strong the stripes should be, and how wide. This analysis requires some knowledge of costume design, a subject which most of us know too little about, but a very profitable subject for investigation. There are any number of excellent books on costume design, and *Art in Everyday Life* by Harriet and Vetta Goldstein is one of them. Another book, which will interest the person who wishes also to teach herself to design and make clothing is *Clothing For Moderns* by Mabel D Erwin, Revised edition 1957, Macmillan, \$5.90. (Miss Erwin has



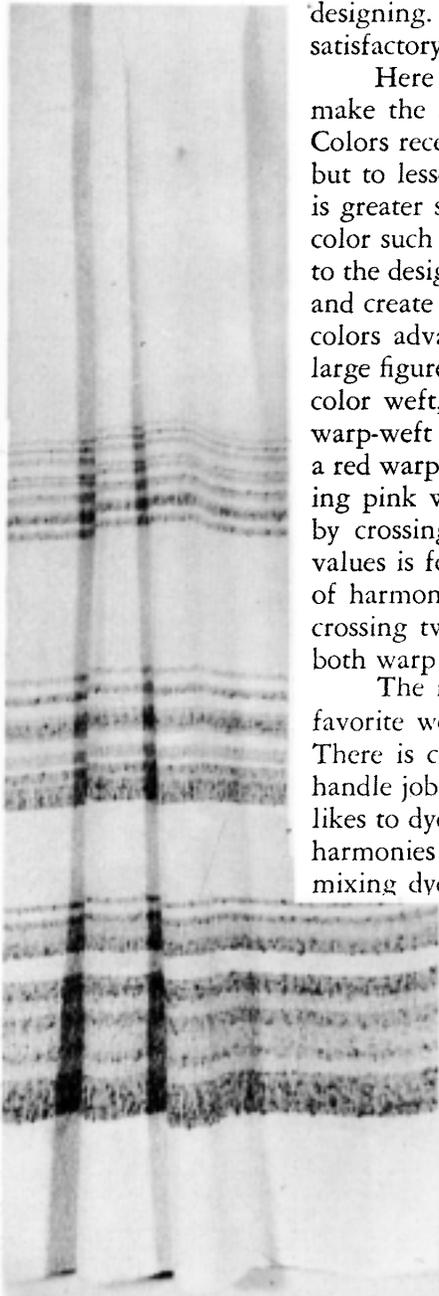
been Professor of Clothing and Textiles at Texas Technological College, now retired, as well as a weaver and a Shuttle Craft Guild member for many years.)

When designing the stripes, use strips of wrapping paper about six inches wide and exactly as long as the skirt should be from waist band to hem. Sketch stripe arrangements in full scale on these, to make sure of the exact placement and proportions of the stripes, and use the final strip as an over-all guide during the weaving.

Before selecting the exact colors, it is necessary to have the materials in mind and the manner for handling them on the loom, since a color in a skein of yarn and a color interwoven with another, are altogether different things. For the warp, select the main color which seems exactly right for the person. Use a single color because then anything can be done with it in designing; a mixed warp gives a pre-determined effect which restricts or eliminates further designing. A fine warp which sets well at thirty ends per inch gives the most satisfactory results.

Here are some facts to consider in selecting the warp color which will make the stripes do what one wishes. Colors vibrate most on a black warp. Colors recede and lose their character on a white warp. The same effects occur but to lesser degrees with light and dark (or high and low) values, so there is greater stripe emphasis on a dark shade than on a light tint. A rather pure color such as red, blue, green in primary hue is more adaptable to changes and to the designing of unusual effects than an exotic tone; start with a simple color and create the exotic tone desired through mixing warp and weft colors. Light colors advance and dark colors recede, so a dark color should be used for a large figure. Although the base *hue* may be changed greatly by using a different color weft, do not try to achieve a greatly changed color *value* through the warp-weft mixture. For example, a rich violet color may be made by crossing a red warp with a bright blue weft, but avoid such an extreme contrast as crossing pink with navy, or the most extreme effort of all—trying to make grey by crossing black and white. The tendency in the use of strongly opposed values is for each color to separate out, giving a salt-and-pepper effect, instead of harmonizing into one vibrant whole. A much richer color is achieved by crossing two colors than by selecting the desired final color and using it for both warp and weft.

