

3 APPROACHES TO TAPESTRY DESIGN by Susan S. Hódges

Approach No. 1--Designing on the Loom

I. The Loom

- A. Use an empty picture frame or a set of canvas stretcher bars sold at arts and crafts stores. Other possible loom frames: tree branches, chair backs, ladder rungs, pitchforks, wooden boxes.
- B. An alternative is a small tapestry or other frame loom. Warp it in the usual way, but ignore any reed or heddle system. Instead, use one of the heading methods listed below to space the warp.

II. Warp and Weft Materials

- A. Warp should be heavy-weight and strong.
 1. Try heavy cotton string, 16 to 20 ply or whatever weight will fit your loom.
 2. Heavy rug wool is good, but will stretch more than cotton.
 3. White is the easiest color to find, but colored warp is fun to work with, especially if your tapestry includes plain weave and bare warp areas.
- B. For weft, try a variety of anything you like.
 1. Some possibilities: yarns, strings, thrums, dye samples, roving, fleece, rags, paper, plastic
 2. Include both shiny and dull yarns and a variety of fibers, thicknesses and twists.
 3. One ball of heavy yarn in a single color can be useful.

III. Tools are unnecessary. If you like, use a ruler for a shed stick and a table fork for a beater, but fingers work just as well.

IV. Warping a Picture Frame Loom

- A. Figure-8 Method (Easiest for beginners)
 1. Wind a continuous warp around the top and bottom bars of the frame in a Fig. 8 fashion. For an even number of warp threads, tie on and end off on the same bar.
 2. Leave a 2-3" space between the edges of the warp and the sides of the loom.
 3. Tension Hint: At the end of every tenth pass around a bar, wrap the bar twice with the warp. After tying off, hit the warp sharply in order to even out the tension.
 4. Advantages of this method: a) It separates warp threads into consecutive pairs. b) It also provides a natural shed or heading if you want it.
- B. An alternative method is to simply wind the warp around and around the frame using the tension hint suggested above (IV.A.3.).
 1. The overall tension for this warp should be looser than in the Fig. 8 warp if you plan to use it as a single warp surface.
 2. An alternative way to use this warp is to consider it as two separate warp surfaces. As in 4 harness double weave, these 2 warp surfaces can be woven separately, or interlocked, or woven as a tube.
- C. Additional information on looms, warping, tension and spacing can be found in the Belfer, Creager, Held, and Meilach books listed in the Bibliography.

IV. Weaving

A. The Heading

1. Purposes: a) Something substantial to beat against b) Can be used to space the warp threads evenly
2. Alternative methods are: a) Chaining b) Twining c) a few rows of plain weave d) 2 rulers, flat shuttles, or cardboard pieces in alternate sheds e) putting a stick in above the Fig. 8 cross and pulling the cross down to the bottom of the warp

IV.A. 3. Other thoughts: a) Suggest chaining or twining around two threads at a time, especially on a Fig. 8 warp b) A chained heading can be tied to the side bars of the loom frame and will help to keep straight selvages on your tapestry c) Try to maintain even spacing, i.e. about the same number of warp threads per inch

B. Some Possible Tapestry Weaving Techniques to Try

1. Open Shed Techniques: a) Weft face stripes (Vertical: different color yarn every other row; Horizontal: different color every 2 or more rows) b) Erratic wefts (e.g. Lozenges and undulating rows) c) Slits d) 50/50 plain weave (i.e. let the warp show)
2. Closed Shed Techniques: a) Chaining b) Twining (Try using 2 colors of yarn at the same time) c) Soumak d) Pile (Use small piece of yarn for individual knots) e) Wrapping the warp threads f) Bare warp areas (Bridge these with a row of soumak)

V. Some Ideas on Design

A. A Multicolor Tapestry

1. Organize yarn pieces into piles of related colors so that you can build up small areas of related color in your tapestry.
2. Alternate and balance multi-color areas with solid color areas of dark or white yarn. These solid color areas will help control your multicolored areas as in a stained glass window.
3. Balance your color areas against one another (e.g. left against right, up against down)
4. For some people, it helps as you work to think of something like a landscape, hills, clouds, lily ponds, trees, waves, etc.

B. A One Color or Related Color Tapestry

1. Use a warp color that relates to your weft but is not quite the same color (e.g. orange warp and red weft).
2. Use different techniques and textures. Balance flat areas with pile and other relief techniques.
3. Or, try emphasizing just one technique (e.g. slits, stripes).
4. Use yarns of similar colors but of different brightness and dullness.

