

WILL FUTURE GENERATIONS LOSE HISTORICAL RECORDS OF TO-DAY?

Scientists Point Out the Probable Destruction of Newspaper Files in a Few Centuries--- The Wood Pulp Problem.

HISTORY narrates the destruction of the great library in the ancient City of Alexandria by order of an Arabian King nearly thirteen hundred years ago. This barbarian monarch is said to have decreed that the entire collection of precious volumes should be distributed among the bathhouses of the city, to be used as fuel, for if they set forth a doctrine similar to the Koran they were superfluous, and if contrary to the Koran they were infidel and unholy.

The wiping out of whole armies of soldiers could scarcely have had such far-reaching effect upon posterity as the burning of this world-famous storehouse of learning; nor could King Omar, the perpetrator of the outrage, have discovered a surer way of pronouncing an anathema against his own name through the centuries. His arbitrary dictum meant the wiping out of priceless historical documents, the obliteration of man's achievements in manuscripts hundreds perhaps thousands of years old. It meant that a single individual had the power of demolishing a connecting link in the story of man's existence, or erasing the record of events from the calendar, of blotting out the register of centuries of development in the world's literature.

Viewing the deed safely from our pedestals of twentieth century civilization it would scarcely dawn upon our modern imaginations that such an event in the annals of the Dark Ages could be repeated in this enlightened era. We could hardly conceive of any destruction of present-day records so far reaching, so effectual in cutting us off from the knowledge of the earth's peoples thirteen centuries hence as that which overtook the Egyptian city 1,270 years ago.

Yet we are now threatened with a catastrophe of the same kind on a smaller scale. Librarians throughout the country are admitting that the entire collection of present-day newspaper files throughout the world, from about forty years ago forward, are in danger of crumbling away and falling into ruin within a comparatively short period.

And so, if the future historian relies on newspaper files, the present generation, and all its vaunted accomplishments—its airship flights, invention of the automobile and trolley, talking machines, piano player—to say nothing of the astonishing fashions, prize-fights, and doings of society, will be swept into oblivion. Our twenty to a hundred times great-grandchildren will know nothing whatever about us, except what they can gather from books and magazines.

And all this on account of a little substance known as wood pulp, or ground wood pulp, as the paper manufacturers call it.

Dating back about forty years ago—a limit set by a prominent New York paper-maker—wood was introduced into the manufacture of paper. Before that time the paper used in the daily newspaper offices was largely composed of rags.

The demand for cheaper paper was met by the introduction of the wood, and there was little appreciable difference in the daily paper, from the standpoint of the subscriber, who found it quite as pleasing in appearance as it had been before. But the librarian viewed the situation through different spectacles, for it is his care that the daily subscribers' descendants shall reap just as much benefit from the daily papers of to-day as the subscriber himself.

During the last twenty or thirty years the problem has been simmering along. Now and then a paper has been read before a society or an association of librarians, and occasionally a committee has been appointed.

The committee has met and passed recommendations, and nobody has paid the slightest attention to these recommendations. And the world has rolled on sublimely as before.

What satisfaction there has been is the thought that this century is a wonderful century—the greatest in the world's history, perhaps. And to think how the future generations would revel in our glorious deeds.

They would have, not the bare, cold, historical facts with which we have been bred up in our school histories, where we read that "Louis VIII., who had succeeded to his father Philip, instead of complying with Henry's claim, who demanded the restitution of Normandy and the other provinces wrested from England, made an irruption into Poitou, took Rochelle after a long siege, and seemed determined to expel the English from the few provinces which still remained to them"—no such canned edition of fresh, live, invigorating events, indeed. But instead, the carefully preserved newspaper files should await their eager expectancy. Events which have made our own blood flow quicker—the aviation meet at Rennes, the battle of Reno, the triumphal return of Teddy from Africa—all would be preserved for the next generations in detailed, circumstantial accounts which should thrill them even as we who have lived with them have been thrilled.

But wait! How about the wood pulp? That is what seems to stand in the way. And whose fault is it that wood pulp is used in the manufacture of paper, anyway? Historical societies, publishers, paper manufacturers, and librarians throughout the country are or will soon be asking this question. And this other question: What shall be done to preserve the newspaper records of the world since 1870?

The historical societies rely upon the librarians to settle the difficulty. The librarians blame the publishers, the publishers blame the paper manufacturers, and the paper manufacturers blame that perpetual scapegoat, the public, which desires to buy its newspapers as cheaply as possible.

There are ways by which all the newspapers of the last forty years which are stored away in libraries may be restored and made non-perishable. There are ways by which all the newspapers printed from now on for library use may be made to endure the centuries.

