The German Misapprehensions Regarding Overlord:

Understanding Failure

In the

Estimative Process

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A PAPER PRESENTED AT THE

INTELLIGENCE AND MILITARY

OPERATIONS CONFERENCE

U.S. ARMY WAR COLLEGE

MAY 1987 / September 2015

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I. - INTRODUCTION

From the German perspective, the D-Day invasion of Normandy on 6 June 1944 came as close as possible to being an attack out of the blue, and it came as both a strategic and tactical surprise to the Germans.[1] Within the context of the German intelligence analysis and command decision apparatus, the purposes of this article are to examine two vital questions:

1. What are the root causes of failure in the estimative process?

2. Why does strategic surprise always appear to be inevitable?

The goal of this paper is to find rational answers to both questions.[2]

Some popular historians have labeled the failure of German "intelligence" regarding the Normandy landings as one of modern history's most extraordinary military blunders. In point of fact, there was nothing "extraordinary" about the Wehrmacht's apparent unreadiness for the main Allied assault, the *Schwerpunkt* as the Germans called it. Rarely has a nation at war been more expectant of invasion.

By late April 1944, Radio Berlin had broadcast to the German people that an enemy invasion in France would come at "any minute, anywhere."[3] On 18 May

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[1] For "out of the blue" see Michael I. Handel, "Intelligence and Deception," *Journal of Strategic Studies* 5 (March 1982): 149.

[2] Several modern writers have concluded that strategic surprise "comes close to being inevitable." Michael I. Handel, "Clausewitz in the Age of Technology" (Monograph, U.S. Army War College, 1985) 74 n.29. Also, Idem, "Intelligence and the Problem of Strategic Surprise," *Journal of Strategic Studies* 7 (Sept. 1984): 229-82; Idem, "Intelligence and Deception," 137; Klaus Knorr, "Lessons in Statecraft," in *Strategic Military Surprise: Incentives and Opportunities* (New Brunswick, N.J.: Transaction Books, 1982), 256; Ronald G. Sherwin and Barton Whaley, "Understanding Strategic Deception: An Analysis of 93 Cases," in *Strategic Military Deception*, eds. Donald C. Daniel and Katherine L. Herbig (New York: Pergamon Press, 1981), 179; Richard K. Betts, "Analysis of War and Decision: Why Intelligence Failures are Inevitable," *World Politics* 31 (Oct. 1978): 61-89.

Radio Berlin announced that "the ports [of England] are bristling—crammed to the bursting point—with … invasion equipment."[4] The Germans certainly were anticipating the *Grosslandung*; and yet, the critical details of their expectations about the Second Front invasion simply were wrong.

The Germans were expecting a diversionary attack to be made in Normandy, but they were absolutely convinced that the Allied *Schwerpunkt* would come in the Pas-de-Calais sector. Everything was set to await the arrival of the Allied forces on the shores of France north of the River Seine—where, in due time, Adolf Hitler and the Wehrmacht expected to destroy them. But, in their effort to build and man the *Atlantikwall*, the Germans made one critical mistake—one the French had made earlier. They too forgot that a concrete and steel barrier with an exploitable weakness is no shield at all.

The D-Day invasion of the Normandy coast provides a dramatic and well-documented example of a strategic attack which, though presaged by a variety of indicators, nevertheless, came as a complete strategic and tactical surprise.

While this article is by no means a historical summary of the Normandy story, it does contains sufficient factual information to highlight the major threads of development and errors existing in the German pre- and post-invasion estimates.[5]

As will become apparent, there was nothing unique about the factors that blocked or inhibited the German perceptive process; there was nothing to make the factors inapplicable outside the historical context of World War II or the

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[3] "World Battlefields," *Time*, 1 May 1944, 23.

[4] Army Times Editors, *The Tangled Web*, (Washington: Robert B. Luce, Inc., 1963), 144.

[5] For a factual study, see T. L. Cubbage II, "Anticipating Overlord: Intelligence, Deception and Surprise -- German Estimates of Allied Intentions to Land Invasion Forces in Western Europe" (diss. Defense Intelligence College, 1969, retyped and edited 1985), 330 pages. See also Cubbage, "Anticipating Overlord: Was Strategic Surprise Inevitable?" a paper presented at the Intelligence and Military Conference, U.S. Army War College, Carlisle Barracks, Pennsylvania, 22-25 April 1986, 196 pages (the longer older, less developed version of this paper).

Normandy invasion. In fact, ten very common factors are elucidated which, alone and in combination, formed significant blocks to the ability of the Germans to perceive correctly the Allied intentions. Stated in their simplest form, the blocks or inhibitors are: 1) the human factor; 2) the bias factor; 3) the expectation factor; 4) the options factor; 5) the plausible interpretation factor; 6) the distraction factor; 7) the intelligence collection factor; 8) the deception factor; 9) the time factor; and 10) the organization factor. The fact that there are so many factors immediately suggest that estimating any enemy's course of future action is ever going to be easy.

II. - GERMAN COLLECTION AND ANALYSIS CAPABILITY

Niccolò Machiavelli—who must have understood the concept of coincidence perfectly—held the belief that all history showed that no great public misfortune had happened that had not been foretold by someone blest with the art of prophecy; and they ought to be sought out and put the payroll as sages to the ruler.[6] In the Normandy story you will see that one-legged General Erich Marcks played the part of "Machiavelli's Prophet"—proving as always that it is hard to be a prophet in your own land. General Marcks commanded *Armeekorps 84* in the Normandy sector. On Wednesday, 1 June 1944, while inspecting the *Westwall* fortifications at Arromanches-les- Bains, he looked out to sea and told an officer with him: "If I know the British, they'll go to church next Sunday for one last time and then sail Monday. *HGK B* [(Rommel's HQ)] says they're not going to come yet, and that when they do come it'll be at Calais. So I think that we'll be welcoming them on Tuesday, [the sixth of June,] right here."[7] When he uttered the prophecy he was on a hill overlooking what the British called *Gold Beach*. The problem then, as in the days of Machiavelli, was that no one had figured out

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6 Niccolò Machiavelli. *Il Discorsi,* I, 56 (1531); Walter Laqueur, *The World of Secrets: The Uses and Limits of Intelligence* (New York: Basic Books, Inc., 1985), 305.

7 David Irving, *The Trail of the Fox* (New York: E. P. Dutton, 1977; New York: Avon Books, 1978), 424.

how to recognize such casual observations as having historic significance until it is too late to matter.

By late 1943 the Germans clearly understood that the Allies would invade the Western Front sometime in 1944. And yet, in spite of the fact that the Germans had a broad collection capability and a diverse analysis apparatus, Hitler and the *Wehrmacht* never were able to recognize and properly appreciate the key elements of the OVERLORD/NEPTUNE invasion plan.[8] Neither were they able to deduce the correct time and place of the Anglo-American landings. At various times from between early 1943 and 6 June 1944, the Germans saw indication of, and gave credence to, the dangers of invasion in: the Balkans, Italy, Southern France, Spain, Portugal, and along the Biscay coast of France; also in Brittany, on the Contentin Peninsula, in Normandy, and the Pas-de-Calais; and even in Belgium, Holland, in the Skagerrak, and in Norway. So many places.

In Berlin, during a 23 January 1944 conversation with the Führer, Japanese Ambassador Ōshima asked where Hitler thought the enemy would land. The Führer answered: "Honestly, I can only say I don't [actually] know. Beyond a doubt the most effective area would be along [the shores of] the Straits of Dover, but to land there would require much preparation and the difficulty would be great. I don't think the enemy would run such a risk." As the conversation with Ōshima continued, Hitler finally admitted to the Ambassador that it would be "impossible" to prevent the enemy from landing "somewhere in the West," but he declared that Germany would nevertheless "absolutely stop any real second front."[9]

Between 1941 and July 1944, the major German command and agency analysis centers had at their disposal a quantitatively, if not qualitatively

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[8] OVERLORD was the code name for the overall plan for the invasion of northwest Europe in 1944, and NEPTUNE was the code name for the actual operations plan within the OVERLORD concept.

[9] "Magic" Summary No. 677, 1 February 1944, A1, SRS 1198, Records of the National Security Agency, Record Group 457, Modern Military Records (MMR), National Archives (NA), Washington, D.C.

impressive, volume of information relating to the Western threat. From that information the analysis centers put together pre- and post-invasion estimates.[10]

A brief review of how the Germans answered the four basic questions that faced them will aid in the development of an understanding of the roots of the German inability to anticipate correctly the Allied plan.

III. - THE GERMAN ESTIMATES

III.A. - THE HOW OF THE MAIN INVASION

By June 1944 the Germans had decided that the Allied invasion scenario called for several attacks. Hitler was firmly convinced that the enemy would stage several large diversions in addition to delivering the *Schwerpunkt* or main blow.

III.B. - THE WHERE OF THE MAIN INVASION

Hitler believed that the *first major diversion* would come in the Normandy-Contentin Peninsula sector; that the second diversion would come in the Brittany sector; and that the main assault would be in the Pas-de-Calais sector.

III.C. - THE DATE OF THE MAIN INVASION.

Initially the Germans decided that the invasion landings would begin on 18 May 1944. The exact date was established on the basis that the landings would be made on a high tide coinciding with the hour of dawn. When the expected invasion did not come in May, estimates varied as to when the next most probable time would be. At first it was believed that the invasion would not come

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[10] A comprehensive collection of reports are contained in the War Diary of the Operations Division of the German Naval High Command. The intelligence section of that diary shows that reports, from all sources, got wide dissemination. *See Seekriegsleitung, 1 Abteilung, Kriegstagebuch*, Tiele A, Heft 49-58, 1.V.43- 31.VI.44, Chief of Naval History Repository, Washington, D.C.

before mid-June. The weather conditions developing over France on 3 June made it appear that an imminent attack was very unlikely. The bad weather and rough seas made an imminent invasion landing seem most improbable. *Heeresgruppenkommando B* (*HGK B*) and *Oberbefehlshaber West* (*OB West*) were of the belief that the landings would be in either mid-July (Rommel's view at *HGK B*) or mid-June (von Rundstedt's view at *OB West*). Then, on the evening of 5 June, additional indicators pointed to an attack before 8 June. However, only the divisions subordinate to *Armeeoberkommando 15* (*AOK 15*) in the Pas-de-Calais sector were put on full alert.

III.D. - THE STRENGTH OF THE MAIN INVASION

Estimates of the size of the enemy forces in England and the number of divisions that could participate in the initial assault waves of the attack varied. Rommel's staff at *HGK B* believed that the Allies had about sixty- five combat ready divisions in England (actually, of some 35 Allied divisions in England, 29 divisions were assigned to the OVERLORD plan). The staff at *Oberkommando der Kriegsmarine* (*OKM*) estimated that the Anglo-Americans were capable of simultaneous landing on a twenty-five division front. The *Oberkommando der Wehrmacht* (*OKW*) staff accepted an enemy capability to land on a fifteen to twenty division front, or to make several strong diver- sionary landings in multi-division strength followed by the main blow.

When the landings began in Normandy, there was some initial confusion on the part of the Germans about whether it was a raid, a diversionary attack, or the main attack. By mid-day on 6 June, the Führer had decided that the landing was *the strong diversion that he had predicted would come in Normandy*. When informed of the landing about noon, Hitler told his staff that he was convinced that the activity in France was not the *Schwerpunkt*. Hitler reminded them that he had been predicting a diversion in Normandy and said he believed that his

warnings had proved to be well founded.[11] He then warned of the imminence of a second diversion in Brittany and of the main attack in the Pas-de-Calais sector. The military situation in Normandy was discussed further at the mid-afternoon Führer Conference. Grossadmiral Karl Dönitz argued that if there was to be a second seaborne assault it probably would not come in Brittany. Hitler did not agree.[12] The Führer was convinced that a second diversion would occur in the Brittany sector.

As time passed, the Wehrmacht commanders in France became convinced that the Normandy invasion would be the only Allied landing; but Hitler—directing German war operations from his headquarters 1000 kilometers to the east at Berchtesgaden—would not accept that view. As late as 8 July, the Führer still was warning of the danger of an attack in Brittany and of the imminent danger of a large attack north of the Seine River in the Pas-de- Calais sector. On that day, in a new directive for the conduct of operations in the West, Hitler noted that:

> *[T]he enemy probably will attempt a second landing in France in the Armeeober-kommando 15 sector [which was the Pas-de-Calais area], all the more so, as public opinion [in England] will press for the elimination of the long-range [V-1 pilotless flying bomb] weapons firing on London. The disposition of the forces still available in England suggest attacks primarily against the sector between the Somme and Seine [Rivers] … but [attacks] also [are possible] against [both] Belgium and Southern Holland. At the same time, surprise attacks designed to effect the capture of one of the large ports of Brittany cannot be ruled out. Similarly, an attack against the French Mediterranean coast also may be expected.*[13]

One did come in southern France, but not until mid-August 1944.

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[11] Walter Warlimont, *Inside Hitler's Headquarters 1939-45*, trans. R. H. Barry (New York: Frederick A. Praeger, Inc., 1976), 427; John Toland, *Adolph Hitler* (New York: Ballantine Books, 1976), 566.

[12] Chester Wilmot, *The Struggle for Europe* (New York: Harper & Brothers, 1952), 248.

[13] Lionel Frederic Ellis, *Victory in the West: The Battle for Normandy* (London: Her Majesty's Stationery Office, 1962), 322.

It was his certain belief in, and real fear of, a second attack which caused Hitler to hold back from the fight in Normandy all of the numerous strong divisions stationed in the Pas-de-Calais sector. If they had been committed immediately to the counter-invasion battle, these units well might have played a decisive part in the battle for the beachhead. It was not until 25 July that the Führer authorized *OB West* to move some of the *AOK 15* units into the battle in the *AOK 7* sector, but by then it was too late.[14]

IV. - THE ROOTS OF FAILURE

In the context of the times, and from the German perspective, there was no irrationality in the developing process that produced the pre- and post-invasion estimates concerning the impending June 1944 D-Day landings. Some writers have pointed to certain very specific indicators—the lines from the Paul Verlaine poem, "*Chanson d'Automne*," in the *messages personnels* broadcast nightly by the BBC to the French resistance being the most popular choice—and characterized them as being so absolutely unequivocal that as indicators they should have overridden any assumed level of wartime confusion in the analysis process. Nevertheless, on close scrutiny, each of the so-called clear warnings, in the context of January to June 1944, not only were ambiguous but often were patently inconsistent with other apparently unequivocal information.

Consider, for example, the impact that the inclement weather during the first few days of June had on all the other "obvious and unequivocal" warnings of an impending attack. On 6 June 1944 Admiral Theodor Kranke, Chef, *Marine-gruppenkommando West* at Paris, made this note in his *Kriegstagebuch*:

> *The enemy has certainly succeeded in surprising to a certain extent the whole machinery of the German defense organization; and not the least*

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[14] Jock Haswell, *D-Day: Intelligence and Deception* (New York: Times Books, 1979), 184.

by the clever choice of a period to land when the weather appeared to be [very] unfavorable, but kept improving.[15]

Much of the incompetence or the wanton neglect that has been imputed to the Germans and their several intelligence services has resulted from a clear suppression or ignorance of the many intelligence indicators that logically pointed to greater invasion dangers in every quarter except Normandy. Furthermore, many of the histories were written prior to the declassification and public release of the intriguing details concerning the FORTITUDE deception plan,[16] the DOUBLE-CROSS agent operations[17] and the ULTRA/MAGIC signal intelligence.[18] Indeed, when all factors are considered, it is hardly fair to say

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[15] Samuel Eliot Morison, *History of United States Naval Operations in World War II: The Invasion of France and Germany* (Boston: Little, Brown and Company, 1957), 13.

[16] "FORTITUDE" was the code name given to the plan outlining a part of the strategic deception policy for the war against Germany in conjunction with OVERLORD. See SHAEF/18209/Ops(b), 3 June 1944, Records of SHAEF, Record Group 381, File No. Fortitude, MMR, NA; and Plan "Bodyguard," Combined Chiefs of Staff, C.C.S. 459/2, 20 January 1944, w/encl., Records of SHAEF, Ibid. *See also* Roger Fleetwood Hesketh, "Excerpt from Fortitude: A History of Strategic Deception in North Western Europe, April 1943 to May 1945, Conclusion," in *Strategic Military Deception*, eds. Donald C. Daniel and Katherine C. Herbig (Elmsford, New York: Pergamon Press, 1981), 233-42; Barry D. Hunt, "An Eyewitness Report of the Fortitude Deception: Editorial Introduction to R. F. Hesketh's Manuscript," in Strategic Military Deception, Ibid, 224-232; Cubbage, "Anticipating Overlord," 52-60, 250-252; Cruickshank, *Deception in World War II*, 85-205; and Jock Haswell, The Tangled Web: *The Art of Tactical and Strategic Deception* (Wendover, England: John Goodchild Publishers, 1985), 92-108, and 147-50.

[17] "DOUBLE-CROSS" is the descriptive name given to the "XX" or Twenty Committee, a group reporting to London Controlling Station, whose task it was to manage all of the double agent operations in England. For more on the clever work and methods of the Twenty Committee, see J. C. Masterman, *The Double-Cross System in the War of 1939 to 1945* (New Haven, Conn.: Yale University Press, 1972), passim; and Ewen Montague, *Beyond Top Secret Ultra* (New York: Coward, McCann & Geoghegan, Inc., 1978), passim.

[18] "ULTRA" was the British code name given to intelligence derived from decrypting German Enigma-enciphered radio messages. "MAGIC" was the American code name given to intelligence obtained from decryption of the Japanese machine-enciphered radio messages. The American radio station at Asmara, Ethiopia, intercepted the wireless messages from Japanese diplomatic and military attach, personnel in Western Europe. The messages to Tokyo from General Hiroshi Baron

simply that there was a German "intelligence" failure. To be sure, there were numerous notable intelligence collection failures. But, and of more significance, the Germans' "failure" also was one of analysis and acceptance, *i.e.*, product use, and that involved both the German intelligence services and the command centers.[19] The "failure" involved the Führer, the *Wehrmacht* officers in Germany and France, and the men of *Abwehr* and *RSHA*.

Any study of the intelligence process must accept as true the proposition that correct information, which is timely told, yet not believed or not acted on, is no better than no intelligence at all.[20]

The correct and timely analysis of information acquired by intelligence organizations is a necessary, but certainly not a wholly sufficient, condition to guarantee success in the intelligence process: one of the most critical phases in the intelligence cycle lies in persuading the military and political leadership to make timely use of the information and analysis furnished to them.[21]

Ōshima, the Japanese Ambassador in Berlin, and others, provided the Allies with valuable insights into both the intentions and capabilities of the Germans. The British intercept sites in England obtained information of a tactical and operational nature. For more on ULTRA, see F. W. Winterbotham, *The Ultra Secret* (New York: Harper & Row Publishers, Inc., 1974), passim; Ronald Lewin, *Ultra Goes to War* (London: Hutchinson & Co., Ltd., 1978; New York: Pocket Books, 1980), passim; Ralph Bennett, *Ultra in the West: The Normandy Campaign of 1944-45* (London: Hutchinson & Co., Ltd., 1979; New York: Charles Scribner's Sons, 1980), passim; Thomas Parrish, *The Ultra Americans: The U.S. Role in Breaking the Nazi Codes* (New York: Stein & Day, 1986), passim. As regards the use of MAGIC in the European Theater, see Ronald Lewin, *The American Magic: Codes, Ciphers and the Defeat of Japan* (New York: Farrar Straus Giroux, 1982), 10, 12-13, 46, 204-17, 232-46.

