

Errors in Weaving Patterns

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While producing drafts for **Handweaving.net** {1} from patterns in various weaving documents, I discovered that almost all of them contain surprising numbers of errors.

This article discusses the prevalence of errors in old weaving patterns, different types of errors, and methods for error detection and correction.

Prevalence of Errors

Every old pattern book or manuscript that I have worked with contains a significant number of errors in its patterns. Some examples of numbers of errors are: *An Album of Textile Designs Containing Upwards of 7,000 Patterns Suitable for Fabrics of Every Description*, by Thomas Ashenhurst, had 240 out of 7,201 patterns with mistakes. Approximately 500 more had printing defects. In *Donat's Large Book of Textile Designs*, with 9,021 patterns, more than 400 patterns were not correct in the original. At least 20% of the patterns in *Traité Encyclopedique et Méthodique de la Fabrication des Tissus*, by P. Falcot have errors.

Some books have errors evenly distributed throughout them, such as the work by Ashenhurst, mentioned above. Others have groups of relatively error-free pages, followed by a page or two full of problems. *Donat's Large Book* fits this pattern.

Different Types of Errors

While producing drafts for over 30,000 patterns, I found that the types of problems in imperfect patterns generally fall into one or more of these categories:

(1) **Simple Errors in the Visual Pattern.** One or more cells has the warp or weft showing incorrectly. This causes visual defects in the pattern. This is most common near the edges of the pattern, where the design is continued on the opposite edge. This is difficult to see until the pattern is repeated, which was undoubtedly cumbersome to do long ago without computer technology.

(2) **Printing Defects.** These have several forms, including not enough ink on the plate, too much ink causing cells to bleed together, crossed out cells

with mistakes in handwritten patterns, entire rows or columns missing from typeset patterns, printing that was not centered and ran off the edge of the page, patterns with different numbers of rows or columns at opposite edges, and grids of cells that are not evenly spaced or are so crooked on the page that they become difficult to read.

(3) **Repeat Errors.** These also have several forms, including incomplete patterns, where the pattern when repeated is clearly missing rows or columns, and mistakes in partial or full repeats, where one full unit of the pattern is shown correctly, but the next partial or full repeat is different than the first.

(4) **Compound Errors.** These are combinations of the other types and are the most difficult to correct, especially then they involve incomplete pattern units in the original, or repeats of the pattern with neither the original nor the repeat is correct. While often hard to fix, errors of this type are often very easy to see.

Error Detection

I use several techniques for detecting errors in patterns. First, I repeat the pattern at least once in each direction, so that at least two units of the pattern are shown both horizontally and vertically. After this, a quick visual scan of the pattern often reveals errors in cells at the edges of the pattern, the most common type of mistake. It will also cause errors where the pattern is not complete, such as missing cells or rows, to show up. Then I produce a draft for the pattern beginning with a straight treadling and threading.

This is then reduced to a form requiring as few treadles and shafts as possible by removing duplicate rows or columns from the tie-up, and reusing the ones that remain instead of the duplicates. When this can be done, there are patterns that appear in the threading and treadling, for the reused tie-up and threading entries. Almost all of the time these have some symmetry about them, making it easy to scan them visually looking for things that aren't symmetric in some way.

When found, I give the pattern further scrutiny. Lastly, I look for shapes within the visual pattern elements. Often there are rules that can be implied for visual shapes forming a pattern, governing how it should look.

Correcting Errors

I wrote specialized software for producing drafts from scanned images of patterns. It finds the centers of each cell in a pattern, and then instantly shows a draft on the screen, just like on **Handweaving.net**, with the tie-up, treadling, threading, and color drawdown.

For correcting mistakes, this software allows any cell in the drawdown to be clicked with the mouse. This changes it to show the warp instead of weft or vice versa, and causes the pattern to be instantly redrafted and redrawn on the screen, including repeats. The drafting software automatically detects and removes partial horizontal or vertical repeats from patterns.

