

alyze raw material in a piece of paper and to tell whether the wood—if it is pulp paper—was prepared by a chemical or mechanical process. And if the investigator knows his paper history, he can say that the materials and process indicate that the paper was made after a given date.

Dr. Grant tells some paper facts that prove useful. For example, until about 1800 all paper was made of rags, mainly linen or cotton. In the eighteen fifties a rag shortage was so acute that straw eked out rags in paper. Esparto grass was first processed in 1861; wood some twenty years later.

Rosin was used to make paper take ink better, at first in Germany, then more widely about 1835. Paper loaded with titanium dioxide and associated white pigments is later than 1930. Calendered papers date from 1830; coated papers from 1890.

Some landmarks in paper history are still vague, but not the recent ones. Sherlock Holmeses of the paper world keep close track of current changes in the industry.

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FOODS

Many New Juices to Join Familiar Ones on Table

FOR the breakfast menu of a few years hence: Rhubarb juice. Passion fruit juice. Guava juice. Strawberry juice. Blueberry juice. These are new products that the giant-infant of the food industry, the juice business, is about to make available for your pantry.

Tomato, grapefruit and pineapple juices are the leaders in this array of liquids. Yet prior to 1925 bottled and canned juices were limited to bottled grape juice and small amounts of bottled apple, loganberry and other berry juices.

Grapefruit juice came in in 1926, tomato juice was packed first on an important scale in 1928 and pineapple juice joined the procession in 1931.

The total quantity of fruit and vegetable juices preserved exceeded 32,000,000 cases in 1937. The volume is still growing and tomatoes alone provide approximately 13,500,000 cases annually.

Canned orange juice introduced in 1930 reached large commercial production in 1934. More recently lemon and cranberry juices have appeared, along with the "nectars" of apricots, peaches and pears. Plum, cherry, papaya, cur-

ETHNOLOGY

Feudal State Preserved On Island of Sark

THE FEUDAL age is supposedly dead. But England has a sample of it left, like a living bit of archaeology.

This feudal state, the Island of Sark in the Channel group, is still held under the charter Queen Elizabeth granted to a Norman in 1565. A Norman descendant, Sybil Hathaway, and her American-born husband, Robert Hathaway, are dame and seigneur of Sark.

Mr. and Mrs. Hathaway—they have long Norman titles at home—have been visiting our shores and giving some Americans a chance to gaze at two amiable moderns who are actually expected to protect an island in return for public duties performed by their loyal tenants.

There is no unemployment in Sark, says Mrs. Hathaway; no automobiles, no street lights. The 600 inhabitants are mainly fishermen and farmers. A parlia-

ment of 52 men and women make laws, which Mrs. Hathaway can veto if she sees fit. The people speak ancient Norman, interlarded by English words like radio and telephone. Education has been compulsory in Sark since 1805, or before England had it. English and French are taught to Sark children. Tourists are a source of revenue, to the tune of 25,000 visitors a year.

People of Sark, Mrs. Hathaway emphasizes, are not British colonists. They are Normans. They are her feudal tenants, and she is the King's feudal tenant. She pays every year a twentieth of a knight's fee.

Asked how she spends her time at the feudal manor, she says she has a farm, is keen about dairying and has a dairy diploma, likes gardening, receives endless visitors. Every problem on the island is brought to her door.

Her husband, who must sign state papers, is nevertheless secondary. He once asked someone to make his position clearer, and was told, "Well, if your wife committed murder, you could be hanged for it."

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PSYCHOLOGY

Two Simple Rules Will Help You to Forget

IF YOU have something on your mind that you would like to forget, just follow these two rules:

First, fill your days with new interests, new activities, and these will crowd the old from your mind.

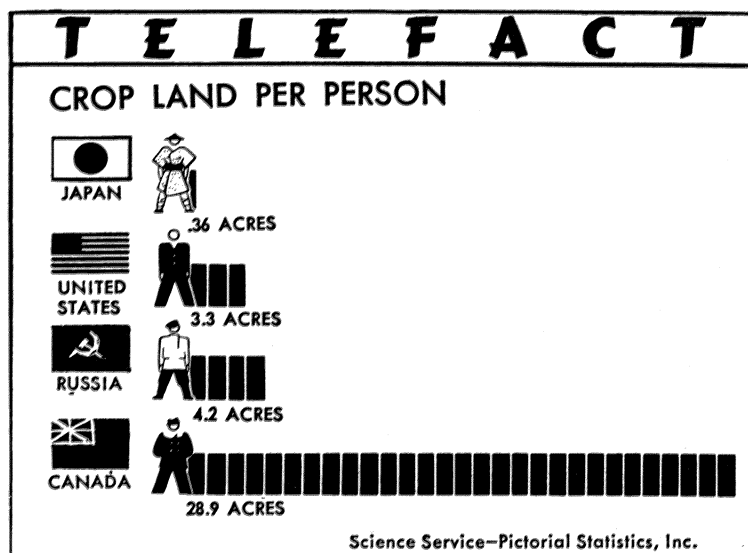
Next, transplant yourself to new surroundings away from all the little reminders that bind you to the past.

