PART ONE

Strategy

Sea-Lion *(Otariidae). A carnivore modified for aquatic life.*

— *ENCYCLOPEDIA*

History is swamped by patriotic myths about the summer of 1940. Many of these were generated by the shame of that portion of the British public who – after the fall of France – declared that it was time to negotiate terms with Hitler's Germany. It was a view shared by men of the Left and of the Right. The former believing that the Hitler-Stalin peace pact would last, and the latter hoping that it would not.

The Swedish ambassador in London reported back to his Ministry in Stockholm that he had spoken with people, including Members of Parliament, who wanted to seek terms with Hitler. He reported a senior member of the British government as saying common sense not bravado would govern British policy. From Washington, the British ambassador was prepared to seek out contacts for such a move. In Lisbon Sir Samuel Hoare and in Berne David Kelly made contact with possible intermediaries to get German viewpoints.

Lloyd George, the 'Churchill' of the First World War, wanted peace with Hitler, had wanted it for some time, and seemed not to mind who heard him say so. In Berlin his name had already been mentioned as a possible leader of a puppet regime. Even in the tiny, five-man War Cabinet that Churchill had formed, there was not unanimous determination to go on fighting. Lord Halifax,

the Foreign Minister (who had only narrowly missed becoming Prime Minister instead of Churchill), suggested that they prepare a reply to Germany, to have ready if Hitler offered peace on reasonable terms. Chamberlain, now in Churchill's War Cabinet as Lord President, supported the idea of compromise.

Sardonic then was Churchill's choice of Halifax to go on the BBC and reject unequivocally Hitler's peace offer. For Churchill there would be no talk of peace terms. Already 65 years old, long derided as a warmonger, he declared his intention to fight, 'however long and hard the road may be'. Significantly perhaps, Churchill went to great trouble to get an important member of the Royal Family to the far side of the Atlantic where the Duke of Windsor became Governor of the Bahamas.

Churchill called himself Minister of Defence, artfully 'careful not to define my rights and duties'. Daily meetings with the Chiefs of Staff gave Churchill tight control of the progress of the war. The three service ministers were brushed aside and not even invited into the War Cabinet.

Churchill had his priorities right; Fighter Command's men and machines would decide whether or not Hitler came to London. Churchill, the first British Prime Minister to wear a uniform while in office (even Wellington did not do so), chose the uniform of the RAF. His only major change in the system, or the men who ran it, was to create a Ministry of Aircraft Production and give it to a newspaper tycoon to run.

But not until the Battle of Britain was won did Churchill gain the wholehearted support of the British public. No wonder then that he devoted so much of his time and energy, to say nothing of rhetoric, to convincing the British that they had won a mighty victory.

Broadcasting over the BBC on 11 September 1940, Churchill said, 'It ranks with the days when the Spanish Armada was approaching the Channel, and Drake was finishing his game of bowls; or when Nelson stood between us and Napoleon's Grand Army at Boulogne.' Later he was to point out that the great air battles of 15 September took place, like Waterloo, on a Sunday.

The Battle won, men forgot their ideas about a compromise peace with Hitler. Wartime propaganda, much of it primarily intended for American newspaper and radio correspondents, provided material from which a David and Goliath myth was engineered. It suited all concerned, except the Germans, who still today insist that there was no such event as the Battle of Britain.

The Battle of Britain, although small in scale compared with the later fighting, was nevertheless one of the decisive battles of the Second World War. It converted American opinion to a belief that the British, given help, might win. This belief fed anti-German feeling. Until now dislike of Nazism had been repressed, because Americans felt that they couldn't do much about it. In 1940 they began to believe they could do something about it, and Britain provided a focal point for many disparate anti-Nazi elements, from émigrés to labour unions.

In military terms, the Battle proved that Britain was a secure base, from which the USA could fight Germany. More importantly, but less accurately, it convinced America that air-power was the decisive weapon with which to do it.

In June 1940 the French signed an armistice with the Germans. The British had been killed, captured, or had departed. The refugees turned round and began the walk home. Hitler took two old comrades on a tour of the 1914–1918 battlefields, where he had served as a corporal.

Hitler now ruled a vast proportion of Europe: from the Arctic Ocean to the Bay of Biscay. Stalin, his new friend, was supplying oil, cattle, grain and coal. Rumania, Hungary and the Balkans were all anxious to do business with their rich and powerful neighbour, as teams of German technicians investigated the resources of the conquered lands.

The German victories had been a direct result of brilliant generalship and highly skilled, well-equipped armies with good morale. Yet by the spring of 1940 – in spite of months of war with Britain – the Wehrmacht had made no preparations whatsoever for any direct assault upon a hostile shoreline.

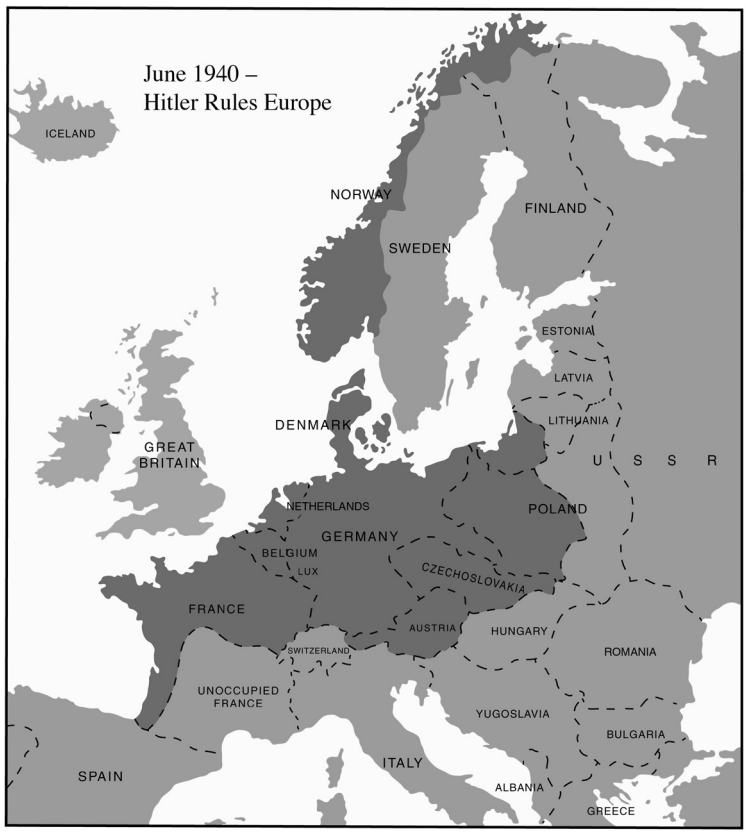

FIGURE 2

By the summer of 1940 Hitler had created a centralised Europe ruled from Berlin. The USSR had invaded Poland and split it down the middle with Germany. That part of France not occupied by the German forces was little more than a satellite. The German mark was pegged artificially high in respect to other currencies so that wealth moved back into Germany without the victims realising what was happening. Anxious to be in at the kill, Italy declared war in the final hours of France's agony and nibbled pieces of territory. The Balkan countries, given the choice of co-operating fully or being taken over, co-operated.

Unlike the Anglo-American armies later in the war, the Germans had no landing craft – for tanks, trucks, or men – no artificial breakwaters, no trained beach-masters, or any system of sea-route marking. In fact, the only army with any experience, or adequate equipment, was the Japanese army, which operated its own sea transport. It had made amphibious landings on the banks of the Yangtse river in 1938. At the time there had been a flutter of interest from military commentators but, apart from some experiments by the United States Marine Corps, no high commands envisaged a need for such techniques.

It was not until 12 July 1940 that the OKW – the High Command of the Wehrmacht – prepared a memorandum about invading England. Even then General Alfred Jodl, its author, described it as being 'in the form of a river crossing on a broad front'. He called it operation *Löwe* (Lion). Hitler took this memo and used it as a basis for his Directive No. 16, 'on preparations for a landing operation against England'. He changed the name to *Seelöwe* (Sea-lion).

