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Hitler's War and the German Economy: A Reinterpretation¹

By R. J. OVERY

When the Allied intelligence services at the end of the Second World War examined the performance of the German war economy a paradox was uncovered. Instead of operating at full throttle, the German economy appeared to have been only partially mobilized for war until 1942, despite the fact that Germany had embarked on a programme of European conquest in 1939 for which it was assumed by the Allies that large military and economic resources were necessary. The traditional explanation that this prompted was that the German economy, encumbered with the apparatus of Nazism, performed its tasks inefficiently.² This view laid the foundation for an interpretation based on the concept of the *Blitzkrieg*.³ According to this explanation the German economy was mobilized at a low level because Hitler had intended it to be that way, partly to complement the military concept of the "lightning war"; partly to take account of the peculiar administrative and political circumstances of the Nazi state; but primarily because he wanted to reduce the burden of war on the German people and thus remove the prospect of an internal upheaval. It was to be "a system of waging war without reducing civilian consumer standards".⁴ According to these arguments the fear of an internal crisis reached a peak in 1939 and made necessary the launching of the first of those short wars for which the German economy had been specially prepared.⁵ This was rearmament in "width" rather than "depth"; war in short bursts rather than "total war".

Although the military concept of the *Blitzkrieg* has been critically re-examined, the idea of the *Blitzkrieg* economy, and the reasons for it, still remain an orthodoxy. The purpose of this article is twofold: first of all to carry out the same critical examination of the concept of *Blitzkrieg* economics to

¹ I would like to thank Mr B. Bond, Dr W. Deist, Dr Z. Steiner, and Prof. A. Teichova for advice in the preparation of this article.

² B. H. Klein, 'Germany's preparation for War; a Re-examination', *American Economic Review*, xxxviii (1948), pp. 56-77; idem, *Germany's Economic Preparations for War* (Harvard, 1959).

³ A. S. Milward, 'Der Einfluss ökonomischer und nicht-ökonomischer Faktoren auf die Strategie des Blitzkriegs', in F. Forstmeier and H. E. Volkmann, eds. *Wirtschaft und Rüstung am Vorabend des Zweiten Weltkrieges* (Düsseldorf, 1975), pp. 189-201; A. S. Milward, 'The End of the Blitzkrieg', *Economic History Review*, 2nd ser. xvi (1963/4), pp. 499-518; idem, *The German Economy at War* (1965); idem, 'Hitlers Konzept des Blitzkrieges', in A. Hillgruber, ed. *Probleme des Zweiten Weltkrieges* (Köln, 1967), pp. 19-40.

⁴ A. S. Milward, 'Could Sweden have Stopped the Second World War?', *Scandinavian Economic History Review*, xv (1967), p. 135.

⁵ On the question of the internal crisis see T. W. Mason, 'Innere Krise und Angriffskrieg', in Forstmeier and Volkmann, *Wirtschaft und Rüstung*, pp. 158-88; idem, 'Labour in the Third Reich', *Past & Present*, 33 (1966), pp. 112-41; idem, 'Some Origins of the Second World War', *P. & P.* 23 (1964), pp. 67-87; E. Hennig, 'Industrie, Aufrüstung und Kriegsvorbereitung im deutschen Faschismus' in *Gesellschaft: Beiträge zur Marxschen Theorie* 5 (Frankfurt, 1975), pp. 68-148.

show that in most respects the concept does not fit with the actual facts of German economic life between 1936 and 1942; secondly, to suggest an alternative interpretation based on a re-assessment of Hitler's intentions and the response of the German economy to the demands of war in 1939. It will be argued below that Hitler's plans were large in-scale, not limited, and were intended for a major war of conquest to be fought considerably later than 1939. The fact that the large armament failed to materialize was not due to any *Blitzkrieg* conception, but to the fact that economic preparations were out of step with the course of foreign policy; a dislocation that was exacerbated after 1939 by a combination of poor planning, structural constraints within German industry, and weaknesses in the process of constructing and communicating policy. The intention was large-scale mobilization. Hitler's object, in the long run, was European conquest and world hegemony.⁶

I

If the idea of the *Blitzkrieg* economy is to work, it must be shown that Hitler, strongly influenced by short-term economic and political considerations, conceived of, planned and launched a war based on this economic policy in the late summer of 1939.⁷ Yet all the evidence—or rather lack of it—suggests that short-term economic and social considerations played only the smallest part in Hitler's foreign policy calculations. If anything, it was the part that he deliberately chose to ignore, since those who understood the intelligence available tried without success, throughout the year leading to war, to demonstrate that the Allies were economically stronger than the Axis and that German economic preparations were inadequate.⁸ The reason for this situation is clear enough. Hitler did not think in narrow "economic" or "social" terms. He was happy for the economy to perform the political tasks which he set it to do: the creation of employment before 1937, and preparation for war thereafter. But he left Schacht and big business to achieve the first, and, unwisely, expected Göring to achieve the second. His concerns were not primarily with the day-to-day problems of economics, living standards, and social peace, as were those of his contemporaries, but with questions of race and foreign policy. What economic views he had were placed in the context of his broader military or social ambitions in a general and uncritical way. Of plans for a *Blitzkrieg* economy before 1939 there is little sign. Hitler provided no detailed analysis of how such an economy might work, no systematic intervention in

⁶ For criticism of the military *Blitzkrieg* conception see: W. Deist et al, *Das Deutsche Reich und der Zweite Weltkrieg*, 1, *Ursachen und Voraussetzungen der deutschen Kriegspolitik* (Stuttgart, 1979); L. Herbst, 'Die Krise des nationalsozialistischen Regimes am Vorabend des Zweiten Weltkrieges und die forcierte Aufrüstung', *Vierteljahreshefte für Zeitgeschichte*, xxvi (1978), pp. 347-92; J. Dülffer, *Weimar, Hitler und die Marine* (Düsseldorf, 1973); and J. Thies, *Architekt der Weltherrschaft. Die Endziele Hitlers* (Düsseldorf, 1976).

⁷ T. W. Mason, *Sozialpolitik im Dritten Reich* (Opladen, 1977), pp. 305-10; Milward, *German Economy* pp. 8-14.

⁸ International Military Tribunal, *Trial of the Major War Criminals* (hereafter IMT), (Nuremberg, 1947-9), xxxvi, pp. 493-7, Doc. 419-EC, Finance Minister to Hitler, 1 Sept. 1938; W. Warlimont, *Inside Hitler's Headquarters* (1964), p. 24; on General Thomas's efforts to convince Hitler of Germany's poor economic position see H. B. Gisevius, *To the Bitter End* (1948), pp. 355-7; B. A. Carroll, *Design for Total War* (The Hague, 1968), p. 178.

economic affairs, no plan to switch abruptly from consumer goods to arms and back again, whether in response to raw material shortages or to the monthly reports of his internal security police. Economic questions, when considered at all, were all subsumed into his great plans for the future; the plans for *Lebensraum* and the plan to wage a “life and death struggle” for the survival of the race.⁹

Indeed the tenor of all Hitler’s statements before the outbreak of war pointed towards, not *Blitzkrieg*, but its exact opposite, the prospect of a massive and long-term war of the continents from which Germany would emerge either victorious or destroyed¹⁰ and towards which he believed himself to be progressively restructuring the German economy. For this struggle he announced in May 1939 that “the government must be prepared for a war of ten to fifteen years’ duration” during which the requirements of the army in particular would become a “bottomless pit”.¹¹ Most important of all the lesson he drew from the First World War was not that the hardships of total mobilization should be avoided but, on the contrary, the belief that “the unrestricted use of all resources is essential”.¹² To the leaders of the Armed Forces to whom Hitler delivered this lecture, the sentiments were unrealistic to say the least. But for the historian it is almost the only evidence available on what Hitler’s long-term intentions for the economy were; and it is hardly the language of *Blitzkrieg*. Any review of the projects that Hitler had authorized under the Four Year Plan and German rearmament confirms this wider intention. The naval programme, the enormous fortifications designed to be completed only in the 1950s, the synthetic oil and rubber programmes, the steel programme of the Reichswerke “Hermann Göring” were large and expensive projects, launched with Hitler’s blessing, but designed for completion only in the long-term. Such projects had already begun well before 1939, diverting resources of labour, raw materials and machinery from the consumer sector to the sectors necessary for large-scale war.¹³ If it is argued that Hitler’s intention had been a limited war fought in 1939 together with the safeguarding of domestic living standards, such preparations did not make sense. But that is not what Hitler intended. Hitler wanted a healthy and expanding economy so that he could convert it to the giant task of European and Asian conquest.

