
TRANSCRIPT

Air Cdre RAF (Retd.) Andrew Lambert

08-12-2009

THE ENDURING PSYCHOLOGY OF WARFARE

I want to start with talking about the psychology of warfare. And I should say that was my subject for my Master of Philosophy degree at Cambridge. I then want to move on and take the lessons that I think come out of this physical lecture through to coercion, which I say is a modern paradigm of war. Of course, anything I may say does not reflect Her Majesty's Government opinion in the slightest. So that's basically the structure of what I'm going to do. I will aim to have a fifteen-minute break between the two and then if we can leave the questions please to the end, and then we can have a discussion about psychology and interstate relations as one complete access point.

I have to say this is probably the most misunderstood phenomenon of war that there is. Most people will tell you they know everything about warfare, but when it comes to understanding the psychology at warfare, they by and large do not understand it. The great generals of this world generally do, but a lot of people who wear four-star or five-star rank, although they seem to be very important, have no idea about psychology. And the problem is that they tend to think that warfare is a science. But if you measure how many laser-guided bombs you need to hit a various targets with, then this will happen, or that will happen. And they tend to have a very simplistic approach. What I'd suggest to you that actually this is the bit that warfare is all about. This is the bit the people like Alexander the Great would have understood completely. Napoleon probably understood it pretty well. Hitler on the other hand probably did not understand it. So this is the art of warfare. Everything else, the number of weapons you need to take out, targets is the science. This is the real art of warfare. And this is the point that we really need to take on board.

So my content is that war is actually about people's minds. So I want you to forget everything else you know about warfare and think 'minds'. Because that's what it's really all about. Let me just give you a thought for a second. This is a group of models, you can see, found in the grave in the Middle Kingdom of Egypt about 1500 BC. Fairly impressive group of people, as you can see armed with shields and fairly impressive spears. And certainly if you were a peasant living in the village and this lock turned up, you would have to be very impressed and you'll probably do pretty much what they wanted.

But then imagine this little group when they went onto a battlefield and suddenly here we are, Battle of Kadesh, 1274. There's Ramses the Great and somebody's churning around the battlefield with one of these chariots capable of moving at about thirty miles an hour, firing well up to thirty arrows per minute, range of the arrows up to about a hundred yards, probably (inaudible) fifty yards. Against the spearmen they could do virtually nothing. They could stand and wait, they could throw their spears but miss if they had arrows, generally they would miss as well, and the only lucrative target there is actually the horses. So these people could move around the battlefield, come into contact, fire a volley of arrows and move away and coming from a different angle. This is generally what that is, what group that comes from? There is a little bit of a clue, 1120, Cappadocia. It's the Assyrians. So we're talking about Nineveh, we're talking about Tiglath-Pileser I, as this particular chap was, as everyone will remember. You'll notice that the terrain they're operating in northern Iraq it's obviously a little bit more mountains, a little bit difficult, three horses opposed to two. We now have somebody with a shield. The composite bow has moved on a bit as you'd expect from 12.74 down to 11.20. So this is slightly more vulnerable perhaps than Ramses II's little chariots. You can imagine the effect of these on infantry tactics throughout the Middle East. And indeed, these sorts of weapons dominated warfare for at least five hundred years. And the history of warfare in that particular period is the history of the chariot. Very, very effective. The Egyptians could dismantle their chariots within two minutes, load the wheels onto the backs of the horses and then swing them across the river while dragging the chariot and then reassembling 2-3 minutes on the other side. We're talking about extreme mobility, this is the attack helicopter of 1200 BC.

Well, you can see the obvious psychological impact of something like this. But I won't before I go on too much just to consider some different battles and look at different situations. This demonstrates the overwhelming asymmetry of a particular weapon. But I want to look inside the mind of a particular group of people. Now, those of you that were assiduous filmgoers, a couple of years ago would have seen this particular film: '300'. And as you can see, that's Leonidas, and of course he was the man as we all know that defended the pass of Thermopylae. Now as you probably recall, this was not a particularly good film, it was lost somewhere between sci-fi and real history. But nevertheless it does show that when he defended with his other allies defended the pass of Thermopile which is shown here, a great big mountain on the left hand side, a very narrow strip, and then a drop to the sea on the right. The Great King Xerxes of course that comes from the north, come all the way across the Hellespont, and this was essentially the only way into Greece as I'm sure you'll recall. They fought for three days and then eventually they were never defeated on their back of line, but they were outflanked as I'm sure you're a call. The Immortals had withdrawn to the south, they then outflanked the Greeks. Leonidas said he would send away those that could be sent away and he and three hundred Spartans of those who had left decided to continue the fight for one more day. And at the end of the day, as you recall, they withdrew up onto the hill, they had fought the Persians into a standstill. And at this stage the Persian morale went down and they decided they were not close to the Greeks anymore, and fired on the Greeks who by this stage had no longer any shields, most of them lost their

helmets, almost all of them were wounded, and they were fighting with tooth and nail against the Persians. So the Persians withdrew and then finished the Greeks off with arrows.

Now, psychologically that had a huge effect on the Persian morale as I'm sure you could imagine, the fact that these people were so dedicated. At the end of the war I'm sure you all know a memorial was put up – this is actually a later memorial of Leonidas as you can see. And they then put up this particular quote: “Tell them in Sparta, Passerby, that here obedient to their laws, we lie.” They did just what was asked of them. They were expected to go there, to give their lives willingly and to fight and die in a cause. As you probably recall only those that had children were allowed to go because they had succeeded, they had produced a new generation, and so they went, and there they all did exactly what was expected of them. Indeed, as you saw from this bit: “Tonight we dine in Hell.” Actually he said “Tonight we dine in Hades,” which is not quite hell, but this is Americanization of a particular event.

So this is the Spartans. These were the people who were the product of a military training ethos, that makes Sandhurst and West Point pale into insignificance. These people were pulled from birth to go to war and they were extremely competent and willing to die.

