crackle of paper is more typically the theme song of city life than the whine of machines. There's a name for that, too. This sociologist calls our vast recording and reading enterprise-all the books, card catalogs, newspapers, press agent activities, deeds, contracts, letters, propaganda—a ravaging flood of paper the White Plague.

The masses, unable to live well rounded lives, fall back too heavily on reading, and the movies, and listening to the radio, and watching professional sports, and otherwise experiencing life at second hand.

The cycle of city evolution, if unchecked, leads on downward. Over-expansion of industry and questionable speculations are followed by depressions. Imperialistic wars, that we hear so much about, result in starvation, disease, and uncertainty that affect widening circles far beyond battlefields.

Dictators

To restore a semblance of order, come forward the dictators such as Mussolini and Hitler, who make martial law and wartime emergency discipline the everyday rule of life for millions.

This stage ends in a deliberate cult of savagery, warns the sociologist. The arts and sciences cease to flourish. Barbarian invasions threaten, within and without. An exodus from the cities begins.

After that, one more picture: war, famine, and disease wracking both city and countryside, and the cities go down in ruin like the ancient fallen ones-Babylon, Nineveh, Armageddon, Antioch, Troy-

That may be averted, as we told, if human beings will shake off their inertia, and do something. Our civilization has drifted along, exploring and experimenting, and feeling happy over its success in taming the wilderness. But now, it begins to be possible to look back and see what's been done. And the picture is less lovely than we supposed.

What with forests recklessly demolished, grasslands washed bare of vegetation, slum-ugly patches in every city, and all the rest of the things that have

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gone wrong, the sociologist's suggestion is that we must re-settle our planet.

North America is recognizing this need, he says, returning to forest and grazing land some of the lands that were never good for farming. There are large and small efforts to clean out alleys and build homes. The business of rising above our machine age and creating a new environment offering a good life to the millions is being seriously studied in countries everywhere.

It is a job that would have baffled Hercules. But the twentieth century may have to swing it.

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Science News Letter, October 15, 1938

Rebuilding of Ruined Forests Confronts New England

With Half of Trees Down in Southern Part of State, Cooperation of State and Federal Agencies Is Secured

REBUILDING of the hurricane-ruined forests to their former estate as a prime natural resource is an outstanding task now being undertaken by New England as the people turn to the task of reconstructing their battered communities. Representing New England's forestry interests, Ward Shepard, director of the Harvard Forest, has been in consultation with the U.S. Forest Service, the Civilian Conservation Corps, the Works Progress Administration and other government agencies, discussing Federal participation in meeting the present emergency and in setting up a long-time reconstruction program.

At present, about half of southern New England's trees are down. What once were forests and farm woodlots are tangled heaps of splintered trunks and limbs piled like giant match sticks and waiting for sparks to turn a literal inferno loose. The second tropical disturbance, which poured heavy rains on the ruins, was a cause of thanksgiving to the anxious watchers, for it gave insurance against forest fires for a week or two.

In the meantime it is hoped to get the emergency fire-prevention program into operation. First step will be the recruiting of officers and personnel. U. S. Forest Service experts are already on the ground, and companies of the CCC and WPA are being moved up to the front. As far as practicable, emergency worker corps from adjacent states will also be moved into the area of action, and the knots of official red tape will be cut to the limit.

A five-fold scheme of attack has been laid out: (1) Forty-foot strips will be cleared of down timber along all highways. (2) Roads and fire-lanes will be reopened through the forested areas as fast as axes and saws can be plied. (3) Extra men will be put on fire patrol. (4) Fire lookout towers (they are all down now) will be rebuilt. (5) Down timber will be removed.

The last of these five jobs is of course the biggest and the most difficult to carry out. Yet it must be completed, with saw and axe where possible and with controlled burning where necessary, for the tangled heaps of dead trees are not only an immediate fire hazard but they will in time come to harbor terrific concentrations of insect and fungus pests that will menace trees left standing and the new growths of timber that will soon spring up.

Not only that, but these blown-down masses contain a great deal of cash value if it can be salvaged. The wind took New England's biggest and best trees, which were in many cases the farmers' savings accounts. Government labor will salvage as many of these valuable trunks as possible, and government-backed credit will help the owners to market them gradually instead of dumping

them in distress sales.