Some of the confusion over Hitler’s intentions has been fuelled by his own uncertainty about how an economy worked. He expected much more to be

⁹ *Nazi Conspiracy and Aggression* (hereafter NCA), (Washington, 1946), VII, pp. 847, 850-1; Doc. L-79 report of a conference with Hitler, 23 May 1939. For a general discussion see E. Jäckel, *Hitler’s Weltanschauung* (Wesleyan U.P., 1972), pp. 27-46; K. Hildebrand, *The Foreign Policy of the Third Reich* (1973), pp. 91-104; A. Kuhn, *Hitlers ausenpolitisches Programm* (Stuttgart, 1970), pp. 96-140.

¹⁰ A. Speer, *Inside the Third Reich* (1970), p. 166. Speer recorded Hitler’s statement to his generals that “if the war were not won, that would mean that Germany had not stood the test of strength; in that case she would deserve to be and would be doomed”; H. Rauschnig, *Hitler Speaks* (1939), p. 125, “even if we could not conquer then, we should drag half the world into destruction with us, and leave no-one to triumph over Germany”; also pp. 126-8.

¹¹ NCA, VII, pp. 851-3, Doc. L-79. This conviction is echoed in M. Muggeridge, ed. *Ciano’s Diplomatic Papers* (1948), p. 284, ‘Conversation with the Reich Foreign Minister, 6-7 May 1939’, when Ribbentrop assured Ciano that “preparations are being made to carry on a war of several years’ duration”.

¹² NCA, VII, p. 851.

¹³ W. Birkenfeld, *Der synthetische Treibstoff, 1933-1943* (Göttingen, 1963), pp. 112-40; M. Riedel, *Eisen und Kohle für das Dritte Reich* (Göttingen, 1973), pp. 155-232; D. Petzina, *Autarkiepolitik im Dritten Reich* (Stuttgart, 1968); Düllfer, *Hitler und die Marine*, p. 498; Thies, *Architekt*, pp. 151-2, 186-7.

delivered then was actually possible, and had only a very hazy idea of economic time-scale. He wanted a high level of preparation for war and at the same time wanted *Autobahnen* and the *Volkswagen* for the purposes of completing the material structure of the *Volksgemeinschaft*.¹⁴ He wanted massive building programmes on an unprecedented scale. Speer calculated the cost of 25 milliard marks.¹⁵ Significantly, the buildings were scheduled for completion by 1950 to coincide with the achievement of total victory, suggesting that Hitler had already seen his coming war as a long-term struggle of heroic proportions.¹⁶ These many ambitions betrayed Hitler's inability to see the economy as a whole, to grasp that cars and tanks could not be produced at the same time, that fortifications vied for resources with the rebuilding of Berlin. It is this inability that has been mistaken for a positive desire to restrict military production in favour of the civilian sector. This was not so. It was a result of Hitler's curiously compartmentalized view of German affairs which persuaded him that each aim was possible simultaneously. His petulant reaction to all advice during the war to restrict his "peace-time" projects demonstrated the confusion of his economic thinking.¹⁷

But, it will be objected, how can the outbreak of war in 1939 be accounted for if not in terms of a short war designed to suit the special economic and social crisis of 1939? Put another way, can it be explained in terms of the large-scale total war-effort which Hitler's plans clearly did express? The answer to both questions lies in the particular circumstances of the Polish crisis. It is necessary to digress a little to examine this explanation because it is on Hitler's intention that so much of the argument rests. The first point to make is that Hitler did not expect a European war to break out in 1939. Of course there was an element of risk as in any act of aggression. But all the evidence shows that from 1938 onwards, and increasingly after March 1939, Hitler had persuaded himself that the western Allies would not take action over Poland and, by implication, over further German action in the East.¹⁸ As late as August 1939 Hitler expressed his conviction to Ciano "that the conflict will be localized" and that it was "out of the question that this struggle can begin war . . .".¹⁹ The head of Hitler's military planning staff was allowed to take leave during August, and even to have it extended until the 18th, so confident were the armed forces that a general crisis would not develop over

¹⁴ R. J. Overy, 'Transportation and Rearmament in the Third Reich', *Historical Journal*, XVI (1973), pp. 389-409.

¹⁵ Speer, *Inside the Reich*, p. 176; J. Dülffer, J. Henke, J. Thies, eds. *Hitlers Städte. Baupolitik im Dritten Reich* (Köln, 1978).

¹⁶ J. Thies, 'Hitler's European Building Programme', *Journal of Contemporary History*, XIII (1978), pp. 423-4; Speer, *Inside the Reich*, p. 174.

¹⁷ On the *Autobahnen* in wartime see K. Lärmer, 'Autobahnenbau und Staatsmonopolistischer Kapitalismus', in L. Zumpe, ed. *Wirtschaft und Staat im Imperialismus* (Berlin, 1976), pp. 253-81; Speer, *Inside the Reich*, p. 176; Carroll, *Design*, pp. 171, 245. For more details of the economic cost of these projects see J. Dülffer, 'Der Beginn des Krieges 1939; Hitler, die innere Krise und das Mächtesystem', *Geschichte und Gesellschaft*, II (1976), pp. 457-9.

¹⁸ L. E. Hill, ed. *Die Weissäcker-Papiere, 1933-1950* (Frankfurt, 1974), pp. 149, 153, 155-6; A. Bullock, 'Hitler and the Origins of the Second World War', *Proceedings of the British Academy*, LIII (1967), pp. 280-1; E. M. Robertson, *Hitler's Pre-war Policy and Military Plans* (1963), pp. 160-2; Hildebrand, *Foreign Policy*, pp. 84-90. According to Rauschnig, *Hitler Speaks*, pp. 123-4, Hitler had already reached this conclusion in 1934.

¹⁹ *Ciano's Papers*, pp. 301-2, 'First Conversation with the Fuehrer, 12 Aug. 1939'; p. 303, 'Second Conversation with the Fuehrer, 13 Aug. 1939'.

the Danzig question.²⁰ When news of the pact with Stalin arrived, Hitler was finally, and it could be argued, sensibly, convinced that the West would not attack.²¹ Any hesitation before the invasion of Poland was caused by Italy's panic and the prospect of a second Munich, but on no account did the outbreak of a general war seem any more likely to Hitler in August 1939 than in September 1938—if anything less so. Indeed, all the intelligence available to the Germans of Allied rearmament and strength confirmed that neither Britain nor France was in a position to risk war with the Axis powers.²² The general war for which Hitler was preparing was not supposed to break out in 1939, and even when it did would, according to Hitler, peter out as the Western powers grew tired of their gesture.²³ He did not shirk the war when it came, not because he had any *Blitzkrieg* economic plan prepared, but for the quite different reason that he believed in the long run that the economic and moral resources of the Reich, when stretched to their utmost, would prove greater than those available to the Allies.²⁴ In other words, even when general war broke out against his expectations in 1939 Hitler immediately thought in terms of the large-scale contest which had coloured so much of his thinking beforehand.

The second point to emphasize is the long-term nature of Hitler's imperial ambitions. The fact that the Polish question led to general war prematurely in 1939 obscured the character of the imperialism, which was designed in two complementary stages.²⁵ The first was to create a military-economic core for the new German empire comprising Germany, Austria, Czechoslovakia, and parts of Poland, to be achieved without a general war. This core was to be protected by fortifications to east and west and was to provide the resources of the autarkic economy.²⁶ The achievement of this first stage was to be guaranteed by neutralizing the threat of intervention by concessions to one or other potential enemy, Britain in 1938, Russia in 1939. The second stage involved using this large economic region as the base for launching war against the major powers. It was for this racial struggle that the German economy was to be prepared. Much of the evidence from the pre-war period shows the extent to which Hitler's view of foreign policy was coloured by such irrational biological and geo-political perspectives. France, Russia, Britain, and even the United States were the main enemies, a conviction that wavered only with

²⁰ Nuremberg Trials, Case XI documents, Foreign Office Library (hereafter Case XI), Körner Defence Doc. Book IB, pp. 154-5.

²¹ Speer, *Inside the Reich*, pp. 161-2; W. Carr, *Arms, Autarky and Aggression* (1972), p. 123; *Weizsäcker-Papiere*, pp. 159-60; J. Toland, *Adolf Hitler* (New York, 1976), p. 548.