Hitler's Directive No. 16, a top-secret document of which only seven copies were made, asked the army and navy chiefs for more proposals. But the Luftwaffe had a specific task: it must reduce the RAF morally and physically to a state where it could not deliver any significant attack upon the invasion units. To Göring that seemed possible.

In the heady days of that summer anything seemed possible. In Berlin representatives from the Welsh Nationalist movement were already talking of their coming role. So was a senior official of the IRA, which had been exploding bombs in England for several months before the war. The Welshmen made no progress with the Germans; the Irishman was sent home in a U-boat in August 1940, but died en route and was buried at sea, his body shrouded in a German naval ensign.

In France the German army was devoting some of its finest units to preparations for a great victory parade through Paris. *Generaloberst* Heinz Guderian, architect of the blitzkrieg, was in

the capital, along with many other senior members of the army and air force. *Feldmarschall* Hugo Sperrle, commander of Air Fleet 3, had made it his headquarters.

Units rehearsed for the victory procession included massed motorcycles and tanks. German flags were prepared for all the façades in the Place de la Concorde, and blue hortensias for the Étoile. Press reports of the event were prepared but not yet dated. The only cloud on the horizon was a growing fear that the widespread publicity would invite a decidedly unfriendly flypast by the RAF. On 20 July caution prevailed; the whole scheme was abandoned and the men went back to their units.

By that time, Berlin had enjoyed a victory parade. It was a modest affair. Local conscripts of the 218th Infantry Division marched through the Brandenburg Gate. Joseph Goebbels, Minister for Public Enlightenment and Propaganda, took the salute. Hitler was not present. He was saving himself for the following evening, when the whole Reichstag and an astounding array of Generals had been summoned to hear his speech. Appropriately this glittering event took place in the Kroll Opera House. Hitler's speech was a long one and he used it to claim personal credit for the victories of 1940. 'I advised the German forces of the possibility of such a development and gave them the necessary detailed orders,' said the ex-Corporal to one of the most dazzling arrays of military brains ever gathered under one roof. 'I planned to aim for the Seine and Loire rivers, and also get a position on the Somme and the Aisne from which the third attack could be made.'

One eye-witness was William Shirer, who later described Hitler as an actor who this day mixed the confidence of the conqueror with a humility that always goes down well when a man is on top. Almost in passing, Hitler offered Churchill a chance to make peace. It was 'an appeal to reason', said Hitler. Whether he hoped that his appeal would bring peace is still argued. Some say it was no more than a way of 'proving' to the German public that it was the British – and more specifically Churchill – who wanted the war. We shall never know. It was in Hitler's nature to seek

opportunities and pursue those that seemed most promising. '*So oder so*,' he would repeatedly tell the men around him: achieve it either this way or that way.

When the applause of that multitude of generals, politicians and foreign dignitaries died away, Hitler began to distribute the honours. He created no less than twenty-seven new generals. Mostly they were men who had commanded armies or panzer groups to win for him the great victories in Poland, Norway and the west. But artfully Hitler arranged that yes-men such as Alfred Jodl and Wilhelm Keitel – who had told Hitler, 'my Führer, you are the greatest military commander of history' – got double promotions and seniority. While Gustav von Wietersheim – whose motorised infantry corps had consolidated the panzer thrust by which Guderian skewered France – was passed over because he had argued with the Führer in 1938. The lesson was learned by some.

So many new promotions were announced that there was not time for the Generals to receive Hitler's personal congratulations. As each name was called, a General stood up and gave the Nazi salute. There was then a brief pause while other officers leaned across to shake hands and, according again to Shirer, slap the back of the officer honoured.

By the time that Hitler had finished creating Generals, and no less than a dozen Field Marshals, there could have been few men in the opera house who did not understand that this was a cunning piece of megalomania that, while thoroughly debasing the coinage of high rank, defined Hitler as the man who owned the mint.

It was an unprecedented step. The Kaiser made only five Field Marshals in the whole of the First World War. Even General Erich Ludendorff had failed to find a baton in his knapsack. Now Hitler made twelve after less than a year of war, and the fighting had covered only a few weeks. But the new *Generalfeldmarschälle* were delighted. In Germany such exalted rank, from which the holder could neither be retired nor demoted (or even promoted), brought the provision of an office, a secretary, a staff officer, motor vehicles

and horses, and full pay and privileges. And all this for life – or until defeat. A Field Marshal ranked above Reich Chancellor in the protocol lists but not above Führer, which was a new post invented by Hitler for himself.

In order to rescue Göring from the new squalor of Field Marshal rank, Hitler invented a new post for him too. Göring received an extra-large baton. Hitler passed it to where Göring was sitting alone in the Speaker's Chair, and the *Reichsmarschall* could not resist opening the box to get a glimpse of it. And for Göring an old medal, the *Grosskreuz*, was revived. From this date onwards Göring can be seen in photographs wearing his special uniform with the huge cross dangling at his neck.

Three of Göring's Luftwaffe Generals became Field Marshals at the Kroll Opera House ceremony. One was the dapper little Erhard Milch, senior man at the Air Ministry, as well as Inspector General of the Luftwaffe. The other two were Albert Kesselring, commander of Air Fleet 2, and Hugo Sperrle of Air Fleet 3. Both men were double-jumped in promotion from *General der Flieger* to Field Marshal. Was this an idea of Göring's, to lessen Milch's power? Until this day he had been the Luftwaffe's only *General-oberst*. If so, this divide-and-conquer policy was something Göring had learned from Hitler. To be an arbitrator between rival subordinates is a well-established device of the tyrant. It consolidates power. But in July, as the first skirmishes of the Battle of Britain were taking place, Göring and his three Field Marshals were about to learn that it was no way to win a battle.

Hermann Göring

Hermann Göring grew up in the gothic shadows of a castle at Veldenstein near Nuremberg. His father was a retired government official, once senior officer in German South-West Africa and Consul-General in Haiti. Göring's godfather – a wealthy bachelor named Epenstein – was a friend of his family. He owned the castle, lived in stylish quarters on the top floor, and shared his bed with Göring's mother. Her husband tolerated this arrangement.

While still a small child, Hermann went to boarding school. He grew up to be an ill-disciplined boy, so bold that he seemed incapable of recognising physical danger. This seemed exactly the right qualification for military college, and so it proved. By the time war began, in the summer of 1914, Göring was a promising young infantry officer, although not promising enough to be accepted for flying training. So, without him, his closest friend, Bruno Loerzer, went off to get his wings.

As Loerzer finished pilot training, Hermann Göring was nearby, hospitalised by arthritis, after considerable front-line service. Göring could hardly walk, and there was no question of his returning to the trenches. Defying all military regulations, Loerzer put his friend into the back seat of his aeroplane, and they reported for duty, with Field Aviation Unit No. 25, as pilot and observer.

It says much for Göring's famous charm that the crippled young officer escaped a court-martial, and was allowed to become an aviator. For the Air Service it proved a wise decision. This lame subaltern became one of Germany's most famous fighter pilots. He won the coveted *Orden Pour le Mérite* – the Blue Max – and succeeded von Richthofen to command *Jagdgeschwader 1*, the legendary 'flying circus'.

For Loerzer it was also a wise decision. Göring never forgot his friend's loyalty, and on 19 July 1940 at the Kroll Opera House he became a full Luftwaffe General.

In the final hours of the First World War, as communists fought to seize power throughout Germany, Göring came into conflict with a 'soldiers' soviet' in Darmstadt. Göring came off best, as he did later when faced with a mob intent on roughing up any officer in uniform, on the grounds that such men were responsible for the war which Germany had lost. But doubtless these events played a part in Göring's acceptance of the Nazi creed. And the Nazis' pathological hatred and fear of Jews went unchallenged by a man who had seen his father humiliated by his mother's Jewish lover.