The next step is selecting the weft material or materials. Mrs Hudson's favorite weft material is fine, nubby rayon which she often uses throughout. There is considerable variety in nubby rayons, available from sources which handle job-lot materials, usually in white and often in colors. Since Mrs Hudson likes to dye her own yarns, color is not a problem to her. She designs her color harmonies from a color wheel and then dyes to get exactly what she wants, mixing dye pigments so that with only a few jars of dye she can have every

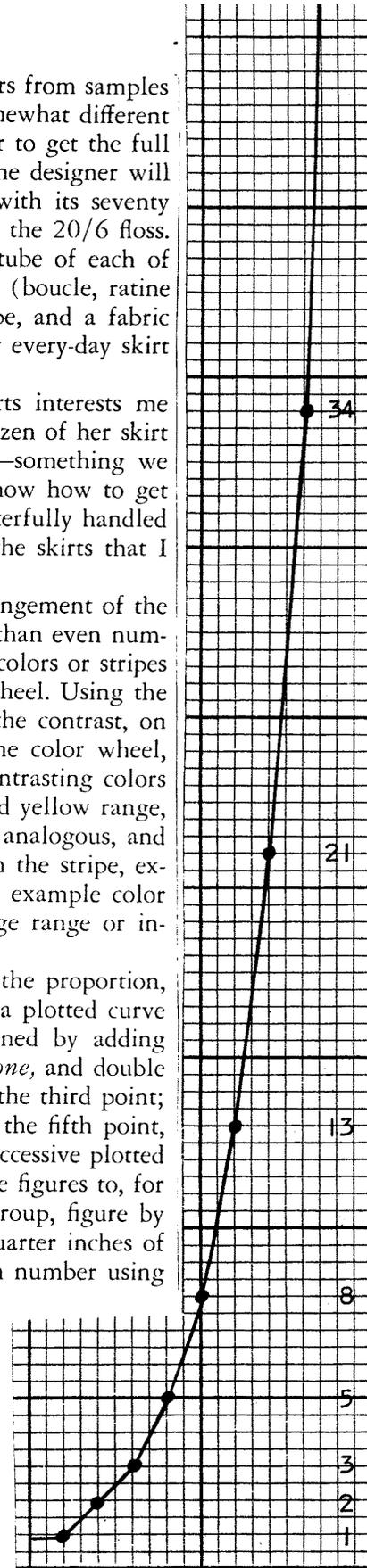


imaginable color at her fingertips. The weaver who selects colors from samples or from materials on hand (as most of us do) will have a somewhat different problem; different types of yarns must usually be used in order to get the full color range desired. If this mixture of yarns is not desirable, the designer will find that the Lily color palate for Article 114, perle cotton with its seventy colors gives excellent selections. The most advantageous size is the 20/6 floss. Fortunate is the weaver who can keep in stock one 2-ounce tube of each of these colors. For the body of the fabric, the fine, rough rayon (boucle, ratine or nub) gives a splendid body or hand, a beautiful, soft drape, and a fabric which can be adapted appropriately to any use from a sport or every-day skirt to a cocktail or evening skirt.

Speaking of materials, one point about Mrs Hudson's skirts interests me greatly. She uses no metallics. After looking at more than a dozen of her skirt lengths I gained the feeling that metallics may be a crutch—something we can add to a design, sure to give it sparkle, when we don't know how to get that quality any other way. The designing problem was so masterfully handled that it was not until I had returned home and was recalling the skirts that I became aware of the absence of metallics.

It is in the actual selection of the weft colors and the arrangement of the stripes that Mrs Hudson uses rules. First of all, use odd rather than even numbers; that is, in designing stripes use three, five, seven, or nine colors or stripes rather than two, four or six. Select the colors from the color wheel. Using the basic color as a foundation, select the color exactly opposite, the contrast, on the color wheel as the accent color to include one-third of the color wheel, extending on either or both sides of the contrast. Thus, the contrasting colors for red may be in the green and blue range, or in the green and yellow range, or in the blue-green and yellow-green range. These colors are analogous, and as many analogous colors as desired may be used. Then, within the stripe, expand the base color to one-sixth of the color wheel. With our example color scheme this means that reds in the red-violet or the red-orange range or incorporated, or a slight degree of both.