I want to move forward not from Marathon which took place round about there where I'm pointing to: Pylos and Sphacteria. Because just fifty five years later the same product of the same education found themselves confronted by a set of circumstances that did not work too well. And let me just talk it through. You will recall that of course Athens was conducting what we now call hit and run in strategy, while Sparta which was dominant on land, could ravage Attica at will. The essence as far as the Athenians was concerned, was to get their fleet and move into the Spartan rear in order to cause hurt and damage. So the Spartans could be persuaded not to continue their attacks on Athens. And indeed that was going on and happening on a regular basis. And in 425 - this is after Pericles had died by the way, died as I'm sure you recall, of the plague - the strategos-elect Demosthenes decided that he would take an expedition - this is a picture taken with the long way around - take an expedition around the bottom of the Peloponnese and move down towards this area, to (inaudible) to support an Athenian ally. For reasons various, most notably the fact they were caught in a storm, Demosthenes found himself beleaguered on this little promontory near a place called Pylos. This is the town of Pylos, you can see here. So not wishing to lose the opportunity, he invaded Pylos, set up a camp and protected himself, sent away the remaining ships that he had and off they went to join the main fleet, which lay off Corfu. Well, of course as far as the Spartans were concerned, the fact that Demosthenes had positioned himself just to the west of Sparta was entirely unacceptable. So King Aegeus, the Spartan king who was ravaging Attica at the time was recalled, the Spartan fleet was activated and everybody started moving towards Pylos to kick them off. So the Spartan fleet arrived, moved into the lagoon, their troops as you can see set up a camp right opposite Demosthenes in this area here. At the same time they decide to put a four hundred hoplites on this island here, which is called Spahcteria. Now, if you read this, this is all

in Thucydides - I can't remember which page it is on - I'm sure you'll be able to find it without too much difficulty.

So the Spartans had the Athenians in a very beleaguered position. A big fortification there, fleets in the lagoon and of course taking the island of Sphacteria. They then carried out an attempted invasion which did not go well because the Athenians were quite well organized, they had quite well defended themselves. And so the Spartans pulled back, licking their wounds, trying to decide what to do next. Unfortunately for the Spartans, just this time what should come into view was of course the Athenian fleet. The Athenian fleet moved into the lagoon, engaged the Spartan fleet and defeated it, and a huge number of Marines disembarked. And now of course the whole balance of power in the area has changed. Now of course the Spartans with their ground, blocked by the fortification, find themselves beleaguered and most particularly the people of course on Sphacteria cannot get off the island, nor do anything else. Because Athens now has control of the lagoon and has control of all the waterways.

At the same time after this happened there was a brush fire on Sphacteria. Sphacteria is fairly long and low island with hills on either side, a little bit of a hollow in the middle. But has a lot of thorn bushes and a brush fire went from south all throughout the island. So you'll still have the thorn bushes there but without any leaves and it's a lot of ash, a lot of dust, very, very difficult to move. But the decision was taken by the Athenians that they would now invade Sphacteria in order to relieve the people on top of the heels. So the invasion took place, and Marines were landed here. You'll recall there are four hundred twenty Spartans and the Athenians landed at least eight hundred hoplites. In addition to that they landed a lot of archers and peltasts and allies, maybe another eight hundred as well. So probably a thousand and six hundred in total. So the Spartans of course with four hundred were greatly outnumbered.

What then happened was that the Athenians then started to move in towards the center, and the Spartans who had a little fortification up here moved down to the south. But the Spartans found themselves in the position that wherever they went, they were surrounded by Athenian archers and Athenian slingers. And although they tried to form their phalanx and then move forward to attack the Athenians, the Athenians just retreated and carried on pouring in arrows and slingshots.

The Spartans then decided to retreat back up to the top of this hill where they could fortify to seek further instructions. Unfortunately, as far as the Spartans were concerned an allied officer said that he thought he could possibly get around this little hill here and get above where the Spartans were. And so with Athenian agreement he then took a small detachment around a coastal route as you can see, and managed to get himself above the Spartan position. So the Spartans who had carried out this tactical withdrawal against some onslaught of arrows and onslaught of slingshots never managing to form phalanx, never managing to form a frontline, never coming to grips with the hoplites - the Athenian hoplites - always coming under bombardment, suddenly found themselves faced with another group of power and that is up on the high ground above them, obviously ready to start the offensive all over again. As soon as they saw that, the

Athenian **heddles** went forward and pointed out at **them, they** were in a precarious position. Contrary to what happened Thermopylae, the Spartans threw away their shields and came out with their hands up, waving their hands and said, that's it, we do not want to fight anymore. These were the sons and grandsons of those that fought off Thermopylae. These, the sons and grandsons of the '300' who gave up their lives so willingly. And yet here, for some reason their whole morale was unlocked and they decided to give up.

Thucydides in his history of the Peloponnesian War draws attention to a number of factors. He says, first of all, the Spartans were considerably outnumbered. Lots of archers, I mentioned the hoplites, eight hundred archers and eight hundred peltasts, slingers and various others. So they always found themselves in a position of inferiority. Secondly, of course they found themselves surrounded. Wherever they went, there were people overlooking them, firing arrows at them all the time, putting them in a position of perceived weakness. They could never form phalanx, they could never move forward, they could never engage the enemy. They were just acting as targets. Thirdly, he says, well, no front lines I mentioned, no phalanx. And a lot of them were vulnerable because of the way which the arrows were coming. Since there was no frontline, a lot of the arrows were coming in from behind them. So it was sort of complicated here, you know, a lot of arrows were coming in a position in their vulnerable area. Most of them were wounded. And indeed, those that were left behind in the retreat northwards were then butchered by the Athenians and their cries would do nothing to reinvigorate the Spartans that remained.

But of course the other thing that was important was the dust and the smoke. Don't forget this was a place that was full of thorn bushes. So when they formed the phalanx and started going backwards, they were going back through thorn bushes. The whole place had burnt so as they stand to move across the ground, the dust came up, so it was very difficult to look around and see where the enemy was. Dust and a lot of smoke - it's difficult to breathe. The noise of the Athenians calls during this particular retreat made it difficult to hear orders. They found it difficult to understand what was going on. And then finally when they had got back to what they perceived to be the great secure area on top of the hill to the north of the island, just when they thought they were secure - thank God that's over! - oh God, they're up on the hill above us, they're going to start the missile storm all over again! And those, according to Thucydides, is essentially what made the Spartans give up. And give up they did. Two hundred ninety two surrendered, and these became absolutely indispensable as far as the Athenians were concerned because they were taken to Athens and they were kept there as hostages. Sparta, if you do anything we don't like, guess what's going to happen to your two hundred ninety two hoplites? And as a coercive strategy it was extremely successful.

