

# The Effectiveness of an Air War

by George Friedman - December 20, 2022

The Russians have initiated a concentrated air attack on Ukraine focused on the use of drones. The target is civilian and industrial infrastructure, primarily electrical and related systems. The intent of the attack is to undermine survivability in cities by limiting the transport of food, heating and so on, in order to compel the Ukrainians to surrender or to so weaken their defenses that a ground attack can successfully penetrate and seize territory. Failing that, the attack can also have a psychological dimension, inflicting significant civilian casualties, creating intense hardship and causing individual cities or even the country as a whole to surrender. It's intended to be a lower-cost and more efficient strategy than the use of massed infantry.

The problem with this strategy, however, is that it has been tried before and consistently failed. The Germans sought to force British capitulation through the concentrated bombing of London early in World War II. The damage and casualties were substantial, but the British did not surrender. Later in the war, the Americans and the British launched combined air attacks intended to break civilian morale and destroy German infrastructure. They failed. Indeed, the U.S. Strategic Bombing Survey conducted after the war showed that German production actually rose during and after air assaults.

In Vietnam, the United States conducted air campaigns designed to damage North Vietnam's industrial strength. Toward the end, Hanoi was attacked by devastating B-52 assaults, which were less precise with far more civilian casualties. North Vietnam did not capitulate.

Each of these attacks was carried out by trained and motivated pilots in excellent (for that time) aircraft. The reasons for the failures had some consistency. Attacks on cities focused on the use of aircraft, making them vulnerable to air defenses. Intelligence on the location of factories and other infrastructure was imprecise, and therefore air attacks failed to hit their targets. Aircraft and munitions were periodically unavailable, which gave the enemy some breathing room. Perhaps most important, the attacks bred a spirit of resistance among the population, which meant that the casualties caused by effective attacks reduced the pressure on the government to capitulate. The population calculated that ruthless air attacks would mean a more ruthless peace. Some have even said that the Blitz saved Churchill. All of this is against the recuperative power of the enemy. Damage can be repaired, and total destruction from the air is difficult.

Concentrated air attacks were infrequently used against ground forces. The planes that were deployed were mostly fighter aircraft, which could practice more precision. This made necessary the dispersal of ground forces, which made carpet bombing only marginally effective and attack aircraft vulnerable to ground fire.

Russia's air assault on Ukrainian infrastructure and urban concentrations has one advantage over prior attacks: Drones have a degree of precision. The problem, however, is that their identification of targets relies on intelligence, which can become obsolete in the course of a flight. Moreover, intelligence is collected in an urban environment with a great deal of clutter. And in the current technological environment, drones are more likely to be shot down than aircraft in prior wars.

The most important point is that airpower, under the best circumstances, cannot take and hold ground. Ground forces must be deployed to do that. Drones can support ground campaigns, as airpower did in WWII and Vietnam, but the gap between intelligence and action makes support for ground attacks more difficult.

The Russians are therefore depending on a follow-up ground assault, combining artillery and infantry and confronting the same. The problem is that infantry can be widely dispersed and dug in, as it is today. Urban fighting against an enemy familiar with the ground conditions is challenging. The chances that airpower can ease this problem are as slim as they were in WWII or Vietnam. Ground forces will have to go in, and a good deal of the defending force will not have been knocked out by the air attack. They will be in the classic situation of infantry on the attack: facing counterfire from a well-dug-in enemy. It can be done, but I would argue that the newly trained Russian infantry will not be a match for the bloodied Ukrainian forces. Air power, save for nuclear, is a necessary but insufficient dimension of war.

**Author: George Friedman**

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