[19] Michael Handel properly notes that "past failures in avoiding surprise cannot be blamed on a dearth of information and warning signals. Accordingly we must look to the levels of analysis and acceptance for an answer. Michael I. Handel, "Strategic Surprise: Politics of Intelligence and the Management of Uncertainty," in *Intelligence: Policy and Process*, eds., Alfred C. Maurer, Marion D. Tunstall and James M. Keagle (Boulder, Colo.: Westview, 1985), 245.

[20] The essence of good intelligence is "timely truth, well told." Washington Platt, *Strategic Intelligence* (New York: Frederick A. Praeger, Inc., 1957), 33.

[21] Handel, "Strategic Surprise," 259.

The Germans never succeeded in this regard.

It must be understood that there are certain circumstances that arise in the context of preparing military estimates which tend to form blocks to proper perception, and by doing so make an already difficult intelligence task seem virtually impossible. While strategic surprise seem inevitable, it is too easy to allow that conclusion to follow merely from the difficulty of the task of analysis and acceptance. But, once the blocks that impeded the German perception capability are identified and their roots are understood, it will be possible to better appreciate—if not fully understand—why the Germans failed to anticipate properly the Allied intentions. The perception blocks identified in this article after study of the Normandy invasion are ten in number. They are expressed in terms of blocking factors—factors which like some fog or mist have the practical effect of clouding men's minds when they try to see into the future.

IV.A. - THE HUMAN FACTOR

One very basic cause of the German inability to perceive the relevant indicators of an Anglo-American *Schwerpunkt* in the Normandy region was the human factor. If men are to perform the task of analysis and acceptance—for what machine can do the job—then it must be accepted as inevitable that mistakes will be made. "That human beings often make erroneous judgments is self-evident from our daily experience."[22]

IV.A.1 - A PARTICULAR PERSON

This factor involves a particular people involved in the German analysis and command structure. An examination of the human factor means focusing on a few of the key people involved in the intelligence and command apparatus—for "ultimately, the idiosyncrasies and personality of each leader play a definite

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[22] Richard J. Heuer, Jr., "Cognitive Factors in Deception and Counterdeception," in *Strategic Military Deception*, eds. Donald C. Daniel and Katherine L. Herbig (Elmsford, New York: Pergamon Press, Inc., 1981), 31.

role."[23] In 1944, in Germany the key man was Adolf Hitler. In his role as Führer, he was both the chief intelligence analyst and ultimate command policymaker.[24] The important secondary figures were Rommel at *HGK B*, von Rundstedt at *OB West*, Jodl at *OKW*, Schellenberg at *RSHA/SD*, and Bormann at *Führerhauptquartier*. At the tertiary level, the cast of actors is legion. For the purpose of discussing the human factor here, a look focused on Hitler will suffice.

In regard to matters of intelligence analysis and command policymaking much depends on whether leaders are open-minded and freely encourage criticism, especially by being open to receiving unpleasant information.[25] As Michael Handel pertinently makes this observation which is pertinent to understanding Hitler and the Nazi regime:

> *Leaders in a democratic system are generally more inclined to consider a wider variety of options than those who have always functioned within authoritarian or totalitarian political systems. In authoritarian countries, where the climb to the top is an unrelenting struggle for power, habits of cooperation and openness are usually less developed. The prevalence of ideology naturally restricts openness to variety, criticism, and consideration of contradictory ideas. Leaders in totalitarian countries ordinarily have little tolerance for ideas that deviate from the "party line," since such ideas are seen as personal criticism—as a dangerous element undermining the existing ideology.[26]*

As a clear example of totalitarian leadership, the Führer's attitudes and pattern of rule prove Handel's observations in the extreme.

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[23] Michael I. Handel, "Strategic Surprise: The Politics of Intelligence and the Management of Uncertainty" (First Draft), (U.S. Army War College, Photocopy, 1985), 36.

[24] Horst Boog, "German Air Intelligence in World War II," a paper presented at the Intelligence and Military Operations Conference, U.S. Army War College, Carlisle Barracks, Pennsylvania, 22-25 April 1986, 3-4.

[25] Handel, "Strategic Surprise," 259.

[26] Ibid.

Hitler was able to create and remain within a closed and private world of his own, from which the ugly and awkward facts of Germany's wartime situation systematically were excluded.[27] Hitler simply refused to read any report which contradicted his view of Germany and its role and position in the world, or its capabilities on the battlefield.[28] The object of Hitler's staff at the *Führer-hauptquartie*r, as they perceived their duty to the Führer, was to maintain Hitler's *Nachtwandlerische Sicherheit*, *i.e.*, his sleepwalker's sense of security.[29]

> *The power of Martin Bormann, Hitler's personal secretary, was built up on the skill with which he pandered to this weakness, carefully keeping back unpleasant information and defeating the attempts of those who tried to make Hitler aware of the gravity of the situation.*[30]

With a like view the *RSHA/SD* took its cue in regard to the type of information forwarded to the attention of the Führer—operating on the assumption that Hitler wanted reassurance more than the truth.[31] Hitler, in this cosmic isolation made most of his decisions without consulting anyone on his personal or military staff.[32] The Führer's world was a land of illusion and delusion. It is little wonder that in December 1943 Feldmarschall Rommel was moved to denounce the *Atlantikwall* and the concept of a *Festung Europa* as a cloud cuckoo land illusion: the figment of Hitler's *Wolkenkuckucsheim*.[33]

IV.A.2 - TRAINING AND EXPERIENCE

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[27] Alan Bullock, *Hitler: A Study in Tyranny*, abridged ed. (1964: reprint, New York: Perennial Library, Harper & Row, 1971), 423.

[28] Ibid.

[29] Ibid.

[30] Ibid.

[31] Wilmot, Ibid.

[32] Handel, "Strategic Surprise," 260. "Members of his entourage were often as surprised as were the victims of his moves…. Such decisions, generally made on the spur of the moment, are very difficult to anticipate." Ibid.

[33] Samuel W. Mitcham, Jr., *Rommel's Last Battle: The Desert Fox and the Normandy Campaign*, (New York: Stein and Day, 1983), 21.

Klaus Knorr makes an especially important observation about the critical problem of interaction between the intelligence and the command decision staffs:

While intelligence organizations are largely manned by professionals with expertise related to the warning function, top decision-makers are not, and have not been trained in the business of reacting to and acting upon warning. They have arrived at their positions on the basis of quite different skills, and their staffs have been selected on the basis of criteria that are for the most part indifferently or not closely related to the matter of responding to strategic warning.[34]

In this context, Hitler and his staff of sycophants can be viewed as merely the extreme case of a general mental disposition on the part of decision-making staffs.

In contrast to the situation today where large intelligence organizations and staffs are the rule, none of the major powers in World War II entered the war with a trained, standing professional military intelligence corps. The *Wehrmacht* approached the problem as being simply one of military staffing where one officer ought to be as good as another. However, in actual practice, *Wehrmacht* intelligence officers (the *Ic's*) most often were simply regarded as *die Mädchen für Alles*. Being considered merely as "maids for all work," which could include keeping the war diary, morale, propaganda, and censorship duties as well, did not make the *Ic's* position a distinguished.[35] The *RSHA/SD* approach to military intelligence was hardly any different.

As Donald McLachlan has noted:

Certain professions, certain kinds of university study, [seem to] develop just those mental skills that intelligence work requires; what is [much]

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[34] Knorr, "Lessons in Statecraft," 257-58.

[35] Boog, "German Air Intelligence," 5.

more important, they encourage … confidence in the making of [difficult] judgments.[36]

Implicit in that observation is a belief that professional line military officers do not have the right stuff for the business of strategic military intelligence. The serious problem in this regard is that the need for obedience and subordination, and the rank consciousness in all uniformed services makes it difficult for career military intelligence specialist to speak out and make bold assertions: the system does not tolerate what often is viewed as insubordinate behavior, and few career officers want to stake their reputation and advancement on a long-shot prediction.[37]

Michael Handel has succinctly summarized what it is that the "gifted amateur" can bring to an intelligence service.

Amateurs frequently bring with them new enthusiasm, a creative imagination, informality, perhaps some academic openness, and a somewhat more detached and objective search for veritas—all of which are intellectual qualities highly useful for intelligence work in general and deception work in particular. This fresh start allows them to reexamine old problems from a new point of view, unlike the pre-war professional intelligence bureaucrats: they were not obligated to commit themselves to earlier, not always fully rational, traditions or to old policies.[38]

A close look at the ranks of those in the *Wehrmacht* and *RSHA* who were involved in the intelligence analysis and warning process does not reveal a

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[36] Donald McLachlan, *Room 39: A Study in Naval Intelligence* (New York: Atheneum, 1968), 344. According to McLachlan, the one thing that all the outstanding intelligence officers he knew had in common was "common standards of exact scholarship." Ibid. He viewed the intelligence service as "a new learned profession." Ibid, 346.

[37] Klaus Knorr, "Failure in National Intelligence Estimates: The Case of the Cuban Missile Crisis," *World Politics* 16 (April 1964), 460. See also, David Kahn, *Hitler's Spies* (New York: Macmillian Publishing Co., Inc. 1973), 533 ("they could … express their opinions more forcefully")

[38] Handel, "Intelligence and Deception," 140.

strong cadre of well-trained or experienced intelligence officers who fit the bill in that regard.

IV.A.3 - ATTITUDES

Beyond the problem of training and experience is the issue of personal attitude. How do the analysts and the policymakers view life in general? According to Michael Handel, the "early and easily attained military successes caused the Germans to feel vastly superior to their adversaries, to feel that they were immortal … [which], combined with their traditional nationalism, assumed racial superiority and ethnocentric view of the world, reduced their incentives to learn about others."[39] Sharing these beliefs, Adolf Hitler had a particularly dangerous aversion to being on the defensive. Hitler had an expansionist vision of Germany's destiny and he steadfastly refused to retire voluntarily on any front.[40] So dogmatic were his views in that regard that frontline commanders were denied the freedom of maneuver when on the defensive.

IV.A.4 - VIEW OF INTELLIGENCE

Driven by his view of Germany and of his historic rôle in creating the Third Reich, Hitler ceased to acquire and evaluate the evidence—intelligence or otherwise—that was available to him. Hitler believed that he was the leader of an irreversible historic movement. All his judgments proceeded from that belief. Accordingly, he had no need for intelligence, for if—as he believed—his was a divine mission, there could be only one outcome—total victory over Germany's enemies. For Hitler and the Nazi regime, there was no room for the notion that "intelligence can and should be the voice of conscience of his staff."[41]

The observation that Hitler made most of his decisions without consulting anyone carried with it the implicit idea that not even the intelligence staff at

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[39] Ibid, 141.

[40] Arthur Bryant, *Triumph In The West: A History of the War Years* (Garden City, New York: Doubleday & Company, Inc., 1959), 142.

[41] McLachlan, *Room 39*, 343.

OKW/WFSt was consulted. Hitler disliked intelligence reports. Part of this dislike was due to the belief that his adversaries were trying to deceive him and the intelligence reports were only evidence of the enemy's deceits.[42] For that very reason Hitler distrusted signal intelligence most of all. He perceived it as an obvious vehicle for the practice of deception. The Führer also had an ideological bias regarding intelligence reports.[43]

John Campbell has put the intelligence situation vis-a-vis the Führer in the following perspective:

> *Hitler's attitude toward intelligence was at best ambivalent. Intelligence at variance with his governing Wunschbild stood a good chance of rejection as defeatist; at times, according to [General] Warlimont, the clearer the information about enemy intentions the more Hitler was inclined to doubt it.* [*Oberst* Alexis von] Roenne[, *Chef, OKH/Fremde Heeres West*] *was summoned to [the Führerhauptquartier at] Rastenburg only two or three times a month and might then be granted only ten minutes of [General] Jodl's time. Hitler never saw him at all.[44]*

Paul Seabury adds to the understanding:

> Hitler, for example, "did not decide to occupy the Rhineland or Austria or to attack Czechoslovakia or Poland because any incoming information … exposed an opportunity." Instead the basic decision [to act] was made and then intelligence was gathered in order to determine the techniques to be employed.[45]

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[42] In February 1943 *OKW/WFSt* issued a warning to all commands and staffs stating that the Soviet and Allied forces were trying to mislead and deceive the Germans. F. H. Hinsley, E. E. Thomas, C. F. G. Ransom, and R. C. Knight, *British Intelligence in the Second World War: Its Influence on Strategy and Operations*, Vol. III, Pt. 1 (London: Her Majesty's Stationery Office, 1979), 120.

[43] Handel, "Strategic Surprise," 260.

[44] John P. Campbell, "D Day 1943: The Limits of Strategic Deception," *Canadian Journal of History* (1977): 234-35.

[45] Paul Seabury, "Knowing Who's Who," *The International Journal of Intelligence and Counterintelligence 1* (Spring 1986): 123; quoting from Michael Gayer, "National

For Hitler, intelligence was not important, except in the sense of its value at a tactical level or as a counterintelligence tool. It was not seen as a policymaking or strategic planning tool.

Moreover, "the more conservative German officer corps strongly resisted the integration of intelligence officers into the *Wehrmacht*…. This conservatism, tradition and aversion to civilian intellectuals did not allow them to tap the enormous intelligence potential of civilian amateurs."[46] When they were on the offensive—sometimes only in the Führer's imagination—Germany and the *Wehrmacht* simply neglected the strategic intelligence function.[47]

> *This fundamental neglect of intelligence perfectly suited the elite of the German officer corps. They believed that aggressiveness from which [the neglect] … stemmed protected Germany and thus their livelihoods from foreign dangers. Inside Germany, however, in the army, they did not merely ignore intelligence; they fought it. For intelligence threatened their jobs.*[48]

To recognize the need for strategic intelligence would be to simultaneously acknowledge its importance. From that would follow the need to create a new kind of officer to deal with it. They viewed the problem as one which would, in the end, rob the traditional *Wehrmacht* officers of their power and *raison d' être*.[49]

The *Wehrmacht* officer corps was not unique in that regard; nor was Hitler's attitude about intelligence. Historical evidence supports Donald McLachlan's observation that "men of action, [and] the commanders in operations tend at first

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Socialist Germany," in *Knowing One's Enemies*, ed. Earnest May (Princeton, N.J.: Princeton University Press, 1985), 343.

[46] Handel, "Intelligence and Deception," 140.

[47] Kahn, *Hitler's Spies*, 524.

[48] Ibid, 531.

[49] To better understand the traditional *Wehrmacht* officer class, see T. N. Dupuy, *A Genius for War: The German Army and General Staff, 1807-1945* (Fairfax, Virginia: HERO Books, 1984), passim.

to be suspicious or even contemptuous of intelligence unless they have experience of it methods."[50]

IV.A.5 - APPLICATION

Having good intelligence is one thing: being able to understand the significance of intelligence and to apply it to the conduct of battle is quite another. *Feldmarschall* Rommel, for one, knew how to make good tactical use of quality intelligence—when it was available. In North Africa, Rommel had proved he understood the worth of *tactical* intelligence and that he knew how to use it. "He never sent his troops into action without careful thought. Meticulous collection of information and reconnaissance, often carried out personally, always preceded an operation."[51] In that theater he was well served by the tactical intelligence collection efforts of the combat Y-Service of the *Wehrmacht* which provided radio monitoring and radio direction finding information.[52] When Rommel went to France in December 1943 he discovered that he would have little reliable information for his use in defensive planning.

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[50] McLachlan, *Room 39*, 341.

[51] W. von Mellethin, *German Generals in World War II* (Norman, Oklahoma: University of Oklahoma Press, 1977), 82.

[52] Harold C. Deutsch, "Ultimate Consumers: Intelligence and the Operational Art in World War II (ETO)," a paper presented at the Intelligence and Military Operations Conference, U.S. Army War College, Carlisle Barracks, Pennsylvania, 22-25 April 1986, 40.

IV.A.6 - INTUITION AND LUCK

Much has been written about Hitler's uncanny intuition and his amazing good luck. However, as it turned out, he had neither. Throughout the 1930's and into 1941, Hitler acted on the basis of political hunches. Time and time again his decisions turned out to be right. His many successes confounded friend and foe alike. It was the political successes that eventually encouraged Hitler to apply his intuitions to the battlefield as well, without first having analyzed why his political hunches had turned out right.[53] Hitler's "good luck and uncanny intuition" was nothing more than an astute political appraisal of the timid leaders of France and England, and their unwillingness to call Hitler's bluff. When the bullets actually started flying that political astuteness counted for nothing.

Intuition is an interesting concept: "the word implies that understanding can take place without the reason intervening. This may be true in the Arts and in religious experience, but in military matters it is nothing more that `hunch'."[54] In the business of military intelligence there is no substitute for an analytical framework which allows for an orderly and objective arranging and weighting of the best evidence.[55]

IV.A.6 - SUMMARY

When the variety of individual preferences and prejudices are multiplied by the total number of people who were involved in the German intelligence collection and analysis and decision-making systems, then the importance of the sum total of the human factors—both particular and humanistic —becomes readily apparent. Sometimes men of diverse views and experience work well together and their diversity provides a complement, making for a better collective judgment. That didn't happen in Germany and France in 1943 and 1944.

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[53] McLachlin, *Room 39*, 344.

[54] Ibid.

[55] W. D. Howells, "Intelligence in Crises," in *Defense `83,* ed. George R. Copley (Washington, D.C.: D&FA Conferences, Inc., 1983), 349.

It is clear that the many German intelligence analysts did what they could to make good and proper use of the available intelligence. The *Wehrmacht* officers, particularly the ones serving in France seemed to have paid due regard to the tactical intelligence information they received. In the case of Hitler it cannot be said that he made good use of strategic intelligence. But what is most interesting about the Normandy landings was that no one on the German side ever figured out what the Allies were actually planning to do. Prior to the actual landings one does not see a situation where Hitler believes one thing and the others something else. Therefore, the fact that the Germans erred in the preparation of their estimates cannot be persuasively explained by accusing Hitler, the Wehrmacht officers individually, or as a group, of conspiracy, neglect, or simply stupidity.

Little care seems to have been taken by the Germans in the selection of their intelligence officers, or in training the commanders who made the final appreciations of the situation. As a result the quality of their intelligence collection and strategic analysis was poor. Some may be tempted to speculate that if all of the Germans who played a part in the development of the pre- and post-invasion estimates had been trained intelligence officers, then better estimates might have been produced—but perhaps not. The lack of a formal intelligence training may have derogated the intelligence analysis acumen of some of the key men involved, but it certainly was not the whole cause of their failure to discover the secret of the Allied invasion strategy. Consequently, there must have been other important factors—and indeed there were—which also influenced the German ability to perceive and act on the relevant indicators surrounding the Normandy invasion.

IV.B. - THE BIAS FACTOR

Moving from the particular person to the larger universe of all men, *the bias factor* opens new vistas in the study of the more general humanistic factors as they affect intelligence estimates. The central themes here are the patterns of erroneous perception and judgment, *i.e.*, "biases" or errors in judgment that are

consistent and statistically predictable in the sense that given a large number of cases, most people will be influenced by such tendencies most of the time.[56] There are many biases, but most can be grouped into four general categories: *cultural; motivational; cognitive; and perceptual*.

