

PAPER CHASE

by James Dawson

Paper forms a large part of our life and it would be difficult to go through a day without using it. So fragile, yet under proper conditions quality paper can last for hundreds of years virtually in as good a condition as the day it was made. The pages of old books usually outlast their covers and often the houses that they were kept in. Most books are still printed on paper and despite this digital age, we seem to be using more paper than ever. Paper is portable, cheap, recyclable and causes less eye strain to the reader than a computer screen. The promise of the paper-less office so avidly touted a few years ago, seems rather amusing now. I know that now I have a computer, I am buying more paper than ever. The electronic E-book launched with such fanfare recently has also taken a stumble at the starting gate. Paper products are going to be with us for quite a while yet.

The ancient Chinese were making paper almost two thousand years ago. The recipe is still basically the same. Fibers of a vegetable substance (grass, cotton, leaves, hemp, bark, papyrus, or bamboo, wood etc.) are broken down by pounding and boiling. The pulp is then sieved up through a screen, pressed and dried. This type of paper is acid free and made up all paper before about the mid 1800's. High quality paper was made from linen or cotton rags and the consistency of this paper was very cloth like. The paper was then bleached, treated with sizing to stiffen it and trimmed. Sometimes a design is placed in the screen which then makes a watermark in the paper. This was a way for the paper maker to sign their product and can be useful in authenticating old books as certain printers only used certain paper. You can see a watermark or the pattern made by the screen by holding old paper up to the light, but not all paper has a watermark. Paper was introduced to Europe in the 1200s.

Up to the invention of Gutenberg's printing press in the 1450s, there wasn't much of a demand for paper. Important documents were written on vellum (calf skin) or parchment (sheep skin) along with most of the early hand copied and illuminated books of the period but the supply of animal skins could never have kept up with the greater quantity of books produced by the printing presses. A printing press with no paper would be like having a car with no roads. One wouldn't be much good without the other. Fortunately, paper could easily be supplied to meet the new demand.

Later improvements in printing demanded even more paper which the supply of rag paper couldn't keep up with. By the mid 1800s, wood pulp paper supplied cheaper paper in huge quantities to meet the ever increasing demand. Wood by products were broken down with sulfuric acid and the end product produced paper of various qualities. The cheapest is called newsprint and is used for most newspapers and paperbacks, comics and inexpensive books. The acid that remains in this paper causes it to disintegrate over time, literally from the inside out. By the 1900s, many cheap books were printed on newsprint and it is easy to see how this paper turns yellow and gets brittle. Sunlight, oxygen and heat accelerate the process. Yet this paper serves a valuable purpose though, as the *Journal of Antiques and Collectibles* you are reading is printed on it.

Another paper used in printing is the shiny stock commonly used for magazines and illustration pages in books. The surface of this paper is actually coated with finely

powdered clay, which one reason why piles of magazines and *National Geographics* weigh so much. In fact, the slang name for these magazines is “slicks” because of the appearance of this paper. Its ultra smooth, white surface is better for reproducing photos and other illustrations than the coarser book paper. Books with many pictures in them may be completely printed on this paper and books with a few illustrations might just use several pages of this paper grouped together inside to save money. In some more expensive books, illustrations on rectangles of this paper are glued in by their top corners throughout the book, and these are called tipped in illustrations. Often illustrations in books are protected by tissue paper which keep the picture from transferring its reversed image to the adjacent page, which can happen over a long period of time.

Mass market paperbacks are entirely made of and bound in paper (along with a little ink and glue of course) using a thicker, illustrated card stock paper for the covers. Even the covers of hardback books are usually made of “boards” which is cardboard made from layers of paper glued together (in the early days, book covers could actually be made from thin wooden boards, hence the name). These boards are usually covered with decorated paper, cloth or leather. And then to top everything off, cloth covered hardback books usually come with a paper dust jacket cover.

Before the mid 1800s, no one knew how to make bad paper. Printers used rag paper which is a stable and long lasting product. Even newspapers of the Revolutionary War period can easily last for many hundreds of years if kept away from fire, water and bugs, which are the enemies of paper. To call a newspaper or magazine “a rag” probably dates from this period. Itinerant collectors called rag men would make the rounds in horse drawn wagons calling out “Rags! Rags! Any old rags?” and buying up old clothes and rags so that they could be recycled into paper. This must be one of the first instances of recycling, although very high quality paper would not have been made from recycled material. We can still make acid free paper when we want to, but it is more expensive.

Caring for paper is fairly easy. I used to think that because the rag paper used in old books was not acidic that it would be acid free, but that is not entirely true. Paper is like a sponge and can absorb acids from polluted air or from being in contact with acidic things. Paper can be deacidified by using a deacidification spray (Wei-T’o made from magnesium carbonate is one product) available from library supply catalogs. Professionals usually use a tank of it for books. The Library of Congress has developed a deacidification gas which is used in a pressurized room, but that is not practical for everyday use. Deacidifying paper will prevent further deterioration, but can not rejuvenate paper that has already disintegrated. Never use scotch tape to repair old paper, it is very acidic and has ruined many old books and documents.

Over years, paper can literally soak up odors around it especially tobacco smoke. I was reminded of this a few years ago, when I bought books from a smoker. Every time I walked by them, I could smell tobacco. Stinky books will air out over time and can be set out in a well ventilated location with their pages fanned open to help speed up the process, or even be placed inside a bag of kitty litter to help absorb the odors. Obviously, you want to get to the kitty litter before the cat does.

If you have a treasured old newspaper clipping on acidic paper, don’t place it in a book as the acid in it will soon discolor the book’s pages. Either have it laminated or just

xerox the clipping then throw it away and save the xerox instead. It's on better paper anyway and will last longer.

Paper making is a whole collecting area itself and many books have been written on its history. In the 1920s, Dard Hunter did many nice books about it and some even have actual paper samples inside. You would never think that there could be so many kinds of paper. The Japanese have been making many different kinds of paper for hundreds of years including rice paper, bamboo paper and more. You can even take classes in paper making. Serious lovers of book making can even print and bind books that they wrote themselves on paper that they made.

Imagine trying to get through a day without paper. Most everything we buy in supermarkets and stores either comes in a cardboard box (a paper product) or in containers with paper labels on them. You then pay for the items with paper currency or a paper check. If you pay with a credit card, you will likely have to sign a paper receipt. Your credit card was sent to you in the mail in a paper envelope with a paper stamp on it. Your computer came in a box with a manual full of completely incomprehensible instructions printed on paper pages. If you want to be 100% paper-less, then what will you substitute for toilet paper? I'll bet it won't be a floppy disk!

This article originally appeared in the July 2003 issue of *The Journal of Antiques and Collectibles* .