But some one will have to pay for all this. And who will pay? Shall the historical societies or the libraries pay? Or shall it be the publishers? The paper manufacturer may as well be counted out. It is certain that he is not sufficiently interested in posterity to pay.

And what will happen if no one comes forward and volunteers to pay?

There are people who can live dovelike and contented at the mouth of a volcano. And in the same way there are many people perfectly well acquainted with these facts who eat their three meals a day, get up and go to bed in the usual way, never worrying about the morrow and certainly not fretting about posterity.

There are other people not at all dovelike who believe they could eat and sleep

much better if the decomposition of wood pulp could be allayed or checked altogether. Prominent among these is Mr. F. P. Hill, head of the free library system of Brooklyn, N. Y., who has just returned from the library convention at Mackinac Island, Michigan, where he read a paper dealing with the preservation of newspaper files in libraries. In it he said:

"My attention was recently called to the necessity for rebinding some of the Brooklyn and Manhattan papers in our library and upon examination it was found that in many instances papers published within the last forty years had begun to discolor and crumble to such an extent that it would hardly pay to bind those which had been folded for any length of time.

"Further investigation showed that practically all of these papers were printed on cheap wood pulp, which carries with it the seeds of early decay, and that the life of a periodical printed on this inferior stock is not likely to be more than fifty years.

"This is a serious matter and demands the attention of publishers and librarians throughout the country. It means that the material for history contained in the newspapers will not be available after the period mentioned, and that all such historical record will eventually disappear unless provision is made for reprinting or preserving the volumes as they exist at present.

"The historian depends to such an extent upon newspapers for his data that it will mean a serious loss if some preservative process cannot be found. We can very well bear the loss of many books printed upon wood pulp paper, but the loss of newspapers containing the

news of the day would be one which would be felt for all time.

"It would seem possible that some means might be provided whereby, for filing purposes, a better paper would be used for newspapers. The matter is presented at this time for the purpose of calling the attention of publishers and librarians to the necessity for a better quality of paper for such files of newspapers as are to be preserved.

"As soon as the condition of the files of the Brooklyn Public Library was discovered a circular was sent to some of the prominent newspaper publishers asking (1) the result of their experience, (2) whether a better grade of paper was being used for running off extra copies for their own files, and (3) what, if any, means were being taken to preserve the files in their own offices.

"It was hoped as a result of the circular that definite measures of improvement would be suggested. From responses received it is evident that there is a desire on the part of the publishers to meet the requirements of librarians and others on this subject, and it is likely that a conference of publishers and librarians will be held in the near future to consider the feasibility of printing some copies on better paper, but the answers showed that no special paper was used and that no means were taken to preserve (by reprinting or by chemical process) those in the worst condition."

In the early part of June Prof. Herzberg of the University of Berlin, who is at the head of the Government testing office where all the paper sold to the Government undergoes a special test to determine its quality, wrote to Albrecht Pagenstecker, who first introduced the

wood-pulp process in America, to the effect that experiments recently initiated by the Governmental Paper Testing Institute of Berlin have resulted in producing a liquid mixture by the use of which wood-pulp paper may be indefinitely preserved.

The method as described by Prof. Herzberg is as follows:

"We have recently given much thought to the matter of preserving crumbling and decaying papers and have secured some excellent results. There is a way of making old and brittle newspapers usable. They can be put back into condition so that they may be read and preserved for centuries to come.

"Our method is to dip the sheets, one by one, into a cellit solution, and then hang them up to dry. If their condition makes it impossible to hang them up they may be dried by being spread on large meshed nets. This treatment binds the sheets, does not damage the paper body, and makes it possible to preserve newspapers for a long time.

"The success of this treatment is very surprising. Sheets which before were rotting and about to fall to pieces can be handled readily, and acquire a parchment-like firmness. If, after an interval of several decades, it should be found necessary to repeat immersion in the solution, this will not damage the paper, and it would seem that in this way published matter might be preserved for centuries."

Regarding this chemical solution, Mr. Hill wrote:

"It may be found perfectly feasible to apply the preparation to papers issued from now on, but there will still remain the problem of the volumes already bound, since it would be extremely diffi-

cult, if not impossible, to treat these volumes, page by page, with the solution because the size of the sheets and the weakened condition of the paper would make it practically impossible to handle them.

"The only practical suggestion I have to offer at this time is that as this is a matter of vital importance to all libraries, a committee from this association be appointed to confer with publishers on the subject of the deterioration of newspaper paper, with the hope of finding a practical remedy for existing conditions."