IV.B.1 - CULTURAL BIAS

Two cultural biases—*arrogance* and *projection*—are rooted in the basic predisposition inherent in the analyst's cultural values and heritage.[57] Projection and arrogance are reciprocal cultural biases. The arrogance bias causes the analyst to think he and his party or nation are better than others; in the case of projection, the analyst sees other men as beneath or behind him. Both are cultural mental defense mechanisms. As Kenneth Booth points out, if the analyst knows too much about his adversary, the truth may be too frightening for him to comprehend, and a demoralization—the Hamlet syndrome—may result.[58]

IV.B.1.a ARROGANCE

As a cultural bias, arrogance has special relevance to the study of German intelligence estimates and their command decision-making. Arrogance distorted the German view of the world to an unreal one, which, in turn, resulted in many harmful decisions.[59] The Germans' national arrogance was echoed in the personal arrogance of Adolf Hitler who told German Foreign Minister von Ribbentrop that "when he had to make great decisions, he considered himself to be an instrument of [divine] providence which the Almighty had determined. He [added] … that before big decisions, he always had a feeling of absolute certainty."[60]

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[56] Heuer, "Cognitive Factors," 32.

[57] Ibid.

[58] Ibid, citing Kenneth Booth, *Strategy and Ethnocentrism* (New York: Holmes & Meier, 1979).

[59] Kahn, *Hitler's Spies*, 141.

[60] Handel, "Strategic Surprise," 259.

In early 1944, at the age of 54, Hitler had no habits of cooperation or of orderly staff work, and was incapable of any disciplined or systematic work.[61] Hitler simply imposed his ideas on others. His many early successes in the face of senior German military and foreign policy opposition convinced Hitler that his intuition was infallible.[62] The Führer was not— in his own mind—in need of strategic intelligence. He knew what was going to be the outcome of his decisions and had no need for intelligence estimates—particularly contrary ones.

IV.B.1.a - PROJECTION

The concept of projection relates to the tendency of human perceptions to be ethnocentric. That means analysts see the external world inside out, which typically involves the projection of his own belief systems, and that, by definition, causes the underestimation, if not the denigration, of the opponent's culture, motivations, intentions, material and technological achievements, and the capacity to identify with others.[63] Consumed by feelings of assumed "Aryan superiority" the German projection of their beliefs made it appear to them that none of their adversaries would prove in war to be more than minor nuisances on the battlefield. In that regard, their experiences on the plains of Poland and the fields of France gave their new Blitzkrieg doctrine the dazzling appearance of the ultimate concept.

IV.B.2 - MOTIVATIONAL BIAS

Two motivational biases, namely, *risk taking* and *overconfidence*, result from the influence on judgment of ambitions and fears, and the need for men to perceive their past behavior as commendable and consistent.[64]

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[61] Handel, Ibid; Bullock, *Hitler*, 6.

[62] Handel, Ibid.

[63] Handel, "Strategic Surprise (First Draft)," 30.

[64] Heuer, "Cognitive Factors," 32.

IV.B.2.a - RISK TAKING

Whenever decisions must be made in the face of uncertainty there is an element of risk, and a decision to go forward with a plan of action in the light of the risk involves an element of "gambling."

> *When it comes to gambling, we must distinguish between the considered gamble and the pure gamble. A considered gamble is based on a calculated risk and is decided upon only after careful consideration of the pros and cons in the light of prevalent uncertainties. A pure gamble occurs when an actor is inclined to gamble as a matter of personality, or because he perceives viscerally that there is no acceptable alternative …, and will plunge without a careful prior evaluation of the problem or when the calculated risk would be forbidding to the purely rational decision-maker.*[65]

Practical experience confirms that in the real world considered and pure gambling occur in various mixtures. Without question, Adolf Hitler was predisposed to pure gambling. At no point—even after the most serious defeats—did the Führer ask for or encourage better intelligence analysis to aid him in making major decisions, for in his mind he had no need of it.[66]

In the late 1930's the senior officers of the Wehrmacht were generally disposed to be risk averse. The early successes and Hitler's "luck" changed all that. By 1941 the senior Wehrmacht officers at *OKW* were inclined to high-risk fuzzy gambling—*i.e.*, the taking of action where the frequency of the occurrence of low probability events is highly variable, and where the extent of the local

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[65] Klaus Knorr, "Strategic Surprise: The Incentive Structure," in *Strategic Military Surprise: Incentives and Opportunities*, eds. Klaus Knorr and Patrick Morgan (New Brunswick, N.J.: Transaction Books, 1983), 176.

[66] Handel "Strategic Surprise," 260.

commander's control over the amount of reliable tactical—let alone strategic— intelligence about the combat environment is severely limited.[67]

The propensity to fuzzy gambling is, and necessarily must be, in the nature of military line officers. To paraphrase Walter Warlimont:

> This was in the best tradition of the soldier. Such heroic determination in battle had given the Prussian-German army many a victory and much more besides. But when it turned into a political code of conduct, as at the end of the First World War and during the Hitler period, it leads to irretrievable disaster. For what in the soldier is the height of courage, in the statesman is likely to be irresponsible temerity.[68]

It was this sort of unjustified arrogance which caused the senior Wehrmacht officers to lose touch with reality.[69] When the *OKW* officers lost touch with reality it became impossible for them to avoid going along with Hitler's pure gambling, and any felt need for good strategic intelligence simply disappeared. Thus, for them the intelligence estimate became—if anything—simply a rationalization for what they were bound and determined to do.

IV.B.2.b - OVERCONFIDENCE

Overconfidence—some call it hubris—is said to be the most frequent cause of surprise.[70] It is that feeling that the other side would not dare, and it certainly tends to breed vulnerability.[71] "Swaggering tends to produce self-intoxication, and along with it an inflation of one's strength across- the-board," and such an

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[67] Jesse Goldstaub, "Risk Intelligence Analysis and Forecasting: Policy Gambling and the Catastrophic Event" (Occasional paper, University of Calgary, Faculty of Management, 1984), 9.

[68] Warlimont, *Inside Hitler's Headquarters*, 587 n.1.

[69] Kahn, *Hitler's Spies*, 524.

[70] Roy Godson, "General Discussion: Avoiding Political and Technological Surprise in the 1980's," in *Intelligence Requirements for the 1980's: Analysis and Estimates*, ed. Roy Godson (New Brunswick, N.J.: Transaction Books, 1980), 118.

[71] Knorr, "Lessons in Statecraft," 249.

enhancement of self-esteem tends to lead to even greater self-confidence, and produce even more aggressive attitudes toward an adversary.[72]

Hubris—the central theme in the Greek tragedies—is the zenith state of overconfidence, connoting a pride and insolence so extreme that in ancient times it was said to so infuriate the gods as to cause them to strike men down at the height of their success. One must understand the tremendous risks taken by Hitler in the period from 1936 to 1940, and appreciate his apparent good luck during that time in order to appreciate properly the hubris that prompted the Führer to take even more impossible chances in his air attacks against England and land attack on Russia—wherein both, his luck ran out.[73] Such an understanding brings with it the realization that when men like Hitler are being swept along in a hubristic state of mind, strategic intelligence became, at best, no more than an unnecessary distraction.

IV.B.3 - COGNITIVE BIAS

The several cognitive biases result simply from the way the mind tends to work and not from any intellectual or emotional predisposition toward a certain judgment.[74] The *attribution of causality*, the *estimation of probability*, and the *evaluation of evidence* all merit discussion in the context of intelligence analysis.

IV.B.3.a - ATTRIBUTION OF CAUSALITY

This aspect of the cognitive bias affects the way the mind arrives at attributions of causality. An analyst can see a plane or a tank, but he cannot see causation. Instead, the analyst's individual perception of causation results only from a complex process of inference, and as with other forms of inference, his specific

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[72] Michael J. Brenner, "The Iraq-Iran War: Speculations About A Nuclear Re-Run," *Journal of Strategic Studies* 8 (March 1985), 32.

[73] See Richard K. Betts, "Strategic Surprise for War Termination: Inchon, Dienbienphu and Tet," in *Strategic Military Surprise: Incentives and Opportunities*, eds. Klaus Knorr and Patrick Morgan (New Brunswick, N.J.: Transaction Books, 1983), 169.

[74] Heuer, "Cognitive Factors," 32.

perceptions are subject to systematic biases.[75] For most people the events in the world are seen as part of an orderly, casually related pattern, in which chance, accident and error tends to be rejected as explanations for an observed event.[76] Moreover, the extent to which other people, ethnic or religious groups, or other nations pursue a coherent, rational, goal-maximizing policy often is overestimated.[77] The need to find order and not chaos or pure chance in the world is a powerful mental force; a bias that can and lead to incorrect conclusions being drawn about causality.

The very real problem for the intelligence analyst is that, by definition, his task is to fit various intelligence reports into nice categories which can be explained. It is very hard to write an intelligence report which discusses an observed event and then concludes with the statement that the analyst does not have a clue as to why the event occurred or what may be its implications. Consequently, where the enemy is practicing some form of active deception, the analyst probably will find it much easier to accept and deal with the false data as true because he will find it fits better into an estimate that has good causal linkages. In the business of intelligence, if something is too good to be true, then it probably isn't; except, of course, when it is! The Germans were able to fit all of their evidence into one tidy package which pointed inexorably to a *Schwerpunkt* in the Pas-de- Calais sector.

IV.B.3.b - ESTIMATION OF PROBABILITY

This aspect of the cognitive bias affects the way the mind makes estimations of probabilities. The estimation of probabilities is important because we live in a probabilistic world.

Social, political, military and economic development are not rigidly determined but occur or fail to occur with some degree of probability. Decision-makers cannot be certain of the outcome of their actions, so they weigh the probabilities of alternate outcomes. The information on which

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[75] Ibid, 56.

[76] Ibid, 63.

[77] Ibid.

these decisions are based also involves many uncertainties expressed in probabilistic terms.[78]

Nevertheless, there is much "fuzziness" in the world in regard to the definition of the terms "probable" and "possible."[79]

More important than the linguistic problem regarding the proper definition of "probable"—which is dangerous enough—there is a systemic bias which affects the very accuracy of the way that probability is measured.[80] In general, analysts will tend to overestimate the probability of future event scenarios that are constructed from a series of discrete and individually probable events.[81]

> *The principle of representativeness dictates that the more detailed …*
> *future scenarios become, the more likely they will seem—since the detail*
> *makes an account more strongly resemble the real world. But imagine a*
> *scenario involving seven such assumptions, each of which has a 90 per*
> *cent chance of being right. Its overall odds would be somewhat less than*
> *50-50 (.9 x .9 x .9 x .9 x .9 x .9 x .9 = 47.8 per cent).*[82]

Too many analysts and policymakers never give a second thought to the fact that a multi-branch decision tree can produce a very low final overall probability factor.

If the bias in favor of giving too high a probability to a multiple sequence event is not bad enough, intelligence analysts often have an even greater difficulty in estimating the likelihood of low probability events, even when they recognize that such events may have a potential for very serious consequences.[83] Analysts simply have trouble giving a high probability figure to a situation or outcome that they have trouble imagining. Thus, in simplest terms, an analysts' estimate of

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[78] Heuer, "Cognitive Factors," 44.

[79] Ibid.

[80] Ibid.

[81] Kevin McKean, "Decisions, Decisions," *Discover* (June 1985), 26.

[82] Ibid.

[83] Heuer, "Cognitive Factors," 45.

probability is directly influenced by the mental availability of the event to him. If he can easily imagine or remember such an event, or something like it, then his probability estimate will be higher

In real terms, the breadth and depth of the analyst's own knowledge will directly affect the validity of his probability estimates. Since many of the events that occur in war time are unique events—and by definition fall into the category of low probability events—the high probability of error because of this estimation bias looms large. For the German analysts, it was genuinely hard to imagine an Allied landing in the Normandy sector—with no ready access to a port and with the rocky shallows offshore—so it is not difficult to understand why the Germans did not rate a major landing in this region as a high probability event.

IV.B.3.b - EVALUATION OF EVIDENCE

This cognitive bias affects the way the mind evaluates evidence. There are three different ways that analyst's let their mental processes play tricks on them. The first deals with an *oversensitivity to consistency*; the second with the *absence of evidence*; and the third is concerned with *discredited evidence*.

IV.B.3.b.(1) - OVERSENSITIVITY TO CONSISTENCY

When preparing estimates, analysts routinely will formulate alternate hypothesis and select from among the alternate hypotheses the one which includes the greatest amount of the available evidence within a logically consistent scenario.[84] When very little information is available, serious problems of bias arise. Analysts, perhaps more than most men, tend to be overly sensitive to consistency. It is not uncommon for an analyst to have more confidence in the conclusions he draws from a very small body of very consistent information than from a larger body of less consistent data. Such confidence is misplaced

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[84] Ibid, 50.

because the conclusions drawn from very small samples are highly unreliable in a statistical sense.[85]

IV.B.3.b.(2) - ABSENCE OF EVIDENCE

It is in the nature of military intelligence to have situations where estimates must be made in the recognized absence of evidence. In 1942 and 1943 the Germans were trying to determine where the Allies would land in France before the Allies had decided. They had no objective evidence upon which to base such an opinion. The problem with this bias is that most people have great difficulty in factoring the absence of evidence into their judgments.[86] There is a strong tendency to mentally sum all of the variables in an equation to 100 per cent, and even the most experienced analyst finds it difficult to ascribe a high percentage factor to a single discrete category called "unknown information" or "other unknown options." Military officers—including those in intelligence—are constantly exhorted to "expect the unexpected," but even when they do, they give it a very low probability factor.

IV.B.3.B.(3) - DISCREDITED EVIDENCE

Another critical bias phenomenon concerning the evaluation of evidence is that "initial impressions tend to persist even after the evidence that created them is fully discredited."[87] There is a natural bias which manifests itself as a "tendency to interpret new information in the context of pre-existing impressions … even after the new evidence authoritatively discredits the evidence on which it is based."[88] Richard Heuer postulates the following to explain why this is so:

When evidence is first received, it is perceived within a context that implies [some] causal connection between the evidence and some

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[85] Ibid.

[86] Ibid, 51-52.

[87] Ibid.

[88] Ibid, 53

antecedents that explain the evidence. The stronger the antecedents, the stronger the impression created by the evidence.[89]

Thus, even though early evidence subsequently is discredited, the original causal linkages remain plausible and may be seen by the analyst as sufficient to imply the existence of an event even in the absence of the discredited evidence.[90]

IV.B.4 - Perceptual Bias

The perceptual biases arise from the nature of the process by which analysts perceive the world around them, and the limits on the accuracy of perceptions.[91] These relate to *modeling*, *plots and narratives*, *sagacity*, and *acumen*,

IV.B.4.a - MODELING (aka BOUNDED RATIONALITY)

The world is a very complex place, yet man copes with the complexity. He does so by mentally modeling a world he thinks he can understand.

Over 20 years ago, Herbert Simon advanced the concept of "bounded" or limited rationality. Because of the limits of our mental capacity, he argued, the human mind cannot cope directly with the complexities of the world. Rather we [all] construct in our mind a simplified model of reality and then work with this mental model. We behave rationally within the confines of our mental model, but this model is generally not very well adapted to the requirements of the real world.[92]

The mental models that analysts construct as individuals are no more than "simplifying strategies" which they employ to assist them personally when they mentally process information.[93] Since each of these models reflect individual

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[89] Ibid, 54.

[90] Ibid.

[91] Ibid, 32.

[92] Heuer, 31-32, citing Herbert A Simon, *Models of Man: Social and National* (New York, Wiley, 1957).

[93] Heuer, Ibid, 32.

needs—*i.e.*, they are self-directed—they are dangerous models for use in viewing the world at large. The models an analyst must use when dealing with an adversary in a war-fighting context need to be sophisticated strategies, fine tuned to the business of producing intelligence estimates. The German experience proved that even the personal models that are tailored to a professional military lifestyle are not well suited for use in regard to estimating what an adversary will do.

IV.B.4.b - PLOTS AND NARRATIVES

As an alternative to the use of simplifying models to deal with highly complex situations, Theodore Sarbin opines that human beings think, perceive, and imagine according to a narrative structure. In other words, given two or three stimulus inputs, an analyst will connect them to form a story.[94]

> *The narrative is a way of organizing episodes, actions and accounts of actions; it is a mode of incorporating not only accounts of actions but also accounts of accounts of actions; it allows for the inclusion of antecedent and concurrent events which guide action. In short the narrative is an organizing principle…. Gestalt psychology has demonstrated that organizing principles are at work in the patterning or structuring of sense data. The gestalt idea … is incorporated by the aphorism: the whole is greater than the sum of its parts.[95]*

The narrative, as a perceptual device is well suited as a tool to deal with explaining the behavior of others in military situations involving unbounded complexity. The narrative device has all the properties of a lively metaphor, and calls to mind the images of a story, a plot, characters, and a storyteller.[96] When using the narrative as an intelligence estimation tool, the analyst becomes kin to

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[94] Theodore R. Sarbin, "Prolegomenon to a Theory of Counterdeception," in *Strategic Military Deception*, eds. Donald C. Daniel and Katherine L. Herbig (Elmsford, New York: Pergamon Press, Inc., 1981), 157.

[95] Ibid, 158.

[96] Ibid.

the historian, who, "unlike the novelist, is expected to tell his stories so that they [truly] are consistent with chronology and reveal a `truth'."[97]

Of course, the key to a good novel or historical narrative is the plot. The same is true when the narrative is used as an analytical tool. The analyst focuses on the plot as a device for penetrating the meaning of the actions of others. He looks beyond the story—the narrative flow—and reads the intentions of the adversary in the underlying plot. The use of the "emplotment technique" of analysis is not a substitute for prediction by other methodologies; instead it is a supplementary concept necessary for dealing with the complex or unique case, or with counterdeception analysis.[98]

While it is a powerful analytical tool, the concept of plots and narratives is not without its limitations. The plot, once it is constructed, will dictate the best possible endings for the incomplete story: once established, the plot becomes part of the analyst's current expectations.[99]

> *The problem for the counterdeception analyst is to construct a plot from antecedent events and predict the outcome. [He is] … still concerned with predicting the actions of an adversary, but the foundations for [his] … predictions are not chronologies of specific events, but the organizing principles that assign meaning to the happenings.[100]*

Thus, if the analyst assumes that the adversary is practicing to deceive, and assumes that the enemy knows well the rules of the deception game, then the analyst's *a priori* question should be one which is put immediately to the man who makes the policy—the man for whom the analyst is preparing the estimate.

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[97] Ibid, 160.

[98] Ibid, 161.

[99] Ibid, 168.

[100] Ibid, 168.

The question for the policymaker is simple: "What makes YOU afraid?"[101] If the adversary is good at the deception game, then he will try to find out what makes the analyst's policymakers nervous and he will play to that concern. Since the ultimate target if deception is the decision-maker, the adversary will use any means, fair or foul, to learn the fears of the enemy decision- maker or command apparatus. The analyst also must learn the same thing if he is to guard his policymaker from the enemy's deception schemes. According to Brigadier Dudley Clarke: "*You can never by deception, persuade an enemy of anything not according with his expectations, which are not far removed from his hopes.*"[102]

IV.B.4.c - SAGACITY

Sagacity relates to the ability to make keen discernments. It is a *statistical* approach to intelligence problem solving.[103] Sagacity simply is a mental methodology which involves the making of predictions through the "freezing" or the "holding" of a matrix of clues and inferences.[104] In using this statistical sort of an approach, the analyst first establishes that particular pieces of information are part of a class of strategic actions and factors, and he then predicts for the particular case from knowledge of the characteristic of the class—all of which assumes that the analyst first has inductively derived base rates available for his use.[105] There are a number of intelligence judgments of this type which can be made with a reasonable degree of accuracy—but it is a "bean counter" type of methodology. Obviously, one who practices to deceive with try to give the analysis a lot of false bean to count,

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[101] Goldstaub, "Risk Intelligence Analysis and Forecasting," 4. Questions being asked and information being accepted are subject to the ethno- and geo-centric predilections of policy makers, their biases in terms of cultural perspective and logic, and both their doctrinal allegiances and political mind-set. This mandates that those who make decisions and formulate policy be queried: "What makes YOU afraid?" Ibid.