So there we have the sort of psychology of these particular people. And it shows that even the Spartans are possibly able to be undermined, to have their morale undermined, and to find themselves in a position of weakness.

Well let's fast forward and I'm in a fast forward quite away now to this particular gentleman. Does anyone recognize who that is? It's Carl von Clausewitz. Clausewitz was a man who fought in the Prussian army against Napoleon. He fought all the way through Napoleon's wars. I don't know if he was actually at Waterloo, but he was certainly present at Quatre Bras and after the Napoleonic war he took over the staff college, the Prussian Staff College, and became one of their first commandants. His wife, the baroness, was intimately involved in what he then wrote and he wrote the most famous book "On War", a discussion on war. And he said a number of things that are really quite important. The interesting thing is he unfortunately died of smallpox before he completed the writing and his wife, the baroness, then finished it off for him. So we're not too sure even at this stage how much is the baroness, and how much is the gentleman. However we will take it that they all come from Clausewitz himself. But he said this: "War is an act of human intercourse." And it's important to think about war as human intercourse. Even now when we have robots, UAVs, clever machines, we think, well, maybe war will become depersonalized. But I have to tell you that is never going to be the case. For the simple reason is this: it's people that exult in success. People enjoy success, they enjoy victory. People reap the victories, the fruits of victory. Similarly it is people that pay the price of failure. If you fail, you may lose all your money, you may lose your house, you may lose everything there is, you may even lose your wife and children. You will pay that price if you fail. And so it doesn't matter which robots, which champions fight for you. It's you ultimately who will pay the final price or enjoy the final victory. So war is an act of human intercourse, it's important to remember that.

But he also went on to say this: that war is an act of force to compel the enemy to do our will. That's what it's all about. I don't have to remind you that if you embark on a warfare, once you've killed somebody he has no vote. The dead have no vote. It's the people who stand around and watch him die that decide what to do next. Once you're dead, you're dead. Nothing will change that. But it's the people who look at what happened and how it occurred. They're the people who will make the next decision and that can be absolutely critical. So war is an act of human intercourse and it's an act of force to compel the enemy to do our will.

Well, why should we study this stuff? And I think I've probably given you a few of the clues. I've been involved in this for some time. I was a planner for Gulf War I. And I asked when Gulf War was starting - we were doing the planning in the autumn of 1990 - what the psychological aspect was? What could we do psychologically to unnerve either Saddam Hussein or the Iraqi people? Or indeed the Iraqi army? And I had to say at the time in Britain we had one person who did psychological warfare and he wasn't available. So that shows you the relative importance as far as the British were concerned. Because we had hundreds of people who could tell you how many bombs we needed, but nobody could tell you why we had the bombs?

So I think why study this particular thing is because there are a number of enduring truths that need to come out. And of course it's particularly relevant today because this is what terror is all about: it's all about psychology. A terrorist is not going to take out fifty thousand people or five million people or twenty million people. Or maybe he

would with a nuclear weapon but hopefully that will never occur. Terrorists will kill a few thousand. It's the reactions of everybody else - that's what makes terror successful. Because terror is the art of creating fear.

Now, I don't have enough time sadly to talk too much about strategic bombardment. But I think there are a number of things that I think will be of interest to you when we talk about why. Now, let me show you this particular slide.

This is an analysis. What I'm going to do now is I'm trying to work out a ratio of those who gave up, i.e. deserters divided by those killed. So for every person that was killed, how many people sort of gave up. Well, if you take Korea, the ratio is .38. Vietnam - .19, pretty similar, there's not a whole lot of difference here. So the multiplication ratio is not a whole lot different.

But then we move on to Gulf War I in 1991. We think that about ten thousand were killed. I mean, you can get any number you like out of this, some people will tell you there were millions killed, other people will tell you three thousand, and that can't be true. For the sake of argument ten thousand is probably right, there can be one or two thousand on either side. Deserters. I'm sure I don't have to remind you that while war was taking place, there were death squads operating behind the front line. These are Iraqi death squads who were shooting their own people operating behind the front line. So deserters were likely to be shot. In fact, even the Iraqi death squads found that to be something they couldn't cope with. We think about 160,000 probably deserted. But for this calculation I will use the figure of 100,000. We know this figure precisely because we counted them. So that was the number of POWs. So when you do a calculation, something happened here: .38, .19, .18. So for every guy that died, 18 gave up at least. So what we have to ask ourselves was the factor in this and what made the difference. To a large extent this comes down to the factor that really demotivated the Iraqis. It was seen at the time as being all powerful, a huge great surprise - Oh my God! - a bit like the chariot in the day of the Pharaohs. You know, suddenly these airplanes arrived in, they didn't expect it to happen, and it was seen as something hugely demotivating because it produced not only physical shock, but a huge psychological shock. And I suggest you, it's because it does this: it dominates the fourth dimension which is time. What I mean by that? Well, Saddam Hussein - I think if it wasn't him, certainly one of his friends - characterized Gulf War One as a bit like having to endure a new earth quake every single day. And as soon as you got sorted out one earth quake, guess what, it happens all again tomorrow, and again tomorrow after that. And, say, you find yourself not able to react quickly enough, because everything is going wrong. The same happens on the front line when people are bombing. Oh my God! We've sorted out all the bombing, we've got all the casualties taken care of, it starts all over again. So suddenly you find that everything you wanted to do has all been pressed together, all the time has been compressed. Now, that can be very successful if you want to make people react very fast: instant decisions. There are times when you don't. And the classic one is the Cuban missile crisis, when you'll probably remember Curtis LeMay offered to John Kennedy: I can bomb Cuba tomorrow. And Kennedy thought correctly at the time, you're going to get irrational decisions. What I actually want to do is to extend the time so they have time to reflect,

time to consider. So if you want to squeeze the time air power will do that, you have probably irrational decisions or hasty decisions.