At the request of THE TIMES reporter a prominent paper manufacturer of New York City briefly surveyed the changes affecting the product of his mills during the last four decades:

"Dating back about forty years," he began, "wood was introduced into the manufacture of newspaper, the wood being in the form of mechanically ground pulp. Paper was then made of a composition of rags or cotton waste, with the ground wood and the addition of some clay and coloring matter. About twenty-five years ago the use of chemical pulp was introduced, this taking the place of the rags and cotton waste; so that to-day practically all newspaper is composed of nothing else but wood, clay, and coloring matter.

"The chemical pulp is made by the action of sulphurous acid, which disintegrates the fibre and eats away the resinous material, leaving the pure cellulose. I believe that cellulose is the same foundation as either cotton rags or linen rags; and, so far as the cellulose is concerned, that it remains practically unchanged by the action of the air, provided the acid has all been thoroughly eliminated.

"The mechanical or ground wood pulp will undoubtedly go through the same changes that a stick of wood undergoes when exposed to the air. When exposed to the light it resumes its original yellow shade. I do not think that the change in the shade of paper lessens its durability or injures the paper in any way at all; but, of course, wood in any form will decay.

"Take even the wood put into houses. The beams will decay and the sap evaporate. Naturally the strength is gone, and it becomes brittle.

"Fifty years ago we weren't using ground wood pulp; to-day newspaper is composed of about 75 per cent. ground wood pulp. There is no wood pulp paper we would guarantee to last through the ages. Chemical pulp paper will keep all right, but that costs a great deal more than the wood pulp paper. As to the length of time the wood pulp paper will last, we could not say, as we have nothing at present on which to base an opinion.

"The most destructive agents of this wood pulp paper are light and dampness. A little dampness is beneficial, but not too much. Heat and cold do not affect the wood pulp paper unless the atmosphere is too dry."

The reporter asked why it is that newspaper clippings pasted in scrapbooks thirty or forty years ago remain unaltered.

"The mucilage penetrates into the fibre and becomes part of the paper," was the answer. "Naturally, it has an adhesive and cohesive effect upon the particles of the paper and prevents the air from getting in. There is no trouble with the wood pulp paper when the air can be

kept away from it. We should be glad to find something to take the place of wood in the manufacture of paper provided we could use it as cheaply."

Wilberforce Eames, the librarian at the Lenox Library, is not worrying about the possible extinction of present-day newspaper files.

"I don't anticipate the disappearance of all these newspapers," he explained, at the same time showing the reporter a number of the files of from twenty-five to forty years ago, all of which seemed to be in excellent condition.

"Of course, I know that linen paper will stand the test of time better than wood pulp; but in the preservation of the latter a good deal depends upon the librarian. I should think if papers were flattened out and weights put upon them while waiting to be bound the injury done through creasing and exposing them to light and air would be minimized. After the books are bound it is better to lay them flat instead of standing them up on the shelves for the same reasons.

"It seems unfortunate that papers containing so much of historical value should not be preserved for future generations. We do know, however, that keeping the papers from the air makes the greatest difference.

"With the Tilden collection we received a number of duplicate copies of newspapers that have been folded and laid in piles for a few years. Looking them over recently we found those on top were all yellow and brittle and those underneath yellow around the edges, and also brittle.

"Clay in the paper makes it brittle. I have been interested in this question for many years, and have listened to papers on the subject. Committees have been formed and made recommendations, but I do not believe publishers have paid much attention to their recommendations."

In response to a letter of inquiry from THE TIMES, Herbert Putnam, Librarian of the Library of Congress, writes:

"I have merely the impression common among librarians, viz., that the wood pulp paper upon which our dailies are printed will not be likely to survive more than thirty years, perhaps not more than twenty. It is speedily affected by heat and sunlight, so that it crumbles to the touch.

"The suggestion of a special edition for preservation has been frequently advanced, and was once seriously considered by one of the New York dailies. Only the expense stood in the way, but this was considered a bar, since it would involve a readjustment of the 'underlay' and the 'overlay.'"

Horace G. Wadlin, librarian of the public library of Boston, is no less skeptical in his view of the matter than Mr. Putnam. He writes from Boston to say:

"We have never introduced any method of preventing the deterioration of paper, nor do we know of any method. We keep our files in a place not subjected to undue heat, but I doubt if any efficient method can be provided to prevent the deterioration of the cheaper grades of woodpulp paper. It grows crisp and brittle with age."

Charles Farrington, librarian of the Montague branch of the Brooklyn Library system, is trying the experiment of keeping some newly bound files in the cellar of the building where, as he states, they will be kept in a place "cool and fairly moist." This test will be tried for five years.