[102] David Mure, *Master of Deception* (London: William Kimber, 1980), 101.

[103] The statistical approach was labeled "sagacity" by Karl E. Scheibe, *Mirrors, Masks, Lies and Secrets* (New York: Praeger, 1979).

[104] Sarbin, "Prolegomenon to a Theory," 162.

[105] Ibid, 152.

The use of base rate statistical analysis is appropriate when occurrences are repetitive and when predictions are expected to be in error proportional to the probabilities contained in the base rate.[106] In wartime situations with extremely high stakes, where life-and-death issues must be decided, inferences derived solely from base rates are seldom acceptable; the cost of false positives is too high.[107] Thus, the sagacity technique should be used only to supplement other forms of analysis.

In regard to the German estimates concerning the Allied invasion plans, the sagacity method could have been used by the Germans to develop more reliable information about the Allied assault landing capabilities. This was not done. Instead, in determining the enemy's amphibious assault capability by counting landing craft, the Germans appear to have altogether ignored the so-called landing craft base rate—or other background data on sealift capability. The Germans intelligence staff at *OKH*, *Fremde Heeres West*, was concerned more with the details of the Allied Order of Battle. Accordingly, as *FHW* identified new units and added them to the OB charts, the Germans made the assumption that if a division was in England and was of the assault type, then perforce, the landing craft for the units also must exist! The Allied deception planners knew of the "bean counter" approach being taken by the OKH/FHW intelligence staff and gave them plenty of fictional divisions—bad beans— to count.

IV.B.4.c - ACUMEN

Acumen means superior mental astuteness. It is contextual in nature and involves the analyst "moving with the experimental flow, and responding flexibly to change and novelty as the target person enacts his roles."[108] It is the technique that relies solely on the particular analyst's training and experience. He

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[106] Ibid.

[107] Ibid. In such a situation, the analyst can use the case study (the intuitive or clinical) method, where predictions from the available data allow for either tinkering with or ignoring the base rates. Ibid.

[108] Sarbin, "Prolegomenon to a Theory," 162.

must be possessed of instinct, imagination, or *Fingerspitzengefühl*, and be able to listen with the "third ear" and for the still "small" voice."[109]

Acumen is the most powerful mental tool of the gifted analyst. Experience shows, one either has it or one does not—and an analyst may have it for one type of estimation or target area, and not have it for another. Acumen is like common sense—only it operates on a more intellectual plane. To paraphrase Theodore Sarbin:

> *Prediction by acumen is the stock in trade of the analyst who can penetrate the masks and expose the lies of the adversary. He does this not exclusively by verbal or nonverbal tip-offs or leakage but through empathic skills. Everyday experience confirms that some analysts have skill in taking the role of the other. What appears to be involved when one analyst consistently makes the correct predictions of the conduct of other? Various traits have been posited, such as Einfühlung i.e., an empathetic understanding, or a getting in the spirit of the thing, social intelligence, and so on. Such traits serve only as synonyms for acumen. Among other things, it seems that the ability to view the world from the perspective of another is related to the analyst's ability to "decenter," i.e., to shift from an established mental anchor to a new position in perceptual and cognitive judgments. It may be inferred that the analyst who is successful in taking the role of another is able to construct a scenario, a story, and place himself in relation to the other features of the story, physical features such as geography and climate, and social features, such as role relationships with multiple role players.*[110]

Those with acumen have what can be called *the genius for the craft of intelligence.*

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[109] Laquer, *World of Secrets*, 292.

[110] Ibid. For more on "empathy," see Ralph K. White, "Empathy as an Intelligence Tool," *The International Journal of Intelligence and Counterintelligence* 1 (Spring 1986): 57-75.

The concept of intelligence acumen seems to have been well understood by Carl von Clausewitz.

> *War is the province of uncertainty…. Here, then, above all a fine and penetrating mind is called for to search out the truth by the tact of its judgment.*[111]

and,

> *Now, if [one] … is to get safely through this perpetual conflict with the unexpected, two qualities are indispensable: in the first place an intellect which, even in the midst of this intense obscurity, is not without some traces of inner light, which lead to the truth, and then the courage to follow this faint light. The first [trait] is figuratively expressed by the French phrase coup d'œil. The other is resolution.*[112]

It is clear that coup d'œil also is synonymous with acumen, while resolution is but another aspect of superior mental astuteness in decisive action.

Coup d'œil is a term taken from French, that more or less corresponds to the words glimpse or glance in English. The literal meaning is "stroke of [the] eye". It is mostly used (in English) in a military context, where the *coup d'œil* refers to the ability to discern at one glance the situation at hand.

Theodore Sarbin asks and answers the pertinent question: "Can acumen be learned? The literature of psychology contains a number of programs that in principle might serve as heuristic devices for the training of analysts of strategic interaction."[113] But, more importantly, common experience teaches that it should be expected that those predisposed to reason well, more often than not, will end up working in the areas which call for that sort of talent—*e.g.*, practicing law, doing scholarly research, writing, etc. The World War II experience of the British

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[111] Carl von Clausewitz, *On War*, ed. Anatol Rapoport (Vom Kriege, 1832; trans. Routledge & Kegan Paul Ltd., 1908; New York: Penguin Books, 1968), 140-41.

[112] Ibid.

[113] Sarbin, "Prolegomenon to a Theory," 168.

certainly seems to bear this out. From this it also seem to follow that the military academy, whether Prussian pre-war or otherwise, do not produce those types of gifted individuals in any significant number.

IV.C - THE PERCEPTION FACTOR

IV.C.1 - KNOWING THE UNKNOWABLE

Sometimes there is a need to prepare estimates about what is unknowable—having to anticipate an enemy action before the enemy even plans it. This need arises when a decisionmaker needs to prepare a defense for what he believes may happen. The Germans clearly recognized that their estimates of a future invasion in northwest Europe probably were predating the actual Allied finalized decision process. To overcome that problem, the German analysts attempted to see Europe as they perceived their adversary might. They attempted to develop logically the plan of attack which they believed that the Anglo-Americans in time also might develop. After the advantages and disadvantages of many areas were catalogued and analyzed, the Germans decided that the best coastal sector for invasion was in the Pas-de-Calais region of France. Interestingly enough, the Allied plans prior to mid-1943 all focused on that sector.[114] Also, early in the war, when the *Wehrmacht* was makings its plans to invade England, it planned to depart form the Calais-region ports and take the shortest channel crossing route to the English beaches.

After the Germans had logically concluded that the enemy's *Schwerpunkt* would come in the Pas-de-Calais, they began to prepare their defenses accordingly—fortifying the Channel Ports. It was at that point in time that the current expectations factor began to interfere with the German perception capability. Having concluded that the enemy was going to land in the Pas-de-Calais, there was a natural tendency on the part of the Germans either to ignore

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[114] See C.O.(R)25, July 1943, "Rattle," Record of a Conference Held at H.M.S. "Warren" from 28 June to 2 July to Study the Combined Operations Problems of "Overlord," 93, Records of SHAEF, Record Group 331, File No. 337/16 Rattle Conference, MMR, NA.

or to misinterpret the indicators relating to other sectors—at least the indicators pointing to large-scale landings in the other sectors. Inasmuch as the current expectations seemed logically sound—and they were the product of careful study —the current *Wehrmacht* expectations carried with them their own self-proving persuasiveness.

IV.C.2 - THE CURRENT EXPECTATION PROBLEM

Many experiments demonstrate the extraordinary extent to which the information obtained by an analyst depends on his current expectations—which include his *preconceptions*, and his *assumptions*.[115] An analyst's current expectations have many diverse sources, including past experience, professional training and cultural and organizational norms; all of which predispose the analyst to pay particular attention to certain kinds of information and to organize and interpret this information in certain ways.[116]

Thus, the current expectations factor is a fundamental principle concerning *perception*: analysts tend to perceive what they expect to perceive; a corollary of this principle is that it takes more information, and more really unambiguous information, to recognize an unexpected phenomenon than an expected one.[117] If an analyst is not expecting immediate trouble, or trouble of a particular kind, or trouble in a particular place, then his negative expectations determine how he will read an intelligence report; even as he sorts the reports before him, an analyst will select what is in accord with his expectations.[118] Such patterns of expectation, rooted in past experience and training, subconsciously tells the analyst what to look for, what is important, and how to interpret what he sees; these patterns form a "mind-set" that predisposes the analyst to think in certain ways.[119]

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[115] Heuer, "Cognitive Factors," 34.

[116] Ibid, 35.

[117] Ibid, 34.

[118] See Wohlstetter, *Pearl Harbor*, 390.

[119] Heuer, "Cognitive Factors," 35-6.

In dealing with a major target country, intelligence officers naturally approach their task with a set of expectations about the target's likely patterns of behavior.[120] It is practically impossible for an analyst to sift the relevant from the irrelevant and to perceive a pattern in a large volume of information unless he has some hypothesis to guide him, for it is the analyst's expectations, resting on his beliefs about what is likely to happen, that determine what information receives his attention.[121] Richard Heuer notes:

> *[M]ind-sets are neither good nor bad: they [simply] are unavoidable. There is no conceivable way of coping with the volume of stimuli that impinge upon our senses, or with the [total] volume and complexity of the information that we have to analyze without some kind of simplifying preconception about what to expect, what is important, and what is related to what.*[122]

Moreover, analysts must recognize that objective analysis is not achieved by avoiding preconceptions but by recognizing the tentative nature of all knowledge and by devising means to test our perceptions and assumptions against reality.[123] Joseph Stalin is said to have warned his intelligence chiefs to keep away from "*hypothesis and equation with too many unknowns*," saying that "*an intelligence hypothesis may become your hobby horse on which you will ride straight into a self-man trap.*"[124]

Against this background of current expectation problems, Richard Heuer observes and advises:

> *As a general rule, we are more often on the side of being too wedded to our established views and thus too quick to reject information that does*

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[120] Knorr, "Failures in National Intelligence Estimates," 461.

[121] Ibid, 457, citing Wohlstetter, *Pearl Harbor*, 56, 390, 397.

[122] Heuer, "Cognitive Factors," 36.

[123] Heuer, Ibid.

[124] Angelo Cordevilla, "Comparative Historic Experience of Doctrine and Organization," in *Intelligence Requirements of the 1980's: Analysis and Estimates*, ed. Roy Godson (New Brunswick, N.J.: Transaction Books, 1980), 17.

not fit these views, than on the side of being too quick to reverse our beliefs. Thus, most of us would do well to be more open to evidence and ideas that are at variance with our preconceptions."[125]

The problem with this advice, as noted by Michael Handel, is that "open-ended ideas do not provide enough basis for action or longer planning, as continuous change [and conflicting information] can bring about confusion and paralysis."[126]

Almost without exception "human beings impose structures on the flow of experience."[127] Scientists and engineers tend to impose more formal structures, and in doing so "schematize the flow of experience, seeking structure and organization as abstracted schemata aided by mathematical, geometric, graphic, … or other models."[128] They inevitably produce a regressive view of the world which over the long span of time accounts for the observation that "the extremes move toward the average."[129] Given a choice, this tendency suggests that artists and writers are better suited—or mentally disposed—to be intelligence analysts. This notion is summarized by John Dewey:

The novelist and the dramatist are so much more illuminating as well as more interesting commentators on the conduct than schematizing psychologists. The artist makes perceptive individual responses and displays a new phase of human nature evoked in the new situations. In putting the case visibly and dramatically he reveals vital actualities. The systematizer treats each act as merely another sample of some old principle, or as a mechanical combination of elements drawn from a readymade inventory.[130]

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[125] 124. Richard J. Heuer, Jr., "Strategic Deception: A Psychological Perspective," a paper presented at the 21st Annual Convention of the International Studies Association, Los Angeles, California, March 1980, 45.

[126] Handel, "Strategic Surprise (First Draft)," 30.

[127] Sarbin, "Prolegomenon to a Theory," 158.

[128] Ibid.

[129] Steven Jay Gould, "The View of Life," transcript of the 18 December 1984 PBS television broadcast, NOVA #1118 (Boston, Mass.: WGBH Educational Foundation, 1984), 11.

[130] John Dewey, *Human Nature and Conduct* (New York: Henry Holt, 1922), 145-6.

The German officer corps fit the mold of scientific and logical systematizers.

IV.C.3 - Attitudes and Predispositions of Others

While the current expectations of the analyst are important, so also are those of the adversary. "Intelligence prediction is the estimation of the likely actions or intentions of foreign nations, and its failure can be deduced … to a misunderstanding of foreigners' conceptual frameworks—*i.e.*, a failure to understand properly the assumptions or interpretations of the situation upon which the foreigners base their decisions."[131] *When the adversary's actions do not correspond with the analysts current expectations, behavioral surprise results*. Thus, when an analyst forms expectations about the enemy he must be sure that his current expectations correspond with the adversary's attitudes or predispositions, for both affect the behavior of the adversary government.[132] Attitudes, though they are powerful in shaping behavior, do not by themselves determine it: *i.e.*, behavior depends upon the information on which the adversary in question acts and the value he places on the outcome of alternative courses of action; it is through a mediation of such calculations that attitudes are brought into play.[133] Accordingly, intelligence estimates often are wrong, not simply because the analyst does not know the information or basic values on which an adversary acts, but because he assumed the adversary would "act on the basis of approximately the same information or values that the analyst possesses."[134]

IV.C.4 - Internal Influences

The attitudes of those with whom the analyst works also affect the production of an intelligence estimate. Intelligence analysts share information and ideas—formally in reports, or casually in conversation. Studies of group interaction show

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[131] Benno Wasserman, "Failure of Intelligence Prediction," *Political Studies* 8 (June 1960), 161-62.

[132] Klaus Knorr, "Failure in National Intelligence Estimates: The Case of the Cuban Missile Crisis," *World Politics* 16 (April 1964), 464.

[133] Ibid.

[134] Ibid.

that an analyst's interpretation of a piece of intelligence information will influence those with whom he is in contact.[135] In a military environment, the rank of the intelligence officer will influence the weight given to information from him.[136]

IV.C.4 - CORNERSTONE THEORY

Three concepts—*unconscious suppression*, *stubborn attachment*, and *psychological investment*—form the cornerstone theory that explains why the current expectations factor tends to cause intelligence analysts and commanders to become locked into certain mind-sets.

IV.C.4.a - UNCONSCIOUS SUPPRESSION

When an analyst is processing new intelligence information he approaches it with "a set of assumptions and expectations about the motivation of people and the process of government in foreign countries; events consistent with these current expectations are perceived and processed easily; those that contradict prevailing expectations tend to be ignored or distorted in perception."[137] Accordingly, from time to time, all of the old information should be reexamined—for an analyst's current expectations may change—to see if there is anything that was overlooked, albeit unknowingly.

IV.C.4.b - STUBBORN ATTACHMENT

Sometimes the analysts' problem is one of not being able to mentally let go of an expectation. "Human beings have a stubborn attachment to old beliefs."[138] In some instances the pattern of expectation are so deeply imbedded that they continue to influence preconceptions even when the analyst is alerted to and tries to take account of the existence of data that does not fit his preconceptions;

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[135] Sarbin, "Prolegomenon to a Theory," 169.

[136] Ibid.

[137] Heuer, "Cognitive Factors," 35.

[138] Wohlstetter, Ibid, 393.

trying to be objective does not guarantee accurate perception.[139] This problem often is referred to as *mental anchoring*.[140]

IV.C.4.c - PSYCHOLOGICAL INVESTMENT

At some point in the normal development of every intelligence estimate, the analyst moves from having a tentative hypothesis to the point of having a reasoned opinion—and, at that point, he subconsciously makes a psychological investment in his work product. The harder the analyst has worked to get to that point, the bigger will be his psychological investment. Then, as his work continues, the analyst will find the intelligence information he used first to be more and more supportive of his initial theory; he also will begin to find more facts to support his view. Once his estimate is put down on paper—especially if it is disseminated—the analysts' psychological investment in the product will make a change of mind virtually impossible.[141]

IV.D - THE OPTIONS FACTOR

IV.D.1 - GERMAN ASSUMPTIONS

In their attempt to mentally cast themselves as planners in the role of their adversary, the Germans had to make certain basic assumptions about the nature of the expected Allied amphibious operations. Lacking reliable information about the enemy's developing doctrine, techniques and capabilities, the Germans assumed that their enemy would solve the large-scale cross-Channel amphibious assault problems in the same way that the Germans would. However, the only real German experience in such over-the-beach matters was the invasion planning associated with Operation *SEELÖWE* (SEA LION), the 1940 German plan to attack England.

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[139] Heuer, "Cognitive Factors," 34-35.

[140] Sarbin, "Prolegomenon to a Theory," 153.

[141] *See* I. Nelson Rose, "Litigator's Fallacy," *Litigation: The Journal of the Section of Litigation, American Bar Association* 3 (Spring 1985), 61. ("It is a normal human reaction to look for factual capital to support one's psychological investment.").

Prior to the Allied raid at Dieppe in August 1942 there was considerable similarity in German and Allied amphibious assault theories.[142] The Dieppe raid and the invasion of French North Africa in November 1942 highlighted a number of serious problems in the then existing theories, and the 1943 landing in Sicily and the landings on the Italian mainland allowed the OVERLORD planners to refine their amphibious doctrine.[143] The Germans, having never staged a large over-the-beach amphibious assault, continued to have a primitive understanding of the cross-Channel invasion difficulty.

The Germans computed the Allied sealift capability on the basis of their *SEELÖWE* estimates and OKM overestimated the Allied assault sealift capability by twenty divisions. The Germans assumed: that the Allied plan, like *SEELÖWE* before it, would involve one or more large diversions in conjunction with or prior to the *Schwerpunkt*; that their enemy would land at dawn and at high tide in order to unload his vessels as close to the high water mark as possible; that the landings would be made at a time when the seas of the English Channel were quiet; that the landings would be made after the German heavy caliber coastal guns were destroyed; and that the landings would be made at a time of blue sky weather to allow for the most effective use of the Allied air forces. Finally they assumed that the initial object of the assault forces would be the capture of a port or ports. In addition, almost all of the assumptions made concerning Allied invasion logistics proved wrong which also contributed to the errors in the Germans' pre- and post-invasion estimates.

The Germans imputed a universality of options based on what they knew or thought they could do, or upon facts they assumed were true. The real danger in option projection is the likelihood that the analyst's catalogue of possible options is too limited. In the case of the Allies, they had many other options and capabilities than the Germans imagined.

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[142] For the best account of the pre-Dieppe amphibious assault thinking, see Haswell, *D-Day*, 15-20.

[143] Ibid, 22-23.

IV.D.2 - INTENTIONS AND CAPABILITIES

For an analyst to be able to estimate what an adversary may do, his intelligence data base needs to mirror not only the information theoretically available to the enemy commander, but also must include the information actually known or believed by the enemy planner. "*What is or is not possible matters less than what the enemy believes is possible.*"[144] A determination of the enemy's capabilities must, of course, be based on real world data, but since intent is formed on the basis of a belief about capabilities—which belief may be wrong—the analyst need a different kind of intelligence.

If an analyst is to formulate reliable current expectations about the enemy he must understand the total array of options the enemy may consider, even those which appear to be beyond the enemy's known capabilities. Building a multi-option array is a useful exercise in imagination and it helps to curb the tendency to make a hasty judgment about both the options the enemy believes it has, and the estimate made of the enemy's actual intent. To have too narrow a list of enemy options, or to totally misunderstand the adversary's options—the twin failings of German analysis—puts the analyst in a dangerous position.