And indeed this sort of concept was really brought out in an operation called Operation Strangle that happened in Italy in 1943, when Fridolin von Senger und Etterlin, the German general there who was in charge of XIV Panzer Corps, said: "This is a bit like playing a game of chess where the enemy makes three moves and I only get to make one." So they've expanded their time because they got the freedom and I can only do a little tiny bit.

I'm going to mention that in terms of the sort of a psychological effect. We talk a little bit about World War two, Gulf War, I've already mentioned South Korea and talked about the Iraq War of 1990-91.

I want to then come on to the psychological factors intended to bring it all together and finally talk about combat stress which is essentially what is done to people when you do bomb them and start to impose these sorts of pressure on them.

I'm going to go on to World War II, I just want to start with a little bit about World War I. Now, you will know that World War I contained many innovations. Of course the machine gun, that's why these particular characters were in a trench in the first place. Because you couldn't have an open battle line and move forward as Waterloo occurred or near the great battles of eighteenth and nineteenth centuries. So they found themselves in defensive fortifications.

The other thing that you may be surprised about. This is actually the first war in which indirect artillery fire was used. Because up until then, just like Waterloo, you lined up your cannons and you pointed and you fired them. Now you are firing up into the air, over the hill, down the other side. So these are the sorts of innovations that came to start in World War I. Both these innovations I mentioned were exploited by air power. The machine gun was put onto an airplane. That is how the airplanes then started to use their forward firing capability. And of course it was the airplane that made the ability for indirect fire by the artillery possible. Because how did you know where the shots were falling unless you had somebody who can look over the top and see where they were going? And so it was really the airplane that started to make these two weapon systems useful. And indeed, to begin with in 1914, most of these people in the trenches of 1914 had never seen an airplane. Indeed, the first time that they heard an airplane, they used to come out of their trenches and look up: "Gosh, isn't that fantastic? Wow, look at that, it's amazing!" This was an invention of nine years or eleven years by that stage. So, very short space of time. But of course it didn't take long for them to realize that as soon as they saw a little pup pup pup pup pup as the airplane flew across, it didn't take long before you're notice shortly after the bombs would start raining down upon you. And so the respect started almost immediately.

Well, in 1916 for the first time we started to use aircraft, and in fact it was at the Battle of Aisne we used aircraft for the first time to attack the trenches, using, as you can see, a very highly technologically advanced system for the time.

The other thing that was used also at the same time was the strafing technique. An aircraft like the FE.2bs, as you can see here, pilot sitting in there, and the captain of the aircraft who was often the gunman sitting by the machine gun and being able to attack these trenches.

What was the effect on the Germans when they first felt it? Well, I had to tell you it was absolutely outstanding. because the Germans who thought that they were in defensive lines suddenly find that actually the trench far from keeping them safe did exactly the opposite. Because if I'm going to do a strafing pass with my gun, guess which direction I'm going to go? I'm going to go along the line of the trench. And quite often a single pass will kill thirty people. Everybody in that trench was going to die if you got this line up properly and fire down on the line of the trench. It presented the target to them in exactly the way that could have been wanted. Well, you can imagine the effect of this on German morale. Oh my God! The last place you want to be now when the airplane turns up is in your trench. Because if they do run down, the line of the trench every single person is going to be killed. Now, fortunately trenches don't go in a straight line from here to eternity. But you find yourself in that particular trench being highly vulnerable.

Well, you can imagine it didn't take the Germans long to repeat the operation the other way around. And there's the German three hundred kilogram bomb. And then they came on to things like this by 1918, a very sophisticated aircraft, and very effective it was too.

So we carried out this strafing. And at the time we identified two forms of strafing. The first of them was trench strafing which I've just described, and the other one was ground strafing. This was a sort of target that would take out in a ground strafing operation. And you can see how lucrative that would have been to somebody in the aircraft. I mean, a concentration of targets that was impossible to imagine. You can, as I'm sure you will, imagine the effect that this would have had in terms of ability of armies to deploy forward and ability of armies to sustain the front line. But it has to be said though that after their first surprise, the Germans in particular suddenly realized that an aircraft flying at ninety miles an hour is not a whole lot more difficult to shoot down than a bird that's in flight. And so then they started to impose losses on the aircraft and indeed the toll on aircraft was extremely high. So it was very effective, but very costly. What it did do is there was no longer a frontline. A frontline would have been demarcated on the ground when the trenches didn't exist because anywhere you had a concentration of people you were likely to be targeted.

Communications were also a problem at the time. These gradually improved, but still they found the best method actually was to put the aircraft forward on the semi-autonomous mode and let it just wreak havoc wherever they came.

Now, those of you that have heard my lecture before will know that where this particular technique reached its maximum was actually not in Europe, but it was actually here in Palestine. You will recall that Allenby took Jerusalem around about Christmas Day of 1917, and by the summer of 1918 he was faced with three Turkish armies: eighth, seventh and fourth. In September of 1917 he was ordered to move forward and he used his air power with extreme success. He caught the 8th army as you can see and strafed them all day as they went down the road. And then a couple of days later there's the second day. On the third day he managed to find the 7th army moving down another one of these valleys, the Wadi el Fara which is there, and managed to hose them down with gunfire and caused all sorts of mayhem. On the third day the Australians fired twenty four thousand rounds of machine guns into the Turkish troops that were packed along the valley of el Fara. The panic and the slaughter of the people who were trying now to move out of the way of the land army beggared all the imagination. As a result of this one could argue that both eighth, seventh and fourth moved north, towards Damascus and psychologically they gave up their will to fight. Certainly it is true that Damascus fell to the Allies within a few a few weeks.

So we start to see some psychological activities here. Strafing, catching people into a situation where they're surprised, amazed at what the Allies were capable, and using an airplane which is after all something magical to do this sort of damage.

Let me now come forward to the interwar to World War Two. I just tried to remind you of two things that during the interwar years the Allies carried out attacks on surface vessels as you can see. In 1921 there was a demonstration of air power against a captured German battleship or battle cruiser. You can see that it was demonstrated very, very quickly that even the most sophisticated battleship could be destroyed from the air.

And you'll also recall something that happened about the same sort of time, little bit later, was in the Spanish Civil War. This is the Picasso painting of the air attack on Guernica which achieved such notoriety.