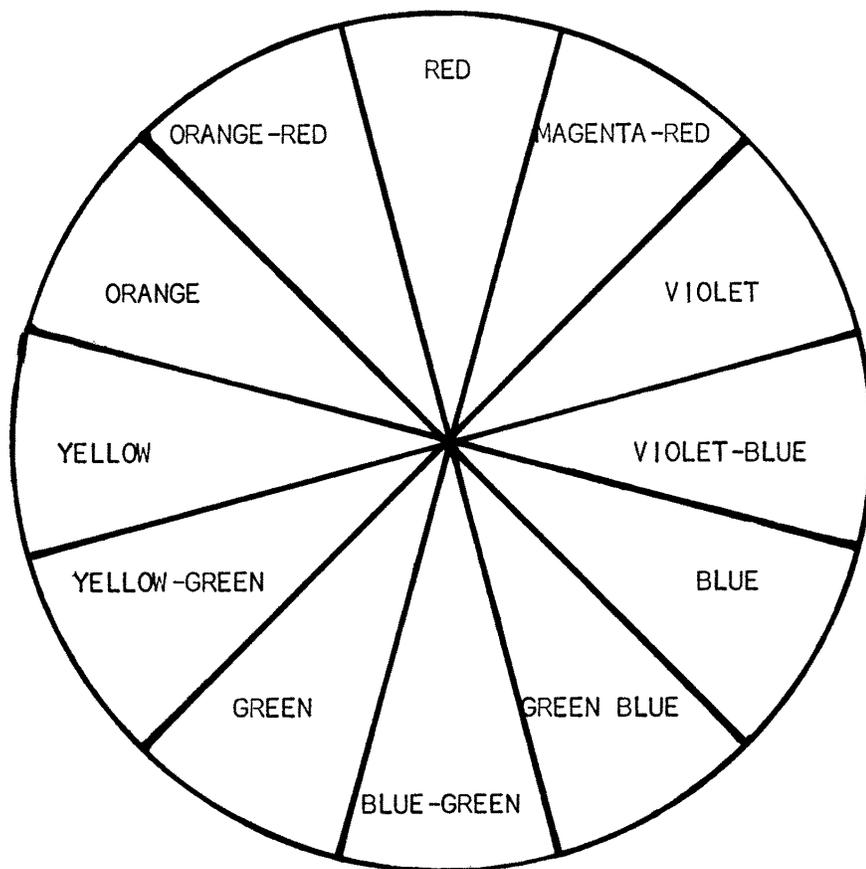
For the selection of the amount of each color to use, or the proportion, use the Summation Curve. This curve, in its simplest form, is a plotted curve for which the values of successive points have been determined by adding the amounts of the two preceding points. Start with the value *one*, and double it for the second point; add these two together to give *three* as the third point; then add the last two for *five* as the fourth point; the *eight* as the fifth point, and so on. The curve is shown on the marginal diagram. The successive plotted points are: 1: 2: 3: 5: 8: 13: 21: 33: 55: etc. To apply these figures to, for instance, five colors which are to be incorporated in a stripe group, figure by number of shots of each if yarns are all the same size, or by quarter inches of weaving if yarns are different; assign a color to each proportion number using



1: 2: 3: 5: 8, or 2: 3: 5: 8: 13, or 3: 5: 8: 13: 21 shots or quarter inches of each to compose the stripes. The unit selected for figuring (it could be inches, yards or millimeters if any of these were practical for the problem at hand) is unimportant as long as the proportions are held.

In some cases, in selecting the proportions for each color within the stripes, particularly if she is using seven or nine colors, Mrs Hudson will use one Summation Curve for the warm colors, and use the Curve over again for the cool colors. For instance, in selecting to use twice as much on the warm side (or one-third of the color wheel in six colors) as on the cool side (with one-sixth of the color wheel and three colors) she may use the Summation Curve starting with point two (2: 3: 5: 8: 13: 21) for warm colors, and starting with point four (5: 8: 13) for the cool colors.

Mrs Hudson uses the first two figures of the Summation Curve for her overall planning. There should be twice as much background area as stripe area, or twice as much stripe area as background area. These same two-to-one or two-thirds and one-third proportions apply to the other variables: warm and cool colors (warm colors are those which are on the red-orange half of the color wheel, cool colors are those on the blue-green half); dark and light color values; dull and shiny yarns; rough and smooth yarns.



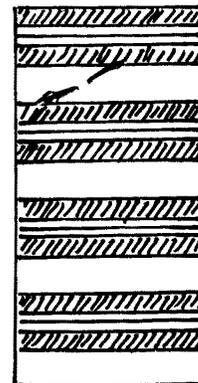
So much for yarn and color selection; the next problem is arranging stripes. There are three basic types of stripes:

- (1) Regular stripes on regular backgrounds, which are symmetrical stripes.
- (2) Regular stripes on irregular backgrounds, or the reverse of this, irregular stripes on regular backgrounds.
- (3) Irregular stripes on irregular backgrounds, which are miscellaneous stripes.

