

Bias

Exposed

Revealing the magic that happens at 45 degrees BY SANDRA ERICSON

The most artistic application in all design comes from a thorough knowledge of the medium—and in fashion, bringing fabric to form beautifully is an art. Designers who use a bias cut successfully delve deeply into each functional and decorative nuance the fabric has to offer. The fabric is to the designer as clay is to the sculptor or an I-beam is to an engineer.

With bias clothing, there are two ways to cut and use the fabric. In one method, the pattern is cut on the straight or cross-grain in geometric shapes such as rectangles, squares, or triangles, and then positioned diagonally in the design so it is worn on the bias. This method can be simple, with just one pattern piece, or the design can be composed of multiple pieces all cut on the straight grain. This choice is the easiest to sew, because the seams are on the straight grain. In the second option, the pattern pieces are cut primarily on the fabric's bias


and combined with straight-cut pieces in the garment design—or not. This method, the focus of this article, requires solving more complex design and construction problems that arise from the malleable nature of bias-cut fabric and bias seams.

When you work on the bias, the garment design is usually more important to the success of the garment than the construction, even though the construction often requires greater-than-average sewing skills.

The garment design starts with an original concept. From there, using the tools and methods described here, you can breathe life into a fabulous bias design.

Sandra Ericson is the founder of The Center for Pattern Design (CenterForPatternDesign.com) and organizes and teaches workshops across the country.

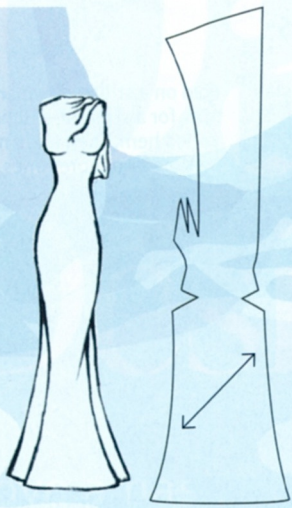
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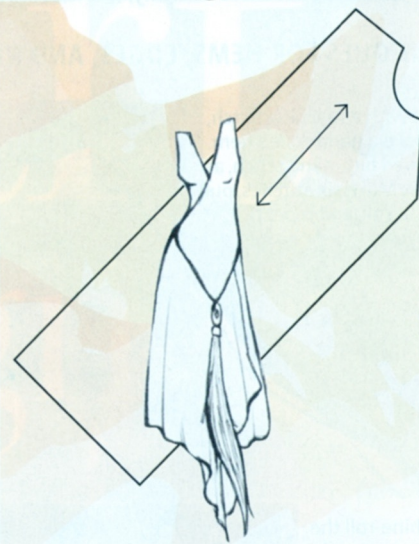
This one-piece bias dress, called the Pyramid Dress, is a subtraction-cut pattern available from the Center for Pattern Design. It has a few short seams for shaping.

Six approaches to bias design

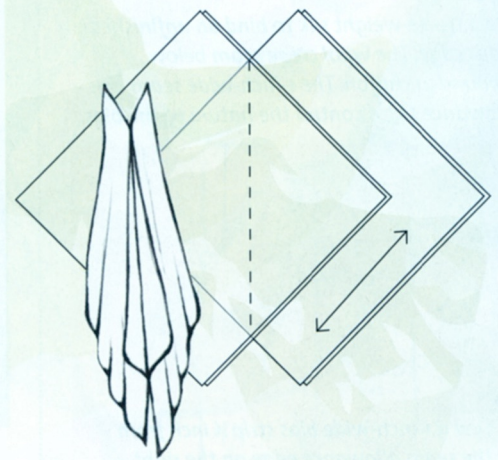
These designs illustrate different ways to use a bias application.



Using gravity to design: The scarf weight closes the top and designs the collar.