In 1922 Hermann Göring joined the Nazi Party. The presence of this ex-officer war hero was very reassuring to the middle classes whose support the Nazis badly needed.

Göring was always the Nazi candidate for political office. He was used to show the voter how responsible the party could be when in power and how willing it was to conform to parliamentary democracy. And so it was Göring who became the President of the Reichstag and the Prime Minister of Prussia.

Hitler appreciated the importance of Göring. When the Nazis got power, Hitler gave him an authority second only to his own. Göring organised storm troopers, took over the Prussian Ministry of the Interior, formed the Gestapo, set up the first concentration camps, and took charge of the economy for the Nazi 'Four Year Plan'.

A fine horseman and a crack shot, Göring was able to combine his enthusiasm for hunting with a sincere concern for wildlife, and opposition to vivisection. In his youth he had been something of a womaniser but two contented marriages provided him with a stability that many of the other top Nazis did not have. He met his first wife, a countess, after flying through a snowstorm and landing on a frozen-over lake in Sweden. His passenger – a well-known explorer who'd engaged Göring to fly him home – offered him hospitality in his castle. It was there that Göring met his future wife.

For pleasure Göring read detective stories, his favourite authors being Agatha Christie and Dashiell Hammett, but he could talk with some authority on subjects as varied as mountaineering and the Italian Renaissance. And he could do so in Italian if need be.

Göring's rise to power gave him a life-style rarely equalled in the twentieth century. He had castles, several hunting estates with grand lodges, and town houses too. The most remarkable of all was Karinhall – named in memory of Göring's first wife – built between two lakes, with formal gardens, fountains and bronze statues, as well as a large section of private countryside. His servants

were dressed in comic-opera outfits: knee-length coats with rich facings, high white gaiters, and silver-buckled shoes. There was a swimming pool, a vast library, gymnasium, art gallery, and one of the world's most elaborate model-railway layouts. His study was larger than most houses, and in its ante-room there was a wall covered with photographs inscribed with varying degrees of enthusiasm: Boris, King of Bulgaria, 'to the great marshal', Prince Paul, Regent of Yugoslavia, 'with thanks', Hindenburg, 'to Göring'.

The pink, girlish complexion, overweight body and many childish indulgences masked a personality capable of superhuman self-control. Göring, wounded during the 1923 putsch, became a morphine addict as a result of his treatment. He eventually cured himself of this addiction by willpower alone.

Five feet nine inches tall, Göring was dynamic – a fluent and persuasive enthusiast with a powerful handshake and clear blue eyes – and many of his antagonists fell prey to his charm.

Göring's civil power as Air Minister, his military rank as Commander in Chief of the Luftwaffe, and his political status made him incomparably more powerful than any other military leader in Germany. To retain his advantage, Göring was quick to point out to Hitler any failing of his rivals: the army Generals. The power and prestige of pre-war Germany had been largely due to the show of air-power that Göring's Luftwaffe had staged. Hitler responded by treating the Luftwaffe as a privileged 'Nazi' service, while describing his army and navy as 'Imperial' legacies of the old regime.

As a confidant of Hitler, and by 1940 named as Hitler's successor, Göring had personal access to the supreme command. As a 'General' who gave the army the closest possible co-operation, Göring was important to the men of the General Staff. As the air ace who inherited von Richthofen's command, Göring had an unassailable authority among his own flyers.

In 1940 the victories in the west gave the 47-year-old Göring new power, and new tastes of luxury. He went shopping for diamonds in Amsterdam, and took a suite at the Ritz Hotel in

Paris. Göring liked Paris so much that he decided to move into a fine house on the Rue du Faubourg St Honoré. That this was the British Embassy – now unoccupied except for one caretaker – made it no less attractive.

Göring took the German ambassador with him to inspect the property but when they explained the purpose of their visit, the custodian said, 'Over my dead body, your Excellency', and closed the door in their faces.

As far back as 1933, Hitler had authorised Göring to start a national art collection which would remain in Göring's hands for his lifetime but then become a public collection. The conquests of 1940, and the way in which the European currencies were all pegged artificially lower than the German mark, gave new impetus to this collection. Many art treasures were simply seized: 'ownerless' Jewish collections and 'enemy possessions' were taken into new custody. To obtain paintings from unconquered countries, Göring simply swapped his surplus. A dealer in Lucerne, Switzerland, received 25 French Impressionist paintings in exchange for 5 Cranachs and 2 German Primitives.

The regal splendour of Göring's life-style was completed by his train. Code-named 'Asia', its vanguard was a pilot train which accommodated the staff – civilian and military – in comfort that extended to bathing facilities. There were also low-loaders for cars, and freight wagons for Göring's shopping.

The train in which Göring travelled, and sometimes lived, was specially weighted to provide a smooth ride. This luxury meant two of Germany's heaviest locomotives were needed to move it. One coach was designed as bedrooms for himself and his wife, and a study. Another coach was a modern cinema. A third was a command post with a map room. A fourth was a dining car. There were also carriages for his senior commanders and for guests, some of whom (Milch, for example) had a whole carriage to themselves. At front and back, there were special wagons with anti-aircraft guns and crews, although whenever possible the train was halted near tunnels as protection against air attack.

In the spring of 1940 Göring, who liked to be called 'the Iron Man', ordered his train west to Beauvais in France, a suitable place to command his Luftwaffe for the attack upon England. Few doubted that *Der Eiserner* was about to lead his Luftwaffe to a unique military victory. To do it would be nothing less than a personal triumph.

The Rise of the New German Air Force

In November 1918, a defeated Germany was forbidden the use of military aviation. Since there was at that time virtually no other sort of aviation, about a hundred large companies were without work.

AEG (manufacturer of the G.IV twin-engined bomber) had already planned for such a contingency. As early as 1917, they had formed Deutsche Luftreederei, an airline which would use the aircraft they built. So within three months of the war's end, the world's first civil aeroplane airline* connected Berlin with Leipzig, Weimar and Hamburg.

Professor Hugo Junkers, another German aircraft manufacturer, was just as quick to adapt to the changing times. On the very morning that the Armistice was signed, he had held a senior staff conference to discuss the changeover to manufacturing civil aircraft. By 25 June 1919 – three days before the signing of the Versailles Treaty – the outstanding Junkers F-13 was test flown. And while the other transports in use were cumbersome old wood-and-fabric biplanes, Junkers's new machine was an all-metal cantilever monoplane, and such a breakthrough in design that sales were made in spite of the thousands of war surplus aircraft that were available at give-away prices. It was a period when many wartime flyers formed one-man airlines. But the manufacturers were in the most advantageous position to prosper, and Junkers had shares in several airlines.

* The world's first passenger-carrying airline service was operated by Zeppelin airships before the First World War.

Professor Hugo Junkers came from an old Rhineland family. He was a scientist, a democrat and a pacifist. He was also a genius. While working on gas-stove design he became interested in the efficiency of layered metal plates for heat transfer. He built himself a wind tunnel to study the effect of heated gases on various shapes, and ended up as the most important pioneer of metal aircraft construction.

By 1918, as the First World War ended, Hugo Junkers was already 60 years old. He was a white-haired old man with a large forehead and clear blue eyes. He had a large family but was ready to 'adopt' brilliant newcomers.

The most successful of Junkers's protégés was a small, rather pop-eyed man named Erhard Milch. No account of the Luftwaffe, its victories or its failures, would be complete without devoting some words to this strange personality.

Erhard Milch did not create the Luftwaffe (that was the role of General Hans von Seeckt and dated from his memo of 1923), but Milch wet-nursed the infant air force, and dominated it right up to the end.