²² E. Homze, *Arming the Luftwaffe* (Nebraska U.P. 1976), pp. 244-5; W. Baumbach, *Broken Swastika* (1960), pp. 30-1; *Ciano's Papers*, p. 298, 'Conversation with the Reich Foreign Minister, 11 Aug. 1939'.

²³ *Weizsäcker-Papiere*, p. 164.

²⁴ NCA, VII, p. 854, Doc. L-79; according to B. Dahlerus, *The Last Attempt* (1948), p. 163, Hitler told him: "If the enemy can hold out for several years, I, with my power over the German people, can hold out one year longer".

²⁵ There is considerable debate on how many such 'stages' there were. Since there is general agreement that Hitler's policy involved some kind of primary imperialism to make possible the final war for wider dominion, I have concentrated on this broader strategic intention. It did not seem necessary to enter the discussion about how many minor 'steps' each stage required. See M. Hauner, 'Did Hitler Want a World Dominion?', *Journal of Contemporary History*, XIII (1978) pp. 15-31; A. Hillgruber, *Hitlers Strategie. Politik und Kriegführung 1940-41* (Frankfurt 1965); B. Stegemann, 'Hitlers Ziele im ersten Kriegsjahr 1939/40', *Militärgeschichtliche Mitteilungen*, XXII (1980), pp. 93-105.

²⁶ Carr, *Arms*, pp. 72-80.

the tactics of diplomacy.²⁷ This interpretation of Hitler's economic and military ambitions, which required a large rearmament and a continuing militarization of German society, accords much more satisfactorily with the evidence of war preparations, most of which pointed to a war to be fought in the mid-1940s or later. The first stage of the build-up of the Luftwaffe was not to be completed until 1942, and it was to be prepared for a long war only by 1947 or 1950.²⁸ The naval programme was due for completion only by the mid-1940s.²⁹ The plans for refurbishing the Reichsbahn laid down in 1939 were to reach fruition in 1944.³⁰ Hitler himself authorized Keitel to inform the armed forces that they should concentrate on training and internal development until at least 1944 or 1945.³¹ And the impression that was given to the Italian leadership throughout 1938 and 1939 was that the war with the major powers, the larger and inevitable conflict, would be postponed until 1942 at the earliest.³²

Finally, it must be remembered that German strategy was very much dictated by Hitler's personal and fantastic perspectives on world affairs, so different from those of his contemporaries abroad. The *Blitzkrieg* strategy suggests a degree of economic and political realism, and of careful calculation, which the evidence of Hitler's activities does not confirm. Throughout 1938 and 1939 he became more and more preoccupied with the fulfilment of a German destiny to which he alone claimed the insight, and for which he was quite prepared for the German people to bear the severest consequences. "War does not frighten me", Hitler told Dahlerus. "If privation lies ahead of the German people, I shall be the first to starve and set my people a good example. It will spur them to superhuman efforts".³³ When he told his generals in 1939 that he was the first man since Charlemagne to hold ultimate power in his own hand "and would know how to use it in a struggle for Germany",³⁴ he was stating his firmly held belief that the destiny of Germany lay in his hands alone. Hence the reasons which Hitler himself gave for the attack on Poland; that he was growing old and could afford to wait no longer to create the new German empire; and that what counted in foreign policy was will. Lacking the will to restrain Hitler before 1939, the western nations had forfeited their claim to the status of great powers and would not fight.³⁵

²⁷ Ibid. pp. 5-20; K. Hildebrand, 'La programme de Hitler et sa réalisation', *Revue d'histoire de la deuxième Guerre Mondiale*, XXI (1971), pp. 7-36; F. Zipfel, 'Hitlers Konzept einer Neuordnung Europas', in D. Kurse, ed. *Aus Theorie und Praxis des Geschichtswissenschaft* (Berlin, 1972) pp. 154-74; Rauschnig, *Hitler Speaks*, pp. 126-37; A. Speer, *Spandau. The Secret Diaries* (1976), p. 70, who recalls Hitler's remark: "But I'll still have to lead the great clash with the U.S.A. If only I have time enough, there would be nothing finer for me than to stand at the head of my people in that decisive struggle as well"; Thies, *Architekt*, pp. 165-6, 187.

²⁸ Bundesarchiv-Militärarchiv (hereafter BA-MA), RL3 234 'Industrielle Vorplanung bis 1.4.1945', 15 Oct. 1940; IMT, XXXVII, Doc. 043-L 'Organisationstudie 1950' 2 May 1938; IMT, IX, p. 60, Milch cross-examination; R. J. Overy, 'The German Pre-war Aircraft Production Plans: Nov. 1936—April 1939', *English Historical Review*, xc (1975), pp. 779-83; Homze, *Arming*, pp. 242-50.

²⁹ Hauner, 'World Dominion', p. 27; Dülffer, 'Beginn des Krieges', pp. 467-8.

³⁰ NCA, VI, p. 729, Doc. 3787-PS, Second Meeting of the Reich Defense Council, 10 July 1939.

³¹ Case XI, Körner Defence Doc. Book 1B, p. 140.

³² *Ciano's Papers*, p. 242, 'Conversation between the Duce and the Foreign Minister of the Reich, 28 Oct. 1938'; *Documents on German Foreign Policy* (1956) Ser. D, VI, Doc. 211, 'Unsigned Memorandum, Discussion with Göring, 16 April 1939'.

³³ Dahlerus, *Last Attempt*, p. 63; Hauner, 'World Dominion', pp. 28-9.

³⁴ Speer, *Inside the Reich*, p. 165.

³⁵ Gisevius, *Bitter End*, pp. 361-2; Rauschnig, *Hitler Speaks*, pp. 276-87, for a record of Hitler's increasing morbidity and isolation in 1939.

The fact that Hitler's wider intentions failed to produce the large-scale armament that he wanted was not because he lowered his sights and chose *Blitzkrieg*, but because of the premature outbreak of a general war in 1939 and the difficulties experienced thereafter in mobilizing an economy starved of strategic guidelines and a satisfactory wartime administration.

II

The *Blitzkrieg* economy is just as elusive in the wider context of German war preparations. The restructuring of the economy implied by the Four Year Plan, and the acceleration of Hitler's diplomacy after 1937, showed what the ultimate purposes of the regime were. If Hitler's precise intentions were not always clear, or were not always taken seriously by the business or military élites, there could be no doubt that the restructuring was taking place.³⁶ It was a necessary step in preparing for large-scale war and German hegemony. In fact it was precisely because this was a long-term goal that exact details were lacking. The re-orientation of the economy was bound to be a lengthy and clumsy process. The absence of precise economic planning confirmed that the intention was not to wage a short, carefully-calculated war in the near future, but a big war at a later date.

It was Hitler's intention that Göring should co-ordinate the efforts to prepare the economy as a whole, using Party agencies and leaders where possible to carry the programme out. Göring's view of the economy was, like Hitler's, concerned with its role in the future conquest of Europe and world war. Like Hitler, he assumed that the scale of preparation should involve the whole economy. His task within the Four Year Plan was to re-orient the total economy to war purposes. That Göring was unsuccessful in doing so by 1939 was an indication not only that he was an inappropriate choice as plenipotentiary, but that he expected to have much more time to complete his task.³⁷ Working on a wide range of uncompleted projects, Göring was among the foremost of those who argued against risking war in 1939 and who accepted Hitler's assurances that the crisis in August would be localized.³⁸ Göring worked on the assumption that any war would be a general and large-scale conflict; hence his anxiety to prevent war until Germany was fully prepared. To the *Gauleiter* in 1938 he spoke of the "new war" of "great proportions" to come.³⁹ To industry in October 1938 he stressed that "the economy must be completely converted".⁴⁰ A year later he warned industry that "Today's war

³⁶ Case XI, Körner Defence Doc. Book 1B, p. 140, Fritsche Affidavit, 29.6.1948; pp. 155-6, Warlimont cross-examination; Gisevius, *Bitter End*, pp. 277-360; according to D. Orlow, *The History of the Nazi Party* (Newton Abbot, 1973), II, p. 263, the party itself had no indication that a general war might break out in 1939 and was taken by surprise.

³⁷ W. Treue, 'Hitlers Denkschrift zum Vierjahresplan', *Vierteljahrshefte für Zeitgeschichte*, III (1955), pp. 184-210; D. Petzina, 'Vierjahresplan und Rüstungspolitik', in Forstmeier and Volkmann, eds. *Wirtschaft und Rüstung*, pp. 65-80.

³⁸ R. Manvell and H. Fraenkel, *Göring*, pp. 154-65.