Sometimes either the original pattern or its partial repeat, or both, must be corrected, because

they have to be the same in order for the partial repeat to be detected and removed. The software also has features for adding rows or columns to a pattern missing these, with some work by hand required to complete them.

Conclusions

I have found that the percentage of errors in a work containing weaving patterns in no way reflects the overall quality or beauty of the patterns themselves. Some of the most beautiful and interesting patterns, such as those in Falcot, have required the most correction.

Even given significant numbers of mistakes, it is amazing to me that many old books are as accurate as they are. The authors of old pattern books were limited in the technologies available to them for recording and reproducing their work. Imagine working with quill pen and permanent ink, or setting moveable type in frames to produce patterns. Some of these books have many hundreds or thousands of entries, all done by hand, without computer technology!

Web Link

1. Handweaving.net:
<http://www.handweaving.net/>

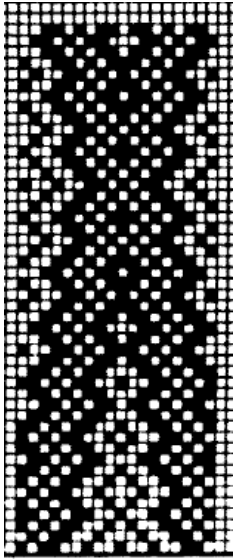
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Examples

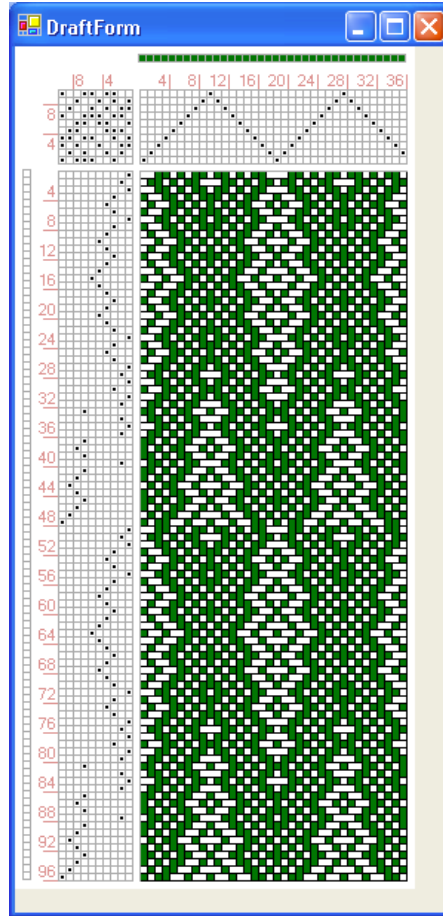
The following examples illustrate the problems encountered with printed patterns. The pattern numbers at **Handweaving.net** {7} are listed in parentheses after the corrected drafts.

1. Donat's *Large Book of Textile Patterns*, page 132, Figure 31. Missing rows in pattern, not even one full pattern unit shown.