Milch was born in March 1892 in Wilhelmshaven, where Milch senior was an apothecary of the Imperial German Navy. 'Loyalty to the Kaiser and loyalty to my country were the only political doctrines I received either as an officer or earlier in my parents' home,' he told the judge at Nuremberg at his war-crimes trial.

But the dominant influence upon Milch's life was a secret that troubled him throughout it. So much so that when, near the end of his life, a biographer discovered the truth, Milch suppressed it still. The facts are simple, but, even in this permissive age, bizarre.

Klara, who was to become Milch's mother, fell in love with her uncle. Such a marriage was forbidden not only by her parents but by Church law too. Eventually she did her parents' bidding and married another man – Anton Milch – but did so on the strict understanding that he would not father her children. It was a decision endorsed by the discovery that his mother was in an asylum, and incurably insane. And so she agreed to the arranged marriage

on condition that her uncle – the man she truly loved – would be the father of her future children. Erhard Milch grew up to know the wealthy man who visited them as 'uncle', not realising that the visitor was his father.

So carefully did his parents guard their secret that it was not until 1933 that the by then middle-aged Milch discovered the truth behind the mysteries that had haunted his youth. And this was the result of an investigation started by an informer who said that Milch's father was Jewish. It was an accusation calculated to get him removed from the key job he had in the Nazi regime.

The rumours said that because Anton Milch was Jewish, his mother had invented a story about Erhard's illegitimate birth in order to get Erhard classified as 'Aryan'. The rumours continued throughout the war and after it. They were fomented by Milch's evasive replies at the post-war Nuremberg trials. Milch allowed these stories to circulate all his life, for the only way that he could refute them was by revealing a secret that he was determined to take to his grave.

'I'll decide who is Jewish and who is not Jewish,' Göring told several men who came to him with stories of Milch's birth. But such replies only convinced the accusers that Göring was a part of the cover-up.

But Göring knew all the facts of Milch's birth. He had in fact been behind the Gestapo's investigation of the mystery. It is difficult not to wonder what Göring himself made of the curious fact that his right-hand man had a secret about his mother that was even darker than Göring's own.

Milch was an observer with the German Army Air Service in the First World War. His organisational abilities gave him command of a fighter squadron in spite of the fact that he could not fly an aeroplane! So it was no surprise that Milch proved to be such an able employee in the Junkers organisation. And yet his next change of job took him to the very top levels of commerce. When the German government bullied and cajoled thirty-eight separate airlines into becoming just one subsidised state monopoly, Milch

was selected to be one of its bosses. This choice remained 'inexplicable' even to Milch: he still couldn't pilot a plane, had very little business experience and no technical knowledge of aviation or manufacturing.

But Milch learned very quickly. Soon he was paying Hermann Göring – by now an influential Nazi Reichstag deputy – a regular 'consultancy fee', and his private papers later revealed the extent to which he was already compiling files of damaging material about his rivals and superiors.

By 1929 Milch was the chief executive of Lufthansa and a secret member of the Nazi Party. His enemies said that his membership was kept secret so that when he falsified Lufthansa accounts (so that the Nazi Party never paid for the aircraft chartered from Lufthansa) no suspicion would attach to him. In 1932 alone, Hitler and other Nazi leaders flew 23,000 miles. Aircraft played a vital part in the Nazi political campaigning. If Milch provided this facility for nothing he certainly earned the rewards he subsequently collected.

Milch became a figure of growing political importance as Lufthansa built airport facilities, organised signal and meteorology networks, and radio beacons for air-corridors. Its personnel were trained in administration, supply and engineering as well as all the mysteries of blind-flying and long-range navigation. Even in its first year, Lufthansa had a night passenger service Berlin–Königsberg to connect with Moscow, and was sending experimental flights far afield. Its G-24s went to Peking and its Dornier Wal flying boats to Brazil. As early as 1930, civil aviation in Germany (measured by passengers or by mileage) was as big as all the British and French civil aviation services combined! All gliding records were, at this time, held by Germany and Austria.

By 1932 (and this was a year before the Nazis came to power) Germany had a claim to be the leader of world aviation. The Graf Zeppelin airship – carrying about sixty people and freight – had circumnavigated the world, been on long cruises to Egypt, Iceland and the Arctic, and in March 1932, begun a scheduled

service between Friedrichshafen and Rio de Janeiro. This was to be the only transatlantic air service for another seven years! The experimental twelve-engined Dornier Do X had crossed both the South and North Atlantic and a German pilot in a German plane had made the first east–west crossing of the North Atlantic.

Professor Junkers's series of all-metal monoplanes had culminated in the classic Junkers Ju 52/3m. By 1932 it was in service on the Berlin–Rome and Berlin–London routes. Lufthansa now connected Berlin with Barcelona, Moscow and Athens, flying a daily average of 30,000 miles.

No country in the world had training facilities to compare with the *Deutsche Verkehrsflieger Schule* (German Air Transport School), where so many of the Luftwaffe's pilots learned to fly bombers. To supply candidates for Lufthansa's training, there were about 50,000 active members of gliding clubs of the *Deutsche Luftsportverband*. In 1932, the 20-year-old Adolf Galland, already a skilled glider pilot, applied for training as a Lufthansa pilot: of 4,000 applicants, only 18 were accepted. The examinations lasted ten days.

This intense interest in aviation was shared by the general public. The 14-year-old apprentices, working at any aircraft factory, would find glider construction a mandatory part of their apprenticeship, and would not become qualified tradesmen unless they possessed the glider pilot's licence.

When the Nazis gained power, Erhard Milch was the obvious choice to build in secrecy a new air force. Professor Hugo Junkers had by now become an outspoken critic of the Nazis. He was one of the most powerful individuals in German aviation, and by far the most brilliant. Milch decided that he could gain control of the aviation manufacturing industries by making an example of his one-time benefactor and employer.

Milch sent the police to arrest Junkers. He was accused of many offences, including even treason. Armed with the terrible power of the totalitarian state, Milch broke Junkers. The end of the interrogations came only when Junkers assigned 51 per cent of his various companies to the State. This was not good enough for

Milch. He then demanded, and got, chairmanship of the companies for his own nominees. Still not satisfied, Milch put the ailing old man under house arrest, until he gave the State the remainder of his shares. Less than six months afterwards, Hugo Junkers died. Milch sent a delegation of mourners from the Air Ministry, with a suitably inscribed wreath. This so angered Junkers's family that the men from the ministry returned to Berlin without attending the ceremony, rather than face their wrath.

Perhaps it is not too much to suggest that Milch found in the Nazis, with their despotic regality and regalia, elaborate rallies and displays, something to appeal to the ardent monarchist he had always been. Although his role as Göring's right-hand man brought him sometimes into arguments with his boss (who was marginally younger than Milch), his loyalty to Hitler and his Nazi kingdom was unquestioning.

And Hitler gave his two airmen a comprehensive slice of the kingdom. They had control of everything from Lufthansa ticket clerks to fighter pilots, and from the secret construction of military aircraft to the gliding clubs, which were now a part of the NSFK (Nazi Flying Corps). Such flexibility made these men the envy of other service chiefs, who had no such access to semi-trained personnel, and no access to Hitler via civil channels. Nor did other service chiefs have such control over the design and development of their weapons, and the supply of them, as the Air Ministry had over the aircraft industry.

But there is little to support the allegation that, even before the Nazis came to power, the German aircraft industry produced fleets of warplanes, thinly disguised as civil aircraft. Of seven major aircraft types used by the Luftwaffe for operations in the Battle of Britain, only two had prototypes flying before 1935. One of these – the Ju 52/3m – was undoubtedly designed as a transport aircraft, as its sale to the airlines of twenty-nine foreign countries, and its brief and unsuccessful career as a Spanish Civil War bomber, indicated. The other aircraft was the Dornier Do 17, which flew in prototype form in the autumn of 1934. But this 'Flying Pencil' was

put into storage after flight testing, and was adapted for military use only after being discovered there.