³⁹ Case XI, Körner Defence Doc. Book 1B, p. 8, statement of Gauleiter Uiberreither, 27 Feb. 1946; see also IMT, xxxviii, p. 380, Doc. 140-R, Göring address to aircraft manufacturers, 8 July 1938, in which he called for the achievement of a long-term production of "a colossal quantity" of aircraft.

⁴⁰ IMT, xxvii, pp. 161-2, Doc. 1301-PS, 'Besprechung bei Göring, 14 Okt. 1938'.

is a total war, whose end no-one can even approximately foretell".⁴¹ In December 1939 he wrote to all Reich authorities telling them to "direct all energies to a lengthy war".⁴² In all this he was merely echoing Hitler's own intention, even though the timing of war had misfired. The picture he presented to the German economy at large, if at times unspecified or unrealistic, was of a future and large-scale conflict for which the complete transformation of the economic structure was required.⁴³

The same contingency was prepared for by the armed forces, which were compelled to perform their functions in partial ignorance of the exact nature of Hitler's long-term intentions. The lack of precise information reflected Hitler's own secretiveness and administrative methods. To Halder, the Army Chief-of-Staff, he remarked: "my true intentions you will never know. Even those in my closest circle who feel quite sure they know my intentions will not know about them".⁴⁴ In this light the armed forces geared preparations to a wide number of major contingencies which they regarded as reasonable. It was widely agreed that all such contingencies required preparations for a total war economy, and the army developed during the 1930s the theory of the *Wehrwirtschaft*—the defence-based economy—to cope with the requirement.⁴⁵ General Thomas, head of the army economic office, planned economic mobilization as though any war might mean total war, hoping to avoid the mistakes of 1914. Preparations for this "armament in depth" existed throughout the 1930s and continued after the outbreak of war in 1939, coinciding with Hitler's view of future warfare.⁴⁶

Thomas himself complained after the war that such preparations had been much less successful than he had expected. Part of the reason for this lay with the administrative confusion surrounding rearmament, what Thomas called "the war of all against all".⁴⁷ But a major explanation lay in the general unwillingness of much of German industry to co-operate in preparing for total war, the more so as many industrialists regarded a general war as unthinkable in 1939. Industry was faced in 1939 with the prospect of rising trade and a consumer boom based on the continued modernization of the German economy. Instructions from Göring and Thomas were circumvented or ignored.⁴⁸ The whole structure of controls and *Wehrwirtschaft* preparations was sabotaged by the unwillingness of many industrialists, happy enough to take re-armament

⁴¹ Milch Documents (MD), Imperial War Museum, London, LXV, 7302-3, letter from General Brauchitsch, 6 May 1939.

⁴² MD, LXV, 7299, letter from Göring to Reich authorities, 7 Dec 1939.

⁴³ Case XI, Prosecution Doc. Book 112, Doc. NI-090, minutes of meeting of iron industry and Four Year Plan Office, 17 March 1937; Doc. NI-084, minutes of meeting held by Göring, 16 June 1937; Doc. NI-8590, Report from Loeb to Göring, 30 Oct. 1937, 'Results of work done during the first year of the Four Year Plan'; *Documents on German Foreign Policy*, Ser. D, IV p. 260, Doc. 211.

⁴⁴ Case XI, Körner Defence Doc. Book 1B, p. 81, Halder cross-examination. See also Gisevius, *Bitter End*, p. 353; R. J. Overy, 'Hitler and Air Strategy', *Journal of Contemporary History*, xv (1980), pp. 407-8; W. Carr, *Hitler: a Study in Personality and Politics* (1978), pp. 41-5.

⁴⁵ W. Warlimont, *Inside Hitler's Headquarters* (1964), pp. 17-23.

⁴⁶ Carroll, *Design for War*, pp. 192-212.

⁴⁷ Milward, *German Economy*, p. 23.

⁴⁸ On the resistance of the car industry see Overy, 'Transportation', pp. 404-5; on industry as a whole see A. Schröter, J. Bach, 'Zur Planung der wehrwirtschaftlichen Mobilmachung durch den deutschen faschistischen Imperialismus vor dem Beginn des Zweiten Weltkrieges', *Jahrbuch für Wirtschaftsgeschichte*, Part I (1978), pp. 42-5. By May 1939 only 60% of the mobilization plan could be accounted for by the existing industrial agreements.

orders, to follow the logic through to actual war. The problems with which private industry and banking were concerned were those of markets (including the newly-won areas of central Europe) investment, and money supply.⁴⁹ This was not, of course, true of all industrialists. The large state sector developed after 1936 was designed to provide the Nazis with the war materials which private industry might have been reluctant to provide. There were also sympathizers in private firms, whose board-rooms were penetrated by the Nazis, who were willing to co-operate in the economic restructuring. But the increasing tension between these elements and the rest of the economy, symbolized by the clash over the *Reichswerke* and the *Volkswagen*, placed limits on the pace and extent of the Nazi war-economic programme.⁵⁰ The emergence of just such a division showed clearly that the *Blitzkrieg* solution of a small arms sector and protected consumer output was not the option that the Nazis had chosen. The purposes of Nazism and the purposes of German capitalism no longer coincided, as they had appeared to do in 1933. The resistance of business was caused by the crude attempt to force the whole economy after 1936 along the path towards the successful prosecution of a major "racial struggle".

III

In the light of this interpretation of Nazi intentions, it is not surprising to find that in most important respects the *Blitzkrieg* economy does not fit with the actual circumstances of German economic life during the period in question. The first problem is the sheer scale of Nazi rearmament. If it is looked at from a pre-war perspective, military expenditure in Germany up to 1940 was very large, much greater than that of any other power, with perhaps the exception of the Soviet Union, and much greater as a proportion of GNP than that of any power.⁵¹ In May 1939 General Thomas boasted that in the following twelve months German rearmament would have almost reached the levels of the First World War.⁵² Far from avoiding the total commitment of the previous conflict, the German economy was on the brink of exceeding it. It will be argued later that Hitler did not get value for money, but to contrast German "limited" mobilization with the "total" mobilization of the Allies is, before 1941, historically misleading.⁵³

More important, however, is the fact that economic mobilization was intended to continue at a high and rising rate. Where the *Blitzkrieg* economy represented the peak of a short-term armaments effort to be used up in a short

⁴⁹ Christie Papers, Churchill College, Cambridge; 180/1 25, letter from 'a senior German industrialist' to Christie, 7 July 1939; 'Memo by members of Big Business in Germany 1937', pp. 2-23; 'Rough Notes of a recent conversation with a German industrialist, 1 June 1939'.

⁵⁰ Riedel, *Kohle und Eisen*, pp. 167-78, on the Reichswerke; P. Kluge, 'Hitler und das Volkswagenprojekt', *Vierteljahreshefte für Zeitgeschichte*, VIII (1960), pp. 376-9.

⁵¹ Carroll, *Design for War*, pp. 184-8.

⁵² IMT, xxxvi, p. 116, Doc. 028-EC, 'Vortrag gehalten vor General-major Thomas am 24 mai 1939 im Auswärtigen Amt'.

⁵³ To some extent this is a statistical illusion. The percentage increase in British military expenditure was much greater than that of Germany in 1939-40 and 1940-1 because it was growing from a much smaller base. It is difficult, too, to compare like with like since the structure of state finances and the definition of military expenditure differed between the two countries.

campaign, the German economy in 1939 was already operating at a high level of military production and was designed to reach even higher levels in the future. Nearly all the plans indicate this. The Navy's "Z-Plan" required a huge industrial effort which had only just begun when the Polish crisis arose.⁵⁴ Such a programme was essential to waging the larger, long-term conflict that Hitler had in mind. Moreover Hitler gave priority to the "Z-Plan" over every other service programme, even over exports, something which made no sense at all in terms of a *Blitzkrieg* economy.⁵⁵ Demands for the air force followed the same course. Germany already possessed a large force of modern aircraft by 1939, if smaller than those of the Allies together.⁵⁶ In addition to this, Hitler demanded a five-fold increase in air strength late in 1938, a request that would have needed an annual production of 20,000 aircraft in peacetime and 30-40,000 in wartime.⁵⁷ Although German aircraft production planners scaled these plans down substantially during 1939, they were almost exactly the sort of plans that Britain was laying down at the same time for "total" mobilization.⁵⁸ Even the Luftwaffe itself, less ambitious than Hitler, planned a much larger output of aircraft than it in fact got from 1939 onwards. The last peace-time programme for the Luftwaffe planned an output of 14,000 aircraft a year by 1941, nearly three times the output for 1938.⁵⁹ The *Wehrmacht* mobilization plans for the air force expected production to rise to over 20,000 aircraft in the first full year of war: actual production was 10,247.⁶⁰ All this suggests that Hitler wanted a huge increase in the proportion of the economy devoted to military purposes, even if war had not broken out in 1939.

