Indispensable for an Historian
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LUFTWAFFE is nearly indispensable for anyone who wants to understand the air war over Germany, design all air war game, or simply have a good time fighting the world's most complex air campaign over again. It's quite playable and both sides have a good chance if handled intelligently. Among them, Zocchi, Avalon Hill, and Vercammen have designed a winner. In particular, Zocchi has brought the enormous mass of bookkeeping into some kind of control, although, like Battle of Britain, the game is better played with several persons per side; this is going to be inevitable when you get that many units on board, each with different characteristics.

The game isn't perfect, of course; but the critiques I offer below should be read, keeping in mind the paragraph above. I like LUFTWAFFE and heartily recommend it to air war buffs.

The problem with the game is that it really doesn't allow any experiments with air war strategies. The player, particularly the Allied player, is stuck with the misconceptions of the time. This may produce historical realism, Avalon Hill's forte, but it's frustrating to have game after game build strategic mistakes into its rule structure. This is particularly true of games, in which air warfare is either the principal or an important Factor,

The greatest myth of World War II is that 'strategic bombing' was effective. It wasn't. Neither the German attacks oil Britain nor the U.S. attacks oil German industry had much of all affect oil the outcome of the war; in fact, it can be argued that air attacks often *increased* war production, and they certainly had an effect on German morale: Goebbles figured that U.S. attacks on civilian populations were worth several Panzer divisions.

After Hamburg was ruthlessly destroyed, many workers who had formerly been in non-essential industries went to work in war plants; munitions and war materiel production in the area increased s a direct result of the raid. Furthermore, according to tile *Strategic Bombing Survey* made by USAAF (United States Army Air Force) after he war, bombing of factories had nothing like the effect the AAF generals thought it had; buildings were knocked down, but the tools remained largely undamaged, while German recovery capabilities were much greater than we imagined. It is strange that the similar experiences of the English didn't tip us off; but we suffered from believing our own propaganda about German morale and the "inefficiency" of National Socialism.

As Zocchi's tables and the *Strategic Bombing Survey* show, German war production increased steadily from 1939 through 1944; so did ammunition, weapons, armor, artillery, and naval construction. Our "strategic bombing" was a costly failure, as well as a moral outrage to our own Christian heritage. With atomic bombs it may be *possible,* although morally outrageous to win wars by killing helpless civilians; atomic weapons can do it efficiently and in large numbers; but with WWII technology it just wasn't possible.

Finally, in 1944, the operations research people forced the USAAF and RAF Bomber Command to concentrate oil worthwhile targets: transportation and oil. The effect was dramatic. Coal deliveries to factories in Bavaria fell by 50% before November. The interdicted Ruhr fields piled coal in larger and larger masses, while what coal that got out was subject to confiscation by the railroad to supply locomotive requirements.

The same was true of oil and gas; in June, 1944, oil became a high priority target, and before September aviation petrol had fallen from 175,000 tons/month to 5,000, while oil refinery output went from 316,000 tons/month in May to 17,000 in September.

The interdiction of transport and oil nearly crippled the Reich. All the countless tons of bombs rained down oil civilians in cities had little effect. Yet, LUFTWAFFE makes victory contingent on blasting cities "with aircraft factories" or "destroying" such cities by hitting them with a single raid. The optional rules make more sense.

Of course, in the real world the Allies stubbornly held to city busting as a winning tactic until quite late in the day. Faulty intelligence coupled with over-enthusiastic reports of damage done to the enemy made the generals all too willing to listen to politicians who curried public favor with their accounts of "paying the Huns back in kind." The American people, after all, believe war to be so evil that anyone who forces us into it must be some sort of monster, not fit to live oil the same earth with us; what did we care about German civilians. The fact that our President had deliberately maneuvered us into a war lie was elected to keep us out of ("Again and again I say that not one American boy is going to die on foreign soil") wasn't generally known; at least, not then.

The worst of the tragedy was that about 35% of the U.S. war effort, and 60% of the British, was devoted to aircraft production, most of which was wasted in "strategic bombing." Had the wasted effort gone into ground armies, ships, and battlefield aircraft the war might well have ended at least a year sooner. In any event Europe would not have been reduced to post-war beggary.

Thus, Zocchi's game certainly reflects "realities" as seen by the strategists of the time. We *thought* we were winning by bombing cities, even if, as it turns out, we should have been better off to have left the aircraft at home, closed the factories, and turned the productive forces to something else.

The next fault of the game is in the bombing of bases. Again, I don't see quite what could have been done about it. If we break up the bomber counters into smaller units, we couldn't play the game; if we don't, attacks oil bases make no sense because there simply aren't enough bombers to take out the bases in a wide area. Yet, the destruction of enemy air bases is not only allowable under the laws of war (as we accepted them prior to throwing them out fro "strategic" bombing) but of great military value. The "roll-up" attack, in which the first waves go in to blast near bases, next wave deeper bases, etc. until deep penetration has been achieved is an extremely valuable kind of

attack, while systematic destruction of all of an enemy's air bases together with his means of supplying them, can achieve air supremacy. It's true that Europe of the time probably had too many bases for this to have succeeded: we don't know, since although the strategy was advocated by certain air generals it was never adopted. Incidentally, it is now definitely known that had the Luftwaffe continued this strategy in the Battle of Britain instead of abandoning it for the relatively useless city raids and "strategic" attacks oil factories, England would have been knocked out of the war.

The Zocchi rules presently allow a base to be knocked out for the rest of the quarter if bombed; that's probably not enough, given that we can have only one raid per quarter. I'm not arguing that cratered runways can't be repaired in that time, but that if you are attempting this kind of air war you'll run the raids more frequently.

Air supremacy is defined as "being able to fly where you will, while the enemy is unable to fly at all." To get it, you have to kill his air force; and you can't do that in the air, at least not very profitably. You have to get it oil the ground, either by destroying aircraft oil bases, knocking out the bases, or denying him the fuel and other essentials required to operate his planes. Once you've done that, as the Israelis did to the Egyptians in the Six Day War, the rest is easy.

In other words, my critique of LUFTWAFFE is concerned with the victory criteria and those rules which build the historical mistakes of WWII into the games; I wouldn't like for our future air strategists who may be playing LUFTWAFFE to make the same mistakes again. As for the rest of the game, it's excellent. I'm truly amazed at the work that has gone into the air combat rules, the board, target lists, aircraft capability simulations, and all the rest of it. The quality of the game equipment is also high, although I personally wish that economics didn't dictate that AH use the "bookcase" format; the order of battle charts have to be folded, there are more folds in the boards, and it's just harder to get everything back in the box without mixing it all up. And, to top it off, just before AH went to matchbox I went to the trouble of designing a whole shelf system to hold the older sized boxes!

For the real air war nuts, when you buy LUFTWAFFE get all extra set of counters and some cardboard to mark off into turn counters; that way you call keep track of the number of turns each unit has left in the air and not have to employ the artificial rules which LUFTWAFFE includes in order to make the game playable. The "turns to fly,, problem gets particularly sticky when the German player is staging his aircraft to intercept a major raid, and a heavy cardboard (I made mine of plywood, but then I'm a REAL air war nut) status board along with all extra set of game pieces makes it all a lot easier.

LUFTWAFFE isn't perfect; but so much work has been done that it's indispensable for those who want to design air war in Europe games; and until the perfect game comes along sometime in early 1944, I recommended that you get and play LUFTWAFFE. You'll like it if you like air war