Hitler gained power when the Reichstag passed his Enabling Act in March 1933. The Luftwaffe must be dated from the big aircraft-building programme that started in January 1934. But few of these machines were suitable for modern warfare, for air forces do not start with warplanes: the first need is training aircraft. And so, of the 4,021 aircraft the Luftwaffe ordered in January 1934, 1,760 were elementary trainers (Arado Ar 66 and Focke-Wulf FW 44). Only 251 were fighter types, and all of these were biplanes.

On 1 March 1935, the existence of the Luftwaffe was officially announced. It was accepted as a fact of life by the Allied powers that had forbidden it. In Berlin a huge and grandiose Air Ministry building provided a thousand offices, where ambitious men bickered. Göring had neither the technical knowledge nor the inclination to give the new air force a clear directive. Hitler asked only for the greatest possible number of combat aircraft in the shortest possible time. It was in this atmosphere that all thoughts of a long-range strategic bombing force languished.

There was no strong opposition to the four-engined long-range bomber (possession of which would have totally changed the Battle of Britain), it was simply a matter of priorities. The complex problems of manufacturing such aircraft would delay all the other programmes.

The priorities of the new air force preoccupied the men in the German Air Ministry. Petty jealousies and vicious vendettas flourished as empires were built. Milch was tough enough to handle the men under his command but this did not endear him to Göring. On the contrary, the relationship between the two men became steadily worse as time went on. Frustrated by the technicalities of a new sort of air war that he could not master, Göring condemned them all as unnecessary 'black boxes'. He sought out men who could share his memories of the Red Baron and the wind in the wires. And he gave them jobs.

FIGURE 3

War hero, stunt-flyer and bon vivant, Ernst Udet made this self-portrait in 1933.

Ernst Udet, although no close friend of Göring, was just such a flyer. Udet was an amiable, much-travelled man who lived only for flying. Germany's second most successful fighter ace (after von Richthofen), Udet had continued to fly after the war. He had got finance for an aircraft factory that bore his name, took one of his products – a U.4 – to South America, and won an air race from Rosario to Buenos Aires. He severed his relationship with the Udet factory, and lived by giving stunt-flying demonstrations round Germany. He flew for an expedition filming African wildlife, and went so low that one of the aircraft was damaged by a lion that jumped at it. He made an impressive showing at the National Air Races in Cleveland, Ohio, where he stunted his old Flamingo biplane. He flew in Hollywood and in Greenland, where he worked with Leni Riefenstahl, the famous German woman film-maker.

In the USA, in September 1933, Ernst Udet watched a flying demonstration of Curtiss F8C biplanes. These were rather old by American standards and the Americans had no objection to

Udet's buying them. The Curtiss company called this design a 'Helldiver' and gave the same name to all their subsequent dive-bomber designs. Although the exact way in which Udet found enough money to buy two such machines has not been established, it seems virtually certain that on Udet's recommendation, Göring paid money into Udet's bank account, and the aircraft, when shipped to Germany, were tested for the new air force. The concept of aircraft using machine guns and small bombs against front-line infantry had been discussed by German theorists since the First World War. Now Udet demonstrated his Helldivers, and the accuracy of this sort of bombing attack – within 30 yards of the target was not unusual for an expert pilot – persuaded the German Air Ministry to ask Junkers and other companies to design such a machine. The Junkers Ju 87, the famous Stuka, was the result. It became the world's most successful dive bomber.

Many times Udet was offered a job with Göring, but he was unable to decide what he wanted to do. And yet during these years, when the air force was being created, Udet always had access to the top levels of command. It was a memorandum of Udet's in 1933 that first considered the military application of the glider. This idea eventually brought far-reaching changes to military operations. And Udet kept in touch with the aircraft industry too, and could prove as suspicious of new ideas as Göring was. In August 1935, 39 years old and still a civilian, he sat in the cockpit of the Bf 109 prototype.* Professor Messerschmitt said that Udet looked uneasy as the mechanic closed the canopy over his head. The prototype was not yet ready to fly but Udet pronounced on it. 'When he got out, he patted me on the back and said, "Messerschmitt, this will never be a fighting aeroplane. The pilot needs an open cockpit. He has to feel the air to know the speed of the aeroplane."'

* The Messerschmitt 109 and 110 designs were started when the company was named Bayerische Flugzeugwerke and thus were abbreviated Bf 109 and Bf 110. In July 1938 the company became Messerschmitt AG, so that the abbreviations for the later designs were Me 210, Me 410, Me 163, etc.

There was no argument but Messerschmitt knew that his arch-enemy, Professor Ernst Heinkel, was his most serious rival for the new fighter contract, and that the Heinkel prototype had an open cockpit.

No wonder that there were so many criticisms and misgivings when 'the flying clown' joined the Luftwaffe in January 1935, and one month later was named as Inspector of Fighters and Dive Bombers. By June of that same year, Udet was chief of the Development Section of the Luftwaffe's Technical Department.

Some said that Udet's quick promotion was Göring's way of limiting the fast-growing power of Milch. The workings of Göring's mind have to remain conjecture but Udet was temperamentally and intellectually unsuited for this vitally important job. Milch, in spite of all the outward gestures of friendship for Udet, despised him and resented his appointment. He did not like having to consult the over-manned and disorganised department that Udet headed, and Milch resolved to get control of it. Eventually, as we shall see, he did.

Udet was an unusual combination of noisy Bohemian wit and sensitive timidity. In the First World War, having returned from air combat without having fired his guns, he said he couldn't be sure whether it was a reluctance to kill or fear of being shot down.

As a flight commander with *Jagdstaffel 15*, he had once gone alone on a balloon-bursting expedition, only to find himself in a dog-fight with another lone machine. As they looped, dived and circled, looking for an opening, Udet read the words 'Vieux Charles' painted on the enemy fighter. He knew he was fighting Charles Guynemer, the French ace. During the combat Udet's guns jammed. Seeing this, the Frenchman flew over Udet inverted – and waved to him before flying away.

It was suggested to Udet that Guynemer's guns had also jammed but Udet rejected this idea emphatically. He insisted that even modern warfare could find a place for chivalry. Such a lonely romantic would find little in common with the hard-eyed

ambitious men who were jockeying for power in the huge Air Ministry building in Berlin.

Ernst Udet's critics pointed out that he smoked too much, drank too much, and had the disconcerting habit of scribbling acerbic caricatures of his friends and colleagues. Yet Udet's love of flying gave him an advantage in the matter of assessing new aircraft designs. He liked to describe himself as the Luftwaffe's chief test pilot, and when he got a chance to see the Bf 109 in flight he was magnanimous enough to change his mind about Messerschmitt's new fighter.

Initially there had been four fighters from which to choose. The Arado was eliminated because it had a fixed undercarriage, and so was the Focke-Wulf prototype (which had a parasol wing supported by struts). Its wheels retracted into the fuselage, and this complicated mechanism was never satisfactory. This left the Heinkel He 112 as the only rival for the Bf 109. German engine development, or rather the lack of it, forced both manufacturers to use a Rolls-Royce Kestrel engine in the prototype.

At first it seemed certain that Heinkel would get the contract. His fighter was based upon the beautiful He 70. It was strongly made, with a top speed only marginally less than its rival. The structure was rather complex, but its wing loading (that is, the weight per square foot of wing area) was calculated to appeal to the biplane protagonists, and so was its open cockpit.

Messerschmitt's fighter was radically new. Its wing loading was so high that it needed 'gadgets' such as slots, and the wings were incredibly thin compared to the Heinkel's. But once in the air the Messerschmitt was supreme: rolling, diving and excelling in all the tests that the Air Ministry specified. And although the aerodynamics were advanced, the slab-sided, square-tipped wings and very narrow but otherwise orthodox fuselage would give no production problems. It would be superior in cost, in man-hours and in materials.