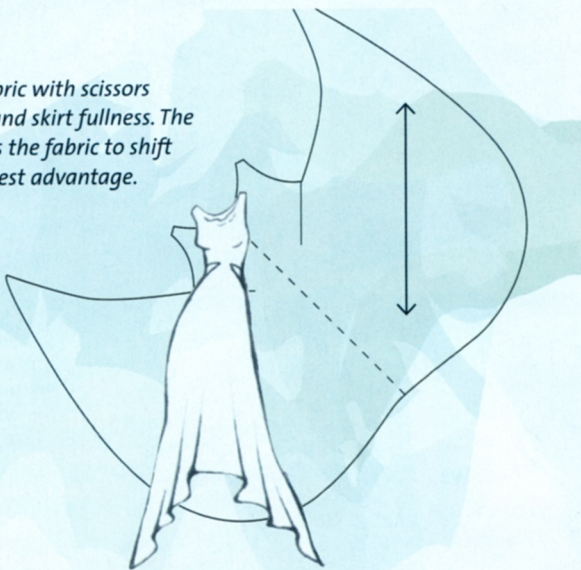


Cut straight, worn on the bias.

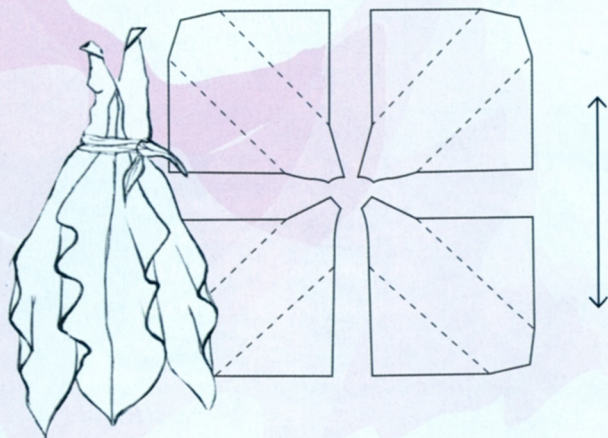
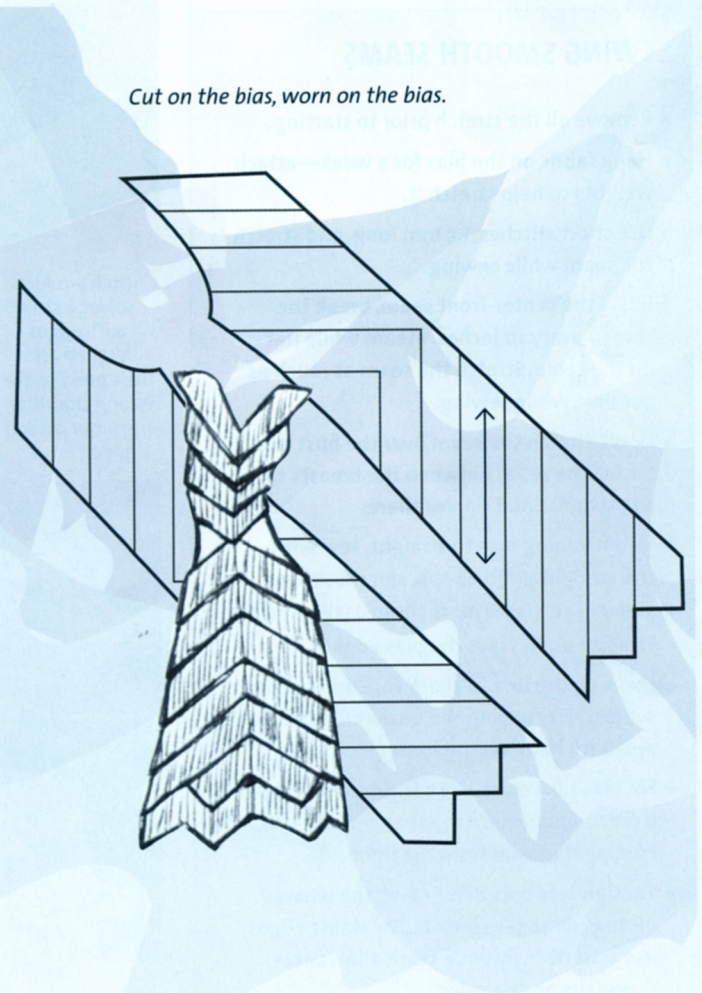


Simple squares sewn with basic vertical seams enable the fabric to drop into elegant bias folds.

Releasing fabric with scissors achieves fit and skirt fullness. The slash enables the fabric to shift grain to its best advantage.



Cut on the bias, worn on the bias.