But these sort of events set the psychological tone for what was going to happen in World War Two. So question was what sort of war would this be? Well, at the time people believed that it was going to be one of those wars where air power would predominate and everything would then give up as soon as a city was attacked. And indeed, if you recall when Warsaw was attacked, a heart went out of the Polish people to continue the war and it looked like the same probably happened, as you recall, in Rotterdam as the invasion took place. But I don't want to talk too much about that because time doesn't really allow me the luxury of doing so.

What I want to concentrate on is still the army in the field. And this I think is the first point that one needs to look at: airpower and armor together forming what we now call the Blitzkrieg method of warfare. A sudden strike from the sky, as I'm sure you recall the attack that was mounted against the French, and I won't go through the sophisticated way in which the battle plans were drawn up. But essentially the Allies were wrong footed. They believed that the Maginot Line would stop the Germans except the route

through Belgium. But as it turned out the Germans actually came through the Ardennes and attacked Sedan, just as the Germans or the Prussians have done in 1870. The Allies might have spotted that one, but they didn't. So on the 10th of May 1940 the Germans moved up through the Ardennes, positioned themselves to cross the Meuse on the 13th and 14th of May. The decision was taken that they would use air power to attack every single artillery piece the French had, to attack all the French positions, but ground troops would come across a little late as you can see there, and airpower continuously rain down offensive fire. Once this birdgehead had been secured, the tanks would pour across and the effect would be as what we now know as Blitzkrieg.

Indeed, the sort of effect as far as the French were concerned, they found that the attacks by the German aircraft were concentrated, they were not just distributed evenly across the line when the Germans attacked, they would take out a particular area and concentrate on it. The French found they had no support. So although they had sophisticated guns, they couldn't call up reinforcements. These people were isolated under air attack, and likely to be attacked very quickly. The French found they were isolated and abandoned. They felt that no one was actually looking after them, no one was giving them support. What then happened was, as the artillery at the back of one of the fortifications on the west bank of the Meuse moved, the infantry thought the artillery were going. At this stage there was a sudden feeling of oh my God, we're going to be outnumbered, surrounded and we're going to be decimated! And so the infantry turned around and ran. And the next effect was French retreat, the Germans pulled across and the effect of course we know was the fall of France. One of the people who was there, a chap called Marc Bloch wrote this: "Nobody who has ever heard the whistling scream made by dive bombers before releasing their load is ever likely to forget the experience. It is not only that the strident din made by the machines terrifies the victim by awakening in his mind associated images of death (...). No matter how thickly bombs may be sown, they never, in fact, register hits on more than a relatively small number of men. But the effect of bombing on the nerves is far-reaching, and can break the potential of resistance over a large area."

So these are sorts of effect that suddenly were being visited upon the Allies. Let's just move now forward quickly to the Western Desert. And I just want to remind you of a couple of things that you will have seen. Western Desert in '42-'43, now the boot is on the other foot, and the Allies are starting to use their air superiority now to do the same damage back to the Germans. I'll give you one example. In one week the RAF flew 10,000 sorties, whereas the Axis powers flew just 3,000. Interestingly enough the Germans complained that the Allies always had air superiority. The Allies complained that the Germans always had air superiority. And clearly those two positions can't both be right. But nevertheless that was the sole psychological effect. But when Rommel wrote in his diary, he wrote this: "Officers and men were badly shaken and they're fighting capacity reduced by the disposal, lack of sleep and the strain and waiting for the bombs." Not a popular thing to write in 1942 because the Afrika Korps Diary is going to be read in Berlin in a couple of weeks' time. This was not something you really wanted Hitler to have been briefed on because (inaudible) your job. In fact he then went on to say in his own personal diaries, and this of course is very non-PC today, but nevertheless it's what he

wrote: “(...) under the same handicap and with the same chance of success.” No chance of success whatsoever. This is of course their commanding general, this is Rommel himself that is writing this stuff. And I think it has the sort of ring of truth when you look at what he writes later on. So psychology is there as far as the German ground soldier is concerned that there is a dominating power here that is very difficult to fight against.

Well this went on, and I mentioned Operation Strangle right in the beginning of the Allied invasion. And this was an attempt by the Allies to take the war into the rear areas and to deny the Germans the capacity to fight because they were deprived of all their sources of war material. A very successful campaign it was, but this is the sort of targets that were attacked in this particular campaign - railways, roads. They were forced back to carts and (inaudible) German army unable to move. So there we find ourselves in position that whereas the Germans would thrust forward here, thrust forward there, withdraw there, you can imagine a mobile war, but they have no fuel. They can't move forward. So that's why the German commanders thought their tactical ability, one of the key factors for their defeat. And indeed, if you then go on to what people have said. This is a war diary, now May 1944, it is still in Italy: “allied fighter bomber activity makes movement impossible.” And this is what Fridolin von Senger und Etterlin wrote: “In the battle of movement commander can only attack by night, like a chess player moving one chess piece back and forth.” But what it does reflect is what is going on in your brain. These bastards have the initiative, they can move three times to every time I try and do something. How can I fight against this? It becomes almost impossible to do so.

Let me move forward now straight into northwest Europe in 1944-45. Learning the lessons of what happened in North Africa, close air support and armed reconnaissance, the Allies started to produce a comprehensive plan and the first of these was to gain air superiority. And if I tell you that on the day of D-Day, 6th of June, the Allies - this includes the Americans and the Poles and everybody else - flew 14,000 attack missions and that was across the beaches into a hundred kilometers behind the front line. 14,000. Well, the D-Day was about fourteen hours long, so it's about a thousand missions an hour. In that whole day the Germans flew seven hundred sorties and that's everywhere in Europe right across to the eastern front. So that sort of says something. What it says is that when you look up and see that, how many of those are German? Well, if you're an allied soldier on the ground you think that's ok, the RAF chaps, they're doing their job well. If you're a German, you sit up and look at that, you know every single one of those is after you. Every single one of those has got rockets and guns and it's waiting to have an opportunity to fire at you. You've got a thousand missions coming in. As soon as that thousand is finished, another thousand gets in and they're just waiting.