Heinkel's readiness to compromise with the aerodynamics of the biplane had resulted in a prototype that was heavy and unresponsive to the controls. Heinkel took his sluggish prototype

and changed it, not once but many times, until eventually it was comparable to the Bf 109, but Udet took Professor Heinkel aside and told him that, now the Bf 109 was in full-scale production, there was no place in his building programme for the He 112 fighter. Stick to bombers, he told Heinkel.

The Messerschmitt Bf 109 was Udet's most important contribution to the Luftwaffe. His decision came at a time when the unconventional Udet was at the height of his influence. Hitler described him as the world's greatest pilot. Sourly Milch added, 'But he also saw him as one of our greatest technical experts, and here he was very mistaken.' But Milch was not yet ready to get into conflict with one of Hitler's favourites and Udet became a member of Milch's group of influential cronies who dined regularly at Horcher's famous restaurant in Berlin.

Neither did Udet have much to fear from Göring. As elected chairman of the Richthofen Veterans Association, Udet had expelled Göring, the unit's last commander. Udet accused Göring of falsifying his First World War record and victory claims and said he could prove it. Milch said that Göring admitted it was true, and was frightened of Udet.

By now Milch had few friends. Heartily disliked by Göring, he found little support from the Luftwaffe General Staff. In spite of this, the irrepressible Milch, working like a beaver, consolidated his authority, and in certain areas increased it. When the Spanish Civil War started and Franco asked for Hitler's aid, Milch instantly recognised it as a chance to increase his power. He took charge of the intervention.

The Spanish Civil War

By early 1937 Milch had a small experimental air force unit operating in Spain. One of its first missions had been the air-transporting of 10,000 fully equipped Moorish infantry from Tetuan, in Spanish Morocco, to Seville. They used Junkers Ju 52/3m aircraft, and the movement went almost without a hitch. In some respects it was as significant as any of the Condor Legion's combat actions.

The Condor Legion's commander was Sperrle, who later became an Air Fleet commander in the Battle of Britain. His Chief of Staff was Wolfram von Richthofen, a dive-bombing and close-support specialist. (He was a cousin of the First World War ace.) The Luftwaffe's first taste of combat was a terrible disappointment for Göring, Milch and the High Command. The Junkers Ju 52/3m proved unsuitable for bombing, and most bombing turned out to be far less accurate than had been hoped. The Heinkel He 51 biplane fighters were inferior to the I-16 fighters (supplied to the other side by the USSR) in speed, climb, manoeuvrability and armament. Reluctant to believe this, the German flyers often misidentified them as 'Curtiss fighters'. But as German skill improved and newer German aircraft arrived, things got better: Berlin's apprehension turned into equally wrong complacency. When Dornier Do 17 and Heinkel He 111 bombers proved faster than enemy fighters the *Schnellbomber* concept seemed vindicated. Rashly the men in Berlin concluded that bombers would never require fighter escort.

The Junkers Ju 87 dive bomber also exceeded expectations, and its small bomb-load was more than compensated for by the fast turn-around time at its bases: some of the units completed half-a-dozen missions per day. And von Richthofen's close-support techniques proved decisive in some actions, even though the war's front line was notoriously difficult to see. There was a shortage of aircraft radio but the airmen relied on signals spread out on the ground. They did little to improve air-to-air or air-to-ground radio. This, too, was to prove a grave error.

The Messerschmitt Bf 109s arrived to take over the fighter combat tasks. Heinkel He 51 biplanes were already adapted to carrying 10-kg high-explosive bombs and improvised petrol bombs. This flat-trajectory bombing in support of infantry attacks became a specialised technique of German (and Allied) light-bomber squadrons. It was one of the few new methods to evolve in the Spanish fighting.

The Luftwaffe's first building programme had begun in January

1934; it went to war in September 1939. By 1937 there was clearly little time left for redesigning the Luftwaffe's aircraft. These aircraft types that fought in Spain – Bf 109s, He 111s, Ju 87s, Ju 52s – remained the basis of the Luftwaffe's strength right up until the end of the Second World War.

Milch sent Hugo Sperrle's Condor Legion to Spain to assess the aircraft already in production. With this in mind, many different aircraft types were sent there, including even float-planes. The flying personnel were rotated after six months to provide combat experience for as many crews as possible. All ranks were encouraged to send reports to a specially constituted department of the Air Ministry.

Just as men from von Seeckt's Defence Ministry provided the Luftwaffe with its staff and its Air Fleet commanders, and Lipetsk (the secret training school in Russia) provided its field commanders, so now did Spain provide combat specialists. Men such as Adolf Galland and Werner Mölders came back from leading a fighter *Staffel* in Spain to revolutionise the formations and tactics of the fighter arm.

Adolf 'Dolfo' Galland was an outstanding personality of this period. Born in 1912, of Huguenot ancestry, Galland, like so many other Luftwaffe aces, was attracted to the sport of gliding while still a teenager. Accepted by the Air Transport School at Brunswick, Galland was soon selected for the secret Luftwaffe. At 22 years old he was an instructor at the famous Schleissheim Fighter Pilot School. Galland went to fight in Spain but, flying a Heinkel He 51 biplane, deliberately avoided combat with the far superior Russian- and American-made enemy monoplanes.

The poor performance of the He 51s caused them to be relegated to the infantry support role. Galland pioneered these experiments and produced a considerable body of written material about the use of aircraft in support of ground forces. This fitted very well with the dive-bombing theories of Udet, which were by now enthusiastically received by senior officers, including General von Richthofen, Chief of Staff of the Condor Legion,

who would soon command the Junkers Ju 87 Stuka units in the Battle of Britain.

And so Galland found himself trapped into the role of ground-support air specialist. As the Bf 109s were shipped to Spain, Galland handed his command over to a young man who was to become his rival as the most famous fighter pilot in Germany – 'Vati' ('Daddy') Mölders. As Mölders began to use the monoplane fighters to win victories, Galland returned to Berlin and a job in the Air Ministry.

In September 1937, as the Condor Legion fighter units near Santander, Spain, flew seven sorties a day against crumbling resistance, senior Luftwaffe officers paid an official visit to Britain. Milch and Udet were invited to inspect RAF Fighter Command at Hornchurch, a key airfield in the defences of London. The aircraft there were Gloster Gladiator biplanes which, like the Hawker Fury fighters also in service, were slower than the Luftwaffe's *bombers*.

There were virtually no monoplanes of any sort in RAF service at this time. The Hurricanes and Spitfires were suffering new delays caused by a modification to the nose that an engine improvement demanded. It is sometimes said that this was part of a nicely timed deception plan, for the RAF's first Hurricanes reached 111 Squadron during the following month. Why such a provocative deception would have been desirable is not explained.

The German Navy

Although by tradition subordinate to the army as a fighting force, the German navy was independent of it in a way that the Luftwaffe was not. In the spring of 1940 the German navy fought a brilliant and daring campaign in Norwegian waters. This had to some extent been made possible by the navy's *B-Dienst* cryptanalytic department which, by the time war began, was able to read even the most secret of the British Admiralty's messages, having broken the codes and ciphers.

In the spring of 1940 the German navy's prestige was high. Its strategists demanded more steel for submarines and were

preparing a surface fleet that, with Italian help, might control the Mediterranean by 1942.

But the navy needed time to recover from the grave, but worthwhile, losses that the conquest of Norway had caused it. So the Admirals had little enthusiasm for hasty and dangerous invasion plans that would their hazard few remaining ships in the Straits of Dover.