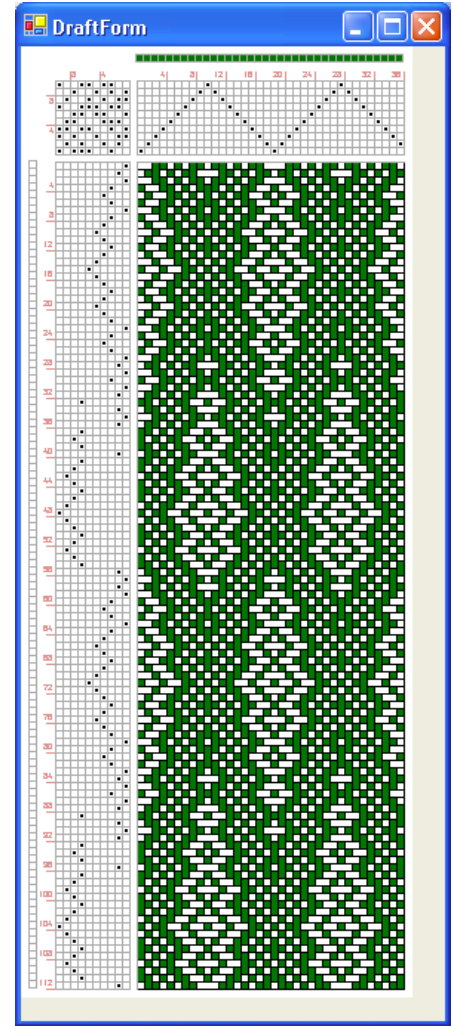
original



draft with errors

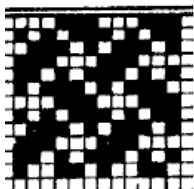


corrected draft (32398)

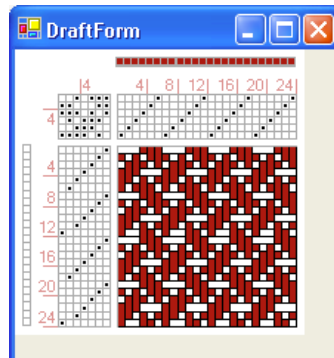


2. Posselt's, *Dictionary of Weaves*, Plate 15, Figure 4. Incorrect pattern cells.

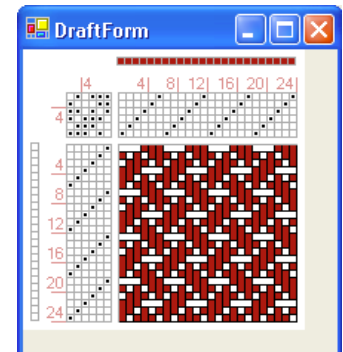
original



draft with errors

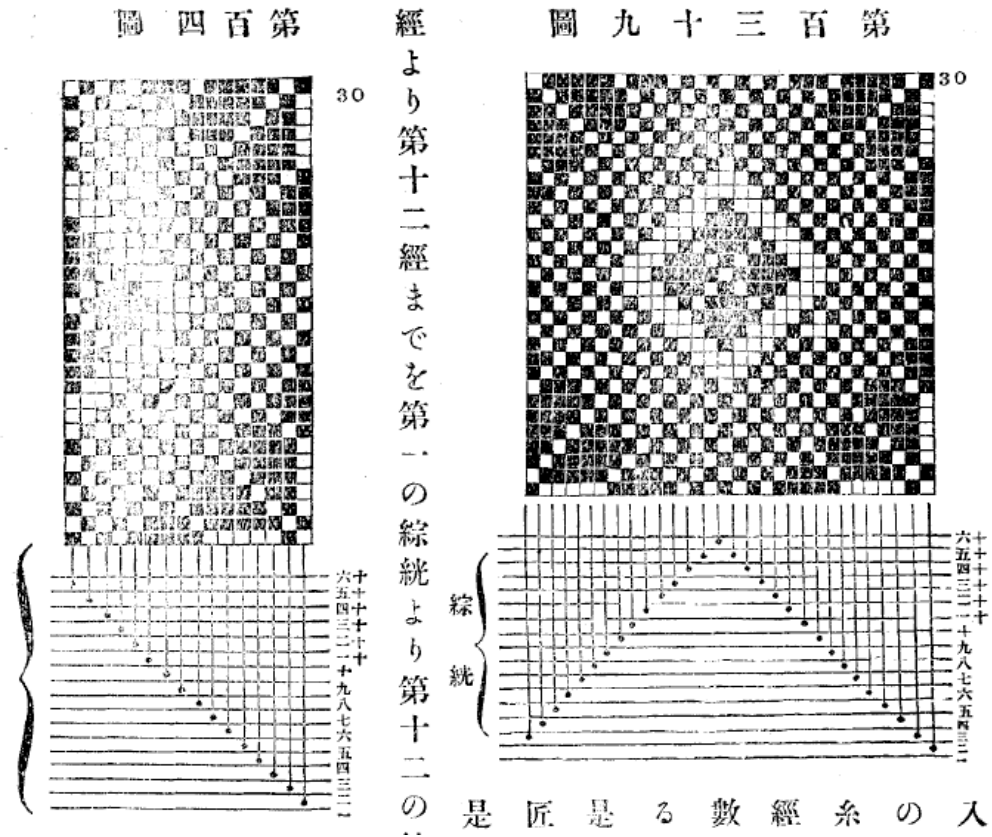


corrected draft (9342)