C. You may work from a thumbnail sketch or a photo if you like. Do not feel restricted by these design ideas. The thing to do is to explore the freedom and possibilities of tapestry weaving without too definite a design in mind.

Approach No. 2--Designing Row by Row

I. The Loom--Any loom with a device that will provide 2 clear sheds

II. Warp and Weft Materials

- A. Warp can be less heavy than in Approach No. 1. Some possibilities are 6 ply cotton rug warp, Navajo wool warp, goat hair yarn, fish twine, rug wool.
- B. Weft--Use less variety than in Approach No. 1 because some row techniques require more consistency in yarn thickness.
 1. Soft single ply works well (e.g. thin roving, Lopi, handspun).
 2. Several strands together of Maypole or needlepoint yarn
 3. Others: 2 ply weaving yarn (2/7), rug yarn, fleece, rags

III. Tools

- A. Beater--For simple looms, use a table fork or a narrow-edged, flat stick. For more complex looms, use your regular beater.
- B. Optional: netting or flat shuttles, knitting needle for looping, pick-up stick, pile stick

IV. Designing on Graph Paper: A Simple Way to Begin Designing Off the Loom

- A. **Easiest Method:** Divide the graph paper into 5 or 7 different areas using straight and curved lines. Put ^{the} most interesting areas near the center and be sure the areas are of at least 3 different sizes.
- B. **An Alternate Method:** Use a geometric or other subject that can be simplified into horizontals, verticals, curves, and diagonals.
1. Draw it yourself or copy something from a magazine or book.
 2. Draw or trace your design out on graph paper. For a colored design, use felt tip pens, water colors, or colored inks.
 3. N.B. diagonals and curves are reduced to a series of stair-steps.
 4. Remember, graph paper distorts a weaving design vertically.
 - a. E.G., for a square tapestry, make a graph design that is higher than it is wide.
 - b. Another way to limit distortion is to let each square represent more weft threads than warp threads.
- C. **Some Sources for Pre-Graphed Designs:** needlepoint books, cross-stitch embroidery books, jacquard knitting patterns, Dover books

V. Tapestry Weaving in Rows

- A. **The Heading--Try twining** for simple looms. Use your usual method for more complex looms.
- B. **Rug Techniques** can be used easily with graphed patterns, or they can be alternated simply in rows with other related techniques.
1. Design areas are built up in whole or partial rows as they are in rug weaving. Many of these techniques require a row or more of plain weave to hold the knots in place.
 2. Possible Techniques to Try: a) Soumak b) Continuous Pile using butterflies and a pile stick c) Looping picked up with a pencil, a knitting needle or the fingers
 3. Gauze and Lace techniques also can be used in this way.
 4. Meet and Separate and Crossed Weft techniques can be used by the more experienced weaver. These techniques are explained in the newest Regensteiner book and in Collingwood's rug book.
- C. **Tapestry Techniques Built in Rows**
1. **Weaving sequence for several weft colors in one row:**
 - a. Use medium short weft pieces (18") or use one bobbin device for each color area in the row.
 - b. Open the shed, and lay each weft piece in from right to left. Bubble the weft pieces or lay them in at an angle to the web. Beat completed row with a table fork.
 - c. Change the shed, and send weft pieces back across starting from the left. This second shed is called the "locking shed".
 2. **Some ways to shift weft colors along vertical, curved and diagonal pattern lines:**
 - a. Slits--adjacent weft color pieces turn around adjacent warp threads
 - b. Warp Interlock--adjacent weft color pieces turn around the same warp thread. Can become bulky in an inch or two
 - c. Multiple Warp Interlock (called "Dovetailing" or "Teething") --Instead of going around the common warp only once, each weft color piece makes 3 or more turns around a warp thread before the adjacent warp color piece does the same thing. Weaving sequence must be altered for this method, but it is quicker and less bulky than single warp interlock
 - d. Weft Interlock--adjacent weft color pieces turn around each other on the locking shed
 - e. Stair-step Intervals--use slit or interlock joinings in stair-step blocks to represent diagonals and curves. Regular intervals produce diagonals; irregular intervals produce curves.

IV.D. Laid-in (Brocade) Techniques. Being in part loom-controlled, they can be used to produce larger tapestries in less time than traditional tapestry techniques.