In Norway it had lost ten destroyers and three cruisers. The *Scharnhorst* and *Gneisenau* had been put out of action by torpedo hits. Of the three 'pocket battleships' with which Germany had entered the war, the *Lützow* had been damaged by torpedoes, the *Admiral Scheer* had engine trouble, and the *Graf Spee* had been scuttled after the naval action off Montevideo, Uruguay. The new battleships, *Bismarck*, *Tirpitz*, and the cruiser *Prinz Eugen*, would need until the following year to train their crews and work up to combat readiness.

To cover the Sea-lion invasion, face the Royal Navy's Home Fleet, motor torpedo boats, coastal batteries, submarines, minefields, and the combined air units of the Fleet Air Arm and the RAF, the Germans had only one heavy cruiser, *Hipper*, two light cruisers, half-a-dozen destroyers and some U-boats.

No wonder that the German navy had sent motorised naval commandos with the panzer armies that invaded France, as part of an attempt to seize French warships. But the French sailed away. Even the incomplete battleship *Jean Bart* had escaped just before the Germans got to St Nazaire.

Churchill, afraid the Germans would still be able to barter armistice terms for the warships they badly needed, ordered the Royal Navy to persuade the French crews to sail beyond German reach or scuttle. In July at Oran in French North Africa units of the French navy came under the gunfire and bombs of the Royal Navy. The blood of 1,300 French sailors spattered all over the British, for two or three generations.

Sea power still decided the fate of nations. In the USA nothing worried Roosevelt and his advisers more than the threat to their eastern seaboard that would come if Germany controlled the Royal

Navy's ships. All American decisions were based on this fear, and Churchill tried unsuccessfully to play on it.

Operation Sea-lion

Undoubtedly Hitler – and most of his advisers – would have preferred a negotiated peace with Britain after France fell. Count Ciano, Mussolini's son-in-law, wrote in his diary, 'Hitler is now the gambler who has made a big scoop and would like to get up from the table risking nothing more.'

So confident was Hitler that the game was over, and Britain had lost it, that he disbanded 15 divisions and put 25 divisions back to peacetime footing. But the British were gamblers too. They wanted double or nothing.

By the middle of July, Hitler issued Directive No. 16. 'Since England, in spite of her hopeless military situation, shows no signs of being ready to come to a compromise, I have decided to prepare a landing operation against England, and, if necessary, to carry it out.' Many historians have italicised the final half-dozen words of that sentence, claiming that it shows he was never in earnest. A more powerful indication of the unreality of Directive No. 16 is its timetable: all preparations were to be ready by the middle of August.

The Directive was so secret that it was sent only to the Commanders in Chief. But Göring passed it on to his Air Fleet commanders, and did so by radio. To put such a important message on the air was an unnecessary risk but the Germans had great confidence in their coding machines. At all levels of command, the Luftwaffe used the Enigma coding machine, at this time changing keys two or three times each day. The Enigma was a small battery-powered machine not unlike a portable typewriter. Rotors changed the cipher, and the receiving machine lit up each letter. This was then written down by one of the code clerks.

When war began the British staged a big cloak-and-dagger operation to get their hands on an Enigma machine. This was hardly the intelligence triumph that recent claimants suggest, as the company

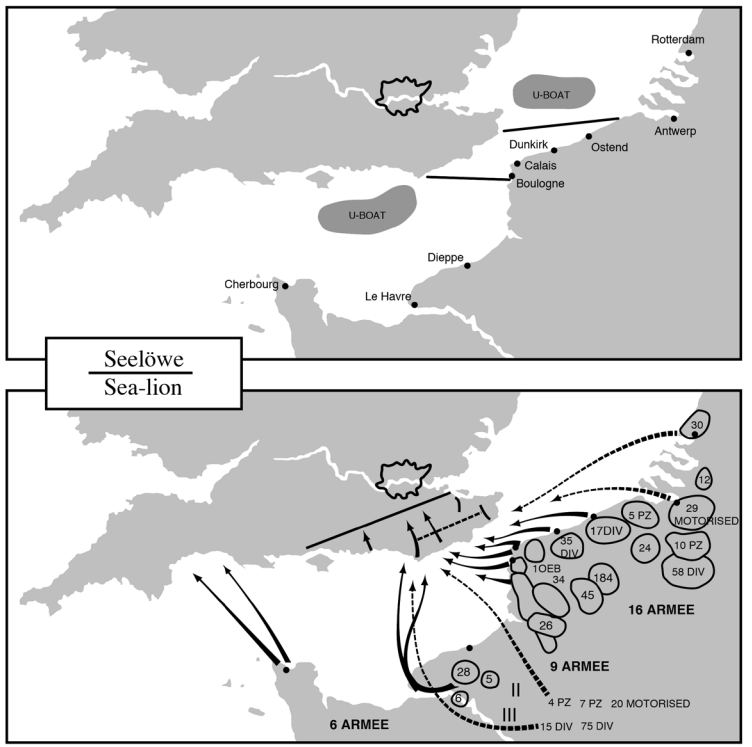

FIGURE 4

TOP The German navy submitted an invasion plan that would have created a narrow sea-lane, protected on each side by minefields. This plan was compatible with the very small naval force still available after the Norwegian campaign. On the other hand it would call for concentration areas in the Pas de Calais that would become targets that even RAF Bomber Command would be able to hit.

BOTTOM The German army envisaged landings all along the south coast. They wanted the speed and convenience of using the great ports and harbours of northern Europe, from Rotterdam and Antwerp to Le Havre and Cherbourg. This was particularly important to the armoured and motorised divisions.

making them had had virtually identical Enigmas on sale to all comers since 1923. Having left things rather late, British intelligence were now fiddling with their machine desperately trying to decode intercepted German messages. It was very much a hit-or-miss affair. (In spite of all the nonsense written about it, very few vital messages of this period were decoded, and it wasn't until the 'Colossus' computer began its work in 1943 that there was a regular flow of information.) When reading about Enigma it must be remembered that armies and air fleets received orders by land-line teleprinter. Radio communication was not reliable enough for the very long and very complex orders required in modern war. And the Germans – whose monitoring service was excellent – were well aware of the danger to security that radio presented. Only rarely, as with this foolish risk taken with Directive No. 16, did the Enigma intelligence pay such a dividend. It gave the British the German code word 'Sea-lion' and was a shot in the arm for the code-breakers. Some claim that this decoded message prompted Churchill to make his 'fight on the beaches' speech.

When the German naval Commander in Chief received Hitler's Directive No. 16, his response was immediate. The Admirals were agreed that no date could be determined until the Luftwaffe had air supremacy over the Channel, but they produced a draft plan and on 28 July the army looked closely at it. The navy planners proposed a beach-head near Dover. By using the narrowest section of the Channel they could lay minefields to protect the invasion fleet corridor. Submarines would be assigned to the Channel, in spite of the difficulties these shallow waters presented to submarines, and more to guard the North Sea flank. It was estimated that the navy would require ten days to put the first assault ashore. The army was horrified.

For the attack westwards through France in May, the German army command's objectives had proved ridiculously modest, in the light of its panzer General's achievements. Now the army was determined to show more ambition. It told the navy that it wanted landings all along England's south coast, from Folkestone to Brighton, with a separate crossing from Cherbourg. The army would need tanks and wheeled

vehicles which meant all the car ferries must be employed, together with the other cross-Channel tourist facilities. The first wave must be ashore within three days. The primary objectives were massive areas of southern England almost as far as London. And, in case you are still taking all this seriously, the first wave was to consist of 260,000 men, 30,000 vehicles and 60,000 horses! Having looked at the navy's proposal, Walther von Brauchitsch, the army's Commander in Chief, and his Chief of the General Staff, Franz Halder, stated unequivocally, 'We cannot carry through our part of the operation on the basis of the resources furnished by the navy.'