IV.D.3 - DEVELOPING THE HYPOTHESES

The first step in hypotheses development is "option building," *i.e.*, the formulation of the widest range of options on the basis of the enemy's actual capabilities, and then adding to the list all of the options that would be possible if the facts were as the enemy believes them. Military officers are told to expect the unexpected, and the option building heuristic forces the analyst to actually list the possibilities. This simple cataloging process will make these options "available" in terms of recall if information is received later that bears on the original option hypotheses.

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[144] Hunt, "Editorial Introduction to R. F. Hesketh's Manuscript - An Eyewitness Report of the Fortitude Deception," 229

IV.D.4 - AVAILABILITY

The real problem for the analyst involved in the development of a broad array options list—assuming that he does not have the convenient aid of MAGIC intercepts—is that it is very hard to imagine the unimaginable; to go beyond the readily apparent options to find new, clever or unexpected ones. The problem here, of course, is the availability bias. "People judge the likelihood of something happening by how easily they can call other examples of the same thing to mind."[145] Obviously then, if an analyst has little or no experience in operations, or his knowledge of doctrine is out of date, he will produce a very short list of options.

All too often, what the analyst does is consider only what his side would do in a like situation and then assumes that the other side would do likewise, as if military options had some sort of a universality. Well at the primary level of attack, defend, reinforce, counterattack or withdraw—which is a fine list for low level tactical analysis—options do have a universality; at the special operations and strategic level this is not so much, if at all, the case.

IV.D.5 - CONSISTENCY

A factor which impedes the formulation of good sets of possible options is the strong tendency on the part of the analysts to assume that the enemy will always act as they have in the past. It is dangerous to assume that the enemy will act consistently over time. Analysts believe that their side learns from its mistakes and that real improvements come from experience, so why shouldn't an adversary also learn? Well they do, so it should be assumed that the adversary also improves within the limits of its capabilities.

The consistency factor is made worse because analysts also tend to assume that the enemy will act in a certain way within the bounds of the capabilities or limitations the analyst presumes exist for him. The Germans made this mistake time and time again. The Germans tended to either grossly overestimate or

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[145] McKean, "Decisions, Decisions," 26.

underestimate their enemy's capabilities. It is important for the analyst to know about the enemy's past actions, otherwise he may know too little about the total range of options that the enemy has used in the past. However, if he is to make consistency judgments, the analyst needs to know a lot more the adversary's immediate past actions— the last time and the time before. The analyst needs a more representative sample of everything the enemy has done in the past, and what he has trained his forces or Special Forces to do.[146]

IV.D.6 - Alternative Hypotheses

Analysts tend to perform rather poorly at the task of formulating full sets of enemy options; they simply do not—or cannot—postulate a broad enough set of alternative hypotheses. The formulation of proper alternative hypotheses, and the identification of the key indicators associated with each, help direct an economic search for information. The hypotheses also serve as an organizational structure for the easy storage and recall of information in memory.[147] In this way, a wide variety of options can be examined over time as the evidence becomes available. It is never a wise thing to discard an option too early in the search for information —the option you discard may be so secret that you have yet to get anything on it, or it may prove to be the solution to a problem that the enemy has yet to discover.

How fanciful a list of options should the analyst assemble? The Germans were sure that the key to the invasion strategy was the quick capture of a port. The Allies, believing the quick capture of a port would be impossible, brought their ports with them in the form of the artificial port devices. Accordingly, the wise analyst should remember these words from Through the Looking Glass:

"I daresay you haven't had much practice," said the Queen [to Alice].
"When I was your age, I always did it for half-an-hour a day. Why,

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146 *See* Patrick Morgan, "The Opportunity for a Strategic Surprise," in *Strategic Military Surprise: Incentives and Opportunities*, eds. Klaus Knorr and Patrick Morgan (New Brunswick, N.J.: Transaction Books, 1983), 219.

147 Heuer, "Cognitive Factors," 66.

*sometimes I've believed as many as six **impossible** things before breakfast."*[148]

How much easier is the analyst's task; he only has to imagine *improbable* things to fill out his list.

How does an analyst learn to do that—to invent improbable options? Some people certainly seem to possess the ability to achieve an excited mental state that leads to insights which go well beyond the ordinary. Consider now for a moment what the ramifications could have been if a German analyst had thought of the improbable option of the Allies bringing their ports with them; then tying that idea to the information the Germans actually had about the existence of the devices.[149] Had Rommel known the enemy had a method of avoiding the need to capture a port, he might have focused on the real danger to the Normandy sector.[150] What if Hitler himself—who imagined some pretty fanciful things—conceived that such an option existed?[151] The Führer was concerned about the Normandy sector, but he was never able to come to grips with the seriousness of the threat because he linked the landing sites with the need to get to a nearby port: he was but a single option away from the truth!

IV.D.7 - Doing the Improbable

In developing broad option lists, well stocked with alternative hypotheses, the analyst is probing the question of whether the enemy actually will end up doing the improbable. Doing the improbable is the very essence of effecting surprise.

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[148] Lewis Carroll, *The Looking Glass and What Alice Found There.*

[149] The Allies opted to bring their ports with them. At a meeting of the Service Chiefs in late May of 1942 Admiral Louis Lord Mountbatten remarked that "if ports are not available we may have to construct them in pieces and tow them in." Dwight D. Eisenhower, *Crusade in Europe* (New York: Doubleday & Company, Inc., 1948; New York: Avon Books, 1968), 250.

[150] Haswell, *D-Day*, 132-33.

[151] In Louis Tracy, *The Final War: A Story of the Great Betrayal* (London: 1896), 78-80, a pre-WW I novel, the British used "a great floating pier" to enable them to land on the coast of France far from the fortified port cities. In Tracy's book, the British land north of Le Havre.

Therefore, a systematic worse-case analysis is necessary if a defender wants to guard against the happening of a low probability event.[152] The problem with the worst-case analysis, as the Germans found out, is that the defender may not have enough resources to be everywhere strong.

In thinking about the improbable, the analyst must remember that surprise results when the enemy is more imaginative within the limits of his perceived capabilities than is the analyst. Progress in terms of the art of war is nothing more than the story of problems and solutions. The German Blitzkrieg was designed to avoid the stalemate of intractable trench warfare.

This brings up the issue of whether the list of options possibly open to the enemy should include only those options which appear rational to the analyst. Heaven no! Options should be deemed neutral in regard to the issue of rationality. History is too full of examples of actions which, at first blush, appeared irrational, but which, on closer examination, were quite logical to the actor. "The behavior of people with a cultural difference from one's own often appear irrational when in fact they act rationally but evaluate the outcome of alternative courses of action in terms of value that differ sharply from others."[153]

Helmuth von Moltke (the elder) cautioned: "If there are four options open to the enemy, he is likely to choose the fifth."[154] These concerns are but another way of saying that an analyst must never close his mind to the likelihood that the enemy may have a greater than expected capability, or do something based on a mistaken appreciation of his capability of the situation, or simply analyze the situation from a different perspective. The deliberate conscious exploring of alternative hypotheses in regard to the enemy's options is a way for the analyst to examine these possibilities in a systematic way.

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[152] Knorr, "Lessons in Statecraft," 253.

[153] Knorr, Ibid, 459.

[154] Haswell, *Tangled Web*, 70.

IV.D.8 - TESTING THE HYPOTHESES

After the analyst has developed a broad spectrum of alternative hypotheses they must be tested in an analysis process involving several critical aspects.

IV.D.8.A - THE ENEMY'S VIEWPOINT

It is generally assumed that the only satisfactory basis for intelligence prediction is by the objective standard of estimating the actions of other states rationally in terms of their assumptions.[155] As often as not intelligence mistakes result from "holding to an incorrect conception of how the [analyst's] opponent sees the situation."[156] *The analyst always must be ready to accept the view that the adversary is "in the grip of a serious misconception*."[157] The analyst must be particularly sensitive to the adversary's view of risk-taking or his willingness to fight against what often may appear as seemingly overwhelming odds. The analyst also must be well versed in the enemy's tactical doctrine.

Still, the analyst must recognize that the art of war is not a new profession. Certain principles of war have proved to work best in certain situations. Accordingly, analysts continually must ask themselves: "What are the most obvious and reasonable directions from which an adversary might attack, even if the available evidence contradicts such contingencies?"[158] Most often the obvious attack will be the one that comes—at least at the tactical level—for often the defender is powerless to prevent the obvious attack; sometimes the attacker does not have the time or capability to do anything else.

Thus, once the obvious attack—the school solution—is considered as a option, it can be examined to see if there are reasons which, though not apparent at first, will prompt the adversary to do something else. For example, there were

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[155] Wasserman, "Failure of Intelligence Predictions," 163.

[156] Morgan, "Opportunity for Strategic Surprise, 217.

[157] Ibid.

[158] Handel, "Intelligence and Deception," 137.

many reasons why an attack in the Pas-de-Calais sector was the obvious first choice of a place to attack. But, upon careful examination the Allied planners found that the Pas-de-Calais area was not the best place to attack. The German never managed to get beyond the apparent school solution.

The concept of analysis through the enemy's viewpoint was not unknown to the Germans. *Oberst* Reinhard Gehlen, *Chef, OKH/Fremde Heere Ost*, said that "for many years my colleagues and I had trained ourselves to see through the enemy's eyes—to think as he would think and calculate his intentions."[159] Still, the verdict of history is clear—the German analysts failed miserably when they tried to apply the practice at a strategic level.[160]

IV.D.8.B - ATTRIBUTION

Analysts tend to attribute the behavior of others to the nature of the person, while they see the behavior of their side conditioned by the nature of the situation.[161] This tendency to attribution leads to serious errors in analysis. "Personal traits are not consistent determinants of behavior; which traits predominate at any given time is heavily dependent upon the situational context in which the behavior takes place."[162]

Another attribution-type problem also bears mention. "Attribution of behavior to national characteristics and the assumption that these characteristics are consistent over time leads to the perception of behavior as inflexible and unchanging. Conversely, to the extent that behavior is attributed to external

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[159] Reinhard Gehlen, *The Service*, (New York: Popular Library, 1971), 99.

[160] German tactical intelligence, on the whole, was quite good throughout the war. Haswell, *D-Day*, 138 ("Gehlen could obtain accurate operational intelligence from units in contact with the enemy on the eastern front.").

[161] Heuer, "Cognitive Factors," 55.

[162] Heuer, Ibid, 57.

circumstances, it is perceived as flexible and subject to influence by the actions of the adversary.[163]

IV.D.8.C - RISKY OPTIONS

Michael Handel has noted the following paradox in regard to intelligence analysis:

The greater the risk, the less likely it seems, and the less likely it seems, the less risky it actually becomes. Thus, the greater the risk, the smaller it becomes.[164]

In war, everything is risky, but some options are decidedly more risky than others.

The decision of General Eisenhower to proceed with the D-Day landings in the light of the adverse weather conditions was a very high risk decision, but from the German perspective the adverse weather made it seem highly unlikely that a landing would be attempted at that time, so the Allied risk was lessened by the fact that the Germans were not on the alert—even though some signs suggested they should be at the highest state of alert. In order for the analyst to judge the degree of risk involved in any particular option he first must understand the concept of risk-taking.

In the 1960's Daniel Kahnemann and Amos Tversky determined that "people tend to avoid risk when seeking gains, but choose risks to avoid sure losses."[165] When analyzing an adversary's risk taking vs. risk aversion temperament, the analyst can assume that if the enemy is on the defensive and is being pushed back (the fight or flight situation) then he is likely to take greater risks to put the situation right again—as Hitler tried to do at Stalingrad. However as a guide to estimating the risk level that would be acceptable to an adversary that is

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163 Heuer, Ibid, 59.

164 Handel, "Intelligence and Deception," 154 n.75.

165 McKean, "Decisions, Decisions," 28.

expected to attack, the theory is less reliable as a predictive tool. To paraphrase Michael Handel:

> *Assuming rational behavior on the opponent's part, the analyst may predict that a very risky operation, entailing very high costs and uncertain benefits, probably will not be implemented. Conversely, he also may assume than an operation involving low risks and high benefits will be selected.*

> *Although valid in theory, such assumptions are very unreliable in practice. In the first place, a high risk in one culture may be acceptable in another. Second, what sometimes appears to be a great risk for an adversary may actually be less hazardous as a result of developments unknown to the analyst. Third, the analyst may underrate the readiness of the enemy to take risks assuming that the adversaries know as much as they do about the strength of the analyst's side as he does. Fourth, the assessment of a specific risk is complicated by the estimated impact of strategic surprise (will strategic surprise—as a force multiplier—redress an imbalance in forces). Finally, in many instances, the stronger defender, interested in perpetuating a favorable status quo, will not comprehend the potential attackers' desperate frame of mind.*[166]

Thus, the attacker may choose what is, or what appears to be a high-risk attack option. And sometimes he may win doing so, although "no rational connection exists between the degree of risk on the one hand and the choice of strategy on the other. The temptation to choose a high-risk/high-gain strategy always is present.[167]

IV.D.8.D - PROBABILITIES

One of the problems inherent in deciding whether a particular option under consideration is risky arises in connection with assigning a probability to its

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[166] Handel, "Strategic Surprise," 251-52.

[167] Ibid, 253.

success. Analysts naturally tend to have trouble dealing rationally with probability concepts. The old military planning rule: "KISS" or "Keep it simple, stupid" takes probability theory into account. So does the rule which states: "The more things that can go wrong, the more things that will go wrong." Since these kinds of rules for planning operations are well understood, they ought to be applied when analyzing enemy options. If an apparent option has too many contingencies involved in it—too many chance events—then it may not be a real option, that is, one that a competent planner would choose if he has a better alternative. If the analyst simply keeps in mind that "it is a principle of probability that the likelihood of any two uncertain events happening [successfully] together is always less than the odds of either happening alone (it is easier to flip heads on one coin toss than to flip heads twice in a row)" then his chances of estimating the probability of risk associated with any given option will improve. By way of contrast, it appears that the Germans were perfectly content to accept the idea—their own preconception that was being reinforced by the FORTITUDE deception—that the Allies would mount several large-scale diversions in France followed by the *Schwerpunkt* in the Pas-de-Calais, with a six division side-show thrown in for good measure in Norway!

IV.D.8.E - THE UNIQUE CASE

History is quirky, full of random events; no vectoring of progress can be discerned in it.[168] Thus, why should the analyst suppose that an adversary's choice of options in time of war will be more ordered—for after all, isn't the object of war controlled chaos? The problem becomes one of discovering which option—from a wide variety of options—the enemy will actually choose in a particular situation. There are situations where the magnitude of the cost of failure is catastrophic and the benefit of success is stupendous (historic turning points); such events have unique properties so they become unique cases.[169] The D-Day invasion of Normandy certainly fits in that definition as being a unique event. The Germans understood that an invasion was coming. They appreciated

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[168] Gould, "View of Life," 1.

[169] Sarbin, "Prolegomenon to a Theory," 154-55.

that, if the invasion was mounted successfully by the Allies, then the war certainly would be lost.[170] It was not by inattention to the problem that they failed to estimate what was afoot. They simply failed to deal with the problem as a unique event and not a sand-table exercise.

IV.E - THE PLAUSIBLE INTERPRETATIONS FACTOR

IV.E.1 - AMBIGUITY RESOLUTION

The Germans had overestimated the size of the Allied force available in England for a cross-Channel deployment. They also overestimated the Allied sealift capability. To make matters worse, they assumed that the enemy would stage several diversions—some of division-plus strength—in addition to launching the *Schwerpunkt* in the Pas-de-Calais sector. Accordingly, the German analysts easily could, and did, accept reports of attacks at many far separated points as indicative of the diversionary targets.

It is not an uncommon phenomenon in intelligence work to have many bits and pieces of information which are subject to several equally plausible interpretations and which may support several different theories. Not even all true intelligence information necessarily is mutually exclusive. The ambiguity involved in resolving plausible interpretations factor facilitated increased confusion in the development of the German estimates.

In late 1943 and during early 1944 there often were several plausible alternative explanations of the significance of the intelligence information being collected by the Germans, and it is not surprising that the German analysts were inclined to select the explanation that fit the *OKW* expectation that the Allies would land in the Pas-de-Calais. Moreover, at the same time the ambiguous information was coming in, the Germans had plenty of apparently good information pointing unequivocally to the Pas-de- Calais sector.

Although the phenomenon has been observed elsewhere, nothing

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[170] Warlimont, *Inside Hitler's Headquarters*, 410.

satisfactory has been written to explain the phenomenon called "*unconscious finagling.*"[171] This is a problem that relates to the intelligence information that is ambiguous, or apparently ambiguous—not to explicit data. In the business of intelligence analysis there is a powerful tendency to make something out of all the information collected. Sometimes the analyst may conclude that some of the data is irrelevant or simply false and it is discarded. On the other hand, the analyst may conclude that certain new information has value in which case he is obliged to resolve the ambiguity. Common experience supports the view that analysts tend not to put that kind of ambiguity resolution on hold—waiting for further data that might clarify the issue. Instead, they resolve the ambiguity within the context of the existing data. There is a strong bias toward accepting the plausible interpretation which fits the best with the analyst's current expectations.

The longer an analyst is exposed to ambiguous data, the greater confidence he will develop in any initial—and perhaps erroneous—impressions he forms.[172] As that greater confidence increases, the resolution of the ambiguity—which the analyst increasing will believe was only apparent—will become clearer, until he finally will conclude that there is no real contradiction between his expectation and the new information.[173] The ambiguity is subconsciously resolved so that it is perceived as a difference without a distinction. When this happens, "the initial misinterpretation is maintained until the contradiction becomes so obvious that it [finally] forces itself upon our consciousness.[174] But the problem does not end there:

> *The early but incorrect impression tends to persist because the amount of information necessary to invalidate the [initial] perception is considerable greater than the amount required to form an initial impression. The*

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[171] Gould, "This View of Life," 19 ("Unconscious finagling"). See Wohlstetter, *Pearl Harbor*, 393. The observation of Roberta Wohlstetter made in 1962 concerning Pearl Harbor fit exactly with what was going on in Germany. The analysts simply resolved all ambiguities in favor with the "party line."

[172] Heuer, "Cognitive Factors," 39-40.

[173] Ibid, 40

[174] Ibid.

problem is not that there is any inherent difficulty in grasping new perceptions or new ideas, but that the established perceptions are so difficult to lose. Thus, inaccurate perceptions generated by ambiguous data may persist even after additional information has been received to clarify the initial ambiguity.[175]

Richard Heuer suggests that "one might seek to limit the adverse impact of this tendency by suspending judgment for as long as possible as new material is being received."[176] In real life the advice makes sense, but, practically, many analysts find it hard to do.

IV.E.2 - THE OPERATIVE BIASES

The tendency first to resolve ambiguity where possible, and second, to resolve it within the context of the analyst's current expectations can be explained in terms of a number of recognized biases. The following are but a few that play a role in the way analysts resolve the ambiguity of information that has several plausible interpretations.

IV.E.2.A - UNCONSCIOUS SUPPRESSION

Since their current expectations determine what they are likely to see, there is a tendency on the part of analysts to unconsciously suppress any data that points away from the expected point of attack.[177] So strong is that bias, that an analyst—if pressed to resolve what looks to be information strongly suggesting danger elsewhere—often will rationalize the ambiguous data as being part of an enemy deception.

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[175] Ibid.

[176] Ibid.

[177] See Wohlstetter, *Pearl Harbor*, 387.

IV.E.2.B - STUBBORN ATTACHMENT

Two of the most important characteristics of perception are that it is quick to form but thereafter resistant to change.[178] When the analyst has a current expectation fixed in his mind based on some perceived likely enemy option, that current expectation will resist change. New information, if ambiguous, will be resolved in a fashion that will allow it to meld with the analyst's expectation. The process is like pouring water into a cup. There is no similarity between the cup (the expectation) and the water (the new data), but in the process of pouring the water takes the shape of the inside of the cup. By dealing with information in this plastic sense the analyst can both use the new information and remain attached to his expectation.

