

and immediately imparts to the molecules its own unresting properties, rolling them into rings, tying them in strings, turning them for a time to its own ends. When it spews them forth again motionless, they are no longer a part of life.

In the end, Dr. Gerard draws a moral

for human society itself. Living systems, he says, constantly prevail against the second law of thermodynamics, which decrees that all things shall run down and become heterogenous, disorganized. In like manner, despite anarchic tendencies in some groups, human society will nevertheless survive and improve.

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PSYCHOLOGY

## Predict Hitler's Downfall When Sacrifices Seem Vain

### Any Break in Series of Successes Will Weaken Faith of People and Their Acceptance of Deprivation

**W**IN OR LOSE, Hitler and his cohorts are headed for downfall, Dr. Edward C. Tolman of the University of California predicted in his address as president of the Society for the Psychological Study of Social Issues.

Internal collapse will come in Germany, Dr. Tolman believes, when Hitler's armies fail to march on to new successes. This will be true whether those who oppose Hitler finally remain unconquered or whether they do succumb. Either way fresh victories must cease.

#### Demands Too Great

Collapse will come because the private in the ranks will not continue to sacrifice most of his primary animal needs, for adequate food, drink, sex, and family life unless he is continually rewarded by the satisfaction of ever renewed success of the Germany of which he feels himself to be an important part.

Hitlerism and Fascism will be defeated, Dr. Tolman said, not by an industrial revolution, but by a psychological revolution—by a new "religion" to take the place of the Nazi religion of nationalism.

A second reason for the downfall of Hitlerism, he sees in the fact that the elite do not practise what they preach to the masses. They do not suffer the same privations that they impose, and do not practise quite the same intensity of subordination to the group that they urge on the common people.

"Perhaps the original leaders—the Hitlers and the Mussolinis—do and can work permanently for the success of the group," he said. "The Hitlers and the

Mussolinis are, however, peculiar. They are driven by childhood and adolescent inferiorities. They can compensate only by the successes of the groups with which they have identified. But the second generation of leaders, who are now being trained, will not be so driven. They will not have started from nothing. They will have been early adopted into the elite."

In the new world order foreseen by Dr. Tolman all the grades of human wants would receive reasonable satisfaction, from the primary needs for food, shelter and sex to those broader desires for the welfare of all humanity.

The first set of needs could even now all be satisfied because of modern technology, he said. The difficulty has been one of distribution. This difficulty will be removed, he predicts, when leaders shift their emphasis from attaining them.

#### Better Ideals Needed

"If we can but imbue our children, not with the goal of getting rich, but with that of being rational and internally and externally cooperative human beings, the problem of the distribution of material goods will no longer be a problem but a straightforward task upon which leaders and led will naturally cooperate."

The second type of human desire—for success and prestige—can also be satisfied. Through guidance clinics and other psychological measures, it has been made possible to assure even for the feeble-minded the pleasure of doing some task well. When our attitudes toward success change, prestige will come to each not from being better than all

others, but in being the very best that he himself can be.

But man has a third type of needs, which has been played upon by the dictators—the real need for sacrifice, for submerging himself for the sake of the glory of his group or his leader.

Christianity has provided man with the satisfaction of these "superego" needs, but realization of sacrifice in Christian practise has too often meant a neglect of the more primary needs of man, or a promise of their satisfaction only in some future world, Dr. Tolman feels.

None of the needs of man may be ignored in the psychological Utopia of the future.

Men will be given an opportunity for sacrifice and devotion to higher ideals in all sorts of vocational groups and place-groups in which the individual can immerse himself. These larger groups must not stop at a nation, a class, a race, but with the whole of humanity.

#### To Face Real Foes

"We must not preach Americans against Germans," Dr. Tolman declared, "against Europeans, against Asiatics, against Africans, but all humanity against nature, against disease and misery and ignorance—against battle, murder and sudden death. Our violent aggressions—our wars—will then occur not between one group and another but between the whole of humanity and hostile nature."

How is such a Utopia ever to be attained?

Dr. Tolman has but one answer—education.

"By education," he explained, "I mean what goes on in the nursery school and in the home, in secondary schools and in colleges, in trades unions and in chambers of commerce, in CCC camps and in universal military training camps (if we get them), in the churches and in the market place, in pressure groups and in Congress. In all these institutions we must have everlasting teaching and propaganda always in the direction of the harmonious balancing in all classes of human satisfactions."

"Our present society is going under. The myth of Economic Man has disappeared or is just disappearing. The myth of Heroic Man (dictatorship) has come. But it also is going to disappear. And we here in America have perhaps still time to combat this myth of Heroic Man, not through adopting it ourselves—that will be our ever constant danger—but only, if (now that technology has

been solved), we see to it that this technology be used not merely in the name of America and the American way of life, but in the name of a human, a psychologically informed way of life.

"Then our aggressions which we shall still have and shall still enjoy will take themselves out not against our fellow

men but against disease and starvation and maladjustment.

"We shall fight primarily not against the Nazis and Hitlers abroad but always and simultaneously here at home against the myths which they symbolize."