To carry out such an expansion the Nazi leadership began from 1937-8 onwards to build up a large state-owned and state-operated industrial structure designed to speed up the re-orientation of the economy for war. In aircraft production most new investment came from the state and much of it was concentrated in building large-scale production units.⁶¹ In 1938 Göring demanded the construction of three giant aero-engine works capable of producing 1,000 engines a month each, to be followed by plans for a 10,000-a-year bomber factory.⁶² In iron and steel Göring pioneered the extraction of low-grade iron-ore, but was also able to use the *Reichswerke* as a convenient cover for large-scale expansion of state involvement in industry, taking over control of Rheinmetall Borsig, almost the whole of the Austrian and Czech

⁵⁴ M. Salewski, *Die deutsche Seekriegsleitung 1939-1945* (Frankfurt, 1970), I, pp. 58-65.

⁵⁵ *Ibid.* I p. 59. The order was given on 29 Jan. 1939 and was confirmed in May. See NCA, VII, p. 854.

⁵⁶ French, British, and Polish front-line air strength was marginally greater than German in quantity, though not in quality, in September 1939. See R. J. Overy, *The Air War, 1939-1945* (1980), p. 23.

⁵⁷ K-H. Völker, *Dokumente und Dokumentarfotos zur Geschichte der deutschen Luftwaffe* (Stuttgart, 1968), p. 211, 'Festlegung der Planungen zur Bergrößerung der Luftwaffe, 7.11.1938'; NCA, III, p. 901, Doc. 1301-PS, 'Conference at General Field Marshal Goering's, 14 October 1938'; R. Suchenwirth, *Historical Turning Points in the German Air Force War Effort* (New York, 1959), pp. 23-4.

⁵⁸ M. M. Postan, *British War Production* (1952), pp. 21, 66-8.

⁵⁹ BA-MA RL3 159, 'Lieferprogramm Nr. 15, 1.9.1939'.

⁶⁰ National Archives, Washington (NA) T 177, Roll 31, frame 3719681, 'Nachsuchubzahlen für Luftfahrtgerät, 1.4.1938'; MD, LXV, 7410-11, 'Vortragsunterlagen für den Vortrag vor dem Herrn Generalfeldmarschall, 13 Dez. 1938'.

⁶¹ For example the Heinkel works at Oranienberg, the Messerschmitt works at Wiener-Neustadt, and the large new investments in the Junkers aero-engine and aircraft factories. Details on state investment can be found in BA-MA RL3 46, Chart 1 'Investitionen; Zellenbau'; Chart 2, 'Investitionen; Motorenbau'.

⁶² MD, LXV, 7429 'Besprechung in Berlin, 29.11.1938'; LI, 451, letter from Milch to Göring on the Volkswagen factories, 21 Sept. 1938.

iron and machinery industry, and slices of the Thyssen empire.⁶³ The purpose, as Göring privately admitted, was to construct an industrial empire sensitive to the demands of Hitler's imperialism and on the largest scale.⁶⁴ The investments involved were very substantial. The hydrogenation plant at Brück alone cost 250 million marks, more than all government investment in the aircraft industry in 1939/40.⁶⁵ Moreover, the investments were largely long-term, making very little sense if the object were to design a *Blitzkrieg* economy. In fact the very scale of all these projects proved to be a drain on productive potential in the early years of war, thus explaining part of the paradox between Hitler's large-scale planning and expenditure and the poor return in the shape of finished armaments. Hitler's intention had been to create this necessary industrial substructure before developing the superstructure of armaments production. War in 1939 interrupted the programme and threw industrial planning into confusion.

The industrial evidence is unhelpful to the *Blitzkrieg* as well. The conversion of industry was planned comprehensively by the armed forces under Thomas, who worked on the "total war" contingency.⁶⁶ The new Volkswagen complex for example, which Hitler, with his fragmented view of the economy had detailed as a peace-time project, was assigned to the Luftwaffe in the event of war. Whilst its conversion was hopelessly planned, as with so much of the effort to convert, the intention to do so was certainly there.⁶⁷ The plan was to draw on the civilian industries to make up for the inadequate provision of factory capacity and to close down inessential consumer production. In February 1940 Göring made it clear that such capacity had to be found "to a much greater extent in the idle factories, even if in one way or another this does not correspond to all wishes . . ."⁶⁸ The head of the air industry economic group instructed air firms in October 1939 to take over any spare capacity in those sectors that were being closed down or were on short-time.⁶⁹

⁶³ K. Lachmann, 'The Hermann Göring Works', *Social Research*, VIII (1941), pp. 35-8; on Austria see NA T 83, Roll 74, frames 3445159-77, I.G. Farben volkswirtschaftliche Abteilung, 'Konzernaufbau und Entwicklung der Reichswerke AG Hermann Göring', 19 Oct. 1939; on Rheinmetall-Borsig see NA T 83, Roll 74, frames 3445356-60.

⁶⁴ NA T 83, Roll 75, Frame 3445754, Pleiger to heads of firms in Reichswerke organization, 29 April 1942; frames 3445997-8, Göring to Gritzbach, 23 March 1942; T 83, Roll 74, frames 3445207-10, 'Gründung und Wachsen der Hermann Göring Werke 1937-1942'.

⁶⁵ Speer Collection, Imperial War Museum, London, Reichswerke documents, FD 264/46 'HGW Konzern-Verzeichnis, 15-8.1944'. The Reichswerke alone cost 400 million marks, 93 per cent from state sources. Although many of the factories were set up outside the old Reich, much of the money had to be found from Reich sources.

⁶⁶ Carroll, *Design for War*, pp. 162-4; NA T 177, Roll 3, frame 3684363, Thomas to heads of services 'betr. wehrwirtschaftliche Räumung, 29 Sept. 1939'; frame 3684308, Göring to all Reich authorities, 24 Sept. 1939; B. Mueller-Hillebrand, *Die Blitzfeldzüge 1939-41* (Frankfurt, 1956), pp. 23-39 on the work of the army.

⁶⁷ BA-MA RL3 20, letter from Göring to Ley, 15 Sept. 1939; MD LI, 451, letter from Milch to Göring, 21 Sept. 1938. On the difficulties of establishing production there see BA-MA RL3 247, report of a meeting at Junkers, Dessau, 17 Oct. 1939; Speer Collection FD 969/45, Bayerische Motorenwerke 'Ablauf der Lieferungen seit Kriegsbeginn', p. 5: On Göring's determination to convert all or any firm see NCA III, pp. 901-4, Doc. 1301-PS.

⁶⁸ MD LXV, 7285, report of a conference with Göring, 9 Feb. 1940; T. Mason, *Arbeiterklasse und Volksgemeinschaft* (Opladen, 1975), p. 1044, Doc. 174, 'Rede Görings in dem Rheinmetall-Borsig-Werke, Berlin am 9 Sept. 1939', in which he said "Inasfar as we don't have the production facilities they will be created through conversion, expansion and new construction".

⁶⁹ NA T 83, Roll 5, frame 3745418, letter from Admiral Lahs to all aircraft firms, 10 Oct. 1939.

So rapid and wide-ranging was this conversion that the Four Year Plan Office estimated that the proportion of the workforce employed for military purposes had risen from 20 per cent in 1939 to 60 per cent by early 1941.⁷⁰

Not surprisingly, this led to reductions in civilian goods production. That this did not happen is a crucial part of the *Blitzkrieg* economy. "There can be little doubt" wrote Prof. Milward, "that the impact of war on the German people over these years was very small".⁷¹ Consumer spending and civilian output, it is argued, were maintained in the face of the demands of war, while the military budget only rose sharply after the end of the *Blitzkrieg* in 1942. The facts show otherwise. Looking at the German economy as a whole, military spending rose at a consistent rate between 1938/9 and 1943/4. There was no abrupt change in 1942, nor any halt in expenditure in 1940 and 1941, as the following Table shows.

Table I. *Military Expenditure, State Expenditure, and National Income in Germany, 1938/9 – 43/4* (mrd. RM, current prices)

Year	Military Expend.	State Expend.	National Income
1938/9	17.2	39.4	98
1939/40	38	58	109
1940/1	55.9	80	120
1941/2	72.3	100.5*	125
1942/3	86.2	124*	134
1943/4	99.4	130*	130

* based on revenue from occupied Europe and the Reich.