1. Design area wefts are laid in by hand between a row or more of loom controlled background wefts woven in plain weave.
 - a. For design wefts, use row tapestry techniques (V.C. above) and tapestry tools (e.g. netting shuttles, small flat shuttles, or wind wefts into butterflies).
 - b. For background wefts, use loom-controlled techniques and tools.
 2. The Open Shed Method
 - a. Lay the design area weft(s) into the same shed as the plain weave shot that follows it.
 - b. The character of design areas changes according to the number of plain weave shots between design weft rows and according to whether design areas are woven frontside-up or backside-up.
 3. The Closed Shed Method (called Discontinuous Brocade)
 - a. Pick up, open the shed, and weave design areas with the fingers, a pick-up stick, or netting shuttles. Sticks and shuttles not only pick up faster than fingers, but they can be turned on edge to open the design shed and can be used as beaters too. Netting shuttles are also good bobbins.
 - b. One or 2 rows of plain weave comes next.
 - c. An advantage which this method has over the open shed method is that the design wefts may float over more than every other thread, if you want them to do so.
 4. Relationship of design and background wefts
 - a. Traditionally design wefts are somewhat heavier than background wefts. (E.G. use the same type of yarn for both design and background, but use 2+ strands of it for the design.)
 - b. Backgrounds are traditionally either weft-faced or 50/50 plain weave depending upon the sett of the warp.
 - c. For a truer tapestry effect, background wefts can be so thin and design weft floats can be made to cover so much of the surface of a piece, that the background wefts become almost invisible. Areas that lack design wefts will seem gauze-like. Use the closed shed technique for this effect.
- E. Tapestry weaving in rows can be combined with 4 harness threadings other than plain weave. 1) Some possibilities are Twills, Undulating Twills, M & O's, Double weave, Rosepath, Monk's belt, Summer and Winter 2) The Theo Moorman Technique is a hybrid laid-in technique for tapestry that uses a 4 harness threading.

Approach No. 3--Designing Off the Loom

- I. Loom Set-up--Use a tapestry loom with string heddles for one shed. For the second shed, use fingers, or put a shed stick or rod into the warp behind the string heddles. A rigid heddle or harness set-up will work too, but is harder on the warp threads.
- II. Warp and Weft Materials
 - A. Warp--Cotton, linen, and wool worsted of many different weights are traditional. The weight depends on the purpose of the tapestry and on how fine the details of the design are. Most any weight warp can be used with string heddles.
 - B. Weft yarn is usually uniform in size.
 1. 2 ply wool worsted is traditional
 2. Other possibilities: New Zealand tapestry yarn, Paternayan tapestry yarn, several strands of Maypole used together
 3. Used for special purposes: silk, sewing thread, embroidery thread, metallic novelties

III. Tools

- A. Tapestry bobbins hold yarn and are used for beating.
- B. Optional tools: shed stick, netting shuttles, table fork beater

IV. Weaving

- A. The Sett--from 6 to 15 threads/inch. Rule of thumb: "The space between warp threads should be a little wider than the width of the weft yarn."
- B. The Heading--With string heddles, chain or twine the warp near each beam in order to maintain the sett. 1) A ruler or cardboard gauge will help keep the proper sett during chaining 2) Tie the chain to the loom frame sides to help keep an even sett and selvages 3) To maintain even selvages, some weavers tie the web to the loom frame every few inches as weaving progresses
- C. Weaving Techniques include many flat tapestry techniques already introduced.
 - 1. Techniques not covered include shading (hatching), outlining, and sewing up slits.
 - 2. Additional techniques can be found in the following books listed in the Bibliography: Beutlich (the most complete), Rhodes, Creager (the best bargain), Belfer, Regensteiner (both books), Black (especially good on loom set-up)
- D. The cartoon is traditionally attached to the warp backwards and sideways.
 - 1. High Warp Method: a) Pin cartoon under the warp b) Using blue or red waterproof ink (felt tip?), draw an inch or 2 of the design onto the warp threads. (Use little dots of ink and do only major outlines; small details are usually "eye-balled".) c) Weave what is drawn on the warp and then repeat the process.
 - 2. Low Warp Method: a) Weave a short hem or heading b) Using pins, attach lower end of cartoon to heading under the warp c) Refer to cartoon periodically as you weave by pulling it up flat under the warp d) Some people attach a dowell to the loom frame under the warp and parallel to the heddle set-up. The top end of a long cartoon can be attached to or wound around this dowell.