Say, you end up in a situation where this air superiority is turned into form of air dominance. At the same time weapon accuracy was improving. So that was also increasingly stress on people. Let me give you a quote from German medical reports at the end of the war. It says this: “Prior to 1943 infantry weapons were leading cause of casualties. The artillery second, and aircraft third. During 1944 and '45, aerial weapons were far ahead of the artillery or infantry as a cause of casualties in the German armed

forces.” It’s not civilians in Dresden or Bremen, this is the German armed forces. So air power has moved into dominance in terms of its ability to destroy things on the ground. And psychologically that has to have an effect. But of course even then, even though they had air dominance, remember, at night the Allies could not use their fighter bombers. So night was the one time the Germans could operate. So we end up in the situation where these things dominate the day and have complete control of the tanks that are brought in to fight. Well, this is reflected by this chap, commander of the 3rd Panzer Division, Fritz von Bayerlein. Panzer was a (inaudible) German division, you can see that as well. It was somewhere down the Lyon on the start of D-Day. It was moved from the south all the way up into the war zone and fought with some distinction as it turned out once it came into contact. but on the way north as he says there: “The number of men who survived the pattern bombing surrendered soon to the attacking infantry or escaped to the rear.” That’s not so good if that’s your commander of (inaudible) Panzer Division these people are giving up. And he said: “The uselessness of fighting (...). Only particularly strong nerved (...) could endure this strain.”

And indeed the real effect seen by the Typhoons occurred on this battle, the Battle of Mortain which occurred as you can see 1200 hours. What basically happened is that the Allies were moving down to the south and the Germans, their only opportunity to impact on the movement down to the south was to bring up a number of Panzer divisions. And you can see them up there. Each one of these is a tank division. That’s infantry with the X on it, so three infantry divisions and let’s see: one, two, tree, four, five – ten divisions. And so in August the counter attack began and they reached this place called Mortain. At this time there were very, very few troops here, most of the troops themselves, the allied troops, were quite a long way forward. And so it looked quite likely the enemy would cut them off and create an encircling movement.

The only option really was to attack them using Typhoons. So Typhoons were sent in and during the course of the morning they found that it was almost impossible to fly because of the low cloud and fog. But by lunchtime when the weather cleared these things then rained and attacked all the German tanks they found. And as Eisenhower recorded in his journal after the battle had taken place, these typhoons destroyed eighty three tanks, probably destroyed a further twenty nine and damaged up to twenty four, in addition to the large quantities of material on motor transport. Some two hundred ninety four sorties were flown, the Luftwaffe were ordered to support at maximum effort, that virtually all of them were shot down as they lifted off from their airfields. As far as the Germans were concerned, their last throw of the battle to stop the bridgehead from breaking out had failed.

The net effect was that 7th army which would become squeezed because at this stage while it was moving down to the south, found themselves in the pockets known as the Falaise Gap. And it was in the Falaise Gap that as the noose was slowly but surely tightened, so the Germans found themselves increasingly squeezed. And once they were fixed like this they became targets, not an army in the field. All concentration into closed pocket in a small area. So the noose tightened, the army became depressed, fewer and fewer roads, continuous air attack. And so what do they do? They dropped weapons and

ran. And so when you see pictures of the Falaise Gap, you find an awful lot of abandoned vehicles, abandoned tanks, abandoned material, some people surrendering, but most of them have just given up and ran. So very similar situation to what had happened with the Spartans.

But what was the overall effect? Well, as you can imagine, German troops were becoming increasingly demoralized by this overwhelming Allied air capability. Most of all those who became stranded of course that was also going on at Normandy and then of course there was Normandy evacuation. So you can end up in a situation where **the (inaudible)** have come through, do not move by day. And in fact whole divisions would move under cover and stay so they couldn't be seen. At night they could then move forward again.

So let's just have some of the effects. Well, concealment. Conceal yourself, hide yourself away. Make sure nobody notices you. Then you come on to the next thing. I found this... In fact it's a translation from the German book. This is a German motorbike, and the apprehensive glance skyward epitomizes the all-embracing effect of Allies's air supremacy. But a common thing that was said at the time by these people was, where is the Luftwaffe? Here we are fighting and dying, moving forward with our tanks doing what the Fuehrer has ordered. Where's the bloody air gone? What have they done? Why aren't they here supporting us? Why should we had to endure all the punishment all by ourselves? So this is a sense of betrayal: where is the Luftwaffe?

Of course you'll remember I mentioned Rommel already. This is a letter that he wrote to his wife. So it has the sense of not just something that's for public consumption. This what he actually told his wife: "The enemy's air superiority has a very grave effect on our movements. There's simply no answer to it." And when you psychologically give to the point where you say there is no answer to it, you've gone a long way psychologically to deciding you're defeated. There's no answer to it, there's no way of getting out of this particular situation. In fact it echoes a letter written by von Kluge to Hitler about a week later after Rommel was strafed by a Typhoon. And von Kluge said the same sort of thing. So a sense of hopelessness. There's simply no answer to it.

But the Germans thought they had an answer to this overwhelming dominance by the fighter bombers. And it went something like this: the Germans were told if you encounter fighter bomber attack, get out of your vehicles and run. Well, that was fine, Typhoon comes down, takes out the vehicles, pulls off, notice the troops on the field, goes round again, comes in, then machine guns down the troops in the field. That didn't work. Next idea. Let's tell the guys that when they get out of their vehicles to get underneath the vehicles because they get some protection from the vehicles. Well, that doesn't work because there are armour piercing projectiles. They go straight through the vehicle hitting the troops underneath. Next good idea. Get out of your vehicles and go and find somewhere to hide. Well, that's fine except that as your vehicles are moving forward there're probably not too many places to hide. So you still get attacked the second time around.

So this was the psychology of the Wehrmacht: very soon we will be told to take on the fighter bombers with our rifles. We tried little stupid ideas, let's think of something even more stupid. It's totally pointless or totally futile. So you end up in a sense here of pointlessness. There's simply no answer to it and all resistance is futile. There is no point in doing this. We've been told all sorts of nonsense. But you can of course go one stage too far. And that is if you tell somebody he's going to die, and it doesn't matter what he does, you're still going to kill him, then he might just as well fight you like a cornered rat. Because he's got nothing to lose and he will think, "Ok, I'll take some of these bastards with me." And so at that particular stage we're in the situation where he's going to fight you right to the last minute. Because at least he'll get some satisfaction.