Source: W. Boelcke "Kriegsfinanzierung im internationalen Vergleich" in Forstmeier, Volkman, *Kriegswirtschaft und Rüstung*, pp. 55-6; Klein, *Germany's Preparations*, pp. 256-8.

In fact the greatest percentage increases in military expenditure were in the years 1939 to 1941. This pattern confirms the fact that German rearmament and war expenditure followed a relatively smooth course of expansion over the period with none of the implied discontinuities of the *Blitzkrieg* economy. As a proportion of National Income and GNP the figures also compare favourably with the performance of the Allied economies.⁷² Since military expenditure grew at a faster rate than the German economy as a whole this could only have been at the expense of civilian consumption.

And so in fact it was. Car production, for example, hungry for raw materials and labour, was dramatically cut back from a peak of 276,592 in 1938 to a mere 67,561 in 1940 and to 35,195 in 1941. The military took 42 per cent of the total in 1940, and 77 per cent in 1941.⁷³ It is the same story for the construction industry. The number of housing units completed fell from 303,000 in 1938 to 117,000 in 1940, and to 80,000 in 1941; again with many of the latter for military use. The volume of construction as a whole fell from 12.8 milliard marks in 1939 to 8.3 milliard in 1940 and to 6.9 milliard in

⁷⁰ Case XI, Prosecution Doc. Book 112, p. 301, Doc. NID-13844, lecture given by State Secretary Neumann at the Verwaltungsakademie, 29 April 1941.

⁷¹ Milward, *German Economy*, p. 29.

⁷² Carroll, *Design for War*, pp. 264-5.

⁷³ United States Strategic Bombing Survey (USSBS), Report 77 *German Motor Vehicles Industry Report*, p. 8.

1941.⁷⁴ These were the important areas from which resources could be released into the military economy. Goods whose survival is supposed to demonstrate the maintenance of consumer spending were either those which would be expected to increase under war conditions (such as basic foodstuffs, the output of which increased enormously in Britain as well during the war)⁷⁵ or those whose production was divided between military and civilian use, a division disguised by the gross figures. In fact it was the high quality of the equipment that the *Wehrmacht* demanded for its members that swallowed up much of the consumer goods production as well as the increased output of food.⁷⁶ For the ordinary civilian consumer much less was available than before the war. By 1943 the armed forces took 44 per cent of all textile production, 43 per cent of all leather goods, and 40 per cent of all paper produced.⁷⁷ Of course Hitler kept a propaganda eye on domestic living standards, and the conquest of Europe allowed greater flexibility than might otherwise have been possible, but many of the concessions made were, literally, cosmetic.⁷⁸

The result of this diversion to military purposes was widespread and increasingly comprehensive rationing, some of it before 1939.⁷⁹ The Four Year Plan Office itself openly admitted the need to cut back on consumption. In a speech early in 1941 State Secretary Neumann acknowledged that:

not only almost all articles of daily use but also practically all other goods have become increasingly scarce in recent years—even prior to the outbreak of war . . . a higher standard of living is the ultimate goal, not the immediate object of the Four Year Plan. Whatever was available by way of labour, materials and machines had to be invested in the production of military-economic importance according to an explicit Führer order The fact that consumer interests had to be put second is regrettable but cannot be helped.⁸⁰

Civilian production as a whole was severely cut back from the outbreak of war, while the bulk of surviving consumer goods production was diverted to the armed forces. The problem facing the German economy was not the release of resources but the ineffective use to which they were then put.

⁷⁴ Number of housing units from R. Wagenführ, *Die deutsche Industrie im Kriege* (Berlin, 1963), pp. 37, 56; volume of construction from Klein, *German Preparations*, p. 105. By 1942 80 per cent of all construction was for military or industrial purposes.

⁷⁵ K. A. Murray, *Agriculture* (1955), p. 375. British grain production increased from 4.6 million tons in 1939 to 8.2 in 1944; potatoes from 5.2 million tons in 1939 to 9.8 in 1943; vegetables from 2.3 million tons in 1939 to 3.4 in 1943. There seems little remarkable about the German economy, better endowed with agricultural potential than Britain, increasing its domestic food production, much of it destined for the well-fed armed forces. It should be noticed that in those areas where the German agricultural economy was weakest—dairy products, fats, oils—production dropped sharply. Milk output fell by a third between 1938/9 and 1939/40; vegetable oils by the same amount.

⁷⁶ Case XI, Prosecution Doc. Book 112, pp. 296-7, Neumann lecture; see the discussion in W. Williams, *Riddle of the Reich* (1941), pp. 10-14.

⁷⁷ Wagenführ, *deutsche Industrie*, p. 174.

⁷⁸ One feature of the 'survival' of consumer goods industries was Hitler's insistence that cosmetics, stockings etc. should still be produced to keep up home morale. But cigarettes, for which there was a large domestic demand, were heavily restricted and of poor quality. In 1941 a heavy tax was placed on tobacco, and women were restricted to a ration half that of men (1½ cigarettes a day). See L. Lochner, *What about Germany?* (1943), pp. 144-5.

⁷⁹ M. Steinert, *Hitler's War and the Germans* (Ohio U.P. 1977), pp. 53, 64-5, 92-3; Lochner, *What about Germany?*, pp. 142-5, who wrote that both before and after 1939 "the simplest articles of daily life were lacking . . . Things made of leather, rubber, metal, wool or cotton were almost non-existent"; NCA VI, p. 723, Doc. 3787-PS, 'Second Meeting of the Reich Defense Council, 10 July 1939', on the intention to take resources away from "the vital industries which are of importance to the life of the people".

⁸⁰ Case XI, Prosecution Document Book 112, pp. 293-4, Doc. NID-13844, Neumann lecture.

The final question concerns the degree of "flexibility" in the German economy; the extent to which, under the terms of the *Blitzkrieg* economy, production could be switched within weeks from one weapons group to another or back to civilian production, as strategy dictated.⁸¹ While it is true that priority changed, as would be expected, under the circumstances of war, in practice little substantial shift between weapons groups occurred during the period. The air force, for example, found it impossible to increase production significantly after the Fall of France while enjoying a production priority, but was able to expand output to new levels when the priority was removed and returned to the army.⁸² In practice, the production for all the services expanded more or less continuously over the whole period 1939-41, for it was difficult to disrupt production programmes at short notice, and the services jealously guarded their own economic spheres of influence.⁸³ The same is true of the switch from arms to the civilian economy. Hitler certainly explored the idea of running down arms production in 1940 and again in 1941, not in response to any *Blitzkrieg* conception or preparation, but in reaction to the extraordinary degree of success that his relatively underarmed but well-run forces were able to achieve. But it must be stressed that Hitler did no more than explore the possibility. Success did not blind the Nazi leadership to the fact that enemies remained undefeated, and expenditure on weapons, like overall military expenditure rose steadily and continuously over the whole period, helped by the expansion of output in the dependent territories in central Europe (see Table 2).

Table 2. *Expenditure on Selected Weapons in Germany, 1939-1941*

Weapon	1939*	1940	1941
	(1941/2 prices, million marks)		
aircraft	1,040.0	4,141.2	4,452.0
ships	41.2	474.0	1,293.6
armour	8.4	171.6	384.0
weapons	180.0	676.8	903.6
explosive	17.6	223.2	338.4
traction vehicles	30.8	154.8	228.0

* Sept.-Dec.

Source: calculated from Wagenführ, *deutsche Industrie*, p. 29.

The problem which Hitler faced was not the degree of commitment from what was, after all, a large and heavily industrialized economy, but the fact that, despite such a commitment, the output of finished weapons failed to match the extent of revenue and resources devoted to arms production. This made necessary a significant change in the level of productivity in 1941-2, rather than in the level of aggregate resources.

IV

Why was there such a gap between what Hitler wanted and what was actually produced? The immediate explanation is that the war broke out before the economy could be satisfactorily converted. Both the military and economic

⁸¹ Milward, *German Economy*, p. 32; Milward, 'Der Einfluss', p. 195.

⁸² R. J. Overly, 'German Aircraft Production, 1939-42' (unpublished Ph.D. thesis, University of Cambridge, 1978), pp. 23-32.