V. Designing the Cartoon

- A. Using other sources: Use a design or subject matter from a source like a book, magazine, photo, or slide. Some possible tools and methods:
 - 1. A viewfinder: a) Make a small frame of white or black paper in the same scale as the proposed tapestry b) Move frame around on a likely picture until you see a design you like within the frame c) Trace the design in the frame for your cartoon
 - 2. Treated acetate and India ink is an alternative to tracing paper. With either you can trace subjects from several sources and put them together into one design using the compositional rules listed below under V.B.
 - 3. A photo with sharp lights and darks can be traced so it is reduced to weavable shapes of highlights, shadows, and middle tones.
 - 4. A slide can be projected onto tapestry sized paper. Weavable shapes from the slide can be drawn onto the paper.
 - 5. To change the size of a tracing to the size of your weaving, take your tracing to a blueprint or photostat service and have them reduce or blow-up the tracing to the desired size.
- B. Some guidelines for drawing your own cartoon:
 - 1. Take an object or objects you like: a) Draw it yourself b) Or trace it from a source c) Or cut or tear out paper shapes

- V.B. 2. Criteria for selecting more than one object: a) Odd no. of objects (e.g. 1, 3, 5,) b) Variety of sizes c) Variety of color tones (e.g. light gray, middle gray, dark gray) d) Possibly, a limited variety of textures
3. Some possible types of composition:
- a. Symmetrical Composition--Both sides of design the same (e.g. a single object, a face, an ink blot in folded paper, a cut paper negative)
 - b. Repeat Design--Use same object several times. Space between objects should be nicely shaped.
 - c. Asymmetrical Composition--Move objects around on a page of same size as proposed tapestry
 - 1) Center of Interest--Place largest, most interesting or brightest colored object slightly off center on page.
 - 2) Eye Movement--Arrange other objects around center of interest so that your eye moves easily from object to object but never moves off the page.
 - 3) Negative and Positive Space--Space between objects and between all objects and the edge of page should be interesting and nicely shaped.
- C. Pictorial Tapestry Backgrounds have a tendency to be dull and flat.
1. One solution is to divide background into weavable shapes.
 - a) Draw a few straight lines across background to divide it into geometric shapes. b) Draw wavy lines through background to divide it into leaf-like or wave-like shapes.
 2. Another solution is to use variegated yarn in background areas.
 - a) Use several strands of yarns in closely related colors.
 - b) Dye your own streaky yarn (e.g. throw a ball of yarn into a pot of Putnam or leave out the leveling agent, e.g. Glauber's Salt. c) Handspun or hand plied yarn might work.

Bibliography:

- Black, Mary. New Key to Weaving, NY:Bruce. Ch.15.
- Bennett, Noel. Working with the Wool, Flagstaff:Northland Press.
- Beutlich, Tadek. The Technique of Woven Tapestry, NY:Watson-Guptil.
- Creager, Clara. Weaving, A Creative Approach for Beginners, NY:Doubleday. Only \$3.95 !
- Held, Shirley. Weaving, NY:Holt, Rinehart & Winston. Chs. 11, 13, 14.
- Meilach, Dona. Weaving Off-Loom, Chicago:Henry Regnery Co.
- Moorman, Theo. Weaving as an Art Form, NY:VanNostrand Reinhold.
- Pendleton, Mary. Hopi & Navajo Weaving Techs., NY:Little, Brown.
- Regensteiner, Else. The Art of Weaving, NY:VanNostrand. Ch.8.
- Weaver's Study Course, NY:VanNostrand. Ch.6.
- Rhodes, Mary. Small Woven Tapestries, Newton Center, Mass:Branford
- Schluter, Liz. Handweaving, CUM Industries, Denmark. Costs \$2. at Naturalcraft. Scandinavian Inlay Techniques on pp.57-65.
- Tidball, Harriet. Contemporary Tapestry, Shuttle Craft Guild Monograph #12.
- Wilson, Jean. The Pile Weaves, NY:VanNostrand Reinhold.
- Znamierowski, Nell. Step-by-Step Weaving, NY:Golden Press.

In Shuttle, Spindle, & Dyepot: Fall, 1976: "An Introduction to Tapestry" (pp.69-77); Fall, 1975: "Grau-Garriga" (pp.92-4); Fall, 1974: "The Loom in My Tote-Bag" (pp.83-5); Summer, 1974: "Uno Mas--The Secret of Mexican Tapestry" (pp. 88-91).