Design the pattern, not the garment. Each quadrant includes a side seam, a center seam, and half of one shoulder—the fabric does the rest.



A fabric folded on the bias is about to meet the form.



The center front is on the bias, and side seams are straight grain.



Do it yourself: how to get fabric to form

One shortcut to finding the best match of fabric to body is to take the fashion fabric (or a good substitute) for a test run. In this draping exercise, cut a length of fabric, either on the grain (for the easiest construction) or on the bias (for a more difficult construction) and walk it around the body. Hold it up and let it fall over different curves, searching for the best drape—that sweet spot where the weave merges perfectly with the body's shape.

DON'T SETTLE UNTIL YOU'RE SURE

Notice what happens when you place the test fabric on a dress form. Decide if it meets the criteria for your design concept and your anticipated wearer. Beware of settling for the first place it looks acceptable—usually, lurking further in your quest is the magic place.

To make this approach your working style, as Madeleine Vionnet did, it is faster and less risky to develop the design on a half-scale dress form and then translate it to full scale after you are pleased with the design.

SCULPTING WITH FABRIC

As you become more familiar with the fabric-to-form idea, you'll see other ways to engineer the pattern design so the bias ends up on convex curves and the straight grain ends up on edges. Ideally, you could have the bias shape the bustline, shoulders, hips, and even some concave curves, such as those under the bust or on the lower back bodice. With a single, well-placed cut in the fabric, it is possible and desirable to turn the fabric on the bias in key fitting areas. The cut need not be straight—designing that cut is the virtuoso feat in designing on the bias. Drape a whole bias garment in the chosen silhouette. Then follow the bias to design a single cut.

Straight-grain cuts are most functional at necklines and straps. As you become more accomplished, straight cuts can meet bias cuts to hold portions of the design in position. Additionally, with a single cut, one pattern piece can offer a straight portion and a bias portion in the same pattern piece that can be matched to separate areas of the body for different functions or effects.

Body movement plays a part in the design, too. The bias should facilitate comfort and enable the fabric to "dance" when it's in motion. For this reason, first determine the design's silhouette, and then plan the style lines for the best application of the fabric-to-body concept.



Bias grain wraps the body, leaving extra fabric for design details.



The front is on grain and the sides and sleeves are on the bias.



Sewing bias-cut fabric

Opt for construction and finishing techniques that are fabric-driven and bias-friendly, without restricting the fabric or the form.

LIGHTWEIGHT HONG KONG EDGE

Use a tissue-weight silk to bind an unfinished seam edge. The wool crepe seam below is bound in chiffon. The 1-inch-wide seam allowance helps control the nature of the bias.

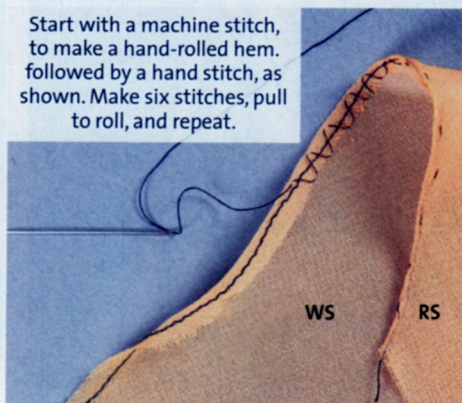


SEWING SMOOTH SEAMS

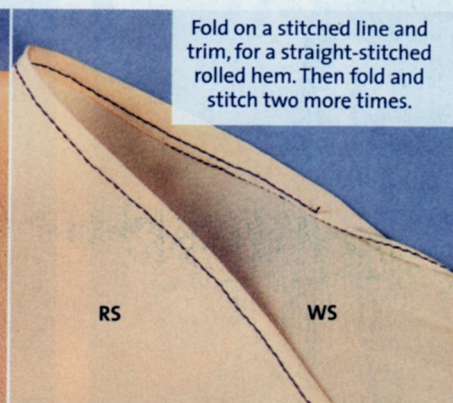
- Remove all the stretch prior to starting.
- Hang fabric on the bias for a week—attach weights to help stretch it.
- Use short stitches, 1.5 mm long, and stretch the seam while sewing.
- Baste the center-front seam, break the thread every 10 inches. Steam while flat on the table. Stretch the seam as much as possible while sewing.
- Don't stretch the seam over the bust area. Shrink the seam between the breasts to avoid horizontal ripples there.
- When joining bias to straight, sew with the straight grain on top, since it's more stable. The bias layer feeds in easily, and the straight grain stays the bias edge.
- Use a plumb line to check for straight side seams, after letting the unseamed skirt front and back hang on the form for a week.
- For bias silk velvet, use a leather foot to get a precision bite into the seamline after slip-basting the seam from the right side.
- Though bias cuts don't ravel, the weave on the cut edges spreads. For stable edges, use 1- to 1½-inch-wide seam allowances, especially on the sides.
- Stretch-press the fabric on the bias before going to the form to drape.