IV.E.2.C - ASSIMILATION

This is a corollary to stubborn attachment. In the latter, the analyst's need to maintain his expectation leads him either to reject the ambiguous data out of hand, or accept it as not being contrary to the expectation. With assimilation the analyst becomes so desirous of using the new information that he simply will incorporate it into the existing expectation—even if this produces some slight change in the original expectation. The analyst both changes the expectation, and denies that it is changed. This particularly deceptive bias explains why gradual change often goes unnoticed.[179] Richard Heuer notes that the "tendency to assimilate new information to pre-existing images is greater `the more ambiguous the information, the more confidence the actor is in the validity of his image, and the greater his commitment to the established view'."[180]

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[178] Heuer, "Cognitive Factors," 36.

[179] Ibid, 37.

[180] Ibid, 38, citing Jervis, *Perception and Misperception in International Politics*, 195.

IV.E.2.D - CONSISTENCY

Another factor that prompts the analyst to resolve ambiguity in favor of the current expectation is the need to maintain consistency. If the ambiguous data is accepted as true, then it either will fit the current expectation or it will not. Because of the confidence the analyst already has in the current expectation, doubts will be resolved subconsciously in favor of accepting the new data as consistent with the existing expectation.

IV.E.2.E - RATIONALITY

When an analyst initially forms his current expectations about the adversary he tends to use a rational process; *i.e.*, he doesn't just assume that the adversary will do something that makes no sense to anyone. In like manner, the analyst also tends to resolve ambiguity in data in favor of the position which affords a greater sense of rationality. However, most analysts tend to overestimate the rationality of the decision making process or apparatus they are analyzing.[181] As Admiral Frank Fletcher reminds us: "After the battle is over, people talk a lot about how the decisions were methodically reached, but actually there's a hell of a lot of groping around."[182] And, for the analyst the problem also may be the result of a decision process which the analyst does not understand or has not anticipated.

IV.E.2.F - CAUSAL ILLUSION

Because of the common tendency of man to impose some sort of understandable order on his environment, analysts often will seek and see pattern that actually are not there.[183] In this regard the analyst may view apparently ambiguous evidence as either a causal precedent to or a causal result

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[181] Howells, "Intelligences in Crises," 351.

[182] Lewin, *American Magic*, 81.

[183] Heuer, "Cognitive Factors," 56.

of his current expectation. The analyst in such a case will end up seeing a relationship and connection that does not exist.

IV.E.2.G - THE LEADING QUESTION

All leading questions presuppose a certain answer will be forthcoming. Sometimes an ambiguity is resolved by plausible explaining it in terms of the current expectation because of the way the information came to the analyst. There are times when others may see the information first and pass it along with a note saying that this may be important in regard to the current expectation. The implied question—isn't this data important?--suggests the answer. The analyst also may get the data from above in the form of a report he is asked to review for his superior officer who thinks that there is a "fit" and wants a second opinion. There are a number of ways that information can be forwarded which may suggest a connection that the analyst might otherwise have missed. An analyst may give a different answer to the same question, when it is posed in a slightly different way.[184]

IV.E.2.H - OCCAM'S RAZOR

It is impossible to tell just which one or more of these foregoing biases led the Germans to accept the idea that the Allies had the capability to strike virtually anywhere in the West. But we know that they did; for that reason due regard must be paid to the plausible interpretations factor.

However. there is a useful heuristic—the fourteenth century investigative principle known as "Occam's Razor"—that will aid the analyst in resolving ambiguity while avoiding the snare of current expectations. William of Occam, born circa 1346 and a teacher at Oxford, was famous in his time, and still remembered, for his pragmatic approach to problem solving. He believed in shaving away (thus the razor) all extraneous details related to the problem at issue. Further, he postulated, where there are several apparent solutions to a problem, the correct one probably is the most obvious. Thus, the analyst who

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[184] McKean, "Decisions, Decisions," 22.

would follow the master's teachings will avoid multiplying hypotheses, or creating ones which are too complicated.

Some analysts do not find Occam's method an altogether satisfying form of analysis. It is a methodology that is neutral to consistency, causality and rationality, but works by cutting through to the very essence of the problem. It may lead to a conclusion that a chance or random event has occurred, which many will not like because "people generally do not accept the notion of chance or randomness"—at least not in their lives.[185] And yet there are times when the intelligence information available to an analyst can, and should, be explained in no other way.

Some of the greatest confusion caused on the morning of D-Day was not due to the parachute dummies dropped behind the enemy's coastline as part of the tactical deception plan; instead it was caused by real live paratroopers accidently dropped far from their designated drop zones. Local German units reacted strongly to the reports of these parachutists as if they were part of much larger forces. Their presence in the enemy's rear made it very difficult for the *Wehrmacht* units in the battle area to get a clear appreciation of what actually was happening. And yet, their presence was not part of any plan—their presence was the result of random chance in the form of transport pilot navigational error.

IV.F. - THE DISTRACTION FACTOR

IV.F.1 - OVERVIEW

One of the major problems associated with the implementation of elaborate cover and deception plans is the possibility that, under the close scrutiny of the enemy, one or both of the plans made be discovered to be a hoax. Working in the Allied planners' favor in 1944 were the many distraction factors: *noise*, *work*, *fear*, *hope*, *self-righteousness*, and *fatigue*.

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[185] Heuer, "Cognitive Factors," 56.

IV.F.2 - NOISE IS A DISTRACTION

The concept of "noise" was first used in the context of intelligence analysis in 1962:

First of all, it is much easier after the event to sort out the relevant from the irrelevant signals. After the event, of course, a [critical] signal is always crystal clear; we can see what disaster it was signaling, since the disaster has occurred. But before the event it is obscure and pregnant with [many] conflicting meanings. It comes to the observer embedded in an [dense] atmosphere of "noise," i.e., in the company of all sorts of information that is useless and irrelevant for predicting the particular disaster.[186]

"In terms of . . . intelligence perception, noise is the buzz set up by competing information signals which prevents the essential message from being heard loud and clear."[187]

Intelligence information often is divided into two types: correct and incorrect—in intelligence jargon, signals and noise.[188] For the purpose of better illustrating the rôle of noise as a distractive factor, it may be more helpful to think of intelligence information as being of four types: true and false, relevant and irrelevant, all of which—in the sense of distraction—amounts to signals, noise, noise and more damn noise! The false indicators (relevant and irrelevant) tend to get just as imbedded in the piles of true but irrelevant materials as do the true and relevant indicators—the correct, real or actual indicators the analyst is seeking. According, in some instances, simply the distractive noise that is generated by an abundance of high-quality, but incompatible or irrelevant intelligence, presents a formidable distraction—particularly where there is little evidence pointing to the real target, and a lot pointing elsewhere.[189]

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[186] Wohlstetter, *Pearl Harbor*, 387.

[187] Lewin, *American Magic*, 63.

[188] Handel, "Strategic Surprise," 245.

[189] Lewin, *American Magic*, 64; Handel, Ibid, 246.

The analyst must always remember that in regard to the distraction of noise, the false indicators always are more likely to be noticed than are the actual ones. This is especially true if the enemy is planting deceptive clues that correspond to the analyst's preconceived notion. Thomas Schelling has aptly noted that "unlike movies, real life provides no musical background to tip us off to the climax."[190]

Michael Handel has noted that a there are several paradoxes that relate to the distraction of noise. First, "as a result of the great difficulty in differentiating between `signal' and `noise' in strategic warning, both valid and invalid information must be treated on a similar basis. In effect, all that exists is noise, not signals." Second, there are "the sounds of silence. A quiet international environment can act as background noise which, by conditioning observers to a peaceful routine, actually covers preparations for war [or attack]." Third, "the more information [that] is collected, the more difficult it becomes to filter, organize and process it in time to be of relevant use…,"[191] thus volume becomes noise.

IV.F.3 - WORK IS A DISTRACTION

The commanders in France and Germany were subjected to the ever present distraction of work; that is, they were distracted by the normal daily functions that each had to perform in his sector of command responsibility. For many of the commanders, and *Generalfeldmarschall* Rommel in particular, the time spent at the business of getting ready for the expected invasion was time that could not be spent in undistracted intelligence analysis. And, at the particular moment of the invasion, Rommel was in Germany preparing to see Hitler to once more argue the case for releasing the Panzer reserves to him so that he could position them well forward along the coastal fronts.

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[190] Thomas C. Schelling, "Forward" in Roberta Wohlstetter, *Pearl Harbor: Warning and Decision*.

[191] All three quoted paradoxes are from Handel, "Intelligence and Deceptions," 154 n.75.

IV.F.4 - FEAR IS A DISTRACTION

The actual indicators—those pointing to a *Schwerpunkt* in Normandy—muted by the "noise" of the false and the irrelevant indicators, competed for attention in the minds of Germans being subjected to the immediate distraction of fear arising from real concerns about the dangers of landings elsewhere in France, especially in the Pas-de-Calais. Worries and anxieties about the course of events on the Russian and Italian Fronts also influenced the thinking of some of the men responsible for preparing and acting on the estimates concerning invasion dangers along the coast of Northern France.[192] This is not the sort of fear—the Cassandra syndrome—that paralyzes men into inaction, but nevertheless is a real one that causes them to turn their mind from the problem.[193]

By the spring of 1944 the Germans were overextended on every front. They were without a strategic reserve. Reaction to the apparent threats on every quarter had thinned the defensive line in France to the point where it was strong—comparatively— only in the Pas-de-Calais sector. The other sectors in France could deal with large raids and division-sized diversions, but none could deal effectively with a large diversion or with the main landing. The over commitment of forces and resultant weak defensive capability led to a very distractive type of fear. If the Germans accepted as possible any new theory that predicted a large diversion or the Schwerpunkt outside the Pas-de-Calais sector, then the danger area would have to be strongly reinforced. But there were no strategic reserves available. Thus, any such reinforcement could come only at the expense of weakening another sector.

General Warlimont said that the *OKW* knew that the success of the enemy's invasion would be decisive in regard to the outcome of the war, but neither Hitler or the *OKW* could bring themselves to make planned economies on the other

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[192] Richard K. Betts discusses this problem in terms of being "preoccupied with other threats." Idem, "Strategic Surprise for War Termination: Inchon, Dienbienphu and Tet," 160.

[193] Laqueur, *World of Secrets*, 270 ("the Cassandra Syndrome").

fronts—in fact, on four occasions in 1944 prior to 6 June, units were moved out of the French coastal sectors. Pleas for reinforcements generally went unheeded.[194]

Most men have a natural, especially stubborn resistance to accepting and dealing rationally with new information that will upset them.[195] Hitler and the other German analysts proved not to be exceptions to this rule; consequently, no unpleasant conclusions were accepted. The Germans initially opted to guard against every possible threat and, having reached the limits of their capability, opted to accept as real only those threats they believed they could defend against with the existing defensive deployments. Fearing the unpleasant conclusion—they simply ignored it.[196]

IV.F.5 - HOPE IS A DISTRACTION

Also working against the Germans in 1944 was what may be called the distraction of hope, sometimes called the *Pollyanna Syndrome*.[197] The Germans, and especially Hitler and the OKW Officers, hoped that if the Anglo-Americans attacked in the Pas-de-Calais sector, where the Germans were the strongest, the invasion force could be destroyed or at least severely crippled and contained. If that could be accomplished then a number of strong Germans divisions would become available for service on the Russian Front. [198] The Germans believed that the transfer of some fifty divisions to the Eastern Front could lead to the destruction of the Russian Armies, or a bid for a separate peace from the Russians. Holding that belief—and the hope it held for the salvation of Germany—made it difficult for the Germans, and for Hitler in particular, to give

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[194] Speidel, *Invasion 1944*, 59.

[195] Wohlstetter, *Pearl Harbor*, 393.

[196] Compare, Klaus-Jürgen Müller, "On the Difficulties of Writing Intelligence History: Some Reflections of an Old-Fashioned Historian," a paper presented at the Intelligence and Military Operations Conference, U.S. Army War College, Carlisle Barracks, Pennsylvania, 22-25 April 1986, 14.

[197] Laquer, *World of Secrets*, 270.

[198] "Magic" Summary No. 798, 1 June 1944, A5, SRS 1320.

credence to any estimate or report that did not predict the main assault would come somewhere in the Pas-de-Calais sector. [199]

The problem inherent in this type of thinking is that it focuses—according to the defender's view—on what would be most convenient for the enemy to do, and it distracts from a proper analysis of what he is capable of doing and a determination of his best option if he seeks the most promising course of action in a given situation.[200]

IV.F.6 - SELF-RIGHTEOUSNESS IS A DISTRACTION

If an intelligence analyst is to perform at his best, he must be a dispassionate advisor and absolutely objective in his analysis. However, in the heat of the action it is virtually impossible to be both dispassionate and objective. In such situations, or those where there are moral or ideological overtones, the distraction of self-righteousness comes into play. Once an analyst becomes convinced that his side deserves to win—or simply must win—then true objectivity is lost, and the analyst's perceptive abilities are distracted.[201] The same holds true for the policymaker.

IV.F.7 - ALERT FATIGUE IS A DISTRACTION

It is well to reflect on the rôle of intelligence in the context of warnings. In the military action arena, warnings and alarms are part and parcel of the standing

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[199]   "Intelligence is the voice of conscience to a staff. Wishful thinking is the original sin of men of power." McLachlan, *Room 39*, 365. In 1962, Roberta Wohlstetter wrote that "there is a good deal of evidence, some of it quantitative, that in conditions of great uncertainty people tend to predict that events that they want to happen actually will happen. Wishfulness in conditions of uncertainty is natural and hard to banish simply by exhortation—or by wishing." Idem, *Pearl Harbor*, 397.

[200] Earl F. Ziemke, "Stalingrad and Belorussia: Soviet Deception in World War II," in *Strategic Military Surprise: Incentives and Opportunities*, eds. Donald C. Daniel and Katherine L. Herbig (Elmsford, New York: Pergamon Press, Inc., 1981), 270.

[201] For an illustration of the distraction of self-righteousness in regard to the French, see Douglas Porch, "French Intelligence and the Fall of France, 1930-1940," a paper presented at the Intelligence and Military Operations Conference, U.S. Army War College, Carlisle Barracks Pennsylvania, 22-25 April 1986, 4.

operating procedures of all armies. In that regard a problem of frequent concern is the fact that the number of alerts sounded far outnumber the number of successfully predicted attacks. Michael Handel cautions that the paradoxical predicament of intelligence organizations is that many alarms which are deemed false in retrospect, actually may have been justified when issued and he notes that "although the cause for the alarm is usually known, the defender's intelligence [organization] may find it much more difficult to produce a timely explanation (before the next crisis occurs) as to why the predicted attack failed to materialize."[202]

This problem provides the background for yet another reason why the Germans were unable to perceive and act upon the relevant indicators pointing to anything other than a diversion in the Normandy region: the alert fatigue factor. Michael Handel has noted that a "deceiver frequently tries to create the impression of routine activities by gradually conditioning the adversary to a certain receptive pattern of behavior."[203] In this context, routine should not be equated only with a quiet and peaceful pattern of activities. Sometimes it is easier to use a prolonged period of heightened tension to create the required impression of routine activity. This phenomenon is common in many situations, but has particular relevance in the military context.

No military unit can maintain a maximum alert status for an extended period of time without having a dulled sense of danger develop in the minds of the individuals in the unit. Thus, "a single alert, let alone a series of alerts or a prolonged period of high alert which is not followed by war [or an attack] will have a decisively negative impact on future decisions. A series of false alarms [also] will undermine the credibility of the intelligence organization [or the command issuing the alert] (the so-called cry-wolf syndrome); and by the time subsequent [warning] decisions on similar matters have to be made, [all the] prolonged periods of mobilization and the routinization of alerts will have brought about `alert fatigue' (i.e., condition the high command and troops to a state of alert and therefore

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[202] Handel, "Strategic Surprise," 254.
[203] Handel, "Intelligence and Deception," 125; Idem, "Strategic Surprise," 263.

*progressively erode their readiness for action). A continual or `permanent'
state of alert can therefore be self-defeating."*[204]

Consequently, military forces have multiple alert levels. For the
Wehrmacht, ALARM II was the highest alert status. Between the beginning of
April 1944 and D-Day, there were no less than ten maximum alerts along the
Kanalküste and that does not count the more numerous practice alarms.

With each new alert, the various commanders charged with the defense of
the Normandy sector became less and less sensitive to the expected danger.
AOK 7 had planned to hold a practice alert on the night of 5 June as part of the
routine training program. When the *AOK 7* commander decided to hold a
Kriegsspiel (a sand-table war game), the alert exercise was canceled; that would
allow the officers scheduled to assemble at Rennes for the map exercise an
opportunity to get a good night's sleep.[205] No one in *AOK 7* expected that the
invasion was imminent.

The dulled sense of danger was reinforced by the inclement weather
conditions along the Channel coast in early June 1944. After receiving a weather
briefing at 0600 hours on 4 June 1944, *Feldmarschall* Rommel concluded that
the invasion would not come until July. He believed that the enemy planned to
use the usually inclement weather in June as a cover for the assembly of ships in
the southern ports of England. He ordered that all of the beach obstacle
construction programs should be completed by 20 June.[206] At 0800 hours on that
day Rommel left his headquarters at Chateau La Roche Guyon and began a trip
that first would take him to his home at Herringen in Germany; he planned to
rest, then go to *Berchtesgaden* on 7 June to plead with Hitler for permission to
redeploy certain *OKW Panzer* reserves and the *LFK III FLAK* units in the
Normandy sector.[207] Before he left, Rommel told his naval aide, *Admiral* Ruge,
that "it eases my mind to know that while I'm away the tides will be unfavorable

[204] Ibid, "Strategic Surprise," 353-54.
[205] Gordan A. Harrison, *U.S. Army in WW II - Cross-Channel Attack*, 276; Ellis,
Victory in the West, 198.
[206] Irving, *Trail of the Fox*, 423.
[207] Ibid, 435, 441; Max Hastings, *Overlord D-Day, June 6, 1944* (New York:
Simon & Schuster, 1984), 68.

for a landing. Besides, air reconnaissance gives no reason to think it's imminent."[208]

When the invasion did come in Normandy, the officers at the *Führerhaupt-quartier* immediately labeled it as a diversion because a diversion in that sector had been predicted by Hitler since February of that year. Notwithstanding the views of Hitler and his entourage—safely tucked away a 1000 kilometers to the east—once the local commanders became engaged in the fighting in the Normandy sector, they quickly realized that the multi-divisional beachhead was no mere diversion. But Hitler could not be persuaded that the Schwerpunkt would come outside the Pas-de-Calais sector. Since 1943 he had believed that the enemy's main assault would come in the Pas-de-Calais region and such an old and well established idea was not easily changed. Once an individual has become dulled to the sense of danger, a dangerous mind-set is established: his thinking is fixed by a sort of intellectual inertia that must be overcome before a new level of understanding can be achieved.

IV.G - THE INTELLIGENCE COLLECTION FACTOR

IV.G.1 - IGNORANCE IS BLISS

The Germans simply failed to collect much of the vital information that might have provided relevant indications of the severity and immediacy of the danger to the Normandy sector. Analysts tend to be overconfident about how much they know.[209] The human mind also tends to suppress uncertainty, so analysts not only are convinced that they know more than they really do, but also that what they do not know must be unimportant.[210]

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[208] Ryan, *Longest Day*, 36; Friedrich Ruge, *Rommel in Normandy: Reminiscences by Friedrich Ruge* (San Rafael, California: Presidio Press, 1979), 169.
[209] Heuer, "Cognitive Factors," 47.
[210] McKean, "Decisions, Decisions," 26.