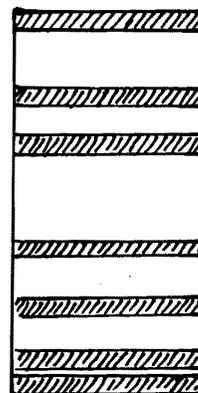
These three strip types are illustrated in the marginal diagrams. One further differentiation in stripe types must be considered. A stripe may be plain: just one color against a background of another color; or it may be emphasized: two or more colors incorporated as a stripe group against a single color background. This last may be called a compound stripe. It is the type most adaptable for skirts.

Any of the three stripe arrangements may be used vertically or horizontally in the skirt design. The selection of both the stripe type and the direction in which it is used must be determined by the figure and personality of the person who is to wear the skirt, and by the purpose for which the skirt will be worn. In designing a reserved and somewhat dignified effect for a mature figure, one would use the first stripe type with the stripes oriented vertically, and in low keyed colors. To give a freer design for an inbetween figure (that great average of not young, not old, not thin, not stout, but past the eighteen year old bloom) select one of the second style arrangements and place the stripes horizontally, using mainly shades of colors rather than tints or vibrant colors. For the youthful figure and a gay aspect, use stripes of the third class, oriented horizontally, with strongly contrasting, sparkling colors. The situations which lie between these three are handled by modified color harmonies and selections can run all the way from subdued, almost monochromatic (different values of the same color), to the vivid, vibrant. Further adaptations to figure are made through placement of the stripes on the skirt length; shifting the emphasis toward the hem or toward the hips, concentrating the stripe in a band or spreading it widely through the entire length.

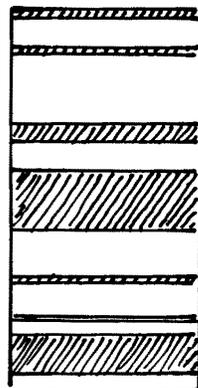
Thus far the problem of skirt designing has been one of analysis, recognizing proportions, selecting colors and stripe form. The big job now lies in integrating these factors into a good design, a beautiful skirt. There is always the approach of planning the stripe design on paper in its full detail, using colored crayons or paints, and then copying the design as nearly as possible on the loom. This is not Mrs Hudson's way. She believes that this kind of planning leads to stiff, uninspired, and often downright ugly results. The way it looks is the thing which counts, and the weaver-designer must be free to modify, add and subtract according to the evident demands of the design, as the work progresses. Mrs Hudson uses the skirt-length of paper for determining the correct type, proportion and placement of the stripe, sketching with pencil instead of with color. But all color designing is done directly on the loom. Only seeing the weft colors as they actually interweave with the warp color can indicate



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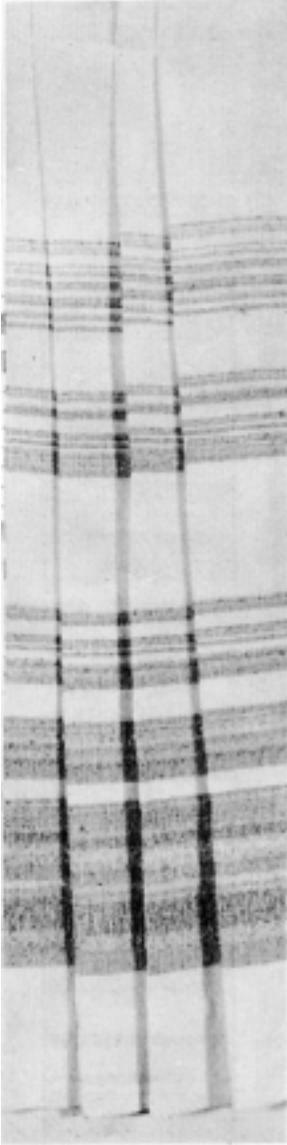
(2)



(3)

to the weaver which color to use when, and the correct place for discontinuing one color and introducing another.

By the time the weaving starts, the weaver should have a mental picture of the desired skirt. Just sit down at the loom and start weaving this picture. As soon as one length is completed, cut it off the loom, press it, baste in the hem and gather or pleat the waist line. Then study the effect. Chances are that it will not match the mental picture. In some respects it may be much more beautiful than one had thought, but in other respects it will fall far short. Analyze carefully what is wrong, and what could be done to correct any faults in design. That is, redesign according to the dictates of this first length, if one is not entirely satisfied with the results. This strip may then be made up into an apron, and the weaver can proceed to the actual weaving of the skirt.