TECHNIQUES FOR HEMS, EDGES, AND NECKLINES

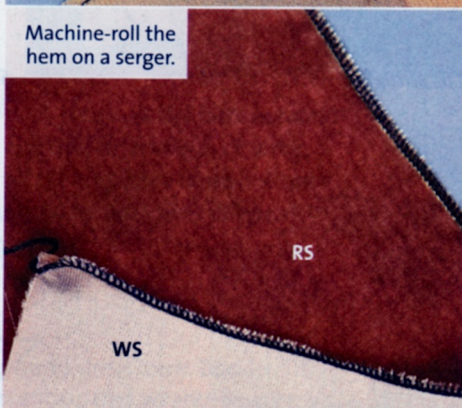
Start with a machine stitch, to make a hand-rolled hem. followed by a hand stitch, as shown. Make six stitches, pull to roll, and repeat.



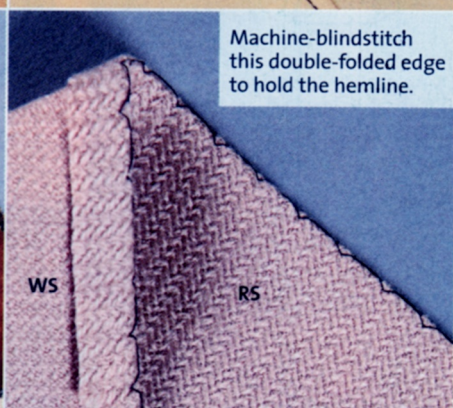
Fold on a stitched line and trim, for a straight-stitched rolled hem. Then fold and stitch two more times.



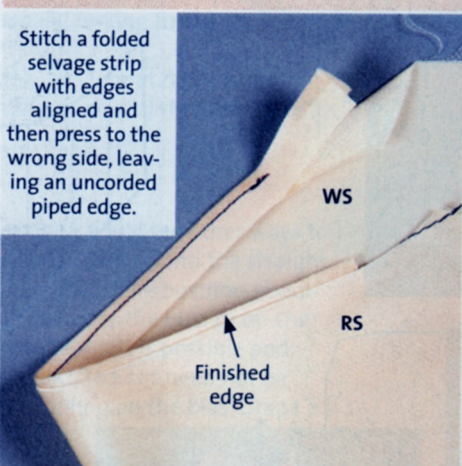
Machine-roll the hem on a serger.



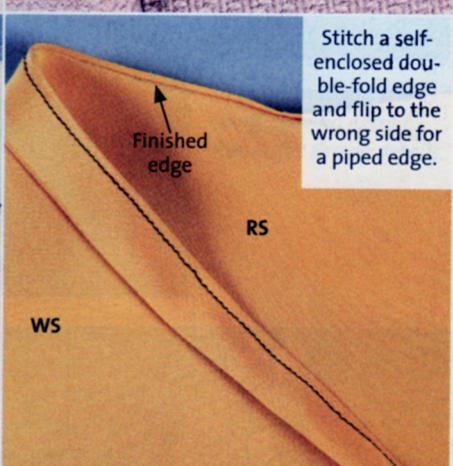
Machine-blindstitch this double-folded edge to hold the hemline.



Stitch a folded selvage strip with edges aligned and then press to the wrong side, leaving an uncorded piped edge.



Stitch a self-enclosed double-fold edge and flip to the wrong side for a piped edge.