⁸³ Klein, *German Preparations*, p. 161; Carroll, *Design for War*, pp. 154-5; Warlimont, *Hitler's Headquarters*, pp. 8-9.

leadership were caught in the middle of restructuring the economy, and were compelled to divert energies to the needs of war before the economy was prepared for it. But that is not the whole answer. There were structural problems in the German economy that were not satisfactorily solved by 1939. There were also difficulties that arose from the very nature of German rearmament. This had started late in terms of a war to be fought in 1939, only reaching significant levels by 1937-8. There was little time to build up the plant and resources Hitler's plans warranted.⁸⁴ Not only was the question of time crucial, there was also the fact that so much of the money was spent on refurbishing Germany with a military infrastructure (airfields, barracks etc.) which had been destroyed or prohibited under the terms of the Versailles Treaty. This was an expensive business made more so by the fact that German weapons were also expensive. The insistence on very high standards of workmanship, and the preference for small-scale over large-scale mass-production contributed to this. So too did the cost-plus system of contracts, which gave no incentive to reduce prices and actually encouraged firms to produce inefficient methods and a high-priced end product.⁸⁵ The 50 milliard marks spent on rearmament by 1939 could have been expected, as Hitler no doubt wished, to yield more in terms of military goods than was in fact the case.⁸⁶ This situation continued into the war. In 1940 Germany spent an estimated \$6 billion on weapons, while Britain spent \$3.5 billion. Yet Britain produced over 50 per cent more aircraft, 100 per cent more vehicles and almost as many tanks as Germany in 1940.⁸⁷ If German armaments had been less well made and more efficiently produced and paid for, the number of weapons available in 1940 would have been considerably greater.

Another answer lay in Hitler's limited access to accurate information on the performance of the economy. This was partly a product of his style of government. But during the war it was as much a product of self-delusion and misinformation. Having spent large sums on rearmament with the most modern weapons Hitler failed to ensure that they were produced in quantity. He accepted new developments uncritically. He found it difficult to accept the long time-scale involved in developing a weapon or in distinguishing between weapons that were mere prototypes and those that were battle-ready.⁸⁸ This element of self-delusion was complemented with a good deal of poor or misleading intelligence. This was very much a product of the regime. Subordinates in the hierarchy hesitated to take initiatives in the economy and preferred to provide only that information which would present an optimistic impression of their achievements.⁸⁹ The information that finally reached

⁸⁴ On rearmament totals see BA R2 21776-81, Reichsfinanzministerium, Abteilung 1, 'Entwicklung der Ausgaben in den Rechnungsjahren 1934-9', 17 July 1939. Rearmament from 1933/4 to 1935/6 averaged 3.445 milliard marks per year, including the *Mefowechseln*.

⁸⁵ On the cost of the fortifications see Dülffer, 'Beginn des Krieges', p. 457. On German arms finance see A. Schweitzer, 'Profits under Nazi Planning', *Quarterly Journal of Economics*, LXI (1946), pp. 9-18.

⁸⁶ Military expenditure had to cover investment in industry, military installations, airfields, as well as military mobilization preparations over the Rhineland crisis, the Anschluss, and the Munich crisis.

⁸⁷ Wagenführ, *deutsche Industrie*, p. 34; R. J. Overy, 'Die Mobilisierung der britischen Wirtschaft während des Zweiten Weltkrieges' in F. Forstmeier, H. E. Volkmann, eds. *Kriegswirtschaft und Rüstung im Zweiten Weltkrieg* (Düsseldorf, 1977), p. 289.

⁸⁸ Overy, 'Air Strategy', pp. 406, 415-16; F. H. Hinsley, *Hitler's Strategy* (Cambridge, 1951), pp. 1-4.

⁸⁹ D. Kahn, *Hitler's Spies* (1979), pp. 386-7; on the misrepresentation of the strength of the Luftwaffe see D. Irving, *The Rise and Fall of the Luftwaffe* (1973), pp. 65-8; R. Suchenwirth, *Command and Leadership in the German Air Force* (New York, 1969), pp. 75-81.

Hitler was often partial and unrealistic, reflecting the intelligence that it was believed Hitler wanted to hear. Hence Hitler's reproaches to Göring over the failure of aircraft production later in the war; and hence Hitler's bitterness that the range of advanced weapons shown to him in 1939 as virtually ready for combat had failed in every case to materialize by 1942.⁹⁰ Hence, too, the persistent underestimation of enemy economic strength provided by German intelligence from 1939 to the invasion of Russia.⁹¹

One of the main culprits in this process of misrepresentation was Göring. His eagerness to enlarge his political empire through the economy, and his anxiety to present to Hitler the most optimistic picture of his achievement with war production, obscured much of the true state of preparations. Göring was then able to shelter behind the German victories until the poor performance of the economy became more obvious in the course of 1941, after which he was gradually excluded from its direction.⁹² Before then he had taken up all his tasks in the economy with much political enthusiasm, little economic or technical understanding and exceedingly poor relations with sections of heavy industry, the Reichsbank, and the Finance Ministry.⁹³ He insisted on treating his office as if he were personally responsible for preparing the future war economy, demanding that other agencies should be fused with his to increase the centralization of the economy under his direction.⁹⁴ Yet the civilian and military economic leadership did not want to work under Göring, and was able to circumvent his jurisdiction whenever possible. Göring himself was unequal to the tasks of organization that Hitler had set him. The result was that, during the crucial years of build-up towards war and in the early years of conflict, the military economy was not directed in a co-ordinated way.⁹⁵ Up to 1938 under Schacht, and after 1942 under Speer, the performance of the German economy came up to expectations. Between those dates came what Speer later saw as an era of "incompetence, arrogance and egotism".⁹⁶

The main characteristics of the "era of incompetence" were the ineffective way in which the resources released for war were taken up, and the general inefficiency and confusion of the military economy. Not that German industry, particularly large-scale industry, was uncompetitive commercially. The problem lay in adopting the same practices in the armament factories. Not only was this slow to happen, but those commercial firms brought into war-work also became infected by the incompetence and inflexibility of the system. One obvious explanation for ineffective mobilization was that industry was caught by surprise by the actual outbreak of war in 1939, and had to divert resources from long-term military projects and from civilian life without a competent central authority for the economy. When war broke out, industry was

⁹⁰ Irving, *Rise and Fall*, pp. 73-4, 155-6.

⁹¹ Homze, *Arming*, p. 244; W. Schwabedissen, *The Russian Air Force in the Eyes of German Commanders* (New York, 1960), pp. 48-51.

⁹² Speer, *Inside the Reich*, pp. 252-66.

⁹³ A. E. Simpson, 'The Struggle for Control of the German Economy, 1936-1937', *Journal of Modern History*, XXI (1959), pp. 37-45; H. Schacht, *76 Jahre meines Lebens* (Bad Wörishofen, 1953), pp. 461-74.

⁹⁴ Case XI, Prosecution Doc. Book 112, pp. 283-8, Neumann lecture; MD LXV, 7299, letter from Göring to all Reich Authorities, 7 Dec. 1939.

⁹⁵ Carroll, *Design for War*, chs. vii-viii.

⁹⁶ Speer, *Diaries*, p. 63.

unprepared for the scale of demands and was anxious, like much of the military leadership, that the war should be over as soon as possible. Moreover, the firms often expressed a marked hostility to a high level of government intervention or military interference and failed to co-operate in achieving high levels of arms output in the way that American or British businessmen did.⁹⁷ It is perhaps not surprising that in a situation where not even Hitler's closest subordinates could guess his intentions, business in Germany was unable to comprehend the scope of what was happening in 1940 and 1941, and to prepare accordingly. Moreover, German business was anxious not to lose the prospect of rising profits and expanding trade which had been held out at the end of the 1930s, and the first years of war saw a continuation of the silent struggle over the nature and destination of the German economy.⁹⁸ Too much energy was used up in combating excessive state interference on the one hand and in competing for contracts and influence abroad on the other. This, combined with the incomplete nature of preparations for a war in 1939 and the lack of a competent war economic administration, substantially reduced the level of war goods that Hitler had wanted.

There was also the question of industrial constraints. This was not simply a result of a lack of central planning, jurisdictional confusion, and poor co-ordination, or of a shortage of raw materials, the lack of which has been much exaggerated. There were problems within the armaments industry itself. There was too great a reliance on skilled labour in areas of manufacture where increasing automation might have been expected. The reluctance of the work-force to accept dilution during the 1930s and the early years of war brought many difficulties in introducing mass-production methods and made labour more of a problem than was necessary.⁹⁹ So, too, did the conservatism of management faced with the requirements of making the transition from small-scale to large-scale manufacture. This was less of a problem with established firms, such as Krupps. But many of the firms that grew large on government orders in the 1930s were small firms faced with all the strains of making the transition to a different style of management at a vital stage in German war preparations.¹⁰⁰ Only when industrialists from the large commercial firms were brought in to run the war economy in 1942 were some of these difficulties overcome.¹⁰¹

One final problem industry could do very little about: the exceptional degree of control exercised over armaments firms by the armed forces. In the absence of a strong civilian economic administration this was perhaps inevitable. But the tight military control over contracts, product selection, and production

⁹⁷ Overy, 'German Aircraft Production', pp. 170-88.