For the long pull, the U. S. Forest Service has been asked to aid in planning an entirely new set of woods for the devastated regions. All of southern New England's timberlands are privately owned; the only national forests are in northern Vermont, New Hampshire, and Maine. This means that woodlands are predominantly in small parcels, and that the timber is of high importance to the farmer-owners. Credit and tax setups must be arranged with these conditions in mind.

One thing was emphasized by Mr. Shepard: In New England's new forests, growing conditions closer to those of nature will be sought than has been the practice in past years. The custom of growing evenly ranked masses of trees, all of the same species and all of the same age, which the world copied from nineteenth - century Germany, will be abandoned in favor of more naturalistic forests of mixed species and all ages.

Such forests, the hurricane showed, can stand against a high wind much more successfully than the uniform, even-aged cultivated timber stands. They are also more resistant to fire and to forest insect and fungus diseases. Finally, they are better homes for game animals and wild birds, and pleasanter places for human recreation.

Science News Letter, October 15, 1938

PSYCHOLOGY

Immature May Seek War Because of the Thrill

CHASING A THRILL is the pursuit of the very young.

Children want to coast down precipitous hills; they want to beat on tin pans, to ride on the merry-go-round and climb on a trapeze, or to be swung by their heels.

A little older, they have the same zest for bright lights and action. They go in for skiing, for speed-boat racing, for fast driving on crowded highways and for quarrelsome parties at night clubs.

Even war has its attraction because it brings excitement and violently disrupts all habits and routine.

Life that is too easy may lead to restlessness. The pacing of the floor by a caged animal or by an idle human is nature's way of trying to keep the organism fit. The undriven organism has a surplus of energy which must find outlet.

How maturity dulls this keen desire

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for a thrill is explained by Dr. Edwin R. Guthrie of the University of Washington in a new book "Psychology of Human Conflict" (Harper).

Older people learn to conserve their energy for useful purposes. Excitement is less readily produced and less necessary for producing action.

With repetition, excitement and enthusiasm normally yield to habit.

"Romantic love," said Dr. Guthrie, "in so far as we mean by that a state of excitement and emotional stir, gives place in marriage to calm acceptance and a household routine.

"The husband or wife of several years' standing who exhibits the symp-

toms manifest during courtship—the heightened pulse, agitation, loss of appetite, inability to keep the mind on a task—would be a subject for interference by friends or for consultation with a psychiatrist."

War news can crowd everything else from the front page. Even the long awaited cure for cancer, if found today, would be less exciting.

But those who have known war find in it no thrill; they remember only the horror and suffering. And an old war ceases to be even news. With excitement centered around Prague, people forgot what was happening in Spain or in China.

Science News Letter, October 15, 1938

ENGINEERING

Electrical Power Needs Should Increase 33 Per Cent.

THE NEEDS of the metallurgical and chemical industries for electrical power will increase 33 per cent. in the next five years, it is forecast in a survey published by the Federal Power Commission.

The chemical and metallurgical plants of the nation, and their allied industries, used well over 13,000,000,000 kilowatthours of electrical energy in 1936, the last year in which complete figures are available. In the next half decade, states the report, these same industries will probably require nearly 18,000,000,000 kilowatt-hours.

The 33 per cent. gain, the report emphasizes, is based on normal trends. It purposely omits, because of their unpredictability, any attempt to take account of potential wartime needs, major shifts in the business cycle or other extraordinary developments.

The anticipated gain in power of more than 5,000,000,000 kilowatt-hours is about equal to the present needs of such a city as New York.

Greatest gain in power use, in the next five years should be in the production of magnesium, the report indicates. While the average increase for all metal industry is expected to be 33 per cent. an expected power requirement increase of 156 per cent. for magnesium production is foreseen.

Next greatest power increase forecast is for calcium carbide production—a 100 per cent. gain. Other potential increases among industries include: electric furnace iron, 90 per cent; potash, 67 per cent; zinc, 65 per cent.

The increases, it is expected, will pull these industrial uses of electricity up nearer the "big three" of industry's electrical power users, the aluminum industry, copper production and heat treating by electricity.

To a layman electricity means light for his home and, to a smaller number, heat for cooking. But the Federal Power Commission, in its report, shows over 180 different products and processes which require electrical power. They range all the way from manufacture of safety glass and stove polish to rayon and refrigerants, without mentioning at all the many metals whose production depends on electro-chemistry.

Science News Letter, October 8, 1938

Brook trout bury their eggs in beds of clean gravel in autumn, generally in spring-fed headwater streams.

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