So in the way in which this whole build-up of psychological pressures work, if you go too far they'll fight you to the death. And of course to some extent that was what was beginning to happen at Stalingrad, until suddenly the Russians realized they've got to give these guys a way out because otherwise we'll have the whole of the 6th army desperately fighting us for every single corner. And so, with psychological pressures, you must not create that sort of situation.

But I will now fast forward and I want to talk about Gulf War of 1991, and I'm not gonna go through this in too much detail except saying that this was the first war when precision-guided munitions were used for the first time. I mean, at the time everybody said how the hell they can do this and it seemed almost unbelievable. The Iraqi Air Force, unlike the Typhoons, could not get that sort of accuracy.

What was the effect? Well, a lot of things sort of came up. We didn't have the effect from the strategic air operations. We thought that the effect really came from the army. The Iraqi army in the field found the attacks by the allied aircraft absolutely devastating. There was a sort of synergy with psychological operations taking place and I'll just mention those very quickly.

We ended up doing a thing called tank plinking and let me just describe to you that very briefly what that is. F-111 aircraft would arm up with four laser-guided bombs, they take off at six o'clock at night, they go up into the Kuwaiti theater of operations, come across the Iraqi tanks. But the first cross would take down the first tank, drop the first bomb – direct hit. Okay, on to the next one – direct hit. The F-111 would return to base, get another four laser-guided bombs and return to the theater of operations now eight o'clock, go into the slot and carry on the process. This became known as tank plinking. Because it was like a game of space invaders. That became known to the Iraqis and they found it highly demotivating. And in fact general Schwarzkopf then insisted that this war was never to be used again. Not because he objected to it being used against the Iraqis, but because it was demotivating for our own tank crews. They were thinking, oh my God, if it's that easy, perhaps they're going to do this to us. So that was the sort of capability that was being visited at home. The effect was that some 87,000 surrendered, 150,000 deserted, with minimal casualties on both sides.

Let me just show you one of the reasons why this sort of thing worked out. Well, we did apply physical stress to them. We cut them off, we made sure the Iraqi army had no communications, no water, no food and no information. For most of the Iraqi soldiers they were attacked every three hours, the attacks by Allied air power are devastating. There was absolutely nothing they could do. In addition, this was amplified by the psychological operations. But of course it's really the combination of what I've described, and these things that really had an effect. Volant solo transmitting on the radio frequencies of the Iraqis in the field who were listening to radios that had been dropped purposely by us so they could listen to our transmissions. You can see lots of leaflets were dropped, and you can see sort of measured message there. A B-52 dropping bombs. "The 16th Infantry Division will be bombed tomorrow. Leave this location now and save yourselves." And this was dropped in huge numbers so much so that some Iraqis said you couldn't see the ground because it was just covered by these particular leaflets.

This was then dropped after the event: we've kept our promise. We kept our promise because, guess what, tomorrow it's your turn. And this was the stage where many of the Iraqi forces in the field suddenly recalled they had an urgent appointment in Baghdad tomorrow, off they went to see the dentist. And so after an awful lot having realized, having seen the success of what happened yesterday or even indeed this morning, when they receive new message, which is essentially a contract: Tomorrow morning at ten o'clock I'm going to kick your backside. When they received this message they knew it was true. They knew that at ten o'clock plus or minus a minute they're going to die. And that is pretty demotivating, particularly if you know there is nothing you can do about it. There's no way you can fight against it and there's no way of managing to overcome it.

The psychological operations information. I mean, this is the sort of exposure, so radio broadcast, 58% of the enemy was exposed, but it was leaflets that really had the effect. And you can see the 70% found themselves wanting to surrender and virtually all of them had seen the leaflets.

But the weapons that they really disliked as much as anything else were things like B-52. Three of these things could drop the same amount of artillery power as a core of artillery. So these things will arrive I say every three hours. Very effective indeed and very, very frightening.

So the psychological effect that we had was really this: the idea of bombing, then leafleting, then bombing, got inside the minds of the people who were subjected to it. This created in turn this sort of sense of anticipation and fear. I have seen what has happened, and this is not going to happen to me. And there's nothing I can do about it. But at the same time we provided leadership substitute, because we said to the Iraqis this is not a battle against you, this is a battle against Saddam Hussein. Leave your trenches, walk in the direction of Jeddah and we will take care of you, we will give you water and food and we will repatriate you. So essentially we gave them a way out and that was most important. Because we didn't want to get them into the position were like a cornered rat they were going to fight to the death.

So what did the POWs think about this? These are some of the comments that they made. "The propaganda leaflets produced the highest threat to our morale, second only to the allied bombing." I would say as well we missed the point that it is the combination of the leaflets and the bombing that has the effect they are talking about. "The Iraqi troops felt resistance was futile as they were against the wall. Radio reports of B-52 bombings caused desertions. The leaflet campaign told the soldiers to leave their vehicles to avoid injury. It proved what George Bush had said about not fighting the Iraqi people."

And the weapons that really the Iraqis disliked: B-52 I've mentioned, the A-10 because it was always there, and then the leaflets. They hated the fact that either the airplanes turned up or indeed the leaflets were dropped. So what were the effects? Well, the enemy was always there. That's what the Iraqis kept on harping on about. Every three hours more airplanes would turn up. The Iraqis felt they couldn't affect the battle. There was nothing they could do. Doesn't matter whether they would get up in the morning, didn't get up in the morning, stayed in their trenches. It couldn't affect the outcome of the battle in the slightest degree. In Iran-Iraq war they manned their tanks. As I described in tank plinking, tanks had a nasty habit of just blowing up, because obviously they were hit. And then there was this one here, the B-52 bombs that arrived they were guided by the will of Allah. There was nothing they could do to affect them in one way or another. And finally there was this feeling that resistance was utterly futile.