Know the fabric for bias cut

Once you have a general concept of the desired garment—day, evening, close- or easy-fitting—it is best to consider fabric possibilities before you plan the style lines and other details. This way, the fabric can dictate their placement. The keys to success are choosing a cooperative fabric with the characteristics you need, and knowing what technical challenges it presents. Polyester, for example, can be too tightly woven to collapse well for a bias garment. Look for four characteristics when choosing a fabric for the bias.

The overall fabric weight should seem heavy in the hand. This weight pulls the garment down over the body, smoothing the fit and preventing cling. In this way, gravity helps you design.



Look for a noticeable “collapse” of the fabric when holding it by a corner. It becomes narrower in width and longer—ideally, it appears to fall straight to the ground with little flaring.



Hold the fabric up to see if you can see light through it. The light that shows through a loose weave is the needed air space that allows the yarns to collapse together.



Find a balanced thread count, or as close as possible. (See “Assess the Fabric’s Balance” below.) A balanced thread count means the fabric has the same number of yarns in both directions.



ASSESS THE FABRIC’S BALANCE

Knowing the fabric well is essential, and for that you’ll need a linen tester or pick glass, which is a folding magnifier. It magnifies a square of fabric so you can compare the warp and weft threads in the weave. If there are close to the same number of yarns in the warp (parallel to the selvage) and weft (perpendicular to the selvage), the fabric is said to be “balanced”; if the count is significantly different, then it is unbalanced.

On the bias, a balanced fabric exhibits the same characteristics on both sides of the vertical center; if unbalanced, the warp direction provides more strength for fit and drape than the weft direction—resulting in a different appearance on each side of the garment. To avoid problems when using an unbalanced fabric on the bias, always make sure to have seams at the center front and back. Cut the right and left sides in a single layer with the warp threads aiming from the center seam to the hem.

Plastic and metal linen testers can be found at AtexInc.com.

Crepe de Chine is a lightweight, balanced weave.



The linen tester exposes balance.



This novelty silk is not balanced.

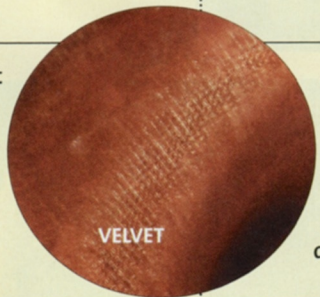
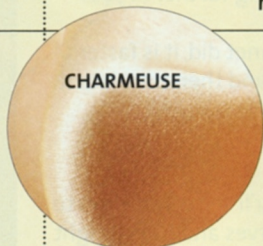
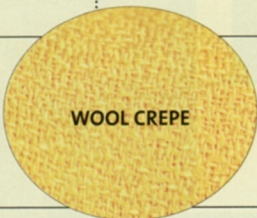


The fabric short list

If you study a fabric, you can see exactly what it is going to do, and then design your garment to correspond. Learn which fabrics work best for bias-cut garments, and look for the characteristics noted below for good results. The successful fabric has weight, the proper collapse, which sometimes comes from built-in air space, and a balanced weave:



WEAVE AND FIBER	DESCRIPTION	CHARACTERISTICS
Chiffon and georgette	Plain weaves with high-twist yarn	These lightweight fabrics achieve good bias designs if they are used in huge volume to build up weight or if they are appliquéd in a way that adds weight.
Crepe-back satin: usually rayon or silk	High-twist yarn, crepe weave	Good bias collapse and weight
Crepe: wool, silk, rayon, cotton	Combined crepe and satin qualities plus weight	The combination enables a fabric to stretch naturally. Use at least three-ply silk for sufficient weight and collapse.
Gabardine, herringbone: wool, silk, rayon, cotton	Twill weaves	This fabric collapses more in the bias direction because the weave is more relaxed.
Satin, charmeuse: silk, rayon	Satin weave with reeled (untwisted) silk	Some yarns float on the surface, adding flexibility; reeled silk also has less friction.
Velvet	A soft woven or knit piled fabric with or without an obvious nap direction.	All velvets have pile, but only velvet without an obvious nap is suitable for bias designs. The pile adds weight, increasing the drape.
Novelty fabric: Monk's cloth, Indian muga, wild silk, and others	Basket weaves, big yarns, very loose weave	Loose weaves impart movement between warp and weft and can make fabrics adaptable to bias designs.



The open basket-weave wool in this dress enables the fabric to collapse on the bias and form to the body.

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