The Sixteens 2014

Project: 4 Color Double Weave
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Warp & Weft Yarn: 8/2 Unmercerized Cotton
Colors: Purple and Orange (Warp); Pink and Light Blue (Weft)

Reed: 15 dent **Sleyed:** 2 per Dent
Sett: 30 EPI and 20 PPI (AVL Auto Advance)

Loom: AVL 16-Shaft Folding Loom with Compu-Dobby I

Software: Proweave (Windows)

Finishing of Samples: I dunked the cloth in a sink of hot water with 3 Shout Color-Catcher sheets. After less than a minute I pulled it out and wrapped it carefully (flat, no creases) in a towel to squeeze out most of the water. I then pressed the cloth with a hot iron until dry. Laura Fry's *Magic In the Water* was used for guidance.

References: My primary resource was *Weaving with Echo and Iris* by Marian Stubenitsky, ISBN 978-90-822182-0-6 http://weefschool.nl/en. This book is going to be a classic reference, and its publication was well-timed. Marian Stubenitsky stresses the importance of color choices. I took notes based upon the high-contrast goal but the book offers guidance for other goals.

Notes from Marian Stubenitsky - *Weaving with Echo and Iris*

- Color interactions are critical
- The most important component may be the grey scale value
- Value = how close a color is to black or white
    - Tint = lighter / more white
    - Shade = darker / more black
- To maximize contrast: choose 2 warp colors with a strong contrast which are not analogous or monochromatic
    - Analogous = close together on the color wheel (e.g., pink and orange)
    - Monochromatic = same basic colors that are mixed in different proportions with white and/or black (e.g., red and pink)
- Highest contrast is produced when the values are SPREAD over warp and weft (e.g., lightest red and darkest blue in warp)
- I do not want two analogous colors TOGETHER in either the warp or the weft (e.g., pink & orange as the 2 weft colors).
- Page 71 - "the threading of four-color double weave cannot be used for iridescent effects"

Color References:

- Quotes from http://en.wikipedia.org/wiki/Analogous_colors:
    - "Analogous colors are groups of colors that are adjacent to each other on the color wheel, with one being the dominant color, which tends to be a primary or secondary color, and two on either side complementing, which tend to be tertiary."
    - "Red, yellow, and orange are examples of analogous colors"
- http://colorindesign.net/2010/04/13/color-schemes-for-interiors-analogous/

Links:

- http://weaverly.typepad.com/weaverly/2008/03/4-color-double.html – note the picture of a longer float and Bonnie Inouye's comment about color and her preference to limit float length
- http://evasweaving.wordpress.com/tag/double-weave/ - 2 inspirational projects with pictures and comments
- http://www.subudesigns.com/images/Ann%20Schaeffer%20scarf%20finished%203%20detail.jpg – beautiful picture of a 4 color double weave
- http://www.tienchiu.com/2010/05/network-drafted-doubleweave/ - colored drafts and careful logic
- http://purpledonsu.blogspot.com/2012/09/bonnie-inouyes-course.html – pictures of a number of 4 color double weave projects created by Bonnie Inouye and her students

Sampling: After lots of overthinking it made sense to just pick 2 colors for the warp (dark purple and orange), 2 for the weft (pink and blue), take Marion Stubenitsky's threading, and play with lots of treadling plans. My first sample had some very long warp floats (spanning 7-9 threads) at the reversals. I did not like the look and felt the long floats created an undesirable "focal point" because, with the exception of the floats, the cloth comprised of 3 floats.

Drafting Technique: I used the 16-shaft "straight draw" threading and tie-up on page 105 of *Weaving with Echo and Iris*. The book states that the interval is 11 and the tie-up ratio is 4:4. To create a treadling plan: I used Proweave and, in tie-up mode, toggled through their twill database keeping an eye on the maximum float lengths (displayed in lower right of screen). Screening for floats excluded many treadling plans. I selected the treadling plans producing a maximum of 5-7 floats in the warp. Weft floats, which are generally controlled by the tie-up and threading, were not a problem and never longer than 3. Then I converted to a peg-plan and started checking floats. The floats were all in the warp and at the reversal points. Based upon my first sample I decided a span of 4 was the longest I could tolerate. This decision was based upon the way the long floats in the original sample "jumped out" visually at the reversals (very discrepant from the overall warp & weft float lengths of 3). I manually removed the floats by either deleting rows or by inserting a lift. Generally only 1 or 2 shafts were causing the problems. I kind of overwhelmed myself at a certain point and decided to pick one and move on.

Draft: Enclosed is my final draft in tie-up and lift-plan formats. Note the threading and tie-up was copied from page 105 of *Weaving with Echo and Iris* while the treadling was based upon an initial starting treadling plan from Proweave's Twill Database Treadling Plan #64.