The gaps in the German intelligence collection were many. By way of illustration consider three types of information: *weather data*; *naval reconnaissance data*; and *aerial reconnaissance data*—which, if it had been properly collected, might have produced the data needed to put all the units defending the *Kanalküste* properly on alert during the night of 5 June 1944.

IV.G.2 - WEATHER DATA

During the period 3-5 June, the weather situation did more to relax the Germans to the threat of imminent invasion than any other single factor. The adverse weather picture—a fact that was actually observable—led to the disregard of the apparently clear warning of the attack that was conveyed by the broadcasts of the messages personnels. The gap in the German intelligence that led to the relaxed state of concern, was that of a proper weather forecasting data base.

The weather situation on the *Kanalküste* had been generally good throughout the month of May but began to worsen at the beginning of June. The weather deteriorated significantly early in the afternoon of 3 June. The *OKM* forecasters predicted that the weather would remain bad—with rain, low clouds and a moderately high wind—for several days.

The Germans might have detected the onset of a weather change but the meteorological stations that they had operated on the Greenland coast were not operational in June 1944. The *Luftwaffe* weather aircraft operating out of Norway did not have the operational radius to cover the gap in the weather intelligence collection program; and there were no *U-Bootes* operating in position to detect the oncoming small area of high pressure.[211] If the German weathermen had seen reports of the high pressure area, a higher state of alert might have resulted.

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[211] Morison, *History of United States Naval Operations*, 49.

IV.G.3 - *KRIEGSMARINE* PATROLS

On the evening of 5 June 1944 the northern sector of the English Channel was full of Allied ships; but the patrol craft of the Kriegsmarine all were in the French Channel ports. Because of the high winds and waves in the Channel, the usual night reconnaissance sorties were canceled.[212] On the one night when naval patrols were most needed there were none, and the opportunity for a timely warning was lost.

IV.G.3 - *LUFTWAFFE* PATROLS

The bad weather on 4 and 5 June kept most of the *Luftwaffe* reconnaissance aircraft grounded.[213] Five reconnaissance sorties were flown on 5 June but none made unusual activity was noted in the southeastern ports of England.[214] This gap in collection was the critical area—the western ports—the where the opportunity for a timely invasion warning was missed.

During the months of April and May the Luftwaffe had managed to fly only 120 reconnaissance missions over Britain.[215] Even then they saw or photographed little of value. On 24 May the Luftwaffe conducted overflights of the Dover, Folkestone and Thames River area. It was the first such coverage since 21 May, and would be the last aerial reconnaissance of the southern England sector until 7 June. The pilot reports and the aerial photographs of the Dover-Folkestone-Thames area did not indicate a buildup in the number of landing craft assembled in that area. On 24 May the Luftwaffe did not get any reports on the fourteen harbors where the loading of hundreds of assault force vessels actually was taking place.[216] Criticism concerning the inadequacy of the visual and

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[212] Wilmot, *Struggle for Europe*, 229.
[213] Ibid.
[214] Wilmot, *June 1944*, 63.
[215] Ibid.
[216] Friedrich Ruge, "The Invasion of Normandy," in *Decisive Battles of World War II: The German View*, eds. H. A. Jacobsen and J. Rohwar (New York: G. P. Putnam's Sons, 1965), 329.

photographic intelligence coverage by the Luftwaffe was repeatedly voiced, but to no avail.

Interestingly, both Rommel and von Rundstedt considered that the meager results of the 24 May 1944 Luftwaffe air reconnaissance were very important. Both *Feldmarschalls* believed that the main invasion danger was to the Channel coast north of the Seine River. Consequently, both felt that the final warning of an attack would come in the form of a report of increased enemy activity in the southeastern ports of Kent. The small number of craft reported as being in the ports on 24 May indicated to the two men that the invasion was not imminent.[217]

IV.G.5 - AGENT OPERATIONS

Worse than the failure to collect the relevant information was the ignorance of the Germans in 1944 of the fact that a major gaps existed in their "agent operations" intelligence collection program. It was the reports from their agents in England that kept the Germans' attention focused on the Pas-de-Calais. There were two principle reasons for that ignorance.

The Allies fed large volumes of false information into the German agent collection system. In fact, the successful layout of the FORTITUDE SOUTH deception resulted solely from the messages of three British-controlled German agents.[218] The false, but highly credible information—the product of the Operation FORTITUDE deception scheme—made it appear to the Germans that their agent collection efforts were producing well.

Also it can be noted that by the start of 1944 the Germans were looking for information to confirm their invasion hypothesis and not for the purpose of raising new fears. Much of the agent information being collected by them from the controlled agents was confirming what they already believed to be true. Consequently, they believed that they were getting corroboration.

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[217] Wilmot, *Struggle for Europe*, 217.
[218] Hunt, "Editorial Introduction," 229.

IV.G.6 - COMPROMISED SYSTEMS

Finally, the Germans were blissfully ignorant of the fact that their adversary had a virtually perfect strategic intelligence collection system in operation. The Germans did not know, or even seriously suspect that all their agents in Britain were acting as double agents under the control of British Intelligence, that the English were reading the German *Enigma* cipher machine transmissions, or that the Japanese *Purple* code had been broken by the Americans. The Germans never seem to have grasp the simple notion that sources as well as plans must be guarded.[219] Being able to read the enemy's mind—at least in the sense of ULTRA, MAGIC, and the DOUBLE-CROSS system—gave the Allied planners at SHAEF a tremendous and unique strategic advantage. In this sense, the Normandy landings may have been unique in regard to the fact that for planning and deception purposes the Allies had almost perfect intelligence.

IV.H. THE DECEPTION FACTOR

IV.H.1 - Passive Deception

The twin aspects of passive deception are *secrecy* and *cover* (or camouflage).

IV.H.1.A - SECRECY.

Secrecy is an important tool of strategic interaction.[220] In strategic interaction, secrecy performs the special function of concealing plans without the risk of using a distorted mirror, an ineffective mask, or a bald-faced lie. If the adversary is misled, it is because he has not been exposed to strategic information.[221]

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[219] McLachlan, *Room 39*, 354.
[220] Scheibe, *Mirrors, Masks, Lies and Secrets*; and idem, "The Psychologist's Advantage and Its Nullification: Limits of Human Predictability," *American Psychologist* 33 (1978): 869-81.
[221] Sarbin, "Prolegomenon to a Theory," 165.

While good secrecy is obviously desirable, perfect security is rarely attained, and yet, deceptions regularly succeed and surprise is achieved without it.[222] Indeed, Barton Whaley's study of 68 modern cases of strategic surprise revealed that perfect security was lacking in every case; that is, there were some sort of a warning or an indicator that signaled the event.[223]

The Allied planners knew that the Germans knew that the big invasion was coming. They also knew that they could camouflage and conceal the deployment of men and material for the invasion, but not completely. The SHAEF planners believed that by stringent security controls they could keep the actual day and time, and the place and size of the attack secret, but that other information eventually would leak out. In spite of several potentially very dangerous security violations, the critical information—the time, place and size of the invasion—all protected by the BIGOT clearance was never discovered by the Germans.[224]

IV.H.1.B - COVER

Cover is synonymous with camouflage. What cannot be kept secret is disguised so that the things that are real will appear not to be so.[225] Cover also means to conceal or hide. The Allied cover efforts took the form of some quite clever schemes, but there was more to it than just disguising and hiding things. In areas where the Allies did not want the Germans observing what was going on in the way of invasion preparations, special care was taken to keep the Luftwaffe aerial reconnaissance away. Because it proved to be easier for the enemy pilots to make "snap and run" sorties over the Kent and Sussex counties German

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[222] Heuer, "Cognitive Factors," 60.

[223] Ibid, citing Barton Whaley, "Stratagem, Deception and Surprise in War," (diss., Massachusetts Institute of Technology, 1969), 164 and Appendix B.

[224] The BIGOT procedures and the security scares are summarized nicely in Haswell, *D-Day*, 152-58.

[225] Camouflage, in the sense of disguising an object, and cover, in the sense of hiding it completely, are forms of passive deception. On the other hand, the use of decoys—fake planes, tanks, ships and depots—involves an active deception effort.

photo interpreters were provided with reasonable coverage of the areas where the Allies wanted them to focus their attention.[226]

IV.H.2 - ACTIVE DECEPTION

Realizing that the Germans were bound to discover certain information about the invasion preparations, the Allies used the existing German collection system to advantage. SHAEF knew full well the Germans believed the area of greatest danger was the narrow channel coast passage opposite the Dover region. To encourage and reinforce the German fears and concerns about the Pas-de-Calais, Operation FORTITUDE was implemented for the purpose of deception.[227] In that manner the Allies made certain that there was no lack of palpable indications pointing to a large-scale attack in that sector.

During the QUADRANT Conference held in mid-August 1943 at Quebec, the Allied invasion planners were directed to prepare a deception plan for use in support of the invasion.[228] That plan, in addition to supporting the OVERLORD/ NEPTUNE invasion plans, had to be in agreement with the Europe-wide deception plan, Operation BODYGUARD.[229] The planners went to work and on 13 February 1944 promulgated Operation FORTITUDE.[230] It was defined as:

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[226] Wilmot, Struggle for Europe, 200.
[227] For the theory of deception, see Haswell, *Tangled Web*, 19- 20, 30-47; Handel, "Intelligence and Deception," 122-54; Heuer, "Cognitive Factors," 31-69; Sarbin, "Prolegomenon to a Theory," 151-73; Sherman and Whaley, "Understanding Strategic Deception," 177-94; Barton Whaley, "Toward a General Theory of Deception," in *Military Deception and Strategic Surprise*, eds. John Gooch and Amos Perlmutter (London: Frank Cass and Company Limited, 1982), 178-91; and Donald C, Daniel and Katherine L. Herbig, "Propositions on Military Deception," in *Strategic Military Deception*, eds. Idem (Elmsford, New York: Pergamon Press, Inc., 1981), 3-30
[228] Albert Norman, *Operation Overlord: Design and Reality* (Harrisburg, Pa.: The Military Service Publishing Co., 1952), 39.
[229] Plan BODYGUARD was approved by the Combined Chiefs of Staff on 20 January 1944, and sent to SHAEF for the purpose of planning on 22 January. C.C.S. 459/2, 20 January 1944, Plan "BODYGUARD," with enclosure, and Memorandum for the Supreme Commander, Allied Expeditionary Force, 22 January 1944, Subject: Overall Deception Policy for War Against Germany," Records of SHAEF, Record Group 331, File No. 381 Bodyguard, MMR, NA.
[230] Wilmot, *The Struggle for Europe*, 199.

A broad plan covering deception operations in the European theater, with the object (a) to cause the Wehrmacht to make faulty strategic dispositions in north-west Europe before Neptune by military threats to Norway, (b) to deceive the enemy as to the target date and target area of Neptune, (c) to induce [the enemy to make] faulty tactical dispositions during and after Neptune by threats against the Pas-de- Calais.[231]

In the broadest sense Operation FORTITUDE was designed to support Operation OVERLORD/NEPTUNE simply by pinning down the *Wehrmacht* divisions. The deception plan was mounted, and it worked.[232] "It was an impressive tribute to the success of the Allied deception plans that every key German commander greeted the news of operations in Normandy as evidence of *an* invasion, not *the* invasion"—the *Schwerpunkt*.[233]

A few points need to be made regarding implementation of the FORTITUDE plan. First, while the plan was elaborate, its central plot or theme was very simple. As Ewen Montague aptly has pointed out: "We had no illusions about the efficiency of the German Abwehr, so we had to make sure that the puzzle was not too difficult for them to solve."[234] The one reason it wasn't too difficult for the Germans to either figure out or accept brings up the second key point:

One overwhelming conclusion stands out with respect to deception: it is far easier to lead a target astray by reinforcing the targets existing beliefs,

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[231] SHAEF/18209/Ops (b), 3 June 1944, Records of SHAEF, Record Group 381, File No. Fortitude, MMR, NA. See also, Plan "Bodyguard", Combined Chiefs of Staff, C.C.S. 459/2, 20 January 1944, w/encl., Records of SHAEF, Record Group 381, File No. Bodyguard, MMR, NA. See Charles Cruickshank, *Deception in World War II* (Oxford: Oxford University Press, 1979; New York: Oxford University Press, 1980), 85-205.

[232] Compare Müller, "On the Difficulty of Writing Intelligence History, 9 ("The German evaluation of the strategic situation and, therefore, of expected Allied operations has never been decisively influenced by Allied deception operations.").

[233] Hastings, *Overlord*, 77.

[234] Montague, *Beyond Top Secret Ultra*, 61.

thus causing the target to ignore the contrary evidence, than it is to persuade a target to change his … mind.[235]

The target of the FORTITUDE deception was Hitler himself, and by way of the ULTRA/MAGIC intercepts, the Allied planners knew the expectation of Hitler—a Schwerpunkt in the Pas-de-Calais, with several large diversions—and played to what the Führer believed was going to happen. The same intercepts also confirmed that Hitler had taken the bait, which is the third point regarding deception. The success of a good deception depends on feedback from the target.[236] Thus, the deception plan kept Hitler's attention focused where he believed it should be focused.

IV.I - TIME FACTOR

As it affects the acquisition, analysis and acceptance process, there are at least four discreet ways in which time has a special importance.[237]

IV.I.1 - TIME AND THE EVENT HORIZON

Every intelligence issue involves the question of "timing," *i.e.*, is the intelligence problem one of explaining an event that has already happened, or is it one of making a prediction about the future? It makes a difference whether the analyst is acting as a "reporter" or as an "oracle." It is in regard to the Delphic process of anticipating the event where most often the estimative process fails. If an event has not occurred, then it follows logically and practically that the indicators that would flow from it do not exist and cannot be perceived. This fact is often overlooked by men who ought to know better.

Operation ARCHERY, the 27 December 1941 raid at the fishing port of Måloy on the Norwegian coastal island of Vågsoy by a British naval task force focused

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[235] Heuer, "Cognitive Factors," 42.

[236] Handel, "Intelligence and Deception," 126.

[237] See Handel, "Intelligence and the Problem of Strategic Surprise", 237-39, particularly the Time Matrix at 238.

Hitler's mind on the danger to Norway and to the whole coast in north and west Europe.[238] The Führer began to talk of turning Europe into a Fortress, an impregnable fortress—*Festung Europa*. Hitler visualized a belt of strongpoints and gigantic fortifications that would run from the Norwegian-Finnish border to the Franco-Spanish border.[239] Thus the German defensive building and the search for the relevant indicators of the true intentions of the Allied invasion planners preceded by as much as eighteen month the actual Allied decisions that shaped the final course of the invasion planning. It was at the RATTLE Conference on H.M.S. "Warren" at Largs, Scotland, from 28 June to 2 July 1943 that the senior Allied officers decided that the invasion of northwest Europe would be made in the Normandy sector and not on the Pas-de-Calais coast.[240]

Premature though their quest might be, in order to prepare the massive *Atlantikwall* structures that Hitler's coastal "crust" defense doctrine envisaged, the Germans could not afford to wait until their adversary had decided upon a landing site or sites.[241] *Grossadmiral* Dõnitz at *OKM* called the problem of prematurity the "Defender's Dilemma."[242] In order to know where and what to build the Germans literally had to know the unknowable. And to make matters worse, once the Germans began to prepare their defenses, they then were at risk that the enemy might change their plans and shift the focus of the attack away

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[238] Müller, "On the Difficulties of Writing Intelligence History," 25.

[239] See Haswell, *D-Day*, 78; Earl F. Ziemke, *The German Northern Theater of Operations 1940-1945* (Washington, D.C.: Department of the Army, 1959), 213-14.

[240] C.O. (R) 25, July 1943, "Rattle," Record of Conference, etc. to Study the Combined Operation Problems of "Overlord," with Strategic Background C.O.S.S.A.C. (43) 29, 25 June 1943, 92-98, Records of SHAEF, Record Group 331, File No. 337/16 Rattle Conference, MMR, NA. See also, Haswell, *D-Day*, 109-10; Harrison, *Cross-Channel Attack*, 72.

[241] 240. Unlike the "Crust" concept, with the MLR at the high tide water's edge, normal *Wehrmacht* tactical doctrine called for the main line of resistance, the *Hauptkampflinie*, to be from 7,000 to 9,500 meters behind the combat outpost line, and stressed the use of immediate and violent counterattacks. W. J. K. Davis, *German Army Handbook 1939-1945* (1973, New York: Arco Publishing, Inc., 1984), 57-58.

[242] Karl Dönitz, Memoirs, *Ten Years and Twenty Days* (Cleveland, Ohio: The World Publishing Company, 1959), 392.

from the fortified areas.[243] A self-negating paradox illustrates the point: Warnings of an enemy attack may lead to a counterplan which, in turn, may prompt the enemy to delay or cancel his original plan, which makes the counterplan worthless.[244]

IV.I.2 - TIME AND THE PERCEPTION HORIZON

As regards the analysis and acceptance of intelligence, time impacts on the process of perception. Intelligence analysis and command acceptance are incremental processes. Seldom, if ever, do the facts bearing on a particular intelligence problem all arrive in one tidy bundle. Thus, the point in time at which facts are noted or an estimate is forwarded to a policy-maker has special relevance. As Richard Heuer has aptly noted:

> *[I]f we consider the circumstances under which accurate perception is most difficult, we find these are exactly the circumstances under which intelligence analysis is generally conducted—dealing with highly ambiguous situations on the basis of information that is processed incrementally under pressure for early judgment.*[245]

New information tends to be assimilated with existing data; thus the actual order in which an receive information affects his judgment because evidence received early in an investigation has a greater impact than evidence received after first impressions are formed.[246]

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[243] If a defender waits too long to begin even the most general sort of defensive fortification work, then the enemy may take the activity to mean its plans have been compromised and change them. Walter Laqueur makes the observation—and by doing so, notes the paradox—that "it could be argued that, almost by definition, intelligence is always bound to fail. If it correctly predicts the political or military initiative of another country, and as a result, countermeasures are taken and the [predicted] initiative does not take place, it will be blames for making false predictions." Laqueur, *World of Secrets*, 4.

[244] Handel, "Intelligence and Deception," 154 n.75.

[245] Ibid, 40.

[246] Ibid, 50.

As the Germans earlier had predicted that the *Schwerpunkt* of the invasion would come in the Pas-de-Calais sector, new evidence—only available after the Allies actually had decided to land in the Normandy sector—came as small and incremental additions to an estimate that had been finalized and was being acted upon. In this context, time and the organizational bias mixed:

> *[There are real] organizational pressures favoring consistent inter-pretation, for once the analyst has committed him- or herself in writing, both the analyst and the organization have a vested interest in main-taining the original estimate.*[247]

It is hard enough to change an estimate once it is committed to paper and disseminated—it is virtually impossible to change one which figuratively is carved in stone in the form of concrete bunkers. In the cross-Channel invasion context, the situation was one in which the Führer himself had given his imprimatur to the estimate that the *Schwerpunkt* would be in the Pas-de-Calais. Thereafter, the *Organization Todt* began pouring concrete on the basis of that belief. It was a case where the early judgments literally were cast in cement.

IV.I.3 - TIME AND THE ANALYSIS HORIZON

The analytical process of distinguishing between signals and noise requires time.[248] As regards many intelligence questions there simply is not enough time to do a proper job of collection, analysis and dissemination. Time, in this regard, did not affect the Germans. However, having too much time also can degrade the analytical and acceptance process. It is clear that the Germans had adequate time to collect and analyze the intelligence information they needed to make the required command judgments. But, by having so much time—literally too much time—the time factor, as it affects the perception horizon tended to work in a predictable and counterproductive fashion. An early judgment adversely affects the formation of future perception; once an analyst thinks he knows what is

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[247] Heuer, "Cognitive Factors," 41.