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## ORDNANCE

## Ideal Light Machine Gun Sought by U. S. Army

**W**ANTED, by the U. S. Army: the ideal light machine gun. Inventors will have one year and one month to produce.

Notice to this effect is carried in the September-October issue of *Army Ordnance*, giving specifications to be met and describing tests that are to be fired during the month of October, 1941.

Specifications boil down as follows: Weight must not exceed 22 pounds, so that one soldier can pick up the gun and walk off with it. Over-all length, 38 inches or less. It must be air-cooled: liquid cooling adds weight and is a messy nuisance anyhow, in a weapon that must be ready to move on a split second's notice. It is to be bored and chambered for the standard .30 caliber Army cartridge.

The new gun must have its barrel capable of being unscrewed from the front, so that a new barrel can be put on in a few seconds. The barrel must be heavy enough so that it can be fired at full speed (300-350 shots a minute) for five minutes without stopping.

It must stick close to the ground, to present as low a target as possible. Mounted on its tripod, the gun should not exceed 18 inches in height.

Ammunition is to be fed in from the left side, in metal-link belts. Cloth-web belts are apt to make cartridges stick in wet weather, and box-magazine and clip feeds are not considered satisfactory.

There are some other specifications, mostly technical in nature. But if a machine gun can meet the requirements as just stated, have the stuff to "take it" under regular knockabout field conditions, and be able to swing around through a wide arc of fire, it should have a good chance of adoption as the standard weapon of its type for the new U. S. Army.

In setting forth the requirements for

the new light machine gun, Brig. Gen. Earl McFarland of the Army's ordnance department reviews some of the machine weapons now in the American and foreign services. Weapons like the Lewis and Bren guns, now most used in the British army, are often referred to as light machine guns but are more properly machine rifles, he says. Like the Browning automatic rifle of World War fame, they are capable of bursts of fire only up to the capacity of their loading clips—30 in the case of the Bren, 20 in the Browning. A real machine gun, even a light one, must be able to keep up sustained fire, fed either from a belt of cartridges or a magazine of some sort.

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## AVIATION

## Biggest Flying Boat Being Built for Navy

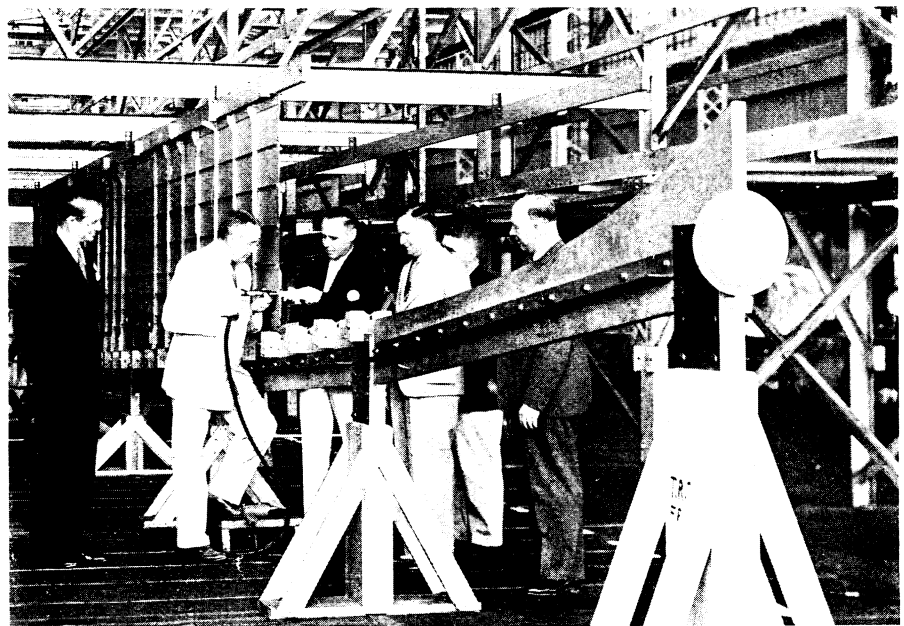
**B**IGGEST flying boat in the world is now under construction at the plant of the Glenn L. Martin Company, in Baltimore. Destined for the U. S. Navy, the start of the "flying battleship" was marked with a keel-laying ceremony, time-honored custom in the building of surface vessels, but never before applied to aircraft.

No information has yet been released on the new airplane, which will serve as a bomber. However, it is obvious that it will considerably exceed in size the Navy's present largest aircraft. This is the type known as the XPB2Y-1. It weighs 29 tons, has a wing span of 115 feet, length of 79 feet and height of 28 feet. It is powered with four Wright engines, of about 1000 horsepower each.

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Over half a million pads of the *moss peat* from bogs of Maine, Oregon and Washington were prepared for surgical dressings in World War days.

An ordinary snap-type *mousetrap* is part of a novel apparatus devised at the U. S. Bureau of Mines for collecting air samples in mines, manholes and other inaccessible places.



### FUTURE DREADNAUGHT OF THE AIR

The aeronautical equivalent of a battleship's keel-laying, when Glenn L. Martin, president of the aircraft building company that bears his name, drove the first rivet in the frame of a giant new flying boat for the Navy. Opposite him, holding the bucking-block against the rivet, is Capt. DeWitt C. Ramsey, U.S.N.