⁹⁸ In particular the struggle over the whole question of state ownership. See Christie Papers, 180/1 25, 'Die deutsche Staatswirtschaft'. On the Reichswerke and state ownership see NA T 83, Roll 74, frames 3445207-10, 'Gründung und Wachsen der Hermann Göring Werke 1937-42'; Case XI, Prosecution Doc. Book 112, p. 149, Doc. NID-13797, Körner to Schwerin-Krosigk, 7 Oct. 1940.

⁹⁹ Overy, 'German Aircraft Production', pp. 159-61.

¹⁰⁰ NA T 177, Roll 14, frames 3698887-916, General Bauer 'Rationalisierung der Luftwaffengerät-Fertigung, 1.6.1941'; Roll 12, frames 3695910-12, General Bauer 'Fertigungsvorbereitung, 1935'; Roll 3, frames 3684551-4, 'Klein- und Mittelbetrieb oder Grossbetrieb', GL Report, 24 April 1939.

¹⁰¹ For aircraft production this process began early in 1941 with the establishment of an *Industrierat*. See MD LIV, 1555; D. Eichholtz, ed. *Anatomie des Krieges* (Berlin, 1969), p. 331, Doc. 161.

methods stifled industrial initiatives.¹⁰² The most damaging problem was the extent to which minor technical demands from the armed forces at the front held up the introduction of mass-production methods and encouraged only short and expensive production runs.¹⁰³ When the more successful commercial firms were drafted into war production, their productive performance was similarly blighted by contact with the poor planning of the military production authorities.¹⁰⁴ When Todt, Speer, and Milch revolutionized production in 1941 and 1942 they did so not by a massive re-directing of resources but simply by using existing resources better. The aircraft industry in 1942 produced 40 per cent more aircraft than in 1941 with only 5 per cent more labour and substantially less aluminium.¹⁰⁵ What produced the low level of mobilization was not a lack of resources but the problem of coping with a premature war in an economy lacking effective central control, dominated by military requirements, and guided by an impulsive strategist whose understanding of the economy was deliberately obscured. Under these circumstances it was possible to produce just enough for the early German campaigns, but not enough for Hitler's "big war"; not enough, that is, to defeat Britain in 1940 or Russia in 1941.

V

The first conclusion to draw from this interpretation of the German war economy is the inappropriateness of applying a *Blitzkrieg* conception. In terms of economic planning, industrial conversion, consumer goods production, civilian consumption, and strategic "flexibility", the model breaks down. The ideas that Germany deliberately sought to restrict the economic costs of war, and that German civilian consumption levels were maintained intact over the early war period while the military economy had its resources skilfully switched from one weapon group to another, fit with neither the general strategic picture nor with the details of economic life in Germany between 1939 and 1941.

Hitler's intention was to prepare for a long and total war, using all Germany's resources to achieve a final victory. This perspective explains the nature of the autarkic and rearmament programmes initiated from 1936 onwards, many of them quite redundant for the purposes of a limited and conventional "short war". The evidence shows that Hitler expected such a confrontation in the mid-1940s, after an initial period of consolidation in central Europe achieved without a general war, and protected by a series of diplomatic *coups* of which the Nazi-Soviet Pact was the most important. It was this initial stage of

¹⁰² Schröter, Bach, 'Zur Planung der Mobilmachung', pp. 45-7; A. Bagel-Bohlan, *Hitlers industrielle Kriegsvorbereitung 1936 bis 1939* (Koblenz, 1975), pp. 137-8.

¹⁰³ Overy, *Air War*, pp. 179-80.

¹⁰⁴ Opel claimed for example that when the firm began military production output per man-hour dropped 40 per cent compared with peace-time output. See British Intelligence Objectives Sub-Committee, Final Report 537, p. 7. On the poor utilization of the car industry as a whole see USSBS Report 77, pp. 5-11.

¹⁰⁵ By contrast in 1941 some 50 per cent more labour was diverted to aircraft production but only a 5 per cent increase in aircraft output was achieved. See USSBS, European Report 4, Chart VI-11; USSBS, Report 20, *Light Metal Industry of Germany* (Part I), p. 17a; Irving, *Rise and Fall*, p. 167; Speer Collection, IWM/FDC 9, Zentrale Planung, p. 789.

preparing a large economic and military bloc in central Europe that backfired in 1939 into a more general war, against Hitler's expectations. That is why the German economy appeared to be prepared for a limited war. It was caught half-way towards the transformation planned by Hitler, with a military base capable of achieving the limited first stage but not the second, more general, one.

It is clear that Hitler, faced with the fact of war in 1939, changed his mind about the time-scale involved in his imperialism, accelerating the move towards the "big" war which found him in conflict with Britain, Russia, and the United States by the end of 1941. That he did so was in part because he believed that the economic time-scale could be speeded up and conversion to the needs of the larger war achieved in the early 1940s instead of later. This expectation was in turn derived from misinformation or lack of information on how the economy was developing. This failure of communication was crucial. It was compounded of Göring's anxiety that the achievements of the Four Year Plan should be presented in as favourable a light as possible, and Hitler's own predilection for secretiveness and fragmented administration. The failure was helped, too, by Hitler's own poor understanding of production and finance, which led him to expect that military goods could be produced much more quickly and cheaply than was in fact possible. Göring's remark that Hitler was only interested in how many bombers there were, and not in how many engines each had, was symptomatic of this approach.¹⁰⁶

Most important of all in persuading Hitler that the "big" war was possible was the remarkable military success enjoyed between September 1939 and June 1940 against enemies whose combined material strength was more the equal to that of Germany. This success was not produced by a *Blitzkrieg* economy. The victories were due, first and foremost, to the staff work, leadership, and fighting qualities of the German forces, together with the weaknesses, poor leadership, and wrong intelligence on the part of the Allies. Hitler's belief that the "big" war could now be won still required a huge economic effort based on the large-scale plans laid down, but not yet completed, between 1936 and 1939. It is true that the extent of the military victories, which surprised Hitler as well as the generals, tempted him at times to question the need for a greater economic effort and to rely more on military prowess. But these second thoughts were very much *post hoc*, reflecting the changing circumstances of war, and were not pre-planned; nor, it must be emphasized, did Hitler ever hold back the continued expansion of the arms economy over the whole of the period 1939 to 1942. Moreover, such second thoughts were soon dispelled by the failures against Britain in 1940 and Russia in 1941, which showed the limit of German military potential and the extent to which the German armed forces were under-armed. As it turned out, the German forces were able to perform remarkably in the face of massive material superiority throughout the war. That they were comparatively under-armed was the result of the fact that the German economy could not be converted satisfactorily in 1939-1941 to the needs of a large-scale war.

This failure to convert satisfactorily, to adjust to the "big" war when asked to do so, had many causes. At one level the failure was simply a result of the

¹⁰⁶ Overy, 'Hitler and Air Strategy', p. 407.

fact that the war broke out prematurely, while many of the preparations were of a long-term character. Hitler's own uncertainty and impulsive strategy created uncertainty among business leaders and economic planners. The economy was caught between peaceful economic recovery and the programme of war preparations laid down since 1936. This lack of appropriate planning was made more acute by the lack of a satisfactory central economic administration in war-time. In the absence of central direction the military had a much greater say in economic affairs, concentrating on matters (such as tactical suitability) that concerned the front line, and not on questions of large-scale industrial production and distribution. When this was added to a reluctance on the part of much of industry to convert for war, and the rapid and unpredictable shifts in strategy, the economy failed to rise to the challenge of a large-scale war as it did in Britain, the United States, and Russia. The failure to solve the problem of arms production (disguised by the very good use to which the *Wehrmacht* put what weapons it had) was caused not by a preference for consumer-goods production over armaments, nor by *Blitzkrieg* campaigns deliberately based on a small military economy, but by the fact that Hitler's larger war arrived before preparations for it were complete. The low level of mobilization was not intentional but was a product of this contradiction between economic and diplomatic reality.

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