On Paper

BY CONSTANCE J. SIDLES

Hold Out for Holdout

THE SALISH INDIANS OF THE NORTHwest never stop a storyteller from telling a tale, even if they've heard it before. "We figure it's never the same story, because we're not the same person," explained an elder. "We change and grow, so every time we hear a story, we gain new insight."

I know what he's talking about. I've told the following story a hundred times, and it's only recently that I realized a new lesson from it.

My publisher Bob came bouncing, Tigger-like, into my office one day. "Our paper worries are over," he burbled. "The printer wanted to help us out with our book, so he gave us a great deal on paper."

My assistant and I looked at each other. Do printers ever give things away? we wondered. We found out. When the books were printed, the images on the pages looked dingy. Instead of crisp black and white, the photos were a foggy gray.

I learned a lesson that day: never let your publisher "get a great deal" on paper. You get what you pay for. As the book sat unsold on shelves, I learned another lesson: consumers aren't stupid.

Recently I asked myself *why* that paper had performed so badly. Hauling out the book, I saw that the halftone dots held no shape. They all looked like formless blobs with spiderlike appendages radiating out. I realized that one big problem with the paper was that it had poor ink holdout. Well, okay, no ink holdout.

Ink holdout refers to the absorbency of paper. When paper is made, the pulp fibers bond together in a mat that is fairly porous. To finish the paper, mills usually smooth it by running it over polishing rollers. The rollers help seal the paper, but it remains largely porous. For uncoated papers, that completes the process.

Papers can be sealed more thoroughly by applying a coating of clay and other materials. The coating fills in the gaps among the fibers, making the paper surface much smoother and less absorbent.

When ink is printed on uncoated paper, the ink's solvents soak into the fibers and spread out. When the ink sinks down through the rough paper surface, it loses the ability to reflect light uniformly. Only part of the light that hits the paper is reflected back to our eyes. Colors look grayer and detail is lost. This kind of paper has poor ink holdout.

Papers that have been coated with a good sealant resist letting ink soak into the fibers. Instead, the ink sits up on the surface of the paper. Dots retain their shape and the ink colorants are able to reflect more light directly back to our eyes. We see better detail and a lot more color intensity. This is a paper with good ink holdout.

If you're printing a design that requires high color saturation and good detail, then choose a paper that has good ink holdout. That almost always means a coated stock, although there are some uncoated papers on the market that have exceptional ink holdout.

To check for ink holdout, look at printed samples that have dense color images printed on both sides. Do the colors look bright and highly saturated? Can you see fine detail in the images? Use a loupe of at least 8-power and look at the dots. Can you see their shape, or do they look fuzzy around the edges?

Finally, ask about the drying time it took to produce the images you see. Mills can make paper with too much of a good thing. If ink holdout is too high, none of the solvents penetrate the paper surface. It's like drawing on glass with a felt-tip pen. The ink doesn't dry. When that happens, the ink from one page transfers an unwanted image to the next page. This problem is called set-off. Once, when we were printing sheetfed covers, the set-off was so bad I thought I was seeing double. I asked the printer what he could do. "Use more drying powder," he said tersely. He added more. And more. Finally he added enough powder to soak up the ink and allow it to dry. But the covers now looked as if they'd been through a snowstorm.

"Where did you say you got this paper?" the printer asked.

"My publisher bought it," I answered. "He said he got a great deal."

I can just hear those Salish elders clicking their tongues. Same story, same person. Will she never learn? ◆

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