AERONAUTICS

War May Answer Question Can Airplane Win War?

Airmen Who Support View of Plane's Supremecy Base Opinion on Theory of the "Lightning Attack"

EUROPE'S war is expected by authorities to answer the biggest question in military science today:

Can the airplane win a war?

Air enthusiasts, whose loyal support is in no small part responsible for aviation's enormous strides, insist that it can. Orthodox military experts contend that the airplane has never settled a conflict and will not settle the next one. No new weapon, they claim, whether it be David's sling or "flying fortress," has ever revolutionized warfare.

Three sanguinary wars have been fought in the last four years, with one of them still going on. The airplane did not win by destroying cities in Ethiopia because there were no cities to bomb. Artillery and not the airplane was the major factor in General Franco's triumph in Spain. Japan has had overwhelming air superiority in her invasion of China, but the war has not been won yet and may never be. None of the three wars is conclusive either way, in expert opinion.

Not all air-men support the view of the plane's surpassing power, but those who do base their opinion on the theory of the "lightning war," by which a nation is brought to its knees in a short time by the destruction of its cities, industries and key centers by continuing waves of bombing planes. They claim the bomber will always get through and that there is no defense against its deadly thrusts. Anti-aircraft artillery is ineffective, they assert: interceptor fighters cannot be warned in time to head the invaders off.

Orthodox military experts tend to minimize the damage which airplanes can do to cities. It seems apparent that they cannot turn them into mere rubble piles. But damage that extensive may not be necessary. On March 16-18, 1938, the city of Barcelona was subjected to frequently repeated waves of attacks by Italian planes from Majorca. The city was quite demoralized.

Airplanes cannot capture ground, it is also pointed out; only infantry can do that and in classical military theory, a prerequisite of victory is capturing ground. The air enthusiasts say this theory nay. Orthodox military experts also tend to insist that destructive effects of gas, incendiary and shattering bombs are exaggerated.

Hence, general staffs of ground forces believe generally that the airplane's greatest usefulness is in spotting the enemy for guiding artillery fire and in bombing specific military objectives. They see for the plane an auxiliary role rather than a dominating one.

Casualty rates for planes, according to most estimates, will range between 25% and 100% in the war just begun. Casualty rates for pilots will be nearly as high. This means that the complete air force will have to be replaced several times a year. The effort to do so will be too great and air war will in time be cut down to its proper size, it is further argued by the more conservative military men.

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in the international whaling conferences.

Germany has a fleet of five whaling vessels, with a total gross tonnage of approximately 70,000. Individual ships range in size from about 8,000 to 20,000 gross tons. In addition, two Norwegian whaling ships are under charter.

This fleet is in no danger of capture or destruction at the hands of British cruisers, for it is all safely tied up in Hamburg harbor. The Antarctic whaling season does not begin until early in October, so that even if conditions in Europe were normal the ships would not be due to sail south for another week or so,

Most of the world's whaling is done by the Norwegians. Conceivably, a blockaded Germany might get some whale oil from Norway by more or less roundabout means. However, the greatly stepped-up wartime demands in Britain and France, not to mention the United States and other neutral industrial countries, will compete heavily for Norwegian oil—and these nations will have the very considerable advantage of being able to offer the Norse whalers real money for their wares.

TO KEEP our orientation in a warlike world: Guns can be very, very useful to science and industry.

There is the deep-sea gun which shoots samples out of the bottom of the ocean to find radium perhaps but, more important by far, to determine the constitution of seven-tenths of the earth's crust—that land that lies beneath water about which we are abysmally ignorant.

There is the gun that shoots holes in the casings of oil wells being drilled thousands of feet in the ground when it is desired to tap the liquid gold that is petroleum.

And the gun that shoots open a clogged blast furnace outlet plugged with frozen slag.

And the gun that shoots aloft distress signals from ships in distress or the gun that flings the first rescuing line to wrecked ships.

UNCLE SAM'S little colonies in Antarctic, to be established this winter, may prove to be the safest place on earth. Greatest danger may be that in the excitement of a smashing civilization ships to bring them back to a battered world may forget to call.

BOMBS and poison gas may play important roles in the war. For background on European war developments involving bombs see SNL, March 25, 1939. For a list and descriptions of the principal war gases, see SNL, Jan. 28, 1939.

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STATISTICS

Fewer Catastrophic Deaths This Year Than in Last

DESPITE the tornadoes, fires, mine explosions, floods, and railroad accidents we've been reading about, statisticians are pleased that the first half of 1939 has fewer catastrophic deaths than the same period last year. The U. S. A. record as compiled by the Metropolitan Life Insurance Company from the daily press for the first six months of 1939 is 29 accidents killing 5 or more. The total loss of life was 266. For the first six months of 1938, 57 major accidents killing 771.

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Rubber trees are no more limber than the average tree.