I just want to bring now these three campaigns to a point just before I go on and look at it very brief lead in the last few minutes. Let's just go through some of the effects that we discussed. So here we are with the Spartans and Thucydides commenting on them. The Spartans felt themselves outnumbered, which was true - they were. In World War two the Germans, well, they hid by day to avoid the fact that they were outmaneuvered, outnumbered by the allied air power. And in Gulf War One the enemy was all-pervasive. So huge asymmetry in capability: we're outnumbered.

What about this one? Surrounded, no frontline, can't form phalanx - we've got to get our phalanx, cause once we form our phalanx, we can advance on the enemy. Well, you can't because every direction you look there're bloody archers.

Where's the Luftwaffe? We can't do anything because bloody airplanes keep arriving. Sense of betrayal.

And here we have the Iran-Iraq war, the tankers are protected. So all the expectations that you have that really come out of this war are all now set at zero. We expect to be able to fight a war with our Spartan frontline, we expect to fight another conventional battle with the Luftwaffe stopping enemy air attacks, but now, every time I go in a tank it blows up.

Let me come on to the physical factors. The thorn bushes, the dust, the smoke and the noise - you can't hear. World War II - same sort of sense of hopelessness. I can't fight

against this. It's just not possible. And again somebody else is controlling. So these are sort of the physical things that I can't really control.

And then we come on to the next thing: vulnerability. Lots of wounds. Fight the fighter bombers with your pocket knives. Resistance is futile. Impotence. I can't affect the battle. A sense of pointlessness. And so you end up in a situation where down to there they're all positive, and then you get into a surprise and panic mode and driven to give up and run away. So down to that point we are in a position where we've considerably seen commonality of sort of experiences of armed men in the field being attacked by some sort of capability that is far greater than themselves.

But let's not forget the rage phenomenon and that still is there. That phenomenon is always there wherever we go and wherever we find ourselves. And any commander who doesn't notice that or forgets to take due account of that is probably going to set himself up.

Well, let me talk about the psychology of war. And I think you've probably got some of these messages so I should be able to go through them quickly. Everybody has its limit, everybody in this room can be undermined. And if you look in your heart, I don't know if there any particular heroes here, but I can tell you I certainly know I have my limits. I've been interrogated, I've been into war and there are some things I could tolerate and some things I couldn't tolerate. I frankly would never want to be captured. I'd probably would commit suicide rather than be captured. For everybody, you have a limit and it varies in your age and culture, and indeed your personality. Ultimately, ladies and gentlemen, you are animals. And you will perform quite often as animals. And there's nothing you can do about that. If a ghost suddenly appeared, oh my God, you'd have all sorts of weird reactions. But they will be very animalistic, very zoological.

These are the sorts of things that cause the difficulties. Claustrophobia. Noise. Isolation. Fatigue. Climate in terrain. Discomfort. Hygiene. Idleness. Helplessness. Those are the things that if you are finding yourself under stress, those are the things that will make your situation worse and worse and worse. So what do we get out of this? We've put these people under stress, we give them all sorts of nasty experiences. What you then get out of it is what's known as a combat stress reaction which is the sort of event that occurs to individuals when things go very wrong. So you cease to function or you function in a highly extreme manner. The symptoms are, well, I mean we've all been through these because actually a combat stress reaction is not whole different to being at school and taking exam, particularly when you haven't studied for particularly well. Some expected reactions include anxiety, trembling and sweating, depression. Tears, thoughts of suicide. Then move on to some more interesting ones: dissociation. A lot of people who find themselves in extremely difficult situation pretend they're not there. The most extreme we found was true with some of the Iraqis when they came under air attack, they were going to sit in a corner down there somewhere and just curl up in the fetal position, waiting for it to end. I'm not really here, actually. Because that was the only way to cope with this sort of stress. They would just remove themselves physically, but psychologically mostly out of the way.

So the next ones you get. Personality changes and hysteria. This is typically demonstrated by somebody who goes insane. This used to happen a lot in the trenches in World War I: I can't take it anymore longer! And they ran up onto the parapet to be shot by the first machine gun. But that's the sort of things that can happen.

Then you move on to more sort of a deep-seated effect, some of it eventually becomes unconscious and finally end up with some sort of psychotic reactions.

Down to about here these are reversible. So probably even to dissociation you can reverse that by taking the guy out of the front line. Once you get onto this sort of level and beyond, you've probably unlocked a guy's brain, he's no longer functioning. He's probably a basket case for the rest of his life.

I'm going to leave this because time is not on my side. If you want to carry out attacks on people and flick this sort of stress, but it's important that when you do it you understand what the enemy's values are, what really unhinges him, and you also understand what his expectations are. What did the Spartans expect when they were at Sphacteria? They thought they were going to form a phalanx and drive the Athenians out. A bloody battle, ok. But that's what they expected. When they got the unexpected that was no good. Because the expectations were considerably exceeded. So when you do this, you must work this out, and exceed whatever expectations he has, because then you will start to get some return. You need also to demonstrate if you're going to do this psychological bit, that you are omniscient and omnipotent. There's no point for example in saying to the 16th Division in Kuwait, guess what, we're going to kick your head or blow your lights out at ten o'clock tomorrow morning and then to drop your bombs in the wrong place. Or to turn up at half past ten and miss the target. You've got to demonstrate you're capable and you know what you're doing. And then you of course have all the cards. He on the other hand has no capability at all. And it doesn't take him long to realize if he is impotent, then he is in a situation of hopelessness. Now, hopelessness by itself doesn't do the trick, you can wait till it goes away. What you're then going to do is creating in his mind a concept of futility, of pointlessness. You are cannon fodder, your dying achieves nothing. You are here just to die. And if you can get that message through to him, then you would have done your work because then people will understand exactly whatever they do they cannot affect the final outcome. Of course, if you're going to wage the psychological warfare, you must always whenever conducting stressful activities, give them a way out. Because if you don't, then any enemy you have will fight you and fight you hard, and fight you to the last. Because he's going to take you with him and it's just payback time.

So there, ladies and gentlemen, it is. That is all I'm going to say. Let's have a break for ten minutes and return at four o'clock. And I'm going to move from the psychological-tactical up to the interstate level, and see if these sorts of things, see if the Spartan effects experienced at Sphacteria actually relate to the way states start to see their behavior.

So, thanks very much.

*

*

*