On 31 July Hitler summoned his army and navy chiefs to the Berghof, his chalet in the Bavarian Alps near Berchtesgaden. *Grossadmiral* Erich Raeder explained the navy's position first. Preparations were going as fast as possible. The navy was scouring occupied Europe for suitable barges, but the work of modifying them for military use and getting them to the Channel ports could not be completed before 15 September. In view of the army's demand for a wider front for the landing, and with the prospect of autumn storms, it might be better to plan for an invasion in May 1941, said Raeder.

Hitler did not get angry at this suggestion but he pointed out that the British army would be better able to deal with an invasion by the following year, and suggested that the weather in May would be little better than that in September.

Having put the navy's point of view, Raeder left the conference. Hitler continued to discuss 'Sea-lion' with his army commanders. At one point he went so far as to say that he doubted whether it was 'technically feasible'. However no such doubts intruded into the Directive of the following day. It was signed by *Feldmarschall* Keitel and came from the OKW, the High Command of the combined armed forces which Hitler personally controlled. Preparations were to continue, and all would be ready by 15 September. Meanwhile the Luftwaffe would begin a large-scale offensive and, according to the effects of the air raids, Hitler would make a final decision about the invasion at the end of August.

The most significant aspect of all this top-level discussion was the absence of Luftwaffe chiefs. At the Berghof meeting, where the ball was passed to Göring's Air Fleets, there had been not even one representative of the Luftwaffe.

And so Göring's so-called Eagle Attack (*Adlerangriff*) was born in the same bungling, buck-passing muddle that had left Guderian at Sedan without objectives, and then halted him while the men in Berlin thought about it. It was the same mess of contradictory orders that had stopped the German armour at Dunkirk. The top brass of the Wehrmacht were learning that it was safer to equivocate. 'Sea-lion was contemplated,' said the jokers afterwards, 'but never planned.'

There was no proper training for the highly specialised amphibious assault and no staff officers with enough experience to plan one. But, having passed the immediate problems to Göring, the army engaged in a series of energetic invasion rehearsals, and propaganda units filmed them for release to cinemas on the actual day. Even more diligently, the German navy searched the rivers and canals of Europe, and crammed the northern ports with barges from all over Europe. Countless men with saws and welding torches fitted each with crude ramps for sea-sick horses under fire. The barges were to be towed across the Channel in pairs, by tugs, at a speed of five knots. The lines of barges were expected to be at least twelve miles long. When they neared England, the plan said the barges were to be sailed into lines from which one unpowered barge would be lashed to a powered barge. Together they would assault the beaches.

Not even the initial assault boats (*Sturmboote*) were armoured. They were tiny vessels, some held only six infantrymen plus two crew. They were designed for river crossings and modified so that they could be launched from minesweepers that would take them as close as possible to the British coast. And the barge crews included Dutchmen, Belgians and Frenchmen with no vested interest in the operation's success.

Even if one is generous enough to equate the modified German barges with what were later called LCTs (Landing Craft, Tanks),

the Germans still had nothing to compare with the two vessels that the Allied armies were later to find indispensable for seaborne invasion. First, the LST (Landing Ship, Tank) that could survive a heavy sea, and yet had shallow enough draught to put tanks directly on to a beach. Secondly, the DUKW, which was a two-and-a-half-ton truck, with a hull and propeller fitted to it. Groups of them brought supplies from supply ship to beach very quickly, so releasing the ship for another trip.

Churchill did not take the threat of invasion seriously. On 10 July he told the War Cabinet to disregard Sea-lion. '… it would be a most hazardous and suicidal operation,' he said. It is in the light of this that one must see Churchill's boldness in sending tanks to Egypt in the summer of 1940. It also explains why he backed up Beaverbrook, the new Minister of Aircraft Production, when he poached personnel and commandeered property that built more fighters but caused delays and shortages in other war industries.

At this stage of the war, any German invasion – seaborne or airborne – would have been cut to pieces. British experiments with setting the sea ablaze were fearsome, and Bomber Command were secretly training their squadrons in the use of poison gas. A cover story about spraying beaches to destroy vermin had been prepared for release should the Germans object to this form of warfare. RAF Medical Officers assigned to the poison gas units were being fortified with copious draughts of 'captured' champagne.

All this has encouraged some to suggest that there was no real danger of invasion in 1940, and conclude that Fighter Command did not fight a decisive battle. This is a specious argument. Had the Luftwaffe eliminated Fighter Command, its bombers could have knocked out all the other dangers one by one. Given the sort of command of the air that the Luftwaffe had achieved in Poland in only three days, German bombers, guided by radio beams, could have destroyed everything from Whitehall to the units of the Home Fleet. There would have been no insurmountable problem for invasion fleets and airborne units if the air was entirely German.

The Douhet Theories

Like many high-ranking airmen, and manufacturers of bombing aircraft, Göring subscribed to the theories of General Giulio Douhet, an Italian who believed that armies and navies were best employed as defensive forces while bomber fleets conquered the enemy. Just before he died in 1930, General Douhet wrote a futuristic story called 'The War of 19 –'. Often quoted but seldom read, Douhet's words had such profound effects upon the German and the RAF High Commands that they are worth examining. Written in the documentary manner of H. G. Wells, Douhet's story described how an 'Independent German Air Force' fought great aerial battles against the Belgian and French air units. 'There was no doubt that the enemy's purpose was to make the mobilisation and concentration of the Allied armies as difficult as possible,' said Douhet's imaginative fiction. The Allies replied with 'night-bombing brigades' that attacked German cities with explosives, incendiaries and poison gas.

Douhet's fiction continues with the Independent German Air Force dropping leaflets telling the citizens of Namur, Soissons, Châlons and Troyes that their cities are to be obliterated, and that Paris and Brussels will go the same way unless they sue for peace. The tale ends when those towns are obliterated, and the governments do sue for peace. It was the pressure that civilians under air bombardment would put upon their own government that formed the basis of Douhet's theories. At the end of his story he writes:

> Impressed by the terrible effects of the bombings and the sight of the enemy planes flying freely and unopposed in their own sky, though they cursed the barbarous methods of the enemy, they could not help feeling bitter against their own aeronautical authorities who had not taken enough protective measures against such an eventuality.

Douhet believed that any nation devoting a large part of its air force to air defence, was risking conquest by a nation that spent everything on bombing fleets. Totally disregarding all the advantages that the defence enjoys in any form of warfare, Douhet

smoothly concluded that 'No one can command his own sky if he does not command his adversary's sky.'

The German Army Air Service's tactics in the First World War had already proved that this was nonsense, but Douhet provided abundant quotes for ambitious bomber theorists. Such men, in Germany, France, Britain and the USA, had long since decided that in war the importance of an air force (and its commanders) would be judged by the amount of damage done to the enemy, not by skill in defence. Douhet was important because he reinforced illusions about the effectiveness of the bomber and reduced still further the influence of the fighter pilots.

Although he had been a fighter pilot, Hermann Göring found Douhet's ideas easy to accept. He was not sympathetic to the complex technical devices which had converted air warfare from armed barnstorming to crude science. Like many of his contemporaries, he found it convenient to stick to von Richthofen's simplistic dictum that shooting down enemy planes was 'the only important thing' and that 'everything else is nonsense'. And Göring's Luftwaffe was dedicated to the offensive, designed for close co-operation with the invading German armies. It lacked long-range bombers, but – argued its leaders – what did that matter if the invasions were so successful that you could leap-frog forward with your medium-range machines from each new lot of captured airfields. It seemed to make sense.

By 1940, some were already claiming that Göring had proved Douhet right. The capitulation of Poland and the Netherlands had followed quickly after the bombing of Warsaw and Rotterdam respectively. Even sceptics were beginning to believe that this was cause and effect. Certainly it seemed to provide Göring with a trump card. If his overall programme of air attacks against military targets in southern England failed, he had only to switch his whole attack to London itself and the British government would seek terms. Douhet said so, and history proved it.

Unfortunately for Göring there were, in Britain, some young flyers who had never read Douhet, and an elderly disbeliever named Dowding.