The average warp requirements for one skirt are a five yard long warp, thirty-two or thirty-four inches wide. This length allows for three yard-long panels for making the skirt, one yard for loom loss, beat experimenting and take-up, and one yard for the sample length which is made into an apron. The best warp material is 20/2 perle cotton (Lily Art 114) or 24/2 unmercerized cotton (Lily Art 314) set at thirty ends per inch. Wefts as desired. Thread to four-harness twill (1, 2, 3, 4, repeated throughout). Tie up the loom with six treadles: two to the *a* and *b* tabbys (harnesses 1-3 and 2-4) and the others tied each to a single harness. Do the weaving on the two tabby treadles, and beat to give the desired texture or hand. Use the single-tie treadles as required in weaving the stripes, to emphasize or de-emphasize a color. If a particular color turns out too altered or too vague for the demands of the design, unweave it and try inserting it in the single-harness sheds, using the treadles in 1, 2, 3, 4, order. The maximum color strength, sometimes desirable for a very narrow stripe, is gained by treadling 1, 3, alternately, or 2, 4, alternately. If a stripe color needs to be toned more by the warp, try inserting it in sheds which have three harnesses raised by using a tabby treadle in combination with a single-harness treadle in this order: *b* with 1, *a* with 2, *b* with 3, *a* with 4.

Here is a summary of Mrs Hudson's suggestions on color selection. Select a plain color for the warp. Stripe colors will vibrate more on a dark warp than on a light warp so consider the stripe strength when selecting. The best color harmony will result if designed on the basis of complementary hues. Many colors may be used if two-thirds of the colors are analogous and selected from one-third of the color wheel, the other third complementary to these and selected from one-sixth of the color wheel. All and any colors will harmonize if used in correct proportion. If two colors vibrate, modify one of them through weaving it in the three-up-one-down or one-up-three-down sheds. If the selected colors are too pastel, they combine uninterestingly; even pale pastel effects must have a little in bright colors to develop emphasis. Always start a stripe with a darker value in a rather broad band, to fall hemward. Lighten the values, make the stripes narrower, and add the emphasis colors as the stripe progresses up-



ward. As weft and warp colors interweave, preconceived color ideas will break down; be ready to accept these interlacement changes and to adapt the design to them. Use strong or vibrant colors in narrow bands, low or dark values in broad bands. A great many small stripes give an unpleasantly "busy" effect.

Here is the plan for one of Mrs Hudson's skirts which will serve as an example of the type of designing outlined above.

Warp: 20/2 perle cotton in pimento red (Lily Art 114, Perle 20, color 773)

Weft: Fine rayon ratine. Background color a blue-grey which takes on a radiant warmth when woven on the red, a color which is difficult to describe but is on the light-grey-purple side. For the stripes the contrasting colors were gold to dark yellow-green, with blue, purple and rose, the proportions in the following order from the greatest to the least amount: dark yellow-green, medium yellow-green, chartreuse, golden yellow (these four colors composing two-thirds of the total stripe area and selected from about one-sixth of the color wheel); violet, blue, rose (three colors composing about one-third of the stripe, from one-third of the color wheel). The uneven stripes are three stripes emphasized by different colors and spacings, as shown on the marginal diagram and in the photograph. The thirty inch long skirt has ten inches, or one-third, taken up with stripes, the balance in the blue-grey background color.

Weave: As indicated by the diagram. Each square of the diagram represents one quarter-inch of weaving. Plain areas are background; shaded areas in the striping colors.

A word about the color wheel is pertinent here. I am in complete agreement with Mrs Hudson's belief that a good color wheel is basic equipment for any handweaver who wishes to do good color designing. Making a good color wheel, using water colors or tempera for the color areas, is a project which some people will enjoy. There are many books containing excellent sections on color, including the Webster Unabridged Dictionary and the Encyclopaedia Britannica. *Art in Everyday Life* by H and V Goldstein (\$8.50), previously mentioned, has very helpful material on this subject and, like the two references above, contains color-plate charts. A book devoted to the study is *COLOR HARMONY, With the McDonald Calibrator*, by Sterling B McDonald (\$15.50) which was reviewed in the September 1952 issue of SHUTTLE CRAFT. These last two books are available from the Craft and Hobby Book Service, Coast Route, Monterey, California. Mr Veren also has in stock the *Cheskin Color Wheel* (\$5.00), which I find very useful and keep constantly at hand. The important point is that one needs a little basic study from one of the countless publications which take up color theory, and a substantial, accurate color wheel for reference while designing. A color wheel is as necessary in the study of color as is a map in the study of geography.