New learning or activities and new surroundings, Dr. John A. McGeoch, psychologist of Wesleyan University, told the New York Academy of Sciences, are among the major determiners of human forgetting.

Since in actual life, he said, one cannot, short of a psychological vacuum, escape the destroying effects of new activity, the wonder is, not that we forget, but that we remember anything at all.

The only reason we fail to forget everything is because we learn some things very well indeed.

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Laboratory tests have shown that by regulating the "interpolated" learning, it was possible to make people forget anywhere from 5 to 90 per cent of what they had previously learned.

The student will remember his tomorrow's lesson better if he goes directly to sleep after learning it than he will if he goes out tonight to a party or to an entertaining show.

The influence of surroundings is also shown, Dr. McGeoch pointed out, in the greater ease which many people experience in working at their familiar desk, and in the difficulty of working as well in a strange office.

We do not forget everything we learn, he said, because somehow these two factors, new learning and new surroundings, are prevented from having their full effect.

We usually remember anything which has been well learned, especially when we try to recall it in a familiar setting.

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reality, is much less efficient on the average.

Finally, scientists point out, the release of atomic energy from uranium need arouse few fears about explosions in nature set off by these physical researches. The very heavy elements in which such an energy release can be secured occur only in very small amounts in the earth's crust and they are greatly contaminated with other elements which do not yield atomic energy. This means that the release of atomic energy can only be achieved by direct intent, in the laboratory, and then only with considerable ingenuity of experiment.

Besides the astounding amount of energy liberated from the uranium atoms, the following appear to be the important consequences of the newest researches:

1. For the first time something other than atomic particles or radiation (alpha and beta particles, positrons, neutrons and gamma rays) has emerged from atom smashing. Uranium seems to be split into two parts, which may prove to be the elements barium and krypton, whose atomic masses add up approximately to that of uranium.

2. The supposed existence of the trans-uranium elements, those numbered 93, 94, 95, 96, heavier than uranium, is called into question. These superheavy elements may be merely forms of barium.

3. The radioactive "time clock" method of determining the age of the earth may be proved wrong if uranium can split up in the strange new manner.

4. Science has a new atomic mechan-

ism that may account for the tremendous energy that keeps the stars shining through the ages.

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PSYCHOLOGY

Psychology of a Sissy Urged as Scientific Study

THE SISSY is nominated for psychological study by Dr. Joseph Chassell, psychiatrist at Sheppard and Enoch Pratt Hospital, Towson, Md.

No one really understands the sissy, Dr. Chassell points out in *Psychiatry*, although many an American boy is entirely preoccupied with the task of proving that he is not one.

Just what is a sissy? The term is well understood even in nursery school, and yet it would be hard to define it.

It does not mean "girlish," for girls can be sissies, too, or they can demonstrate that they are not. And a boy may even be effeminate without rating as a sissy.

Cries of "Sissy! Sissy!" accompanied by a gesture with the two forefingers familiar to all disdaining juveniles, is alternated with the chant, "Just a little baby!"

And yet mere youth does not make a sissy, either. It is a certain kind of immaturity. Boys may demonstrate while they are yet in rompers that sissiness is not for them. And the most unsophisticated, innocent, naive lad may be far removed from the sissy class.

Even the mother's darling with long curls and Lord Fauntleroy collar, Dr. Chassell said, may be recognized by the brotherhood as actually no sissy.

No, it seems to be not so much any of these things as an intangible feeling that they do not belong in the group of other boys. They are not in the gang.

The sissy seems to have a misapprehension of the world as a place where terrible things are always happening and where one must become some vague sort of superman in order to succeed.

Other humans are not seen as persons, he suggested, but as potentially friendly or hostile fairy-book creatures.

The sissy's idea of masculinity, he said, is a caricature built up with the aid of stories of the Wild West, Indian fighting, gangsters, and Buck Rogers. From this view of manhood is born a deep desire to turn away from it into mother's arms, which in its turn must be repressed.

When psychologists have made the study of the sissy, they should tackle next the sissifying mother, Dr. Chassell urged.

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