RKG Presentation – 8 January 2024

Basic Shawl Geometry

Before I start, I want to be clear that I’m not anti-pattern. I knit from patterns a lot, and have some real favorites that I’ve knit multiple versions of. But you don’t always NEED a pattern. Sometimes you just want to do your own thing, or you can’t find exactly what you have in mind, or you have a gorgeous yarn and you just want to knit without thinking too much about it, or needing to dress it up. You may have a lace or stitch pattern you love, and can’t find a pattern that uses it. You may be trying to use up stash.

Knitting without a pattern is also good for handspinners – and I know we have a fair number in the guild – or anyone else who has a fixed amount of yarn in hand and wants to maximize what they can knit with it.

It can also be useful to understand the basic shawl structures if you’re working from a pattern, so that you have a sense of how colors will move if you’re working those differently from what the design calls for, and so you can recognize how a shawl will fit and drape, especially if you know from experience that some shapes don’t suit you.

Shawls are an invitation to creative freedom. They’re flat pieces of fabric, so shaping them is not particularly complicated. They can be worn in various ways, and they (usually) take less yarn than a sweater. You don’t need to worry about fit, and they’re easy to put on and off as you need them – you’re not dragging something on and off over your head. The knitting can be as simple or as complex as you feel like doing.

You can use the weight of yarn that you want, or have on hand. You can work in plain garter stitch or stockinette, or you can use any stitch pattern you like – lace or texture, and you can alternate any of those as you please. You can use colorwork – stripes, mosaic, stranded or intarsia. A shawl can be a canvas.

But I’m not addressing any of those choices tonight, nor am I considering any of the technical choices you can make – which increases or decreases to use, how to handle edges, or what kinds of borders or bind offs you might want to add. Those are all important, too, but beyond the scope of what we’re doing here tonight. I’m also not trying to do a comprehensive presentation of every possible shawl shape, or of every option to produce the shapes I’m talking about. These are basic and common options, but there are many, many others.

The oldest form of shawls that we know of is a simple square. These can be made by simply casting on one side and knitting until a square shape has been achieved, and binding off \* (1)(2).

They can also be made by casting on a few stitches (I usually do 3), and increasing two stitches every two rows, either by increasing one at the beginning of every row, or by increasing one at each end of every right side row and working the wrong side rows with no increases. This continues until the diagonal (the wingspan, if you’re wearing it folded to a triangle) is the length you want. At this point, begin decreasing in the same pattern as your increases until you’re back down to your beginning number, and cast off. \*(3)(4)

Another way to make a square is to cast on in the center and increase. The rate is eight stitches every other row, done at four points. This will give you increase lines from corner to corner both ways, which will be more or less visible depending on how you work the increases. I have always been fascinated by what happens when you do this – you’re knitting a flat piece of fabric in the round, which makes stockinette-based fabrics the easier choice to knit. \*(5)(6)

Rectangles are another very simple shape to knit. There are two simple approaches, and a few that are a little more complicated (but not much).

You can cast on one of the long edges, and work until the piece is as deep as you want it to be, and cast off. \*(7)(8)

You can cast on one of the short edges, and work until the piece is as long as you want it to be, and cast off. \*(9)(10)

The choice between those two approaches may be determined by the direction of your stitch pattern (especially if it’s in lace), or by which dimension, either length or depth, is most important to you if you have a limited amount of yarn.

There are other options for rectangles. Depending on the direction of the lace, and whether you want both ends to look the same, you can work the rectangle in two pieces, either from the ends to the center and then graft, \*(11) or use a provisional cast on in the center of the piece, work the first half, and then pick up the center stitches and work the second half in the opposite direction. \*(12) It’s also possible to work a center panel, and work out from that, or to use a provisional cast on, work the center and a border, and then pick up the provisional cast on and just work the second border.

Triangles are classic shawl shapes. The simplest approach I know is to cast on a few stitches, and, increasing one stitch at the beginning of every row, knit until it’s as deep as you want it to be, or you have the wingspan you need to wear it the way you want to. You can also increase one stitch at the beginning and end of every right side row, if you prefer, although then you need to keep track of which is the right side, which isn’t obvious in garter stitch, but would be in many other stitches. This is the same as the beginning of the bias square shawl – you just never decrease. \*(13)(14)

It’s also possible to cast on the wingspan and decrease the stitches away, but there’s a risk that you’ll run out of yarn, and there’s no advantage to working in that direction, so I haven’t swatched or drawn it.

You can also work a triangle from one wingspan point to the other, increasing until the shawl is as deep and/or half the width that you want it to be, (depending on which is your more important measurement), and then decreasing at the same rate until you’re back down to just a few stitches. If you work the increase once every right side row (one increase every two rows), you’ll have a shawl with a 45 degree angle at the point. \*(15)(16) If you work the increases once every other right side row (one increase every four rows), you’ll have a shallower triangle with a wider angle at the point. \*(17)(18)

If, instead of decreasing when the shawl is as deep as you want it to be, you keep going until it’s as wide as you want, and then bind off, you’ll have an asymmetrical triangle shape. To wear it, turn it so that the long edge is on top. \*(19)(20)(21)

Another way to form an asymmetrical triangle is to work increases and a decrease so as to bias the work. To knit this one, on the right side, work an increase at the beginning of every right side row, and work a decrease at the beginning and an increase at the end of each wrong side row. It’s still growing at the rate of one stitch every right side row, but the shape is tilted, resulting in a shawl that’s longer and narrower than the straight asymmetrical triangle described above. \*(22)(23)

Top down triangles are worked by casting on a few stitches, and either just starting to knit, or working a garter tab if you prefer that look, and increasing four stitches every other row, one at each edge (usually inside a border), and one on each side of a center stitch/es. \*(24)(25)

It’s possible to work more than two triangles this way. Three-triangle shawls sit well on the shoulders and are straight across the back, but don’t drape as well if you want to wear them like scarves. \*(26)(27) Four triangles are also possible. They make a square with a slit.

It’s possible to make a shallower triangle from the top down by increasing six stitches every two rows. This is usually done by working an increase at the beginning and end of every row, and also working one increase on each side of a center stitch. \*(28)(29)

If those same increases are all moved to the edges, so that you do a double increase at the beginning and end of every right side row and a single increase at the beginning and end of every wrong side row, you get a longer and more shallow crescent instead of a triangle. \*(30)

There are a couple of approaches to circle shapes in shawls. They will all involve a center cast on. Elizabeth Zimmerman’s Pi shawl is a classic, and has some real advantages. Because the stitch count remains constant within each section, it’s easy to work lace without worrying about how to incorporate the increase stitches smoothly. And although you need to keep track of your rows, you don’t need to keep track of increases within a section. To work this one, every time you double the number of rows in the previous section, you double your stitches. So work 2 rows, double your stitches, then work 4 rows, and double them again. Carry on until the shawl is as large as you want it. Blocking will make a difference in getting this one lie flat. \*(31)(32)

From the same circular cast on, if you increase eight stitches every other round at eight points, you’ll get what is actually an octagon, but which will easily block to a circle. Note that the center-out square is also worked with eight stitches increased every other round, but placement matters. Those increases are placed at four points, not eight. The increases at eight points will also make a swirl, rather than straight lines. \*(33)

If you want straight line segments, work sixteen increases every four rounds, keeping those increases on each side of eight spine stitches.

Any of the circle methods can be used to make half circles – just use a normal cast on and make the increases required for the style you have in mind.