



When the Second World War began, Barnes Wallis, an aircraft designer, wondered what he could do to shorten the war.

He knew that making armaments needed power and that it would be impossible to destroy coal mines and oil wells by bombing. But what about the Moehne, Eder and Sorpe dams that provided water power and electricity to the Ruhr?

In an engineering journal, Wallis read how these dams had been built in concrete, which is resistant to thrust but fragile when stretched.

At that time, the R.A.F. was using bombs stockpiled since 1919. Over half the weight of the bomb was in the casing and amatol, the explosive, didn't give much of a bang. The conventional thinking was that small bombs, 250 lb each, should be dropped in a line - a "stick" — and hopefully one would hit the target.

The idea that a huge bomb, precisely dropped, could destroy the dam was treated as far-fetched, or at best, looked on with lukewarm interest.

The Air Staff looked on Wallis's proposals as mad, and said so. He responded by writing a detailed text of every possible aspect of bombing the dams and circulated it to seventy people. When approached by a secret service agent who said he should not have put top secret matters in the post, Wallis replied that those in authority considered his ideas to be the ravings of a crackpot - so how could they be top secret!

Before you can lay a finger on your enemy, you must first out-manoeuvre your own bureaucracy who are (moderately reasonably) averse to diverting manufacture toward an unproven end.

Courage

John and Fiona Earle

*"I know that I shall meet my fate
Somewhere among the clouds above."*

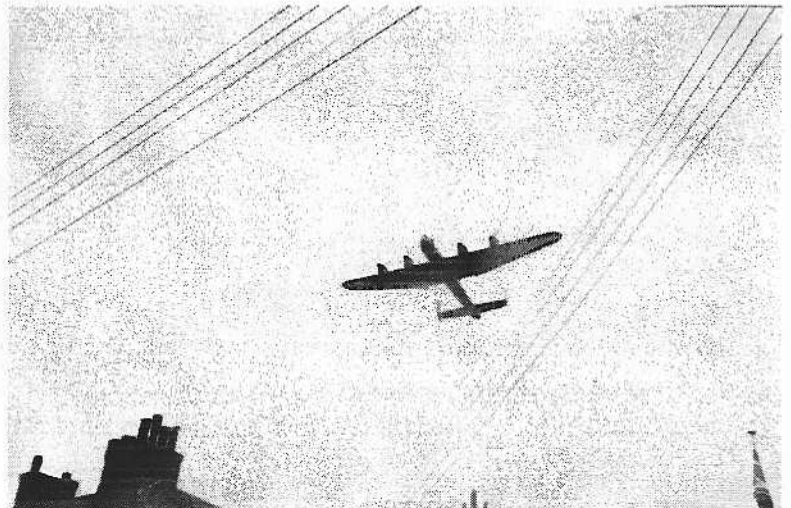
An Irish airman foresees his death. W.B. Yeats. 1919

It was well that the chief test pilot of Vickers, Mutt Summers, had known Sir Arthur Harris for twenty-five years. Harris was the Chief of Bomber Command. Summers also knew Wallis well, and on such friendship and trust could plans be built for a major project: the breaching of the dams.

In 1943, Guy Gibson was asked - NOT ordered - to do one more trip. He agreed. Air Vice-Marshal Cochrane (who Leonard Cheshire described as the clearest thinking senior officer in the R.A.F.) was put in overall charge.

Gibson interviewed everyone - ground crew and aircrew of what was a new squadron. In this, he displayed a different kind of courage in that had he made an error in selection, it could have endangered lives.

Gibson knew he needed brave crew and Cheshire, who later commanded the squadron, divided brave people into two classes. There were those who recognised the probability of an early death and yet forced themselves to go on flying. Others recognised the possibility of death but became so involved with the technical problems of flight and attack that the idea of death receded and they did not have a constant inner struggle. Cheshire put himself in the second category and considered the others to be braver.





Without telling Gibson the target, Cochrane told Gibson to get his pilots so used to really low flying at night, between 60 and 100 feet up, that it became second nature.

We recently saw a Lancaster flying over Hertford Heath at 2-

3,000 feet and roughly 200 m.p.h. It looked huge. How could a gunner miss? Only if it was so low that it had gone before anyone knew it was there.

Busting the Dams

In February 1943 the final planning began. The raid itself was to be carried out in May, when the water level in the dammed lakes was highest. The bombs that Wallis had designed were dropped from Lancasters with the aircraft travelling at the right height, speed and at precisely the right place.

After Gibson had dropped his bomb, he flew alongside the next bomber to divert some of the gunfire away from the attacker and toward himself. Unbidden, Mick Martin did the same and joined the third bomber.

The dams were breached and over three hundred million tons of water flooded into the Ruhr. The aircraft turned for home. Out of the 133 young men who had set out in 19 aircraft, 56 did not return and only three parachuted to a life in prisoner-of-war camps.

The authorities saw the raid as a success, as they were distant enough to balance the deaths against loss of production and destruction of factories. In war, deaths may be a premium that must be paid to frustrate a possible threat that may never develop.



Barnes Wallis was appalled by the deaths. He wished he had never had the idea.

Within hours of returning from the raid, Dave Shannon proposed to a W.A.A.F., Anne Fowler. During their honeymoon she heard a man say that Shannon looked too young to be in the R.A.F. When Shannon turned, the man saw the ribbons of the Distinguished Service Order and the Distinguished Flying Cross. Shannon, an Australian, was a few days over his twenty first birthday.

Gibson was forbidden to fly more, and couldn't face saying goodbye to the squadron. He left on a tour with Churchill while the squadron were attacking a tunnel in Italy.

Gibson's crew flew with the next Commanding Officer, who was not quite so practiced in low flying as the original pilots. On a night operation, a church steeple loomed up fast. The other pilots kept low and went either side of the steeple. The C.O. went up to 300 ft. There was only one gun in the village that only fired five shells. One hit the petrol tank of the Lancaster, and so Gibson's brilliant young crew all died.

The raid itself was a stepping stone to develop the idea of marking a target with a coloured flare as an aiming point. Then a single heavy bomb could be used.

Current Bravery

Can bravery be learnt? Probably by some people. Think of the suicide bombers and riots that peace-keeping troops face in Iraq, Northern Ireland and Afghanistan.

Geoffrey Wellum, a Spitfire pilot, said that surviving his first dogfight was like surviving the opening over from a fast and aggressive bowler. True, the bowler would be unlikely to kill the batsman. In a schoolboy's life, surviving that over is a test of nerve and the ability to react very quickly to unexpected threats.

Physical bravery may not appear to be as necessary in peacetime as in war. The steps that lead to courage are important. They are the antidote to fear. There is no courage without Fear - courage is overcoming that Fear. Fear can lead to inertia, a dangerous attitude that no one should adopt in a changing world where peace and war seem combined.