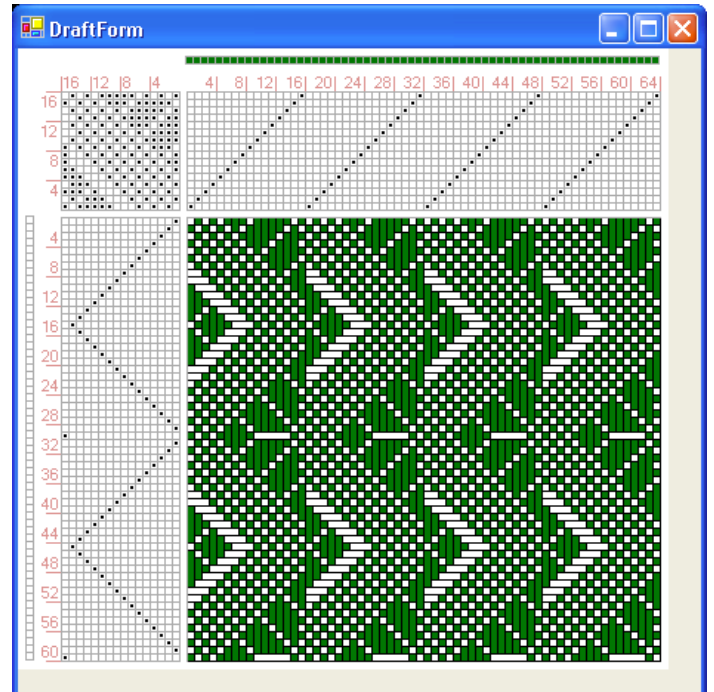
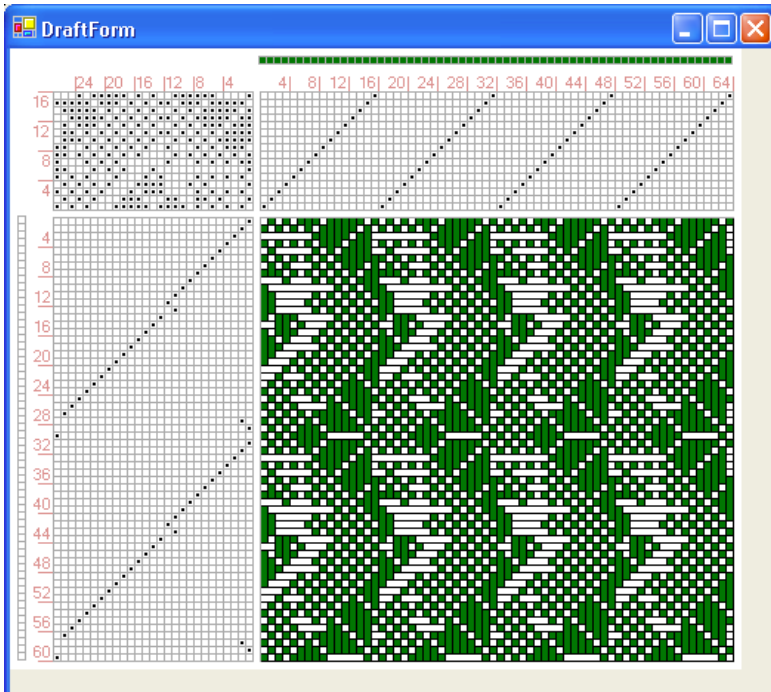
3. Yoshida's, *Orimono soshiki hen* [Textile System]. Compound errors: printing problems and incorrect pattern cells.

original



left draft with errors

left corrected draft (44929)



right draft with errors

right corrected draft (44930)