[248] Handel, "Strategic Surprise (First Draft)," 11.

happening, such perception tends to resist change.[249] For the Germans the early judgments regarding the danger to the Pas- de-Calais sector was locked into the thinking of both the intelligence and command analysts, and it was highly resistant to change with the passage of time.

There is another way in which too much time can impact on the analysis horizon, and Normandy may be the best example of such an impact. Where there is ample time for analysis there also may be ample time for deception—and there certainly was time for an elaborate deception prior to the Allied invasion. This is a nice paradox: when the analyst has the most time for reflective assessment, he is most liable to be the victim of deception.

IV.I.4 - TIME AND THE WARNING HORIZON

One function of military intelligence is to give the commander early warning of the imminence of hostile action so that he, in turn, can give an appropriate warning to his units.[250] An important question is whether all the *Wehrmacht* divisions guarding the *Kanalküste* should have gone to a partial alert on 1 June 1944 when the B.B.C. broadcast part one of the messages personals to the French. Another is whether all of the units in the *AOK 7* and *AOK 15* sectors ought to have gone to, and remained at, *Alarm II* on the evening of 5 June when the second lines of the clear text alert-codes were broad cast. The *AOK 15* units in the Pas-de-Calais did go to a full alert on 5 June, but those of *AOK 7* in the Normandy sector did not.

Actually, the failure of *AOK 7* to go to *Alarm II* on the evening of 5 June made little difference in regard to the first twenty-four hours of the fighting. Once the invasion scenario began to unfold around midnight on the night of 5/6 June, the local units implemented their prearranged defense plans. It seems clear that nothing short of the movement of the powerful *Panzer* reserves into forward positions immediately adjacent to the invasion beaches weeks prior to the

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[249] Heuer, "Cognitive Factors," 41.

[250] Heuer, "Cognitive Factors," 41.

landings—which Rommel wanted done—would have helped that much.[251] In short, the lack of a tactical warning probably did not make a critical difference—the lack of strategic warning did.

IV.J - THE ORGANIZATION FACTOR

The final factor which interfered with the German analysis and warning process was the organization factor.

IV.J.1 - INTER-AGENCY RIVALRY

From mid-1934 until very early in 1944, the two major German overseas intelligence collectors, the *Abwehr* and the *RSHA* were involved in an internecine bureaucratic competition.[252] That conflict led to the takeover of the *Abwehr* counterintelligence and foreign agent operations by the *RSHA*.[253] The takeover process started on 12 February 1944 and was completed on 1 June.[254] At a time when a smooth and efficient collection effort was needed most, the slow process of reorganization hindered such action and *RSHA* was not able to correct the other's faults before the invasion came.

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[251] Irving, *Trail of the Fox*, 411-12.

[252] For a detailed account of the *Abwehr/RSHA* rivalry and the eventual downfall of Admiral Canaris, see Heinz Hölne, Canaris (*Canaris: Patriot im Zwielicht*), trans. J. Maxwell Brownjohn (München, F.R.G.: C. Bertelsmann Verlag Gmbh, 1976; New York: Doubleday & Company, 1979), 163-554 passim. Shorter accounts include: Peter R. Black, *Ernst Kaltenbrunner: Ideological Soldier of the Third Reich* (Princeton, N.J.: Princeton University Press, 1984), 176-217 passim; Lauran Paine, *German Military Intelligence in World War II* (Briarcliff Manor, N.Y.: Stein and Day Publishers, 1984), 181-88; and Gehlen, *The Service*, 93-95

[253] It is interesting to note that Hitler's decision to fuse the *Abwehr* into the *RSHA* was not prompted by a failure of the *Abwehr* collection or analysis effort. Instead it was prompted by a bomb in a crate of oranges! Hitler had forbidden the initiation of any acts of sabotage in Spain. Contrary to his orders, the *Abwehr* station in Spain planted a bomb aboard a British freighter that was bound for England with a cargo of oranges. The incident infuriated the Führer. Black, *Kaltenbrunner*, 194.

[254] Ibid.

As interesting a story as the ten-year long struggle between the *Abwehr* and *RSHA* may be, the interagency rivalry did not really amount to much in terms of actual intelligence production by the *Abwehr*, even during the February-June 1944 transition period. On balance, the end of the rivalry and the initiation of the absorption process did not materially contribute in any way to the failure of the Germans to appreciate properly the intentions of the Allied planners. The "victory" of *RSHA* and the fusing of the two intelligence services, was merely a chance event that occurred coincidentally with the final days of Allied invasion planning. The Abwehr failed in 1939-41 as a foreign intelligence collection organization for reasons other than the inter-agency rivalry. The problems at *Abwehr* resulted from a real failure of leadership on the part of *Admiral* Canaris and his immediate staff.

IV.J.2 - THE RÔLE OF INTELLIGENCE

The other major organizational failure of the Germans was not coming to grips with the issue of what was to be the proper rôle of the strategic military intelligence estimate or appreciation. The traditional German view with regard to tactical military intelligence was that the ultimate responsibility for "building the picture" of the enemy was that of the commander and not the intelligence analyst.[255] Hitler took the concept to an unnatural extreme: the Führer deemed himself alone to be "qualified to do authoritative foreign assessments."[256] Now this sort of rule of practice may have some merit when a tactical commander limits his judgmental combat visions to the tactical horizon of estimation and when the politician limits is estimates to the political arena of national statecraft. But neither the senior officers at *OKW*—trained to direct an "in-contact land-battle" force—nor the Führer were capable of making reliable strategic military appreciations on their own and without the assistance of a reliable intelligence organization. They tried to do it and failed.

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[255] Cordevilla, "Comparative Historical Experience," 25-26. See also, Boog, "German Air Intelligence," 4 ("The Army Manual H. Div 89 g of 1941 … stated that it was the commander who prepared the situation estimate with his Chief of Staff or Operations Officer.").

[256] Ibid.

Hitler made his decisions based on hasty appreciations of the situation made while surveying a map table. He made decisions without taking into consideration the practical difficulties involved in executing the decision in the field.[257] One officer at OKW, General der Artillerie Warlimont, described the Führer's decision-making style thusly:

> *Hitler grasps the operational idea without [ever] giving any consideration whatsoever to the necessary [military] means, the necessary time and space, troops and supplies. Those are the fundamental elements of strategy which are necessary for success, but Hitler rarely took them into consideration.*[258]

If Hitler had no need for information about his own army and its capabilities, what need did he have for intelligence information about his enemy's capabilities or intentions? The answer was none.

Obviously the rôle of German strategic intelligence was not to serve the Führer in his decision-making task. In fact, it never had a mature rôle in the German war-fighting effort. Beginning in 1943, when the Wehrmacht went on the defensive, the German general officers began to ask *OKH/FHO* for more than just OB data. From that time on the work at *Fremde Heeres Ost*, and later *FH West*, began to involve the preparation of strategic estimates. But by the time the "fighting" officers of the Wehrmacht began to come to the understanding that they needed better intelligence—something more than just tactical estimates—just to survive on the battlefield, it was too late either to create either the professional staff to provide it, or the collection organization to support the analysis.[259]

Now at this point it must be emphasized that "intelligence" had a rôle in Germany during the war, but the rôle was one that the Abwehr and RSHA dealt

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[257] Walter Warlimont, "From Invasion to the Siegfried Line," in MS# ETHINT-1 (19-29 July 1945), 30, MMR, NA.

[258] Ibid, 30-31.

[259] Cordevilla, "Comparative Historical Experience," 25.

with mainly in terms of internal defense—counterintelligence and counter-espionage—and in that regard the *Abwehr* and *RSHA* were ruthlessly efficient.[260] The tactical aspect of intelligence also had a rôle and was generally good.[261] It was strategic military intelligence that never had a properly defined and workable rôle in the German war-fighting effort.

IV.J.3 - DECENTRALIZED ESTIMATES

It is equally important to note that merely because the *OKW* and the Führer had no real felt need for strategic military intelligence for decision-making purposes, does not mean that it was not produced. It was simply produced on a decentralized basis. Under the German analysis system there could be, and usually were, as many as fourteen different estimates in being at any one time concerning the potential threat to Western Europe. The same original information was viewed by each analysis center according to its own parochial interest.[262] More often than not, the resultant estimates reflected the reactions of the individual commanders to the unevaluated raw information as it tended to support their personal theories. The object of the exercise of estimation was not to produce an agreed position; instead the various estimates were in the nature of *post hoc* rationalizations of what the particular command or agency was doing. This is an example of multiple advocacy at the extreme, with no effective way to bring divergent views to the attention of the Führer. Only on rare occasions did Hitler see the various estimates. Schellenberg at *RSHA/SD* and Hitler's staff filtered all intelligence reports so that the Führer did not receive any of the disagreeable reports[263] except on rare occasions, like 17 June 1944, when the front-line commanders had personal conferences with Hitler.[264] In the end, and by default, Hitler's opinion became—for better or for worse—the agreed estimate.

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[260] Paine, *German Military Intelligence*, 116-17.

[261] Haswell, *D-Day*, 138.

[262] Cordevilla, "Comparative Historical Experience," 25; Haswell, *D-Day*, 51.

[263] Haswell, *D-Day*, 51.

[264] Mitcham, *Rommel's Last Battle*, 108-110.

Even on so crucial an issue as the expected place of the invasion within the Pas-de-Calais sector there was no agreement. Hitler, von Rundstedt and Rommel all believed that the enemy's main attack would come in the Pas-de-Calais region, but the three of them could never agree about where within the sector—with its 400 kilometers of coastline—the main blow probably would be delivered. Nor was there even a perceived need to come to an agreement on that point.

IV.J.4 - ORGANIZATIONAL REFORM

By the time 1944 arrived, the Germans simply did not have a realistic organization or organizational structure capable of dealing effectively with the strategic intelligence problem. But, by then it was too late to do anything about the organizational deficiencies—even if Hitler and Jodl had recognized a problem existed, which they did not. There may be situations where a few changes in the organizational structure of an intelligence staff may improve the collection or analysis process, but that sort of thing takes time. The Germans had neither the time nor the inclination to reorganize their intelligence collection and analysis apparatus.

V. SURPRISE

Because of the foregoing ten factors—and, in the sense of the *Gestalt*, their interaction and reinforcing effect—the ability of the Germans to collect, to perceive, to analyze properly and to act on the relevant Normandy invasion indicators was weak and inefficient. Their analysis process developed pre- and post- invasion intelligence and command estimates which, while apparently rational and logical in development, simply were wrong. As a result, the Germans suffered both a tactical and a strategic surprise on 6 June 1944, and for some considerable period of time thereafter they continued to be the victims of strategic surprise. The strategic surprise, and the resultant confusion of the battle, caused them to make very serious mistakes in their counter- invasion planning. In the end they were unable to destroy the Allied beachhead. Thus, the

D-Day invasion is one of the rare occasions where the attacking force achieves both a strategic surprise and the final victory.

The fact that an attacker achieves an initial surprise does not mean that surprise alone will carry the day. For, as Napoleon has said: "Uncertainty is the essence of war, [and] surprise its rule."[265] If anything, history consoles military men and political leaders with the observation that there is no direct correlation between an enemy achieving the highest degree of surprise at the outbreak of a battle or war and ultimately emerging victorious.[266] Michael Handel notes well that "one reason for this is that the attackers are often so amazed by the effectiveness of their own attack that they are caught unprepared to fully exploit the opportunities it presents."[267] It is equally important to remember the corollary to this rule, namely: "to know your enemy's intentions is fine, but such knowledge does not always mean that you can stop him."[268]

There was nothing very extraordinary in the German estimative failure. There is no credible evidence which would support the proposition that the failure of the Germans to anticipate the Allied *Schwerpunkt* in Normandy was the result of any single instance of negligence, stupidity, or treachery, or a conspiracy of silence. Rather, the roots of the problem lie in the circumstances which naturally tend to affect even honest, dedicated and intelligent man.[269] The surprise of D-Day all came to pass through a series of quite complicated but, nevertheless, extremely ordinary mistakes of decision analysis.

It is interesting to note that the Germans appear to have made every possible mistake imaginable in regard to their intelligence collection and analysis processes and in their command appreciations. In retrospect it almost seems that

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[265] Handel, "Strategic Surprise," 265.

[266] Ibid.

[267] Ibid, 240.

[268] Lewin, *American Magic*, 93, citing Samuel Eliot Morison's account of the Battle of Midway.

[269] Roberta Wohlstetter noted in regard to the failure at Pearl Harbor, "we have found the roots of this surprise in circumstances that affected honest, dedicated, and intelligent men." Wohlstetter, *Pearl Harbor*, 397.

the Germans set out to be the text book example of what not to do in war. Well Hitler and the *OKW* command certainly did not intend to do that; however, in the context of the times, the men, the organizations, and the analysis methods combined to produce a situation which made strategic surprise inevitable for them—at least strategic surprise became inevitable when the Allied planners began the serious work of planning to achieve it. The strategic surprise that came like a bolt from the blue was not the result of some chance event; instead it was deliberately planned for and skillfully attained. Accordingly, while some may contend that in the broad sense strategic surprise is inevitable, it is not proper to draw that final conclusion here from the Normandy experience. Since this article involves the study of but a single case, it would be inappropriate to project the findings here regarding the inevitability *vel non* of surprise to a universal case.

VI. IMPLICATIONS

The major reasons for the German intelligence and command failure in regard to the D-Day invasion of Normandy have been identified; there now remains the task of determining whether a knowledge concerning the causes of that failure in 1944 has any relevance to intelligence collection officers, or to intelligence analysts, or to commanders or executive decision makers in the late 1980's and beyond into the 21st century.[270] Particularly important is whether such knowledge is of any value to the military intelligence officers and military commanders of the United States in the modern era. Clearly, such knowledge is both relevant and critical: it is vitally important now, and it will continue to be important for decades to come.

The German intelligence and the command failure surrounding D-Day—both as regards collection, analysis and warning, and the confused estimates that

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[270] We are mindful of R. Fleetwood Hesketh's warning that "it is always unsafe to apply too literally the experiences of one war to the changed circumstances of another." Hunt, "An Eye-witness Report of the Fortitude Deception: Editorial Introduction to R. F. Hesketh's Manuscript," 233, citing, "Fortitude: A History of Strategic Deception in North Western Europe, April 1943 to May 1945" (February 1949), Conclusion.

continued to confound the Germans for some time thereafter—is by no means a unique occurrence. The German catastrophes can be matched by many other examples of nations and their armies failing to perceive properly and react to military or terrorist threats.[271] In fact, the current examples that can be recalled— in both the military and the political context—are virtually countless. Surely all of this evidence must indicate that strategic surprises similar to the one that occurred on D-Day in Normandy are not unique phenomena, and are not related solely to World War II. The big surprise today is that so many people who ought to know better seem to be surprised by surprise.[272]

Strategic surprise in the opening phase of war is the most powerful force multiplier in conventional war.[273] The failure of the Germans as regards the Normandy invasion, and many other similar intelligence and command failures, underscore the hard truth that a nation at war, on the brink of war, or existing in a cold war or in a terrorist sensitive situation cannot count on any strategic warning and may not even receive any sort of a local tactical warning in time to react properly to a threat. Accordingly, in order to increase the likelihood that a nation or its armed forces will receive adequate warning—and that is at least assumed to be obtainable goal—then increased attention must be paid to the reasons for past intelligence and command appreciation failures.[274]

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[271] The Allied landings in North Africa, Sicily and Italy add to the list of disasters for the Germans in World War II. There are numerous other examples involving Soviet forces on the Eastern Front. See Ziemke, "Stalingrad and Belorussia," 243-76; Glantz, "The Red Mask," 31-79.

[272] As Roberta Wohlstetter noted: "In view of all these limitations to perception and communication, is the fact of surprise at Pearl Harbor, then, really so surprising?" *Wohlstetter, Pearl Harbor*, 395.

[273] Handel, "Clausewitz in the Age of Technology," 26.

[274] It may be that in today's high technology intelligence collection environment, where information is compartmented into numerous categories of secrecy, the study of recent instances of surprise is practically impossible outside a small circle of people in the Government. Consequently, detailed examinations of historic instances of surprise, such as the D-Day event, must serve as the vehicle for instructing a wider audience both within and without the government and the armed services.

If the factors that have caused other collectors, analysts and intelligence information users to go astray in their decision-making process are understood, then perhaps individuals charged with preparing future estimates may be able to take steps to avoid the analytical pitfalls.[275] Similarly, commanders and policy-making executives who must use intelligence estimates, or who make their own, may better understand the likelihood of an estimation failure. Gaining a real and lasting sensitivity to the probability of an estimative failure may be the most valuable lesson that can be learned from this type of historical case study.

It is probable that no system of intelligence collection and analysis, and no system of command, control and warning, can be devised and staffed which will totally eliminate the identified perception inhibitors. While military technology has revolutionized almost every aspect of modern military doctrine and tactics, the one area in which it has made little progress is that of anticipating surprise attack:

> [The] far reaching advances in the technical means of gathering intelligence information, and the greater awareness of political and perceptual mechanisms undermining the intelligence process has not yielded corresponding progress in the ability to anticipate strategic surprise."[276]

The reason why this is so is quite simple. Today, as in the past, intelligence collection and analysis, and command decision-making— despite access to all sorts of high-technology gadgetry—"is still based on the human factor. As it is labor intensive, [all] intelligence work [and command decision-making] must reflect human nature, not technological excellence."[277] The old saw that "to err is human" packs a more fundamental truth than intelligence analysts and policy-makers care or dare to admit.

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[275] In 1962 Roberta Wohlstetter concluded that "the possibility of … [strategic] surprise at any time lies in the conditions of human perception and stems from uncertainties so basic that they are not likely to be eliminated, though they might be reduced." Wohlstetter, *Pearl Harbor*, 397.

[276] Ibid, 244, 265. "On this account, understanding but not being able to avoid the phenomenon has led to a certain futility." Ibid, 265.

[277] Ibid, 244.

It is dangerous and probably wrong to believe that strategic surprise is inevitable—it only seems so. Indeed, the statistical evidence only supports the conclusion that it is highly probable. Many analysts and policymakers have, at best, an imperfect understanding of the root causes of strategic surprise; *i.e.*, a lack of understanding about how and why the analysis process fails. This article —if its purpose has been achieved—will shed some light on the reasons why strategic surprise has not been avoided in the past. Hopefully too—with understanding—the effect of the ten "fog factors" can be minimized and the process of estimative analysis—the real craft of intelligence—can be improved.[278]

The goal of every analyst should be to improve his vital craft to better serve those whose decisions necessarily must be based on reliable intelligence and estimates. For, as it should be, the real craft of intelligence, "is to make the right deductions and present them to the commander in clear and logical form," with the object, in the midst of so much recognized uncertainty, that "the so-called fog of war [is] … seldom more than a mist."[279]

VII. EPILOGUE

This paper was written and first presented at an Army War College Conference in April 1986. It was re-edited and reformatted in September 2015. It is my firm belief that the lessons of yesterday, discussed herein, remain just as true today.

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[278] But even here a word of caution is in order, for as Pascal Lain, has so wisely noted: "Sphinx, your great power is not in the solution of enigmas, but in the appearance of one who offers this possibility." David Hamilton and Pascal Lain, *Tender Cousins* (New York: Quill, 1981), 87.

[279] According to Field-Marshall Earl Alexander of Tunis; his quote, which I have modified, is from McLachlan, *Room 39*, 338.